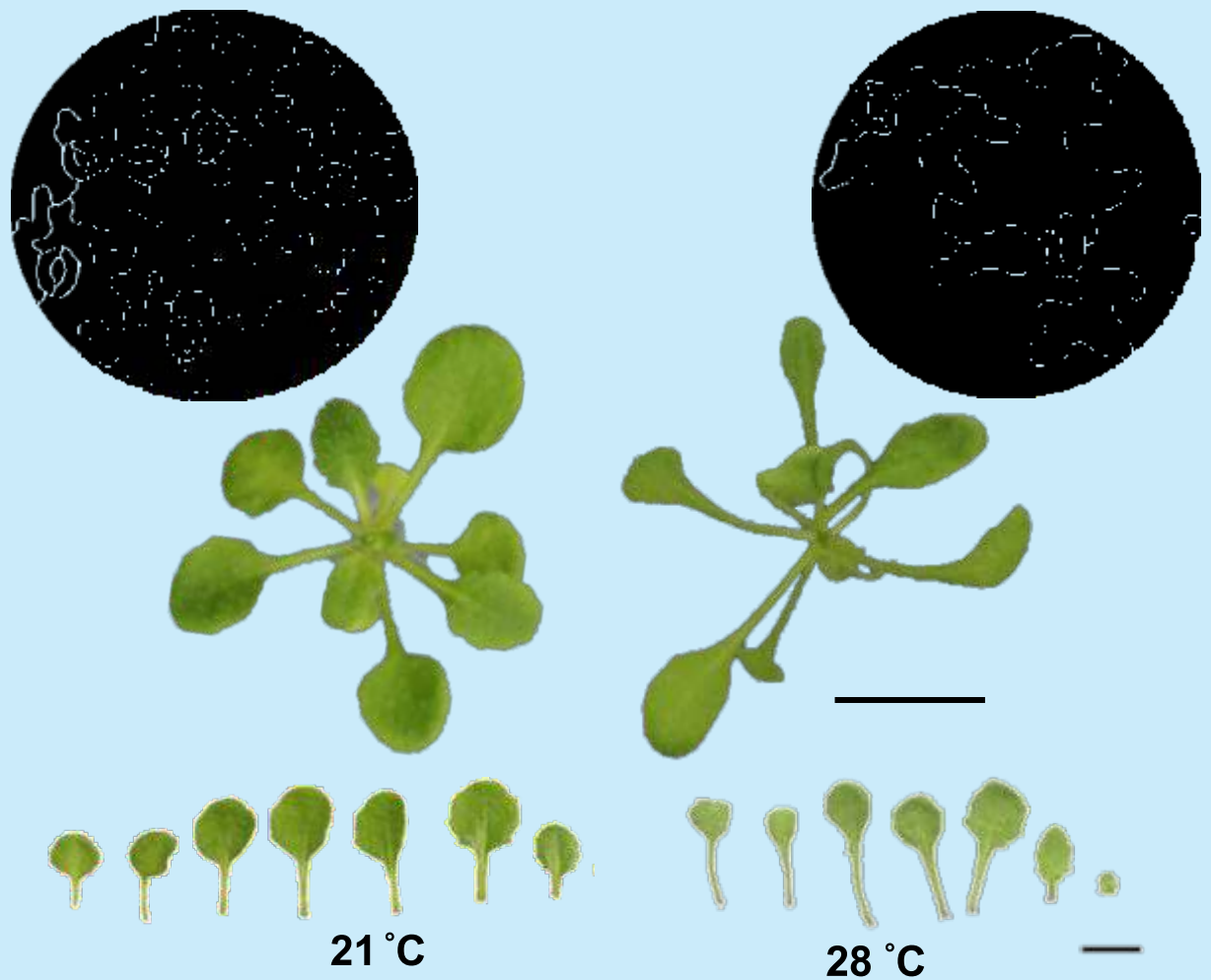




ANNUAL REPORT

2022-23



National Institute of Plant Genome Research, New Delhi

**Rosette and leaf series of Arabidopsis under ambient (21 °C) and high (28 °C) temperature.
Light microscope images of leaf epidermal cells at maturity after cell boundary extraction.**



Vision

To generate new knowledge in the area of plant genomics, assimilate it with current knowledge and translate the same for genetic enhancement of plants for social benefits

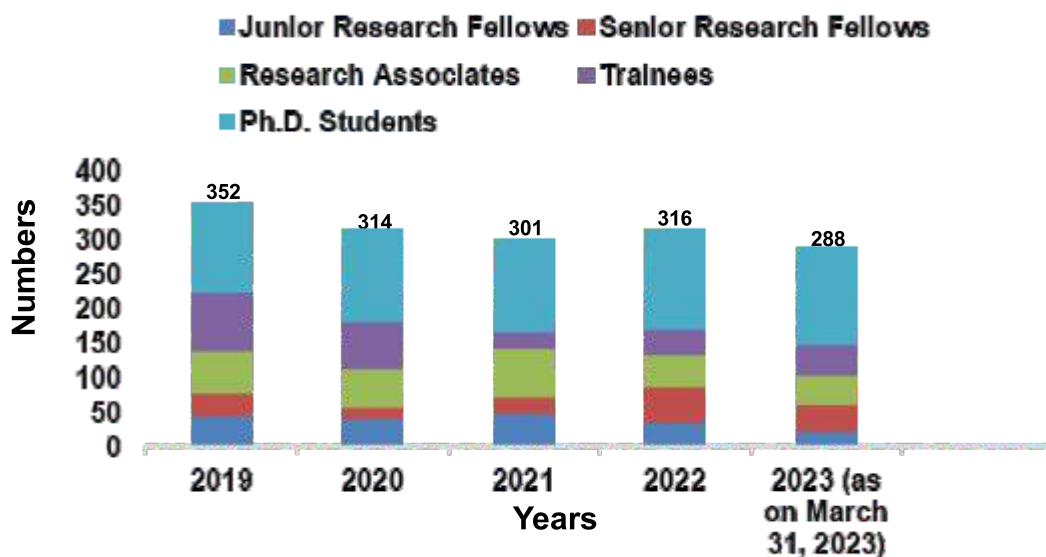
Mission

To undertake, aid, promote guide and coordinate research of high calibre in basic and applied plant molecular biology

Research Areas

1. Genome analysis and molecular breeding
2. Development and signalling
3. Plant responses to abiotic stresses
4. Plant-microbe/insect interactions
5. Computational and structural biology
6. Nutritional traits in crops

Human Resource Development



Achievements

Ph.D. awarded:	[195 (30*)]	Publications:	[1414 (147*)]
Patents and products:	[70 (2*)]	Lectures delivered:	[1270 (101*)]
Lectures organized:	[221 (19*)]	Conference and workshops:	[106 (6*)]
Students visit:	[91 (13*)]	Awards and recognitions:	[251 (23*)]

[2022-23 (*as on March, 2023)]

National Institute of Plant Genome Research, New Delhi



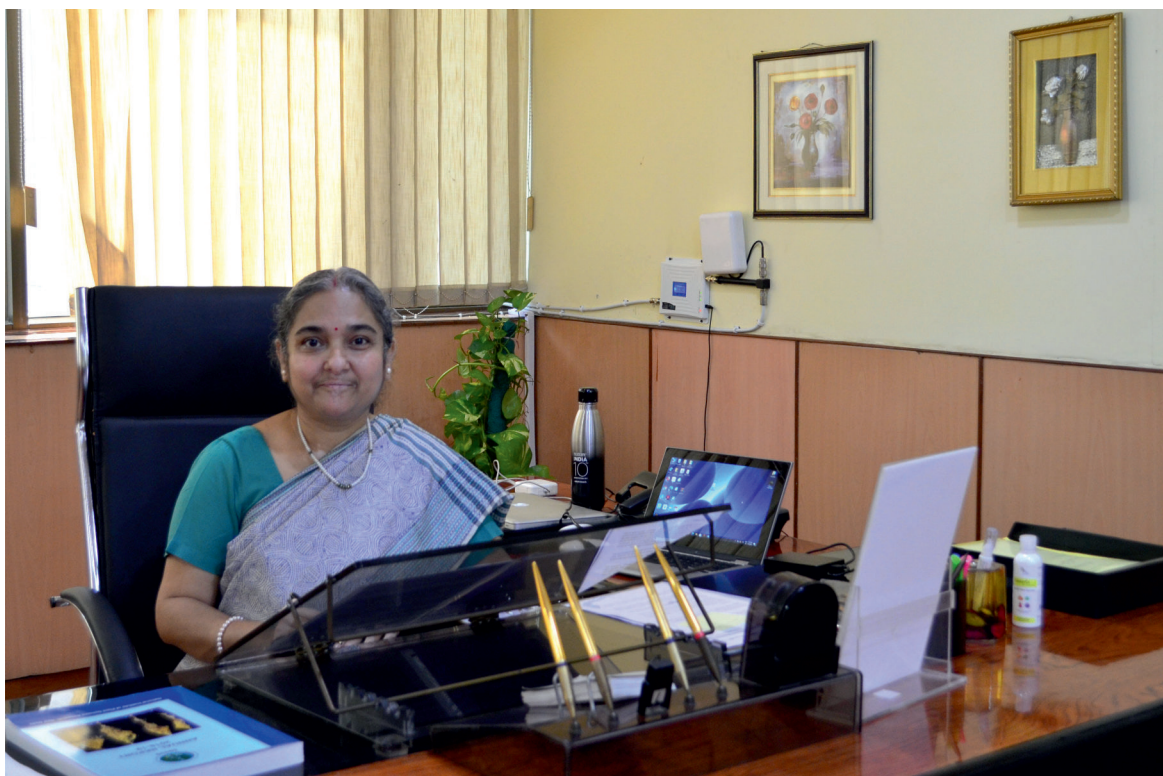
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Mandate

- Undertaking high caliber scientific research in advanced areas of fundamental and applied plant molecular biology;
- Providing effective linkages between various scientific and research agencies in the country on plant genes and related areas;
- Utilizing molecular biology approaches along with tissue culture and genetic engineering technology to identify important genes and manipulate them for generating transgenic plants with improved agronomic characters and pathogen/stress resistance;
- Undertaking fundamental research work related to gene-regulation and mapping;
- Utilizing molecular breeding for genetic improvement of crops for important traits;
- Understanding molecular basis of plant-microbe interactions;
- Imparting advance training in the field of plant genetic engineering and genome analysis;
- Undertaking collaborative programmes with various Universities/Institutes that are engaged in plant genome research.

Preamble



It is my pleasure to present the Annual Report for the year April 2022-March 2023. Starting from its inception in 1998 and 25 years of its existence, National Institute of Plant Genome Research (NIPGR) research is focused both on basic science and translational work. Today NIPGR's vision is to be recognized as a center of excellence not only in the Asia-Pacific region but also among the top plant science institute in the world. To fulfill the vision, the mission is to continue to call for research and innovation in plant biology to have a transformative impact on society and nation-building by undertaking research of high caliber in plant molecular biology and seeking its applications of the same. The Institute is actively engaged in research on topics ranging from genome analysis and molecular breeding, plant development and architecture, adaptation to abiotic stresses, molecular mechanisms of host-pathogen interactions, plant immunity, computational & structural biology, nutritional genomics and emerging areas covering cutting-edge research. Currently, the Institute has 32 scientists, who are leading independent groups covering cutting-edge research in six defined areas. To achieve its objectives, the Institute ran 28 intra-institutional collaborative programs, 49 national collaborations, 6 international collaborations. 30 students have been conferred with Ph.D. degree, and 49 external scientists/students were trained in the institute. The academic year 2022-2023 continued to be highly productive and a number of high-quality research articles were published, many in high-impact journals. NIPGR published 147

research papers in the reporting period and filed 2 patents with 4 granted patents. I would like to highlight below some of the recent achievements of the Institute.

In the area of genome analysis and molecular breeding, progress has been made in understanding the genetic architecture of flowering time in chickpea. The study published in *Plant Molecular Biology* led to the identification of InDel marker, *Early Flowering 3a* gene that negatively regulate flowering time and development of early flowering, high-yielding cultivars through genomics-assisted breeding.

Under plant development and signaling, the elucidation of the role of specific genes, such as REP2 in rice grain development and the exploration of regulatory modules like miR164e-NAC100 in chickpea seed maturation published very recently in the *Journal of Experimental Botany*, offered valuable insights into the intricate mechanisms underlying plant development and growth. Yet another study identified a gene-based marker for LRC which will be useful to develop drought tolerant high-yielding chickpea. It is known that sugars regulate the Pi deficiency response in *Arabidopsis*. The recent report in *Cell Reports* elucidated the role of TOR kinase in plant growth possibly through its interaction with pi signaling pathway. High ambient temperature suppresses *Arabidopsis* leaf area and elongates the stem and petiole; however, the genetic basis of this phenomenon is largely unknown. A recent study in *Plant Physiology* elucidated that a warm temperature-mediated accumulation of the transcription factor PIF4 in leaf cells promotes its binding to the KRP1 promoter in a TCP4-dependent way to regulate cell production and leaf size. Another preliminary study has revealed the molecular mechanisms governing apical hook development in *Arabidopsis*, shedding light on the intricate coordination of growth and hormonal responses. These findings not only contribute to our understanding of fundamental plant processes but also hold promise for the development of stress tolerant, high-yielding crop varieties.

Plant responses to abiotic stresses have been a focal point of NIPGR research efforts. A very recent study in *Plant Cell Environment* revealed the involvement of OsDUF1 in regulating ROS metabolism under dehydration in rice, providing valuable insights into stress adaptation through dynamic changes in the mitochondrial proteome. Preservation of seed vigor and viability during seed storage are important concerns in agriculture. Research published in *New Phytologist* demonstrated the role of Methionine Sulfoxide Reductase B5, *OsMSRB5* in maintaining seed vigor and longevity in rice. Investigating the impact of low nitrogen conditions on plant physiology, another study in *Plant Physiology* identified key regulators like SIBEH4 that contribute to enhanced nitrogen use efficiency. These multidisciplinary studies collectively contribute to our understanding of plant biology, signaling, adaptation, and stress responses, with potential implications for crop improvement.

Understanding Plant-microbe/insect interactions has been a prime area of research at NIPGR. Global attention has been focused towards understanding the role of pathogenicity determinants to mitigate the threats arising out of the pathogen attack in agricultural field. A recent study using proteogenomic approach identified effector repertoire of *Macrophomina phaseolina*, a hemibiotrophic fungal pathogen causing stem rot disease in jute. In a recently concluded study, it

has been shown that the Indian oil seed plant *Brassica juncea* possesses an inherent propensity to retain iGSLs at lower levels for maximizing the overall growth and defense status and has maintained higher aGSLs for better tolerance and protection under natural environments. In addition, towards an overall goal of understanding the molecular basis of fungal eating property of a plant-associated bacterium, *Burkholderia gladioli* strain NGJ1, another recent study in Microbiology Spectrum demonstrated that the nicotinic acid (NA) catabolic pathway is required for mycophagy. Further, metabolomics approach has been deployed to dissect the plant defense/susceptibility mechanism against fall armyworm that is an invasive insect pest causing a severe threat to maize production in Africa and Asia. To provide impetus to the ongoing efforts, a new research group has been established at NIPGR which employs molecular biology, cell biology, and biochemistry techniques to identify key players in chickpea plant defense responses to improve plant resistance against *Helicoverpa* that is a major threat to chickpea production in India.

In the area of computational and structural biology at NIPGR, using extensive Biochemistry, Biophysics, X-ray crystallography, and *in silico* methodologies, SLX1-like protein has been identified in *Arabidopsis*. The study identified the C-terminal domain of At-SLX1 to be involved in autoinhibition as well as enforcing homodimerization of protein, thus facilitating Holliday Junction resolution through nick-and-counter-nick mechanisms. In addition, an efficient visual method for assessing the viability of pollen using digital holographic microscopy (DHM) has been developed. Imaging data reveals that quantitative phase information provided by the technique can be correlated with viability as indicated by the outcome of the colorimetric viability test. This method has been successfully tested on pollen grains of *Lantana camara*, a well-known alien invasive plant in the tropical world.

In the field of Nutritional traits in crops, a very recent article in New Phytologist have presented a comprehensive model for the genetic manipulation of flavonoid biosynthesis in the trichomes of chickpea to grow more nutritious crops with higher disease resistance. The R2R3-MYB transcription factor CaMYB39, a member of flavonol-specific SG7, has been identified as a trichome-specific transcriptional regulator that induces the biosynthesis of flavonols together with isoflavonoids and phenylpropanoid compounds in chickpea. In addition, towards the overall goal of developing genome-wide CRISPR-Cas9 mutant population in rice and improving the stability of rice bran, a pool library of Cas9-gRNA clones has been developed for selected 12,000 rice genes. Using multiplexed CRISPR-Cas9, four selected bran-specific lipases have been simultaneously knocked-out in rice, and different mutant combinations are being evaluated.

To sum up, the Institute has made significant progress in its research activities, which are reflected in high-quality publications and some promising technology leads. Apart from high quality research, publications and manpower training, the Institute is also striving hard to translate its findings. Some of the research is also leading to translational applications as evident from new plant lines that have either entered field trials or expected to enter the trials soon. The Institute is continuously upgrading its research infrastructure in order to effectively pursue the twin goals of conducting high-quality basic research and seeking its application towards product development. The efforts are ongoing to establish the Speed Breeding and High Throughput Phenotyping

platforms at NIPGR's Translational Centre at Bulandshahr. Development of Plant Computational Biology and Bioinformatics Facility, and expansion of Central Instrumentation Facility are also ongoing to give fillip to the research work. During the reporting period, the Institute has hosted several National/International Conferences/ Workshops/Symposia. As part of iConnect Event under ANB, the Institute organized a webinar on "Nutriomics for Better Health" which included talks by eminent scientists, poster presentations, exhibition of related technologies, etc. Institute had successfully organized and conducted a workshop on "Single cell genomics to unravel the Cellular circuitries in plants: From basic understanding to crop improvement" in the International Plant & Animal Genome Conference (PAG 30) held in San Diego, California, USA. The Workshop was attended by scientists, academicians, young researchers, and students from all over the world. As a public outreach, the institute has organized webinars under 'Science Setu' as a part of Azadi ka Amrit Mahotsav to commemorate "75 years of India's Independence" which has benefitted college students across the nation. The Institute has also participated in IISF 2022 and the National Conference 'Akash for Life' and showcased the R&D activities of the Institute. These events had been attended by eminent academicians, scientists, thought leaders, industry leaders, scholars, social workers and students. Furthermore, with an aim to promote science education and awareness amongst citizens, particularly for school teachers and students towards the initiative of Govt. of India for Samagra Shiksha Abhiyan and Jan-Bhagidari, DBT-NIPGR 'Pandit Jaiwant Ram Upmanu Science Museum' has been set up by the Institute at Govt. Boys' Senior Secondary School, Chamba, HP, (Aspirational District), as part of the celebrations by the Govt. of India, "Azadi ka Amrit Mahotsav", to commemorate 75 Years of Independence of India. The museum has been inaugurated by Shri Jai Ram Thakur, Hon'ble Chief Minister of Himachal Pradesh along with Shri Anurag Singh Thakur, Hon'ble Minister of Sports, Youth Affairs, Information & Broadcasting, and Dr. Jitendra Singh, Hon'ble Minister of State (I/C), Minister of Science & Technology & Earth Sciences, Government of India. It was noteworthy that many of NIPGR faculties and researchers were awarded prestigious honors/awards and fellowships in distinct areas for their significant contribution to plant science research during this period. Overall, the institute had made excellent progress in every endeavor it undertook in the last year and with the help of dedicated staff members, it is poised to steadily march forward in contributing to plant science and thereby the nation building.

Finally, it is a pleasure to acknowledge the contribution of fellow scientists, students, researchers, technical and administrative staffs of NIPGR for the overall development of a vibrant Institute. I would like to congratulate one and all, past and present members of NIPGR family for bringing together innovative science and science for society and wish a successful celebration of NIPGR Silver Jubilee. I would like to thank Dr. Senthil K. Muthappa, Dr. Gopaljee Jha and the team consisting of administrative/technical staff of NIPGR for their help in the preparation of this Annual Report.

Subhra Chakraborty
Director



Highlights of the Scientific Achievements

Highlights of the Scientific Achievements

The highlights of the scientific achievements of National Institute of Plant Genome Research during 2022-23 under six major research areas of the Institute are given below:

A. Genome analysis and molecular breeding

Deciphering complex genetic architecture of flowering time to develop early flowering, high-yielding chickpea variety

(PI: Parida Swarup K.)

Transcriptome analysis in four *desi* chickpea accessions with unique inflorescence characteristics identifies the underlying shared regulatory events leading to inflorescence development. The vegetative to reproductive stage transition brings about major changes in the transcriptome landscape. The inflorescence development progression associated genes identified through co-expression network analysis includes both protein-coding genes and long non-coding RNAs (lncRNAs). Few lncRNAs identified positively regulate flowering-related mRNA stability by acting competitively with miRNAs. Bulk segregant analysis and association mapping narrowed down an InDel marker regulating flowering time in chickpea. Deletion of 11 bp in first exon of a negative flowering time regulator, *Early Flowering 3a* gene, leads to early flowering phenotype in chickpea. A combinatorial genomics-assisted breeding and functional genomic strategy delineated functionally relevant novel alleles of a CLAVATA gene for which marker (haplotype)-assisted introgression led to development of the early flowering chickpea cultivars with high flower number and enhanced yield/productivity.

B. Development and signalling

A C2H2 zinc finger repressor from rice controls rice grain development

(PI: Agarwal Pinky)

The role of *REP2* in rice grain development has been identified here. This is a seed-specific gene, expressed at high levels in the developing endosperm. REP2 localizes to the nucleus and the nucleolus. It has a strong repression property because of the presence of the DLN motif. Its ectopic over expression in rice has severe detrimental effects on the plant. However, the knock out mutants generated by targeting the first zinc finger and the C-terminal nucleolar localization signal show that the grain length and weight are decreased while the grain width is increased. These grains are chalky, with altered starch structure. Their total protein content is also decreased. REP2 acts by binding to the C2H2 binding motif in the promoter of an SSP encoding gene. It also interacts with histone deacetylase to bring about its repressive function.

Delineating the role of miR164e-NAC100 module in chickpea seed maturation

(PI: Bhatia Sabhyata)

Here we report the novel role of miR164 in repressing seed maturation in chickpea which is attained by the inhibition of one of its downstream targets. Expression analysis revealed miRNA164 to be highly expressed during early embryogenesis, with most of its levels being contributed by precursor miRNA164e. *In-planta* cleavage and target mimic assays validated *CaNAC100*, encoding a nuclear-localized transcription factor, as a direct target of miR164e wherein the cleavage site was encompassed in the C-terminal region that conferred strong transactivation property to the target. Transgenic chickpea lines overexpressing *CaNAC100* in a seed-specific manner displayed a considerable improvement in the seed traits. Conversely, a significant downregulation of *CaNAC100* and seed maturation genes was evident in the seed-specific overexpression lines of Ca-miR164e. Electrophoretic mobility shift and Dual-luciferase assays confirmed the direct recruitment of CaNAC100 to promoters of seed maturation genes and their subsequent transactivation. Taken together, these salient findings would aid in devising novel strategies for tailoring improved chickpea varieties.

The CaWIP2 gene underlying a major QTL contributes to lateral root development in chickpea

(PI: Chattopadhyay Debasis)

To understand the genetic regulation of LRC, a biparental mapping population derived from two chickpea accessions having contrasting LRC was genotyped by sequencing and phenotyped to map four major quantitative trait loci (QTLs) contributing to 13 to 32% of the LRC trait variation. A SNP tightly linked to the locus contributing to highest trait variation was located on the coding region of a gene (CaWIP2) orthologous to WIP2 gene of *Arabidopsis thaliana*. A polymorphic simple sequence repeat (SSR) in the CaWIP2 promoter showed differentiation between low vs. high LRC parents and mapping individuals suggesting its utility for marker-assisted selection. CaWIP2 promoter showed strong activities in chickpea apical root meristem and lateral root primordia. Expression of CaWIP2 under its native promoter in *Arabidopsis wip2wip4wip5* mutant rescued its root-less phenotype to produce more lateral root than the wild type plants and led to formation of amyloplasts in the columella. CaWIP2 expression also induced expression of genes that regulate lateral root emergence. Our study identified a gene-based marker for LRC which will be useful to develop drought tolerant high-yielding chickpea.

Molecular mechanism of apical hook development in *Arabidopsis thaliana*

(PI: Jewaria Pawan Kumar)

Plant cells are enclosed in a complex cell wall which not only functions as a protecting barrier but also as a mechanical signaling hub responding to external and endogenous cues controlling morphogenetic processes. The cell wall component pectin is a highly complex polymer with three subdomains: homogalacturonan (HG), rhamnogalacturonan-I (RG-I), and RG-II. We discovered

a role for the RG-II, a highly complex but poorly understood cell wall component in regulating differential cell elongation during apical hook development. The MUR1 encodes an enzyme for making GDP-fucose which is required for xyloglucan and RG-II biosynthesis. The mur1 mutant, compromised in RG-II dimerization, reduced RG-II dimerisation leads to attenuated expression of polar auxin transport components, disrupting auxin maxima or minima causing severe defects in differential growth and hook development. We discovered that boron-mediated dimerisation of RG-II plays a key role in hormonal control of differential growth during apical hook development in Arabidopsis.

Nitric oxide regulates mitochondrial biogenesis in plants

(PI: Kapuganti Jagadis Gupta)

By imposing osmotic stress and recovery on Arabidopsis seedlings we investigated the site of NO production and role of NO in mitochondrial biogenesis. Osmotic stress reduced growth and mitochondrial number while increasing NO production. During the recovery phase from the stress mitochondrial number increased and this increase was higher in WT and the high NO-producing nsHb overexpression line in comparison to the NO-deficient nitrate reductase double mutant (nia1,2). Application of nitrite stimulated NO production and mitochondrial number in the nia1,2 mutant while an NO scavenger caused the opposite effect. Osmotic stress induced COX6b-3 and COA6-L genes encoding subunits of mitochondrial COX. The mutants COX6b-3 and COA6-L were impaired both in NO production and mitochondrial number during stress to recovery suggesting the involvement of these subunits in nitrite-dependent NO production. Finally, COX6b-3 and COA6-L interacted with the VQF motif in the presence of NO suggesting involvement of these subunits and the VQF motif in mitochondrial biogenesis.

Arabidopsis TOR kinase regulates phosphate deficiency response

(PI: Laxmi Ashverya)

Sugars regulate the Pi deficiency response in Arabidopsis. TOR kinase is a central coordinator of nutrient-dependent growth in eukaryotes. RNA interference line of TOR kinase showed a hypersensitive response of tori under phosphate deficiency. Estradiol-inducible TOR RNAi lines (tores1) showed a significant reduction in the expression of PSR genes. TOR kinase has an essential role in phosphate signaling, which was proven by increasing TOR activity (S6Kp/S6K level) in pi deficiency. Whole genome transcriptomic analysis further corroborated with the hypersensitive response of tori in phosphate deficiency. The transcriptomic analysis further suggested an increase in defense signaling in tori lines. This was validated by the reduced association of tori seedlings with *Piriformospora indica*. This indicates a role of TOR kinase in possibly interacting with pi signaling to manage the plant growth.

High ambient temperature restricts leaf size via PIF4- and TCP4- mediated direct control of cell cycle

(PI: Ranjan Ashish)

High ambient temperature suppresses Arabidopsis leaf area and elongates the stem and petiole. While the mechanism underlying the temperature-induced elongation response is extensively studied, the genetic basis of temperature regulation of leaf size is largely unknown. Here, we show that high temperature suppresses Arabidopsis leaf area by inhibiting cell division. Cellular phenotyping and genetic and biochemical analyses established the key roles of PIF4 and TCP4 transcription factors in the suppression of leaf area under high temperature by a reduction in cell number. We show that temperature-mediated suppression of cell proliferation requires PIF4, which interacts with TCP4 and regulates the expression of the cell cycle inhibitor KRP1 to control leaf size under high temperature. Warm temperature induces binding of both PIF4 and TCP4 to the KRP1 promoter. PIF4 binding to KRP1 under high temperature is TCP4 dependent as TCP4 regulates PIF4 transcript levels under high temperature. We propose a model where a warm temperature-mediated accumulation of PIF4 in leaf cells promotes its binding to the KRP1 promoter in a TCP4-dependent way to regulate cell production and leaf size.

MAP Kinase and Light: Phosphorylation of PIF3 by MPK6 is required for coordinated downstream regulations

(PI: Sinha Alok Krishna)

Based on the current findings and also previous reports, we propose that MPK6-PIF3 module regulates miRNAs functioning and genes involved in hypocotyl elongation development. Upon perception of RL, MPK6 gets activated and induces rapid phosphorylation and degradation of PIF3 which in turn directly binds to the G-Box element in the promoter of a set of RL-responsive miRNA genes and either induces or represses their expressions. Being a transcription factor, PIFs status affects diverse morphological changes associated with photomorphogenesis via altering several downstream PIF-regulated genes. Further studies are required to authenticate this proposition and uncover the mechanisms by which the MPK6-PIF3 cascade regulates miRNA biogenesis and hypocotyl development in Red light.

Peripheral vascular strand development in nodules is controlled by a bHLH/HLH heterodimer

(PI: Sinharoy Senjuti)

Only the Leguminosae family can develop root nodules with peripheral vasculature, an adaptation that grants them an advantage in optimizing nitrogen fixation efficiency. *Medicago truncatula* develops indeterminate nodules that possess peripheral vascular-strands encircling the central infection zone. How vascular-strands shifted from the nodule central part to the periphery remains unresolved. Here we show, Nodule Vascular bundle Development 1 is required for the proper organization of vascular strands. In *nvd1* nodules, vascular strands pass through the infection zone. NVD2, an HLH transcription factor that lacks a DNA-binding domain, is activated by NVD1. Mutant *nvd2* nodules display a similar partially central vasculature. NVD2 is expressed

along the nodule vascular bundle and NVD2:GFP fusion protein localizes to the nodule vascular endodermis. The formation of the peripheral vasculature is dependent on the proper stoichiometry of NVD1 and NVD2 heterodimers, as NVD2 controls NVD1-mediated transcriptional activation by sequestering NVD1. Our findings showed that the NVD1-NVD2 heterodimer plays a key role in the formation of an orderly peripheral vascular bundle around nodules.

Evolution and functional adaptation of WUS-CLV feedback loop and its related-gene families involved in the stem cell maintenance and cell identity transition

(PI: Soundararajan Prabhakaran)

Overall, results of our work illustrated that in the WUS-CLV feedback loop WUS and its interacting partners such as WUS, STM, LFY, AG, and KNU are maintained as duplicated copies. However, genes involved in signalling such as CLV1, CLV2, CLV3, and RPK2 are present as single copy only. All BAMs are present in multiple copies. In case of HAM2 and HAM3 maintained as single copies, HAM2 and HAM3 are present duplicated or triplicated copy numbers. Transcriptome analysis gave insight about the importance of *BAM* and *HAM* in the embryo development. During cold, and heat condition expression level homeologous genes are very similar either upregulated or downregulated except *BnHAM2* and *BnLEAFY*. However, differential expression between the homeologous genes was observed under drought condition. Most importantly, undergoing study showed that genes involved in WUS-CLV pathway on SAM and IM tissues showed differential expression between six varieties with distinct morphotypes.

Identification of novel molecules to control *Candida glabrata* infection

(PI: Thakur Jitendra K.)

Candida glabrata is the second most common cause of invasive fungal infections. Increasing levels of resistance to commonly used antifungal drugs indicate the need of search for novel antifungals. Multidrug resistance (MDR) is often caused by upregulation of drug efflux pumps by members of the fungal zinc-cluster transcription-factor family including Pdr1p. Earlier, we showed that Pdr1p of *Candida glabrata* directly binds to diverse drugs, and then interact with the KIX domain of Mediator subunit Med15 to recruit the transcriptional machinery on the promoter of drug efflux ABC transporter gene CDR1. This causes stimulated expression of CDR1 resulting into induction of MDR. So, now we are planning to target this particular pathway for the treatment of *Candida glabrata* infection. In this study, we have performed virtual screening of over 300,000 small molecules from six chemical libraries against the novel drug target, Med15 KIX domain of *C. glabrata*. The top six hits were selected from the highest scoring molecules and analyzed further by performing molecular dynamics simulation and binding free energy calculation. In experimental validation, two of the six molecules, Chebulinic acid and Ginsenoside, were confirmed to bind to the target using SPR analysis. Chebulinic acid was also found to inhibit the growth of *C. glabrata* in broth assays. This study suggests that Chebulinic acid, which is found in various plants, could be a promising new therapeutic agent for controlling infections caused by *Candida glabrata*.

C. Plant responses to abiotic stresses

Proteomic profiling of rice unveils OsDUF1's involvement in regulation of ROS metabolism under dehydration

(PI: Chakraborty Niranjana)

This study aimed to examine the growth responses of rice seedlings under dehydration, and investigate the corresponding changes in the mitochondrial proteome. We observed noticeable phenotypic alterations, such as leaf wilting and rolling, after 3 d of dehydration, which intensified at later stages. Concurrently, the study identified mitochondrial damage through modifications in mitochondrial ultrastructure. Quantitative proteomic analysis of the mitochondrial proteome led to the identification 101 dehydration-responsive proteins. Hierarchical clustering analysis unveiled temporal co-expression patterns among these dehydration-responsive proteins. Furthermore, the study discovered a previously uncharacterized protein, OsDUF1, as a marker of dehydration response. Through fluorescence imaging and immunoblot analysis, the study confirmed the presence of OsDUF1 in both mitochondria and chloroplasts. The substantial increase in OsDUF1 abundance in the mitochondria indicates its potential involvement in stress adaptation. Together, the results provide valuable insights into the molecular mechanisms underlying stress adaptation through dynamic changes in the mitochondrial proteome.

A citrate efflux transporter important for manganese distribution and phosphorus uptake in rice

(PI: Giri Jitender)

The plant citrate transporters, functional in mineral uptake and homeostasis, usually belong to the MATE transporter family. We identified and functionally characterized a rice citrate transporter, OsCT1, which differs from known plant citrate transporters and carries a bacterial citrate-metal transporter domain, CitMHS. OsCT1 showed citrate efflux activity *Xenopus laevis* oocytes and is localized to the plasma membrane. It expressed in the shoot and reproductive tissues of rice, and its promoter activity was visible in cells surrounding the vasculature. The *OsCT1* knockout lines showed a reduced citrate content in the shoots and in the root exudates. Further, the knockout and overexpression lines showed variations in the manganese (Mn) distribution leading to changes in their agronomical traits. Under deficient conditions, the supply of manganese towards newer leaf was found to be obstructed in the knockout line. Further, experiments in *Xenopus* oocytes revealed that OsCT1 could efflux citrate with Mn. Thus, we provide insights into a mechanism of citrate-metal transport in plants and its role in minerals homeostasis, which remains conserved with their bacterial counterparts.

Methionine Sulfoxide Reductase B5 plays a key role in preserving seed vigor and longevity in rice (*Oryza sativa*)

(PI: Majee Manoj)

Preservation of seed vigor and viability during seed storage are important concerns in agriculture. Herein, through molecular, biochemical, and genetic studies using seed-specific overexpression and RNAi lines of *OsMSRB5* in *Oryza sativa*, we demonstrate the role of Methionine Sulfoxide Reductase B5 in maintaining seed vigor and longevity. We show that age-induced reduced vigor and viability of seeds is correlated with reduced MSR activity and increased methionine sulfoxide (MetSO) formation. *OsMSRB5* expression increases during seed maturation and predominantly localizes in the embryo. Further analyses on transgenic lines reveal the role of *OsMSRB5* in modulating ROS homeostasis to preserve seed vigor and longevity. We show that APX and PIMT undergo MetSO modification in seeds that affect their functional competence. *OsMSRB5* physically interacts with these proteins and reverts this modification to facilitate their functions and preserve seed vigor and longevity of seeds. Our results thus illustrate the role of *OsMSRB5* in preserving seed vigor and longevity by modulating ROS homeostasis in seeds.

Role of miR169:NF-YA regulatory node in yield and thermotolerance in Arabidopsis and tomato

(PI: Mathur Saloni)

We report that plants improve their yield and heat stress tolerance through miR169 mediated downregulation of the transcription factor NF-YA. Tomato and Arabidopsis transgenic plants overexpressing *MIR169* as well as *At-nf-ya2* mutants show a link with increased yield and yield maintenance after heat stress. In contrast, tomato plants in which NF-YA cannot be cleaved (STTM169) and Arabidopsis plants overexpressing *At-NF-YA2*, or those expressing a non-cleavable *At-NF-YA2* form (miR169-resistant *At-NF-YA2*) and plants inhibited for *At-miRNA169d* regulation (miR169d mimic plants) are more sensitive to heat stress and have significantly reduced yield as compared to wild type plants. Therefore, we show that the miR169:NF-YA module plays an important role in increasing the yield of Arabidopsis as well as tomato under control conditions, and this increased yield is also maintained after heat stress.

SiHDA9 interacts with SiHAT3.1 and SiHDA19 to repress dehydration responses through H3K9 deacetylation in foxtail millet

(PI: Prasad Manoj)

The presence of H3K9ac on drought-responsive genes were identified through the comparative analysis of dehydration tolerant (cv. IC4) and sensitive (IC41) cultivars of foxtail millet. *SiHDA9*, showed significant upregulation in the sensitive cultivar during dehydration stress. *SiHDA9* overexpression in Arabidopsis thaliana conferred higher sensitivity to dehydration/drought stress than WT plants. Further, *SiHDA9* physically interacts with *SiHAT3.1* and *SiHDA19*. This complex is recruited through the *SiHAT3.1* recognition sequence on the upstream of drought-responsive genes to decrease H3K9 acetylation levels. The modulations in H3K9ac levels cause repression

of gene expression and induce drought-sensitivity in the sensitive cultivar. Overall, the study provides mechanistic insights into SiHDA9-mediated regulation of drought stress response in foxtail millet.

Investigating the mechanism of plant responses to low nitrogen condition

(PI: Singh Amar Pal)

To adapt under low nitrogen conditions, plants undergo various changes such as inhibited growth, root system reprogramming to explore deeper soil horizons for N exploration and exploitation. Brassinosteroids are plant hormones that play a crucial role in modulating plant physiology and developmental adaptations to nutrient stress. In this study, we investigated the role of tomato Brassinazole resistant (BES1/BZR1) homolog 4 (SIBEH4) protein in regulating nitrogen metabolism in *Solanum lycopersicon* cv. M82. Overexpression of *SIBEH4* promoted deeper root growth and improves plant physiology by adjusting the metabolic activity of the plant under low N conditions. Additionally, we show that SIBEH4 enhanced photosynthesis efficiency in the plants under low N conditions and improves soluble protein content. These findings suggest that SIBEH4 has a crucial role in plant adaptation to altered nitrogen regimes and can be a potential target for genetic manipulation to enhance nitrogen use efficiency in crops.

Delineating the role of phospholipases in abiotic stress tolerance in Chickpea (*Cicer arietinum*)

(PI: Singh Amarjeet)

Based on RT-qPCR expression analysis and promoter analysis few potential candidate phospholipase genes were selected for functional characterization. Two genes, *CaPLC3* and *CaPLDα2* were overexpressed in heterologous system Arabidopsis for functional analysis. Phenotype analysis was performed for three OE lines of both the genes under drought/osmotic stress conditions. Seedlings of overexpressing lines of *CaPLC3* and *CaPLDα2* showed longer primary root, higher germination rate, better plant growth and stress tolerance phenotype in agar-based media supplemented with mannitol. Phenotype analysis of *CaPLC3* and *CaPLDα2* OE lines at adult plant stage in soil was consistent with the seedling phenotype, and they showed improved plant growth, higher survival rate, higher chlorophyll content, and lesser water loss, electrolyte leakage and MDA content and enhanced stress tolerance in comparison to WT plants under drought/osmotic stress. Thus, both *CaPLC3* and *CaPLDα2* were found to be the positive regulators of drought/osmotic stress tolerance. In future, role of these genes in abiotic stress tolerance will be analysed in homologous system chickpea.

D. Plant-microbe/insect interactions

Molecular dissection of pathogenicity determinants and organellar function regulating effector triggered susceptibility in jute stem rot disease

(PI: Chakraborty Subhra)

Fungal phytopathogens rely on virulence determinants referred as effectors, which act as major player in the battlefield to suppress plant immunity, modify host cellular activities and successfully colonize the hosts. Using a combination of proteogenomic approaches we were able to predict effector repertoire of *Macrophomina phaseolina*, a hemibiotrophic fungal pathogen causing stem rot disease in jute. Among the identified conserved or core effector sets, we detected a significant number of known and novel candidate effectors indicating these proteins may be involved in general and specific infection strategies. These findings highlighted probable role of potential candidates for further characterization, and gave us fresh perspectives on the biology, lifestyle and interactions of *M. phaseolina* with jute. We have also presented the in-depth apoplastic proteome investigation of the rot disease in fibrous crop. Results delineated the events leading to pH regulation, proteolysis, pathogen recognition, and signaling. ECM proteome investigation clearly defines the events leading to wall remodeling, disease response mechanism, and signaling. Our research identified biologically significant disease responsive proteins that might be intriguing and can connect translational alterations to disease response.

Indole glucosinolate over-accumulation affects plant fitness and tolerance to biotic stress in oilseed *Brassica juncea*

(PI: Bisht Naveen Chandra)

We evaluated the consequence of constitutive iGSL over-accumulation in plant defense and fitness traits in a widely cultivated crop species *B. juncea*, grown for its vegetable, oilseed, and condiment values. In this study, we assessed the evolutionary relationship of candidate *MYB* genes governing the iGSL biosynthesis in *B. juncea*, performed overexpression of iGSL *MYBs* in *B. juncea*, and successfully achieved higher iGSL accumulations across all its tissue types. Furthermore, evaluating the consequences of iGSLs over-accumulation on the overall plant defense, growth and agronomical traits in *B. juncea* suggested that their over-accumulations not only maintain plants in sustained defense but also compromise their overall growth and fitness. Therefore, *B. juncea* at the metabolite level possesses an inherent propensity to retain iGSLs at lower levels for maximizing the overall growth and defense status and has maintained higher aGSLs for better tolerance and protection under natural environments. Current work also brings about the first indication of ‘the diminishing iGSL levels in crop species as indicated by the preference for iGSL induction over constitutive allocation in plants.

Nicotinic acid catabolism modulates bacterial mycophagy in *Burkholderia gladioli* strain NGJ1

(PI: Jha Gopaljee)

Burkholderia gladioli strain NGJ1 exhibits mycophagous activity on a broad range of fungi, including *Rhizoctonia solani*, a devastating plant pathogen. Here, we demonstrate that nicotinic acid (NA) catabolic pathway in NGJ1 is required for mycophagy. NGJ1 is auxotrophic to NA and it potentially senses *R. solani* as a NA source. Mutation in the *nicC* and *nicX* genes involved in NA catabolism renders defects in mycophagy and the mutant bacteria are unable to utilize *R. solani* extract as the sole nutrient source. As supplementation of NA, but not FA (fumaric acid, the end product of NA catabolism) restores the mycophagous ability of $\Delta nicC/\Delta nicX$ mutants, we anticipate that NA is not required as a carbon source for the bacterium during mycophagy. Notably, *nicR*, a MarR-type of transcriptional regulator that functions as a negative regulator of the NA catabolic pathway is upregulated in $\Delta nicC/\Delta nicX$ mutant and upon NA supplementation the *nicR* expression is reduced to the basal level in both the mutants. The $\Delta nicR$ mutant produces excessive biofilm and is completely defective in swimming motility. On the other hand, $\Delta nicC/\Delta nicX$ mutants are compromised in swimming motility as well as biofilm formation, potentially due to the upregulation of *nicR*. Our data suggest that a defect in NA catabolism alters the NA pool in the bacterium and upregulates *nicR* which in turn suppresses bacterial motility as well as biofilm formation, leading to mycophagy defects.

Investigation of early signaling events in chickpea upon insect herbivory

(PI: Meena Mukesh Kumar)

Plants have developed sophisticated defense mechanisms (constitutive and induced) to deal with a plethora of herbivores and pathogens. Upon herbivory, plants perceive damage-associated molecular patterns (DAMPs) and herbivore-associated molecular patterns (HAMPs) via receptors present on the plasma membrane of neighboring cells of wounding sites. DAMPs and HAMPs perception rapidly trigger cytosolic calcium (Ca²⁺) elevation and activate calcium signaling. Calcium and other early signaling mechanism lead to the activation of biosynthesis of plant defense hormone Jasmonate to mount adequate defense response to protect against herbivores. Our group is studying the early signaling events in important legume crop chickpea upon *Helicoverpa* infestation. *Helicoverpa* is a major threat to chickpea production in India and severely affects crop harvest. We will employ molecular biology, cell biology, and biochemistry techniques to identify key players in chickpea plant defense responses and develop sustainable strategies to improve plant resistance against insect pests.

Identifying the metabolomic basis of resistance and development of management tools against the invasive pest, Fall Armyworm *Spodoptera frugiperda* in Maize

(PI: Vadassery Jyothilakshmi)

Fall armyworm is an invasive insect pest causing a severe threat to maize production in Africa and Asia. We identified the metabolic basis of resistance in geographically diverse origin, resistant maize genotypes, CML 71 and DMRE 63, by metabolomic analysis. Using information theory framework, we found that global metabolite alteration in CML 71 and DMRE 63 leads to the biosynthesis of herbivory-specialized metabolites. Significant induction of jasmonates (JA, JA-Ile) and benzoxazinoids (BXs), specifically HDMBOA-Glc and HDM₂BOA-Glc accumulation contributes to higher defense in both resistant genotypes. DMRE 63 is genetically primed against herbivory due to high constitutive BXs levels, while CML 71 showed herbivore-induced resistance, including a drastic reduction in amino acid levels lowering its nutritional value. Constitutively elevated levels of inactive OH-JA, high expression of its biosynthetic genes *ZmJOXs*, failure to activate BX levels on herbivory, high herbivore-nutritive amino acids levels cause susceptibility in contrasting genotype, BML 6. Our study reveals a combined constitutive and induced metabolic basis of resistance/susceptibility of maize to FAW herbivory.

E. Computational and structural biology

Biochemical Characterization of At-SLX1 self-inhibitory mechanism

(PI: Gaur Vineet)

By means of extensive Biochemistry, Biophysics, X-ray crystallography, and *in silico* methodologies, we managed to establish the existence of SLX1-like protein among plants using *Arabidopsis* (named At-Slx1). We identified a novel autoinhibitory mechanism of At-SLX1 involved in regulating the robust and promiscuous nuclease activity of At-SLX1, a role played by a separate protein (named SLX4) in fungi and animals. We have also identified the C-terminal domain of At-SLX1 to be involved in autoinhibition as well as enforcing homodimerization of protein, thus facilitating Holliday Junction resolution through nick-and-counter-nick mechanisms.

Fusion transcript landscapes in plants

(PI: Kumar Shailesh)

Multiple fusion sites were found on the same fusion parental genes, thereby accounting for many fusion events without a concordant increase in the number of genes. A few non-nuclear DNA transcripts (mitochondrial or chloroplast) were involved in intra- and inter-chromosomal fusion formation, representing an intriguing class of functional chimeric transcripts in which non-nuclear genes are relocated to the nuclear genome by RNA intermediates, forming chimaeras with pre-existing nuclear genes, probably by retroposed gene copies. This type of gene fusion enabled the transfer of mitochondrial genes into the nucleus while maintaining mitochondrial functions. FTs in plants were more condition-specific than tissues and hence might play a more important role

under certain stress conditions. Many important DNA-binding proteins were discovered near the junction breakpoint of the fusion transcripts' parental genes. A few of fusion transcripts are coding for peptides. Genes in close spatial proximity, particularly intra-chromosomal FTs, were more likely to undergo fusion formation in these species.

Stress Combinations and their Interactions in Plants Database (SCIPDb): A comprehensive database for understanding combined stress responses in plants

(PI: Muthappa Senthil-Kumar)

This study introduces an artificial neural network (ANN) model that accurately predicts the affected parameter and the percentage change in its value resulting from different stressors. Our advanced composite deep learning model overcomes several challenges encountered in traditional machine learning approaches. It serves as a novel computational tool and lays a solid foundation for leveraging complex and multivariate combined stress datasets in future research, enabling better inference of their impact. The model can be applied to multiple crops and various stress combinations falling under major categories of abiotic and biotic stresses. Agronomists can benefit from this model as it facilitates the assessment of interactions between different biotic and abiotic stress factors. The performance of this innovative model has been thoroughly evaluated and validated using real wet lab data to predict the impact of drought and heat stress combinations on plants. Additionally, a comparative analysis of different activation functions, namely TANH, SELU, ELU, and RELU, was conducted. The findings revealed that the ELU activation function outperformed the others in this study.

Quantification of Pollen Viability of Invasive Species via Digital Holography

(PI: Yadav Gitanjali)

Pollen viability refers to the capacity of pollen to get mature and then fertilize, followed by development into seed and fruit. Quantification of viability enables estimation of male reproductive potential of entire species, cultivars and populations. However, viability estimation can be a time consuming, error prone and low scale process, even the fastest methods available today require overnight dye based staining. Here we report an efficient visual method for assessing the viability of pollen using digital holographic microscopy (DHM). Imaging data reveals that quantitative phase information provided by the technique can be correlated with viability as indicated by the outcome of the colorimetric viability test. We successfully test this method on pollen grains of *Lantana camara*, a well-known alien invasive plant in the tropical world. Our results show that pollen viability may be assessed accurately without the usual staining procedure and suggest that the DHM methodology can potentially be applied to a number of emerging areas in plant science, opening up new avenues for further research.

F. Nutritional traits in crops

Improvement of nutritional quality, postharvest fruit stability and pathogen resistance in edible crops

(PI: Datta Asis)

N-acetyl glucosamine (GlcNAc) is a ubiquitous amino sugar that functions as a structural component of a biological membrane that is involved in cell signalling in eukaryotes. Our research confirmed that different microbial pathogens exploit GlcNAc during colonization and survival inside the host. The pathway genes of GlcNAc catabolism is well characterized in several microbes. In this study, a transcriptional regulator of the GlcNAc catabolic pathway is reported for the first time in a filamentous fungus. In addition to this, a regulatory mechanism of MoNdt80 was also identified.

The R2R3-MYB-SG7 transcription factor CaMYB39 orchestrates surface phenylpropanoid metabolism and pathogen resistance in chickpea

(PI: Pandey Ashutosh)

Here, we identified the R2R3-MYB TF CaMYB39, a member of flavonol-specific SG7, as a trichome-specific transcriptional regulator that induces the biosynthesis of flavonols together with isoflavonoids and phenylpropanoid compounds in chickpea. CaMYB39 transactivated the promoters of several flavonol biosynthesis genes without requiring a bHLH co-activator. In agreement with this finding, we detected a strong correlation between the transcript levels of *CaMYB39* and other flavonol biosynthesis genes, which shaped the accumulation of metabolites in the transgenic lines overexpressing *CaMYB39* developing a lighter and brighter phenotypic change in leaves and seeds. Moreover, *CaMYB39* overexpression increased trichome density and enhanced accumulation of diverse flavonol derivatives in trichome-rich tissues. Moreover, *CaMYB39*-OE lines showed improved resistance against the *Aschochyta* blight disease caused by *Aschochyta rabiei* by limiting hyphal penetration. Taken together, we presented a comprehensive model for the genetic manipulation of flavonoid biosynthesis in the trichomes of chickpea to grow more nutritious crops with higher disease resistance.

Towards developing genome-wide CRISPR-Cas9 mutant population in rice and improving stability of rice bran

(PI: Ram Hasthi)

Traditionally, mutant populations in plants have been generated in a non-targeted and random fashion. However, using CRISPR-Cas9, which is a precise and targeted gene editing technology, we have developed a pool library of Cas9-gRNA clones for selected 12,000 rice genes. Analysis of this library through Sanger sequencing of edited plants have showed functionality of the library and good mutation efficiency. Furthermore, using multiplexed CRISPR-Cas9, we have simultaneously knocked-out four selected bran specific lipases in rice, and generated different mutant combinations and achieved T1 lines.



Publications and Patents

Publications

(April 2022 to March 2023)

2022

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2023

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Patents (April 2022 to March 2023)

S. No.	Title	Date of file/grant of patent
Patents Filed:		
1.	Recombinant expression cassettes for modification of glucosinolate content in plants (Complete Indian Application No. 202211034971)	17.06.2022
2	Pan-Genome Genotyping Array and Uses thereof (PCT/IN2022/050901)	07.10.2022
Patents Granted:		
1.	Compositions and methods for production of Transgenic plants having reduced glucosinolate levels	Indian Patent No. 411478 Dated: 15.11.2022
2.	Novel Protein Against Fungal Pathogens	Indian Patent No. 419162 Dated: 24.01.2023
3.	Novel Protein Against Fungal Pathogens	Canadian Patent No. 3,030,660 Dated:17.01.2023
4.	Method of producing virus tolerant and healthy crops against tomato leaf curl New Delhi Virus	Indian Patent No. 421543 Dated:14.02.2023

Awards and Honours

Awards and Honours

Faculty

Dr. Subhra Chakraborty

- ❖ Vivek Jyoti Samman Lifetime Achievement Award by Swami Vivekananda University, Kolkata, 2023.

Dr. Manoj Prasad

- ❖ Prof. KK Nanda Memorial Lecture Award-2022 by Indian Society for Plant Physiology, 2022.
- ❖ INSA - Silver Jubilee Commemoration Medal, 2023.

Dr. Gitanjali Yadav

- ❖ Hamied Fellowship Award, University of Cambridge, U.K, 2022.
- ❖ Elected Member, Governing Council, St Edmund's College, University of Cambridge (2022-25), 2022.

Dr. Naveen Chandra Bisht

- ❖ Fellow of the National Academy of Agricultural Sciences (NAAS), 2022.
- ❖ Fellow of the Indian Academy of Sciences (IAS), Bangalore, 2023.

Dr. Jagadis Gupta Kapuganti

- ❖ NASI - RELIANCE Platinum Jubilee Award, 2022.
- ❖ ABAP Senior Scientist Award, 2022.
- ❖ India - UK Achiever honours award at UK Parliament, 2023.
- ❖ Fellow of National Academy of Agricultural Sciences (FNAAS), 2023.
- ❖ National Startup Award from Startup India, 2023.

Dr. Gopaljee Jha

- ❖ Elected fellow of Guha Research Conference (GRC).

Dr. Senthil-Kumar Muthappa

- ❖ Fellow, National Academy of Sciences India (NASI), 2022.
- ❖ Senior Associate Editor, Applications in Plant Sciences, journal published by Botanical Society of America.
- ❖ Editor, Plant Physiology Reports published by Indian Society for Plant Physiology New Delhi.

Dr. Jitender Giri

- ❖ Appointed as an Editor in the journal “RICE”, 2022.
- ❖ Member, International Steering Committee for International Symposium for Rice Functional Genomics (ISRFG), 2022.

Dr. Swarup K. Parida

- ❖ Associate Editor – Genome Biology.

Dr. Pinky Agarwal

- ❖ Editor, Scientific Reports.
- ❖ Editor, Data in Brief.
- ❖ Enlisted in Women in STEM: Vanguarders of India @75 (Academicians and researchers), published by Confederation of Indian Industries (CII) and Department of Science and Technology (DST).
- ❖ Received SERB POWER grant.

Dr. Jyothilakshmi Vadassery

- ❖ DBT-Janaki Ammal - National Women Bioscientist Award, 2022.
- ❖ NASI- SCOPUS Young Scientist Award in Plant Science/Agriculture, 2022.

Dr. Aashish Ranjan

- ❖ Valuable Editor Award of Journal of Plant Biochemistry and Biotechnology by Springer Nature – Society for Plant Biochemistry and Biotechnology.

Dr. Shailesh Kumar

- ❖ Elected Member, National Academy of Sciences India (NASI), 2022.

Dr. Ashutosh Pandey

- ❖ Prof. Sushil Kumar Innovation Award (SKIA-2022), FloraFunna Science Foundation, 2022.

Dr. Mukesh Kumar Meena

- ❖ NASI-Platinum Jubilee Young Scientist Award, 2022.

Students

Dr. Ashish Prasad (PI: Dr. Manoj Prasad)

- ❖ NASI-Young Scientist Award, 2023.
- ❖ DST-INSPIRE Faculty Fellowship, 2023.

Dr. Namisha Sharma (PI: Dr. Manoj Prasad)

- ❖ Prof. S. K. Sopory Young Scientist Award – 2022, Indian Society for Plant Physiology, 2022.
- ❖ NIPGR Best Research Paper Award, 2022.
- ❖ NASI - Young Scientist Award, 2023.
- ❖ NAAS - Young Scientist Award, NAAS, New Delhi, 2023.
- ❖ Prof. Har Swarup memorial Award, INSA, 2023.
- ❖ Member INYAS – 2023, Indian National Young Academy of Sciences, 2023.

Ms. Apoorva Gupta (PI: Dr. Dr. Saloni Mathur)

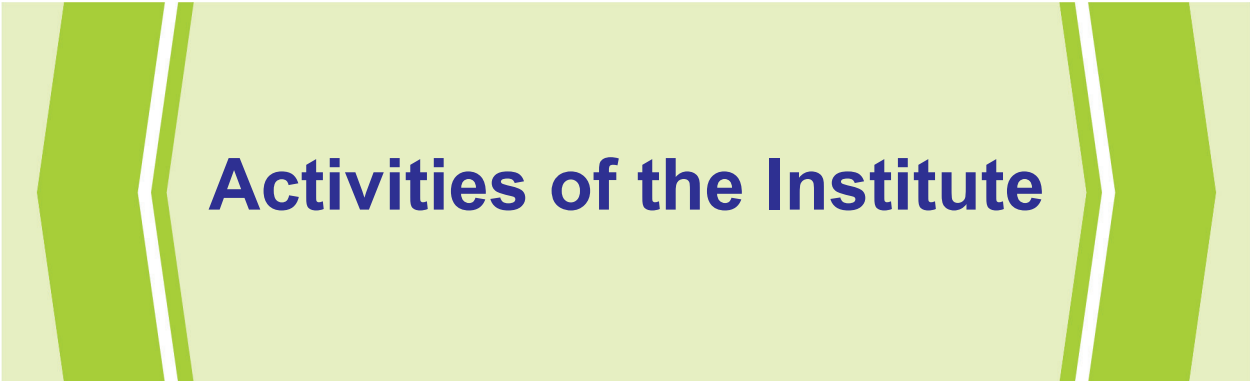
- ❖ DBT travel grant to attend and participate in the New Phytologist Next Generation Scientists Symposium, Estonia, 2022.

Ms. Jashri Rubina Das (PI: Dr. Saloni Mathur)

- ❖ Best oral presentation award at “Recent Trends in Plant Biology” conference (2022) at Srinagar, Jammu and Kashmir by CSIR-IIIM, 2022.

Ms. Shruti Mishra (PI: Jyothilakshmi Vadassery)

- ❖ Best research talk award at “International Plant Calcium Signaling Conference” University of Milan, Italy, 2022.



Activities of the Institute

International Visits

Dr. Subhra Chakraborty

- ❖ Visited Belfast, Northern Ireland to attend the International Congress for Arabidopsis Research Conference and to deliver an invited talk held during June, 2022.
- ❖ Visited John Innes Centre, Cambridge University, Oxford University and University College London, UK to discuss possible collaboration during June – July, 2022.
- ❖ Visited Cancun, Mexico to attend the Human Proteome Organization World Congress (HUPO 2022) during December, 2022.
- ❖ Visited San Diego, CA, USA to organize the International Plant & Animal Genome Conference (PAG-30) during January, 2023.

Dr. Niranjana Chakraborty

- ❖ Visited Cancun, Mexico to participate in 21th HUPO Congress, Cancun, Mexico, December, 2022.

Dr. Alok Krishna Sinha

- ❖ Visited Dr. Justin Lee's lab at Leibniz Institute of Plant Biochemistry, Halle (Saale), Germany, June - July, 2022.

Dr. Gitanjali Yadav

- ❖ 50 Years of Women in Science, Cambridge, U.K, September – October, 2022.
- ❖ The Path Forward with WHO and UN, London & Norwich, U.K, February, 2023.
- ❖ Sveriges Innovationsriksdag, Lund & Stockholm, Sweden, March, 2023

Dr. Jagadis Gupta Kapuganti

- ❖ Indo-German Joint Workshop (IGSTC), Department of Plant Physiology, Friedrich-Schiller University of Jena, Germany, July 2022
- ❖ Indo-Swiss project visit: University of Geneva, Switzerland.
- ❖ Visited UK Parliament for India-UK Achiever Honours, London, UK, January, 2023

Dr. Jitender Giri

- ❖ Visited University of Nottingham to deliver an invited talk in Indo-UK GCRF Networking Grant Meeting Workshop, October, 2022.

- ❖ Visited Phuket, Thailand to deliver an invited talk at International Symposium of Rice Functional Genomics (ISRFG), November, 2022.

Dr. Jyothilakshmi Vadassery

- ❖ Visited Max Planck Institute for Chemical Ecology, Jena Germany under the EMBO Global Investigator funding, June 2022.

Dr. Pawan Kumar Jewaria

- ❖ Visited Technical University of Munich, Germany for research purpose, August – November, 2022.

Dr. Mukesh Kumar Meena

- ❖ Visited Leibniz Institute of Plant Biochemistry, Halle, Germany for research project, September, 2022.

Students

Ms. Apoorva Gupta (PI: Dr. Saloni Mathur)

- ❖ Visited Estonia to attend the New Phytologist Next Generation Scientists Symposium, 2022.

Ms. Shruti Mishra (PI: Jyothilakshmi Vadassery)

- ❖ Visited and attended “International Plant Calcium Signaling Conference” University of Milan, Italy, July, 2022.

Mr. Ramgopal Prajapati (PI: Jyothilakshmi Vadassery)

- ❖ Visited and attended “International Plant Calcium Signaling Conference” University of Milan, Italy, July, 2022.

Invited Lectures

Dr. Subhra Chakraborty

- ❖ Delivered a lecture in the 9th International Congress of Society for Ethnopharmacology, India (SFEC-2022) organized by JSS College of Pharmacy, JSSAHER, Mysuru during April 22-24, 2022.
- ❖ Delivered a Keynote lecture in the 43rd Annual Meeting of Plant Tissue Culture Association (India) & International Symposium on Advances in Plant Biotechnology and Nutritional Security-2022 organized by NIPB, Delhi on April 30, 2022.
- ❖ Delivered Inaugural address in the “iCEN event under ANB on Nutriomics for better health” organized by National Institute of Plant Genome Research, New Delhi on June 01, 2022.
- ❖ Delivered an invited talk in the International Congress for Arabidopsis Research Conference, Belfast, Northern Ireland, UK during June 20 – 24, 2022.
- ❖ Delivered an Inaugural Talk as a Guest of Honour in the Kosambi International Webinar Series on Plant Genomics organized by Savitribai Phule Pune University on July 31, 2022.
- ❖ Delivered Valedictory Address as Chief Guest in Refresher Course in Life Sciences, DDU Gorakhpur University on August 5, 2022.
- ❖ Delivered an Inaugural Lecture as a Chief Guest in the Conference on “Emerging Trends in Genome Editing” organized by Amity University, Noida on August 7, 2022.
- ❖ Delivered a talk during the event on Azadi Ka Amrit Mahotsav organized by NASI on August 15, 2022.
- ❖ Delivered an invited talk in the Proteomics Society - International Conference on Proteins and Proteomics 2022 organized by CSIR-IICB, Kolkata during November 3-5, 2022.
- ❖ Delivered a talk in the Session on “Genetic transformation for crop improvement” in the International Conference on Food and Nutritional Security (iFANS-2023) organized by NABI, Mohali during January 5-8, 2023.
- ❖ Delivered a lecture in the session ‘One Health’- Leadership Talks’ in Startup Conclave, during IISF, 2023 on January 22, 2023.
- ❖ Delivered a Lecture on National Science Day-2023 at Institute of Advanced Study in Sc. & Tech. (IASST), Guwahati on February 28, 2023.
- ❖ Delivered a Keynote Lecture in the “Advances in Plants, Microbes and Agricultural Sciences” (APMAS-2023) organized by University of North Bengal on March 2, 2023.
- ❖ Delivered a talk in the Vivek Jyoti Samman Lifetime Achievement Award by Swami Vivekananda University, Kolkata on March 18, 2023.
- ❖ Delivered a Keynote Lecture in Botanical Congress 2023 organized by Calcutta University during March 23-25, 2023.

Dr. Niranjana Chakraborty

- ❖ Delivered lecture on Global profiling of dehydration-induced chloroplast dynamics and defense response in chickpea in 21th HUPO Congress, Cancun, Mexico, December 04 - 08, 2022.
- ❖ Delivered lecture in National Conference on “Biotechnology for Sustainable Development and Human Welfare” Department of Biotechnology, Jamia Hamdard, New Delhi, November 23 - 24, 2022.

Dr. Alok Krishna Sinha

- ❖ Delivered a lecture on topic entitled “A novel positive feedback mechanism of ABI5 phosphorylation by mitogen activated protein kinase-3 regulates ABA signaling in Arabidopsis” (online) at SUMO modification in cell signalling, Satellite, Montpellier, France, July 03 – 04, 2022.
- ❖ Delivered a lecture on a topic entitled “Signal Transduction in Plants and Protein-Protein Interaction” at Refresher Course in Life Science, under the aegis of UGC-HRDC, Department of Biochemistry, North-Eastern Hill University, August 03, 2022.
- ❖ Delivered lecture on a topic entitled “Dynamic phosphorylation of miRNA biogenesis factor, HYL1 by Mitogen-Activated Protein Kinase” at Recent Trends in Plant Biology, CSIR-IIIM, Srinagar, September 05 - 07, 2022.
- ❖ Delivered a lecture on a topic entitled “Regulation of Cell Cycle by Mitogen-Activated Protein Kinase in Rice” at Advances in Functional Genomics & Gene Editing, Department of Biotechnology, Panjab University, Chandigarh, November 18, 2022.
- ❖ Delivered a lecture on a topic entitled “Editing Mitogen-Activated Protein Kinase -3 (MPK3) in rice for crop improvement” at International Conference on Plant Genetic Engineering and Genome Editing, Central University of Kerala, Kasaragod, Kerala, November 27 - 29, 2022.
- ❖ Delivered a lecture on a topic entitled “Transduction of light signals by Mitogen- Activated Protein Kinase cascade at International Conference on Food and Nutritional Security (iFANS), NABI-Mohali, January 05 – 09, 2023.
- ❖ Delivered a lecture on a topic entitled “A MAPK cascade module working in blue light-mediated Arabidopsis seedling development” at 45th edition of the All-India Cell Biology Conference (AICBC), 2023, Department of Zoology, Banaras Hindu University (BHU), Varanasi, January 20 – 23, 2023.

Dr. Sabhyata Bhatia

- ❖ Delivered an invited lecture entitled “Dissecting the genetic and molecular basis of seed protein content (SPC) in chickpea (*Cicer arietinum* L.)” in workshop on “Utilizing germplasm to identify gene(s)/QTL(s) for root nodules in food legumes”, Division of Genetics, IARI, New Delhi, April 05 - 06, 2023.

Dr. Manoj Prasad

- ❖ Delivered a talk on “Feeding the 10 billion: A genomics perspective” at University of Kalyani, Kalyani, West Bengal, April 06, 2022.
- ❖ Delivered a talk on “Feeding the 10 billion: A genomics perspective” at Assam Agricultural University, Jorhat, Assam, April 07, 2022.
- ❖ Delivered a talk on “Feeding the 10 billion: A genomics perspective”/ Dept. of Botany, Ramjas College, at University of Delhi, New Delhi, April 11, 2022.
- ❖ Delivered a talk on “Climbing the Career Ladder: Roles of Mentors and Mentees” at 14th Young Investigators’ Meeting (YIM2022) India Bioscience (online), May 06, 2022.
- ❖ Delivered a talk on “Plant synthetic biology for climate-resilient agriculture: Progress and prospects” at Department of Biochemistry, NEHU, Shillong, Meghalaya, August 02, 2022.
- ❖ Delivered a talk on “Virus under siege: unravelling novel defense mechanism in plants” at Department of Botany, University of Lucknow, Lucknow, Uttar Pradesh October 15, 2022.
- ❖ Delivered a talk on “Virus under siege: unravelling novel defense mechanism in plants” at Department of Botany; Guwahati University; Guwahati, November 07, 2022.
- ❖ Delivered a talk on “Funding Opportunities for Infrastructure Development in Educational Hubs of Ballia” at JNCU, Ballia, Uttar Pradesh, November 23, 2022.
- ❖ Delivered a talk on Advances in Genomics Research and its Application in Crop Improvement at Integral University, Lucknow, Uttar Pradesh, December 01, 2022.
- ❖ Delivered a talk on ‘Virus under siege: unravelling novel defense mechanism in plants’ at NASI, Prayagraj, Uttar Pradesh, December 06, 2022.
- ❖ Delivered a talk on “Comparative transcriptomics to study heat stress tolerance in foxtail millet” at DBT-APSCS&T CoE for BRSD; Kimin, Arunachal Pradesh, December 12, 2022.
- ❖ Delivered a talk on “Feeding the 10 billion: A genomics perspective” at Pt. Ravishankar Shukla University, Raipur, Chhattisgarh, December 22, 2022.
- ❖ Delivered a talk on “Feeding the 10 billion: A genomics perspective” at University of Hyderabad, Hyderabad, Telangana, December 23, 2022.
- ❖ Delivered a talk on ‘Virus under siege: unravelling novel defense mechanism in plants’ at Department of Botany, University of Calcutta, Kolkata, December 28, 2022.
- ❖ Delivered a talk on “Heat shock proteins of foxtail millet (*Setaria italica*) for imparting climate resilient traits in cereals” at DBT-NABI, Mohali, Punjab, January 07, 2023.
- ❖ Delivered a talk on ‘Virus under siege: unravelling novel defense mechanism in plants’ at Ch. Charan Singh University, Meerut, Uttar Pradesh, January 21, 2023.
- ❖ Delivered a talk on “Climbing the Career Ladder: Roles of Mentors and Mentees” at IIT-BHU, Varanasi, Uttar Pradesh, January 22, 2023.
- ❖ Delivered a talk on “Feeding the 10 billion: A genomics perspective” at Lady Doak College, Madurai, Tamil Nadu, February 02, 2023.
- ❖ Delivered a talk on “Virus under siege: unravelling novel defense mechanism in plants” at BHU, Varanasi, Uttar Pradesh, February 11, 2023.

- ❖ Delivered a talk on “Feeding the 10 billion: A genomics perspective” at Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, February 17, 2023.
- ❖ Delivered a talk on “Genomic interventions for crop improvement to ensure food security in the current scenario of global climate change” at North Bengal University, Siliguri, West Bengal, March 02, 2023.
- ❖ Delivered a talk on “Advances in millet genomics for food and nutritional security” at Sri Krishna Arts and Science College, Coimbatore, Tamil Nadu, March 10, 2023.
- ❖ Delivered a talk on “Advances in millet genomics for food and nutritional security” at PSG College of Arts & Science, Coimbatore, Tamil Nadu, March 10, 2023.
- ❖ Delivered a talk on “Advances in millet genomics for food and nutritional security” at Assam Agricultural University, Jorhat, Assam, March 15, 2023.
- ❖ Delivered a talk on “Millets for climate-resilient agriculture: Story of a heat shock proteins” at Global Millet Conference-2023, ICAR-IARI, Pusa, New Delhi, March 19, 2023.
- ❖ Delivered a talk on “Advances in millet genomics for food and nutritional security” at Tripura University, Agartala, Tripura, March 21, 2023.
- ❖ Delivered a talk on “Feeding the 10 billion: A genomics perspective” at CSIR-CIMAP Foundation Day 2023, Lucknow, Uttar Pradesh, March 27, 2023.

Dr. Manoj Majee

- ❖ Delivered a talk entitled “Seed Survival – Drying without dying: Role of PIMT” at: National Seminar on “Progress of Plant Science in Post-Independence Era” (PPSPIE) to celebrate 75 years of Indian Independence, the Azadi ka Amrit Mahotsav, organized by Department of Botany and Forestry, Vidyasagar University, Midnapore, West Bengal, August 04, 2022.
- ❖ Delivered a talk entitled “PROTEIN L-ISOASPARTYL METHYLTRANSFERASE (PIMT): regulation and functions in seed survival” in National Conference on “Recent Trends in Plant Biology” at CSIR – Indian Institute of Integrative Medicine, Jammu Branch laboratory, Sanatnagar, Srinagar, Jammu & Kashmir, September 05 - 07, 2022.

Dr. Gitanjali Yadav

- ❖ Delivered a talk on “50 Years of Women at Cambridge”, Cambridge, UK, September, 2022.
- ❖ Delivered a talk on “Climate Data Justice”, United Nations, November, 2022.
- ❖ Delivered a talk on “Network Visualisation of Omics Datasets”, HMTV College, Jalandhar, March 10, 2023.
- ❖ Delivered a talk on “Chemical Arsenal of Invasive Plants”, Hansraj College, Delhi, March 15, 2023.
- ❖ Delivered a talk on “Cluster Twinning at Indo-Swedish Interface”, Lund University, Sweden, March, 2023.
- ❖ Delivered a talk on “Data Science for Agriculture”, KSU Stockholm, Sweden, March, 2023.
- ❖ Delivered a talk on “AI in Agri-Biology”, Norkoping Science Park, Sweden, March, 2023.

Dr. Ashverya Laxmi

- ❖ Delivered a talk on “Jasmonic Acid in concert with light and glucose signalling regulates lateral root branching angle in *Arabidopsis thaliana* seedlings” at ICAR-Belfast Conference, 2022.
- ❖ Delivered an invited talk on “Understanding role of sugar signal transduction in regulating plant growth development and stress responses” at 43rd Annual Meeting of Plant Tissue Culture Association (India) & International Symposium on Advances in Plant Biotechnology and Nutritional Security, 2022.
- ❖ Delivered a talk on “Sweet control of plant development” at International Conference on Food and Nutritional Security- iFANS, Mohali, Punjab, 2023.

Dr. Naveen Chandra Bisht

- ❖ Delivered an invited talk on “Improving oilseed mustard by CRISPR/Cas9-mediated genome editing” at ICAR-NIPB, New Delhi on April 29, 2022 during the 43rd Annual Meeting of Plant Tissue Culture Association (India)- PTCA (I) and International Symposium on “Advances in Plant Biotechnology and Nutritional Security” (APBNS-2022), April 28 - 30, 2022.
- ❖ Delivered an invited talk on “Basics of gene editing in plants” in a Workshop on “Genome editing in agriculture: Science, Potential and Policies” organized by Punjab Agricultural University, Ludhiana in association with National Agri-Food Biotechnology Institute (NABI), Mohali and Biotech Consortium India Limited (BCIL), New Delhi, May 11, 2022.
- ❖ Delivered an invited talk on “Genome editing for improving oil quality in mustard” on June 30, 2022, during the “National Workshop-cum-Webinar on Genome Editing” jointly organized by Glostem and INYAS, June 27 - July 03, 2022.
- ❖ Delivered a talk entitled “Genome Editing for Improving Oil Quality in Mustard” on July 23, 2022, in SERB, India sponsored 7-day workshop entitled: “CRISPR Genome Engineering: Hands-On training State-of-Art technology”, at Department of Biotechnology, Panjab University, Chandigarh, July 22 - 29, 2022.
- ❖ Delivered a guest speaker lecture at the 2nd Mentorship Workshop Programme under the DBT-Star College Scheme, organized at Meerut College, Meerut, Uttar Pradesh, August 07, 2022.
- ❖ Delivered a lecture on “Genome editing in polyploid crops: Brassica juncea a case study” under the NAHEP-CAAST Training Programme on “CRISPR-based Plant Genome Editing: Tools and Techniques” October 11 – 21, 2022.
- ❖ Delivered an invited talk on “Targeted engineering of glucosinolate transport in Indian oilseed mustard for higher nutritional value and uncompromised defense response” in a National Symposium on ‘Recent Developments in Plant Sciences for a Resilient Future’ organized by the Department of Botany, Delhi University, November 09 - 10, 2022.
- ❖ Delivered an invited talk entitled “Technical advancement in plant gene editing” during a workshop on ‘Genome Editing in Agriculture: Opportunities and Enabling Policies’ organized

by Tamil Nadu Agricultural University (TNAU), Coimbatore and Biotech Consortium India Limited (BCIL), New Delhi, November 29, 2022.

- ❖ Delivered a talk entitled “Trait improvement of Brassica crops by genome editing tool” on December 14, 2022 during the ICAR-NIPB Centre for Advanced Faculty Training on Genome utilization and editing of plant for useful trait, November 30 – December 20, 2022.
- ❖ Delivered a talk entitled “Targeted manipulation of glucosinolate transport in oilseed mustard for higher nutritional value and uncompromised defense response” on January 07, 2023 in the International Conference on Food and Nutritional Security (iFANS-2023) at Mohali jointly organized by NABI, CIAB, ICAR-NIPB and ICGEB, January 06 - 09, 2023.
- ❖ Delivered an invited talk entitled “Genome editing in Mustard: a case study” during winter school on “Development, Evaluation, and Biosafety Assessment of Genome Edited Crops: Hands-on Training” jointly organized by ICAR-Indian Institute of Rice Research and Agri Biotech Foundation, January 20 – February 09, 2023.
- ❖ Delivered an invited talk on “Improvement of Nutritional Quality in Crop Plants” at Faculty Development Program on “CRISPR/Cas9-mediated Genome Editing for Crop Improvement” sponsored by Gujarat State Biotechnology Mission, February 13 – 18, 2023.

Dr. Jagadis Gupta Kapuganti

- ❖ Delivered an invited talk at Indo-German workshop ‘The role of Phytooglobin-Nitric oxide cycle in anaerobic germination and submergence tolerance of deepwater rice’ at Department of Plant Physiology, Friedrich Schiller University of Jena, Germany, July 25 - 27, 2022
- ❖ Delivered an invited talk at 12th India-Japan Science and Technology Conclave Nitric oxide signaling in plants and its role in plant tolerance to low oxygen stress at University of Hyderabad, September 09 - 10, 2022.
- ❖ Delivered an invited talk on” The role of nitric oxide and under low oxygen stress in plants: Geneva Plant Seminar” University of Geneva, Switzerland, October 2022.
- ❖ Delivered a talk at International Conference on Food and Nutritional Security-iFANS 2023 at NABI, January 08, 2023.
- ❖ Delivered an invited talk at Current Trends and Future Prospects of Plant Biology (CTFPPB-2023), February 23, 2023.
- ❖ Delivered a National Science Day talk at University of Palampur, Himachal Pradesh, February 24, 2023.

Dr. Gopaljee Jha

- ❖ Delivered an invited talk on “Molecular intricacies of microbe-microbe interactions and utilization thereof in control of plant diseases” at Guha Research Conference 2021, Bhimtal, Nainital, Uttarakhand, April 22 - 26, 2022.
- ❖ Delivered an invited talk in BIIS-12 online workshop at SRISTI, Ahmedabad, June 13 - July 03, 2022.

- ❖ Delivered an invited talk on “Application of electron microscopy in plant biology” in DST-STUTI sponsored program on ‘Training in Biological electron microscopy’ AIIMS, SAIF, New Delhi, August 29 - September 04, 2022.
- ❖ Delivered an invited lecture entitled “Understanding of microbe-microbe interactions for effective control of plant diseases” in Recent Trends in Plant Biology, SKICC, Srinagar, Kashmir, September 05 – 07, 2022.
- ❖ Delivered an invited talk on “Exploiting microbe-microbe interactions for effective control of plant diseases” at 91st Annual Meeting of the Society of Biological Chemists (India), Biswa Bangla Convention Centre, Kolkata, December 08 – 11, 2022.
- ❖ Delivered an invited talk on “Understanding Microbe-Microbe Interactions for Effective Control of Plant Diseases” in Advances in Plant Biology 2022, Hansraj College, December 09, 2022.

Dr. Senthil-Kumar Muthappa

- ❖ Delivered a talk entitled “Sweet revenge: role for SWEET class of sugar transporters in plant defense and combined stress responses” at the conference on “Global Trends in Applied Sciences, Medical and Health Sciences (ICGTAMH-2022)”, REVA University Bangalore, October 29, 2022
- ❖ Delivered a talk at the seminar entitled “Stress Combinations and their Interactions in Plants (SCIPdb): A one-stop resource on combined stress responses in plants” on Innovative Approaches for Sustainable Agriculture Under Changing Climates at Indian Society for Plant Physiology West Zone Seminar at Navsari Agricultural University, Navsari, December 22, 2022.
- ❖ Delivered a talk to the school students DAV, Vasant Kunj on the topic ‘Stress interaction & combined stresses in plants’ December 27, 2022.
- ❖ Delivered a talk as a part of special lecture series on the topic “Sweet revenge: role for SWEET class of sugar transporters in plant defense” at Centre for Plant Molecular Biology and Biotechnology, Tamil Nadu Agricultural University, Coimbatore, January 05, 2023.
- ❖ Delivered a talk entitled “Chickpea under threat: the effects of changing climate on dry root rot disease” as a part of departmental invited talk series at Department of Plant Pathology, Sri Karan Narendra Agriculture University, Jobner, Rajasthan, March 25, 2023.

Dr. Jitender Giri

- ❖ Delivered an invited lecture on “Underground revolution: Roots can help achieving food security” in Mini-Symposium on “Plants in Changing Environment” IISER Mohali, April 01, 2022.
- ❖ Delivered an invited talk on “Roots are essential for sustainability” at InSTEM under Science Setu program, May 21, 2022.

- ❖ Delivered an invited talk at University of Nottingham in Indo-UK GCRF Networking Grant Meeting Workshop, October 9, 2022.
- ❖ Delivered an invited lecture on “Gene-editing: Basics, applications and a case study.” CCSU Meerut under STUTI program, January 21, 2023.
- ❖ Delivered an invited lecture on Underground revolution: Roots can help achieving food security” at Daulat Ram College, Delhi University, January 29, 2023.
- ❖ Delivered an invited lecture on “Gene-editing: Basics, applications and a case study.” at hands-on training programme at ICAR-Indian Institute of Rice Research (IIRR), Hyderabad, February 09, 2023.
- ❖ Delivered an invited talk on Membrane lipid remodelling for improving phosphate use efficiency in rice, at Hyderabad Central University in CTFPPB International Conference, February 25, 2023.

Dr. Saloni Mathur

- ❖ Delivered an invited talk on “Insights into the role of coding and noncoding RNAs in cultivar-biased regulation during heat stress in tomato” at 43rd Annual meeting of plant tissue culture association (India) & International Symposium on Advances in Plant Biotechnology and Nutritional Security-2022, National Agricultural Science Complex (NASC) New Delhi, April 29, 2022.
- ❖ Delivered a lecture as Keynote Speaker on “Elucidating the interactions between microRNAs and transcription factors in regulating heat stress response in Arabidopsis and tomato” at ‘MicCon22’ Department of Microbial Technology, School of Biological Sciences, Madurai Kamaraj University (MKU), Madurai September 17, 2022.
- ❖ Delivered an invited talk on “Novel heat stress responsive coding and noncoding RNA regulatory networks in contrasting tomato cultivars from Indian sub-continent” at American society for Plant Biologists (ASPB), Portland, Oregon USA, 2022.

Dr. Swarup K. Parida

- ❖ Delivered a talk on “Next-Generation Molecular Breeding for a Food Sufficient Future” in celebration of Azadi ka Amrit Mahotsav to Commemorate 75 years of Independence, DBT-Science Setu Webinar Series DBT - NIPGR, May 20, 2022.
- ❖ Delivered an invited lecture on “NGS based strategies of population genetics” in A Centre for Advanced Faculty Training (CAFT) on “Genome utilization and editing of plant for useful trait” ICAR-NIPB, December 07, 2022.

Dr. Pinky Agarwal

- ❖ Delivered an invited talk entitled “SUPER STARCHY1 Regulates Rice Grain Development” organized by SHAKTI and JNU, November 24 – 26, 2022.

Dr. Jyothilakshmi Vadassery

- ❖ Delivered talk on “Plant immune signalling against insect pests” in DBT- InStem, Bangalore, Science Setu Webinar Series, April 23, 2022.
- ❖ Delivered invited talk entitled “Plant perception of insect herbivory and role of ion channels in immune response” in the Frontiers Symposium in Biology 2022 at IISER, Trivandrum, May 1, 2022.
- ❖ Delivered an invited talk at the Institute Seminar Series on “Role of ion channels in plant immune response against herbivory” at Max Planck Institute for Chemical Ecology, Jena, Germany, June 7, 2022.
- ❖ Delivered an online talk on “Cyclic nucleotide gated channels in plant immune response against insect herbivory” in the India Investigator Network Series hosted by EMBO and ILS, Bhubaneshwar, June 09, 2022.
- ❖ Delivered expert talk on “Use of metabolomics for crop improvement” at the “Synergistic Training Program Utilizing Scientific and Technological Infrastructure (DST-STUTI)” program of Amity University, Haryana, August 24, 2022.
- ❖ Delivered a talk on “Plant Metabolomics - A novel and versatile tool for crop protection and enhancing productivity” for the Milestone Science Setu Webinar of NIPGR, October 28, 2022.
- ❖ Delivered invited talk (online) in the seminar series “How to Feed the World: Tales from leading Indian Plant Scientists” by Sci-ROI (Science and Research Opportunities in India), US, November 12, 2022.
- ❖ Delivered online invited lecture on “*Piriformospora indica* balances basal immunity and recruits host-derived metabolites for colonization” at National Conference on Emerging Challenges and Prospects in Biological Sciences, Department of Zoology, Sikkim University, January 24, 2023.
- ❖ Delivered an invited lecture on ““Life inside plant roots: How symbiotic fungi *Piriformospora indica* balances basal immunity and recruits host-derived metabolites for colonization” at NCBS Annual Talks 2023: “Patterns in Biology” at NCBS, Bangalore, January 24, 2023.
- ❖ Delivered invited lecture (online) at Department of Biochemistry, Tamil Nadu Agriculture University (TNAU)- PG training course on “Using Metabolomics in Crop Improvement”, January 28, 2023.
- ❖ Delivered an invited lecture (online) on “Plant Immunity against insect herbivory from cellular to metabolic scales” at Department of Plant Physiology, Matthias-Schleiden-Institute for Genetics, Bioinformatics and Molecular Botany, Friedrich-Schiller-University, Jena, Germany, January 31, 2023.
- ❖ Delivered invited lecture on “Symbiotic fungi *Piriformospora indica* balances basal immunity and recruits host-derived metabolites for colonization” at International Conference on ‘Current Trends and Future Prospects of Plant Biology (CTFPB-2023)’ University of Hyderabad, February 23 - 25, 2023.

- ❖ Delivered invited lecture (online) on “Symbiotic fungi *Piriformospora indica* balances basal immunity and recruits host derived metabolites for colonization” at Tamil Nadu Agriculture University (TNAU), Department of Microbiology, February 28, 2023.

Dr. Aashish Ranjan

- ❖ Delivered a lecture on “Leaf traits for crop yield and climate resilience” GCRF Networking Grant Meeting, New Delhi, January 04, 2023.
- ❖ Delivered an invited talk on “Integrated Transcriptomics to Elucidate Gene-Regulatory Networks for Plant Developmental Plasticity and Environmental Responses” at Plant & Animal Genome Conference 2023, San Diego, USA, January 18, 2023.

Dr. Senjuti Sinharoy

- ❖ Delivered a talk on “Divergent evolution shapes up the non-canonical and high nitrogen-fixing nodule development of peanut” at Molecular Intricacies of Plant Associated Microorganisms (MIPAM-2022) CDFD, Hyderabad (Online), February 17 -20, 2022.

Dr. Ashutosh Pandey

- ❖ Delivered an invited lecture on “Waste biomass to high-value and metabolite production; opportunities and challenges” in Faculty Development Program at CIAB, Mohali, April 01, 2022.
- ❖ Delivered a key lecture entitled “on Plant Tissue Culture: Securing Crop Productivity, Improving Crop Quality and Mitigating Crop Vulnerability” in SERB, India sponsored workshop “Plant Tissue Culture: Nature in Room” at Division of Genetics, Indian Agricultural Research Institute, June 03, 2022.
- ❖ Delivered an invited talk entitled “Phytochemistry & metabolomics to study the nutritional traits in photosynthetic organism” in International Workshop on “Synthetic biology of photosynthetic organism to produce value added products” at ICGEB, New Delhi, June 20, 2022.
- ❖ Delivered an expert talk in SERB, India-sponsored workshop entitled: “CRISPR Genome Engineering: Hands-On training State-of-Art technology”, at the Department of Biotechnology, Panjab University, Chandigarh, July, 28, 2022.
- ❖ Delivered an invited talk entitled “Emerging genome editing tools in food crops for enhancing nutritional value” in International Conference on Emerging Trends in Genome Editing organized by Amity Institute of Microbial Technology, Amity University, Uttar Pradesh, August 17, 2022.
- ❖ Delivered an expert talk on “Functional Genomics to Understanding Intricacies of Plant Specialized Metabolism and Development of Value-Added Crops” in STUTI, Hands-On Training Program on: “Advances in Functional Genomics & Gene Editing” at Department of Biotechnology, Panjab University, Chandigarh, November 18, 2022.

- ❖ Delivered a talk on “Functional Genomics to Understanding Intricacies of Plant Specialized Metabolism and Development of Value-Added Crops” at the award ceremony for Prof. Sushil Kumar Innovation Award (SKIA-2022) for significant contribution in the area of Metabolic engineering of banana and tomato organized by Flora Fauna Foundation, Lucknow, December 14, 2022.
- ❖ Delivered an expert talk on Pathway engineering in food crops for enhancing nutritional value and food security in International Conference on Advances in Biosciences and Biotechnology (ICABB-2023) at Department of Biotechnology, Jaypee Institute of Information Technology, Noida, January 19, 2023.

Dr. Prabhakaran Soundararajan

- ❖ Delivered a lecture on topic “Elucidating three-dimensional protein structure using computational approaches” in Training on “Sequence and structure analysis: Molecular modelling, docking, and simulation” (Online), Department of Plant Molecular Biology and Bioinformatics, Centre for Plant Molecular Biology and Biotechnology, Tamil Nadu Agricultural University, Tamil Nadu, July 22 - 23, 2022.
- ❖ Delivered a lecture on topic “Genome sequencing techniques: past, present, and future perspectives” in “Next generation sequencing data analysis” (Online), Department of Plant Molecular Biology and Bioinformatics, Centre for Plant Molecular Biology and Biotechnology, Tamil Nadu Agricultural University, Tamil Nadu), September 20 – 22, 2022.
- ❖ Delivered lecture on topic “Milestones in Genome Sequencing Techniques: Past, Present, and Future Perspectives” in “ADDON COURSE ON BIOINFORMATICS: TOOLS AND APPLICATIONS” (Online), Department of Zoology, Gargi College, University of Delhi, New Delhi, November 19, 2022.

Dr. Pawan Kumar Jewaria

- ❖ Delivered an invited lecture on topic entitled “MAP Kinase Regulation of PIN-FORMED Auxin Transporters in *Arabidopsis thaliana*” at Technical University of Munich, Freising, Germany, October 13, 2022.

Participation in National/International Conference/Workshops

Faculty

Dr. Subhra Chakraborty

- ❖ Participated in Brainstorming session: Application of genome editing in improving nutritional quality and reducing post-harvest losses in fruits and vegetables organized by NIFTEM, Kundli, Sonapat, Haryana on September 30, 2022.
- ❖ Chaired a session in the Proteomics Society - International Conference on Proteins and Proteomics 2022 organized by CSIR-IICB, Kolkata during November 3-5, 2022.
- ❖ Participated in the National Conference for “Akash for Life” at Uttaranchal University, Dehradun on November 5, 2022.
- ❖ Participated in HUPO 2022 World Congress organized by Human Proteome Organization in Cancun, Mexico during December 4-8, 2022.
- ❖ Chaired a Session on “Women in sustainable agriculture, production and consumption” STREE-2020 organized by JNU on November 25, 2022.
- ❖ Participated in Networking Grant Meeting with collaborating partners of Global Challenge Research Fund (GCRF) on “Improving crop yield in dry and Nutrient-Poor soils” held at NIPGR on January 4, 2023.
- ❖ Participated in the International Plant & Animal Genome Conference (PAG-30) and Chaired the Workshop entitled “Single cell genomics to unravel the cellular circuitries in plants; From basic understanding to crop improvement”, San Diego, CA, USA during January 13 – 18, 2023.
- ❖ Participated and Chaired a session in the India International Science Festival, organized by DBT in Bhopal during January 21-24, 2023.
- ❖ Participated in inaugural function of 16th CRSI-Royal Society of Chemistry joint symposium on “Health and Well-being” organized by Jawaharlal Nehru University, New Delhi on February 2, 2023.
- ❖ Participated in inaugural function of 30th CRSI National Symposium in Chemistry organized by Jawaharlal Nehru University, New Delhi on February 3, 2023.
- ❖ Participated in two-day online webinar series on ‘Fermentation: Interplay of Microbes, Immunity, and Nutrition’ organized by BIRAC during February 3-4, 2023.
- ❖ Participated in workshop/consultation on “Invigorating Organic Farming for Sustainable Food Systems and Aatmanirbhar Bharat” organized by NITI Aayog, NITI Bhawan, Sansad Marg on March 6, 2023.
- ❖ Chaired a Session in the 22nd Congress of the International Society for Ethnopharmacology organized by IBSD Imphal during February 24 – 25, 2023.
- ❖ Chaired a Session in the 8th International Conference on Molecular Signalling & 4th CeSin Symposium: Signaling in disease Management and Diagnostics” (ICMSCS-SDMD 2023) organized by IICB, Kolkata during March 16-18, 2023.

Dr. Niranjan Chakraborty

- ❖ Participated in Proteomics Day' at BITS Pilani KK Birla Goa campus, March 18, 2023.

Dr. Debasis Chattopadhyay

- ❖ Participated in National conference on 'Recent Trends in Plant Biology' at IIIM, Srinagar, September 05, 2022.

Dr. Manoj Prasad

- ❖ Participated in XLV All India Botanical Conference at Department of Botany, University of Lucknow, Lucknow, Uttar Pradesh, October 14 – 16, 2022.
- ❖ Participated in International Conference on “Role of Living Legends in Holistic Development of Ballia” at JNCU, Ballia, Uttar Pradesh, November 23, 2022.
- ❖ Participated in International seminar on Plant & Microbes: Health & Food at Dept. of Botany, University of Calcutta, Kolkata, December 28, 2022.
- ❖ Participated in International conference on food and nutritional security (iFANS-2023), DBT-NABI, Mohali, January 06 - 09, 2023.
- ❖ Participated in National Brainstorming Sessions on Empowering Young Scientists of India at IIT-BHU, Varanasi, January 24 - 25, 2023.
- ❖ Participated in International conference entitled “Exploring New Horizons in Biotechnology (ENB-2023)” at School of Biotechnology, BHU, Varanasi, February 10 – 12, 2023.
- ❖ Participated in International conference on 'Current Trends and Future Prospects of Plant Biology (CTFPPB-2023) at School of Life Sciences, University of Hyderabad, Hyderabad, February 23 - 25, 2023.
- ❖ Participated in International Conference on “Advances in Plants, Microbes and Agricultural Sciences” (APMAS-2023) at Department of Botany, North Bengal University, Siliguri, West Bengal, March 02 - 04, 2023.
- ❖ Participated in Global Millet Conference - 2023, ICAR-IARI, Pusa, New Delhi, March 18-20, 2023.

Dr. Manoj Majee

- ❖ Participated and delivered a talk on Seed Survival –Drying without dying: Role of PIMT at National Seminar on “Progress of Plant Science in Post-Independence Era” (PPSPIE) to celebrate 75 years of Indian Independence, the Azadi ka Amrit Mahotsav, Organized by Department of Botany and Forestry, Vidyasagar University, August 04, 2022.
- ❖ Participated and delivered an invited talk on PROTEIN L-ISOASPARTYL METHYLTRANSFERASE (PIMT): regulation and functions in seed survival in National Conference on “Recent Trends in Plant Biology” CSIR – Indian Institute of Integrative Medicine, Jammu, J&K, India, September 05 - 07, 2022.

Dr. Gitanjali Yadav

- ❖ Participated in “National Frontiers of Science” Meeting, Parwanoo, Himachal Pradesh, March 13 - 15, 2022.
- ❖ Participated in “50 Years of Women at Cambridge”, Cambridge, U.K, September, 2022.
- ❖ Participated in “Sveriges Innovationsriksdag”, Sweden, March, 2023.

Dr. Ashverya Laxmi

- ❖ Participated and delivered a talk on Jasmonic Acid in concert with light and glucose signalling regulates lateral root branching angle in *Arabidopsis thaliana* seedlings ICAR conference Belfast, UK, 2022.
- ❖ Participated in 43rd Annual Meeting of Plant Tissue Culture Association (India) & International Symposium on Advances in Plant Biotechnology and Nutritional Security-2022 organized by PTCA and delivered invited talk on “Understanding role of sugar signal transduction in regulating plant growth development and stress responses”, 2022.
- ❖ Participated and delivered a talk on “Sweet control of plant development” at International Conference on Food and Nutritional Security (iFANS), NABI-Mohali, January 05 – 09, 2023.

Dr. Jagadis Gupta Kapuganti

- ❖ Participated and delivered an invited talk at Indo-German workshop, Department of Plant Physiology, Friedrich Schiller University of Jena, Germany July 25 - 27, 2022.
- ❖ Participated and delivered an invited talk at 12th India-Japan Science and Technology Conclave, University of Hyderabad, September 09 - 10, 2022.
- ❖ Participated and delivered an invited talk at Geneva Plant Seminar, University of Geneva, October 2022.
- ❖ Participated in International Conference on Food and Nutritional Security-iFANS, NABI, Mohali, 2023.

Dr. Gopaljee Jha

- ❖ Participated and delivered an invited talk on “Molecular intricacies of microbe-microbe interactions and utilization thereof in control of plant diseases” at Guha Research Conference 2021, Bhimtal, Nainital, Uttarakhand, April 22 - 26, 2022.
- ❖ Participated and delivered an invited talk in BISS-12 online workshop at SRISTI, Ahmedabad, June 13 - July 03, 2022.
- ❖ Participated and delivered an invited talk on “Application of electron microscopy in plant biology” in DST-STUTI sponsored program on ‘Training in Biological electron microscopy’ AIIMS, SAIF, New Delhi, August 29 - September 04, 2022.
- ❖ Participated and delivered an invited lecture entitled “Understanding of microbe-microbe interactions for effective control of plant diseases” in Recent Trends in Plant Biology, SKICC, Srinagar, Kashmir, September 05 – 07, 2022.

- ❖ Participated and delivered an invited talk on “Understanding Microbe-Microbe Interactions for Effective Control of Plant Diseases” in Advances in Plant Biology 2022, Hansraj College, December 09, 2022.
- ❖ Participated and delivered an invited talk on “Exploiting microbe-microbe interactions for effective control of plant diseases” at 91st Annual Meeting of the Society of Biological Chemists (India), Biswa Bangla Convention Centre, Kolkata, December 08 – 11, 2022.

Dr. Senthil-Kumar Muthappa

- ❖ Participated in the conference “Global Trends in Applied Sciences, Medical and Health Sciences (ICGTAMH-2022)” at REVA University, Bangalore, October 28 – 29, 2022
- ❖ Participated in the seminar on Innovative Approaches for Sustainable Agriculture Under Changing Climates organized by Indian Society for Plant Physiology at Navsari Agricultural University, Navsari, December 21 – 22, 2022.

Dr. Jitender Giri

- ❖ Participated and delivered a talk in workshop on Gene-editing at Punjab University, Chandigarh, July 26, 2022.
- ❖ Participated and delivered invited lecture at 7th Symposium on Phosphorus in Soils and Plants, at Montevideo, Uruguay (online), October 04, 2022.
- ❖ Participated and delivered an invited talk at University of Nottingham in Indo-UK GCRF Networking Grant Meeting Workshop, October 09, 2022.
- ❖ Participated and delivered an invited talk at International Symposium of Rice Functional Genomics (ISRFG) at Phuket, Thailand, November 06, 2022.
- ❖ Participated and delivered an invited lecture on “Gene-editing: Basics, applications and a case study” under STUTI program at CCSU Meerut, Uttar Pradesh, January 21, 2023.
- ❖ Participated and delivered an invited lecture on “Gene-editing: Basics, applications and a case study” at hands-on training programme at ICAR-Indian Institute of Rice Research (IIRR), Hyderabad, February 09, 2023.
- ❖ Participated and delivered an invited talk on Membrane lipid remodelling for improving phosphate use efficiency in rice, Hyderabad Central University in CTFPPB International Conference, February 25, 2023.

Dr. Saloni Mathur

- ❖ Participated and delivered an invited talk at 43rd Annual meeting of plant tissue culture association (India) & International Symposium on Advances in Plant Biotechnology and Nutritional Security-2022, National Agricultural Science Complex (NASC) New Delhi April 29, 2022.
- ❖ Participated and delivered an invited talk on Elucidating the interactions between microRNAs and transcription factors in regulating heat stress response in Arabidopsis and tomato in ‘MicCon22’ Department of Microbial Technology, School of Biological Sciences, Madurai Kamaraj University (MKU), Madurai, September 17, 2022.

- ❖ Participated as Director's nominee at STREE 2020, National Conference & Expo: Role of Women in Science and Technology for sustainable Development of Atmanirbhar Bharat. Convention Centre JNU, New Delhi, November 24 – 26, 2022.
- ❖ Participated and delivered an invited talk on “Novel heat stress responsive coding and noncoding RNA regulatory networks in contrasting tomato cultivars from Indian sub-continent” at American society for Plant Biologists (ASPB), Portland, Oregon USA, 2022.

Dr. Pinky Agarwal

- ❖ Participated in STREE 2020 at JNU, November 24 – 26, 2022.

Dr. Senjuti Sinharoy

- ❖ Participated and served as a mentor and experience sharing by Ramalingaswami Re-entry and MK Bhan - Young Researcher Fellowship Joint Conclave 2022-23 at Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, Kerala, November 30 – December 03, 2022.

Dr. Amar Pal Singh

- ❖ Coordinated the iCEN13 Agri-Nutri & Biotech (ANB) June 01, 2022.
- ❖ Participated and coordinated in Biotech Start-up Expo 2022 held at Pragati Maidan, New Delhi, June 09 – 10, 2022.
- ❖ Participated and coordinated the NIPGR activity in the National Conference on “Akash for Life” at Uttaranchal University, Dehradun, Uttarakhand, November 04 – 07, 2022.
- ❖ Participated and coordinated for setting up the Science Museum at the GBSSS Chamba Himachal Pradesh.

Dr. Shailesh Kumar

- ❖ Participated in “Whole Genome Assembly and annotations with Next Generation Sequencing datasets.”, DBT Apex BTIC, ICGEB, New Delhi, July 20, 2022.
- ❖ Participated in International conference at Amity University, Noida, Uttar Pradesh, August 17, 2022.
- ❖ Participated in “Role of big data analysis to design the improved plant varieties for human health”, at Indraprastha Institute of Information Technology Delhi (IIIT-D), New Delhi, October 19, 2022.
- ❖ Participated in International conference at School of Agriculture, Vellore Institute of Technology, Vellore, December 04, 2022.
- ❖ Participated in National conference on Database management ICAR-NIPB on Centre for Advanced Faculty Training (CAFT), New Delhi, December 6, 2022.

Dr. Ashutosh Pandey

- ❖ Participated and delivered an invited lecture in Faculty Development Program at CIAB, Mohali on 1st April 2022.

- ❖ Participated and delivered a key lecture in workshop “Plant Tissue Culture: Nature in Room” at Division of Genetics, Indian Agricultural Research Institute, June 03, 2022.
- ❖ Participated and delivered an invited talk in International Workshop on “Synthetic biology of photosynthetic organism to produce value added products” ICGEB, New Delhi, June 20, 2022.
- ❖ Participated and delivered an expert talk in workshop entitled: “CRISPR Genome Engineering: Hands-On training State-of-Art technology”, at Department of Biotechnology, Panjab University, Chandigarh, July, 28, 2022.
- ❖ Participated and delivered an invited talk in International Conference on “Emerging Trends in Genome Editing” organized by Amity Institute of Microbial Technology, Amity University, Uttar Pradesh, August 17, 2022.
- ❖ Participated and delivered an expert talk in Hands-On Training Program on: “Advances in Functional Genomics & Gene Editing” at the Department of Biotechnology, Panjab University, Chandigarh, November 18, 2022.
- ❖ Participated and delivered a talk on the award ceremony for Prof. Sushil Kumar Innovation Award (SKIA-2022) for significant contribution in the area of Metabolic engineering of banana and tomato organized by Flora Fauna Foundation, Lucknow, December 14, 2022.
- ❖ Participated and delivered an expert talk in International Conference on Advances in Biosciences and Biotechnology (ICABB-2023) at Department of Biotechnology, Jaypee Institute of Information Technology, Noida, January 19, 2023.

Dr. Pawan Kumar Jewaria

- ❖ Participated and chaired a session in Imaging Workshop at TUM “Seeing is believing” Technical University of Munich, Germany, October 13, 2022.
- ❖ Participated in symposium on “Opportunities for frontier research collaborations by the Human Frontier Science Program (HFSP)” at NII, New Delhi, India, February 10, 2023.
- ❖ Participated in National Science Day 2023 at NIPGR, New Delhi, February 28 - March 01, 2023.

Dr. Hasthi Ram

- ❖ Participated in Workshop at Pondicherry University, September 2022.
- ❖ Participated in Nutrient partitioning in rice grain at Mohanlal Sukhadia University, Udaipur, March 15 - 16, 2023.

Students

Mr. Mohit Kumar (PI: Dr. Subhra Chakraborty)

- ❖ Participated in Proteomics Society of India-International Conference on Proteins and Proteomics 2022 organized by CSIR-IICB, Kolkata during November 3-5, 2022.

Ms. Pragya Nalwa (PI: Dr. Subhra Chakraborty)

- ❖ Participated in Proteomics Society of India-International Conference on Proteins and Proteomics 2022 organized by CSIR-IICB, Kolkata during November 3-5, 2022.

Ms. Atreyee Sengupta (PI: Dr. Subhra Chakraborty)

- ❖ Participated in Proteomics Society of India-International Conference on Proteins and Proteomics 2022 organized by CSIR-IICB, Kolkata during November 3-5, 2022.

Mr. Sunil Kumar (PI: Dr. Subhra Chakraborty)

- ❖ Participated in Proteomics Society of India-International Conference on Proteins and Proteomics 2022 organized by CSIR-IICB, Kolkata during November 3-5, 2022.

Ms. Jaishri Rubina Das (PI: Dr. Saloni Mathur)

- ❖ Participated and delivered an oral talk on ‘HSFA7 and Sly-MIR4200:HSFB4a modulate high-temperature tolerance in cultivar-biased manner in tomato’ at Recent Trends in Plant Biology Conference at Srinagar, Jammu and Kashmir, September 05 - 07, 2022.

Ms. Monika Shrivastava (PI: Dr. Saloni Mathur)

- ❖ Participated and presented a poster on Investigating the impact of DNA polymorphism on heat stress response in contrasting tomato cultivars at International Symposium on “Advances in Plant Biotechnology and Nutritional Security” (APBNS-2022), April 28 – 30, 2022.
- ❖ Participated and presented a poster on Delving into the impact of DNA polymorphism in tomato cultivars showing contrasting response to heat stress at National Conference on “Recent Trends in Plant Biology” by CSIR-IIIM, September 05 – 07, 2022.

Mr. Adesh (PI: Dr. Saloni Mathur)

- ❖ Participated and presented a poster on “A comparative analysis of miRNome from contrasting tomato cultivars revealing their thermotolerance and tissue specific roles” at National Conference On “Recent Trends in Plant Biology” conducted by CSIR- IIIM, Srinagar, September 05 – 07, 2022.

Ms. Apoorva Gupta (PI: Dr. Saloni Mathur)

- ❖ Participated and presented a poster on “Deciphering the role of a HSF:miR169:NF-YA feedback loop in Arabidopsis and tomato thermotolerance” at New Phytologist Next Generation Scientists Symposium, Estonia, July 19 – 22, 2022.
- ❖ Participated and presented a poster on “A novel microRNA-mediated regulatory network confers thermotolerance in Arabidopsis and tomato” at National Conference on Recent Trends in Plant Biology, organised by IIIM Kashmir, September 05 – 07, 2022.
- ❖ Participated and presented a poster on “Elucidating the role of microRNA169:NF-YA module in heat stress” at 43rd Annual Meeting of Plant Tissue Culture Association (India) International Symposium on Advances in Plant Biotechnology and Nutritional Security (APBNS-2022), IARI, New Delhi, April 28 – 30, 2022.

Ms. Jaishri Rubina Das (PI: Dr. Saloni Mathur)

- ❖ Participated and presented a poster (Online) on “Cultivar-biased regulation of HSFA7 and Sly-MIR4200: HSFB4a in governing thermotolerance in contrasting tomato cultivar from Indian sub-continent” (2022) at New Phytologist Next Generation Scientists Symposium, Estonia, July 19 – 22, 2022.

Ms. Antima Yadav (PI: Dr. Pinky Agarwal)

- ❖ Participated and presented a poster presented by Antima Yadav at “National Conference on Recent Trends in Plant Biology” entitled “Putative miRNA-target modules controlling rice grain size”, Indian Institute of Integrative Medicine, Srinagar, September 05 – 07, 2022.

Dr. Balasubramiam (PI: Dr. Jyothilakshmi Vadassery)

- ❖ Participated and presented a poster on “Towards structure determination of plant cyclic nucleotide-gated channel- CNGC19: a key channel in calcium cascade against herbivory defense” in EMBO practical course- Cryo Electron Microscopy and 3D Image processing (CEM3DIP) at IISER, Pune, December 04 - 16, 2022.

Dr. Sameer Dixit (PI: Dr. Jyothilakshmi Vadassery)

- ❖ Participated and presented a poster on “Screening and identification of *Spodoptera litura* effectors proteins using RNA interference and its functional validation in plants” at Ramalingaswami Re-Entry Fellowship & MK Bhan, Young Researcher Fellowship Joint Conclave 2022-23 at RGCB, Trivandrum, December 01, 2022.

Ms. Shruti Mishra (PI: Dr. Jyothilakshmi Vadassery)

- ❖ Participated and delivered an oral presentation on “Identification of novel genes involved in calcium-mediated jasmonate perception in Arabidopsis” at International Plant Calcium Signaling Conference at University of Milan, Italy, July 11 - 13, 2022.

Dr. Ramgopal Prajapati (PI: Dr. Jyothilakshmi Vadassery)

- ❖ Participated and presented a poster on “Cyclic Nucleotide Gated Channel 19 (CNGC19) is an important calcium channel regulating Arabidopsis defence against Spodoptera herbivory” in International Plant Calcium Signaling Conference at University of Milan, Italy, July 11 - 13, 2022.

Mr. Vinod Kumar Prajapati (PI: Dr. Jyothilakshmi Vadassery)

- ❖ Participated and virtually attended 25th Biennial International Plant Resistance to Insects Workshop (25IPRI), Malmo, Sweden, May 31 - June 02, 2022.

Mr. Anirban Chakraborty, Mr. Alim Junaid, Dr. Swarup K. Parida, Dr. Sabhyata Bhatia (PI: Dr. Sabhyata Bhatia)

- ❖ Participated and presented a poster on “Delineation of novel QTL(s) and a potential candidate gene regulating seed protein content of chickpea” at International Conference on Food & Nutritional Security & 5th International Plant Physiology Congress & 44th Annual Meeting of Plant Tissue culture Association (India), NABI, January 06 - 09, 2023.

Ms. Sapna Sharma, Dr. Sabhyata Bhatia (PI: Dr. Sabhyata Bhatia)

- ❖ Participated and presented a poster on “Dissecting the genetic basis of seed carotenoid content in lentil” at International Conference on Food & Nutritional Security & 5th International Plant Physiology Congress & 44th Annual Meeting of Plant Tissue culture Association (India), NABI, January 06 - 09, 2023.

Ms. Manisha Yadav, Dr. Sabhyata Bhatia (PI: Dr. Sabhyata Bhatia)

- ❖ Participated and presented a poster on “Understanding the labyrinth of TF CabHLH mediated root nodule development in chickpea (*Cicer arietinum* L)” at International Conference on Food & Nutritional Security & 5th International Plant Physiology Congress & 44th Annual Meeting of Plant Tissue culture Association (India), NABI, January 06 - 09, 2023.

Mr. Asish Kumar Padhy, Mr. Baljinder Singh, S Singh, Dr. Sabhyata Bhatia (PI: Dr. Sabhyata Bhatia)

- ❖ Participated and presented a poster on “Integrated approach involving GWAS and biparental QTL mapping identifies the genes governing seed size and seed weight in lentil” at International Conference on Food & Nutritional Security & 5th International Plant Physiology Congress & 44th Annual Meeting of Plant Tissue culture Association (India), NABI, January 06 - 09, 2023.

Study Tours of the Institute

The students of the following Universities/Colleges/School(s) were given virtual tour of NIPGR to familiarize themselves with the frontier research being carried out at NIPGR.

- ❖ Students of Institute of Home Economics, University of Delhi, Delhi, August 05, 2022.
- ❖ M.Sc. (Biotechnology) students of Gauhati University, Guwahati, Assam, November 07, 2022.
- ❖ Students of class 10th and 11th of Manav Rachna International School (MRIS), Noida, November 21, 2022.
- ❖ Students of class 11th and 12th of KR Mangalam World School, Gurgaon, November 25, 2022.
- ❖ Students of class 10th and 11th of DAV Public School, Vasant Kunj, New Delhi, December 27, 2022.
- ❖ B.Sc. (Life Sciences) students of Maitreyi College, University of Delhi, January 12, 2023.
- ❖ Undergraduate students of St. Edmunds's College, Shillong, Meghalaya, January 16, 2023.
- ❖ B.Sc. and M.Sc. students of Yeshwant Mahavidyalaya, Nanded, Maharashtra, February 04, 2023.
- ❖ M.Sc. students of Department of Botany, Nagaland University, February 13, 2022.
- ❖ B.Sc. (Biotechnology) and B.Tech. (Biotechnology) students of Department of Biotechnology, GLA University, Mathura, February 20, 2023.
- ❖ B.Tech. (Biotechnology) students of Tamil Nadu Agricultural University, Coimbatore, March 14, 2023.
- ❖ B.Tech. (Food Technology) students of College of Food Technology, Central Agricultural University, Imphal, March 20, 2023.
- ❖ B.Tech. (Biotechnology) students of Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, March 29, 2023.

Symposia/Workshop/ Special Lectures/Events Organized

iConnect Event under Atmanirbhar Bharat Abhiyaan (June 01, 2022)

NIPGR has initiated symposia series on thematic research areas through 'iConnect Event under Atmanirbhar Bharat Abhiyaan, where experts in the relevant fields are invited to deliver lectures. Towards this, NIPGR has organized symposium: Nutriomics for Better Health' with the theme 'Agri-Nutri & Biotech' on June 01, 2022. The events included Technology/Product Exhibition and Poster Presentation besides lectures by eminent scientists from scientific institutions and industries.

Swachhta Pakhwada (May 01 - 15, 2022)

Swachhta Pakhwada has been observed in the Institute from 01st to 15th May. The 'Swachhta Pledge' has been administered on May 02, 2022, wherein the staff members, students and researchers of the Institute have participated. During this Pakhwada, "Swachhta Pakhwada Awards" have been initiated by the Institute, with a view to create a healthy competition and have more effective participation and meaningful outcome of the Pakhwada. The duly constituted Committee visited the respective locations in the Institute and selected two best entries, bases on cleanliness of the locations in each category 1) Best Laboratory; 2) Best Sitting Space & 3) Best Common Facility. Additionally, the locations/items which need urgent attention from the point of view of cleanliness have been identified for taking suitable remedial measures. The instructions issued during Swachhta Hi Seva (SHS) campaign have been followed up with the focus on action towards effective ban of Single Use Plastic (SUP). The whole idea of this exercise was to bring about mass awareness and lasting behavioral change about cleanliness, which is also relevant in view of Covid -19 pandemic and to ensure an improved work culture and work environment including hygiene and cleanliness of the work place.

Activities under Bharat Ka Amrit Mahotsava (India@75) at NIPGR (Science Setu 2021) (May 20, 2022)

To commemorate 75 years of Independence of India, a Webinar Series has been earlier initiated by NIPGR. Towards this, webinars are being organized from time to time by the Institute. In this series Dr. Swarup K. Parida delivered a talk on “Next-Generation Molecular Breeding for a Food Sufficient Future” on May 20, 2022.



Webinar

International Yoga Day (June 21, 2022)

NIPGR joined the online lecture session along with Yoga demonstration on the benefits of Yoga, organized by the Department of Biotechnology on May 16, 2022, towards one day countdown of IDY 2022, as per schedule circulated by the Government of India. The 8th International Day of Yoga (IDY) has been celebrated on June 21, 2022 with the motto to promote health & well-being of everyone.

On this occasion, a Seminar on ‘मानवता के लिए योग’ by Dr. Ajay Kumar Shastri, Yogacharya, Jawaharlal Nehru University has been organized which comprised of a brief session on Suksham Vyayam, Pranayam and Meditation. Besides, ‘Yogabhyaas’ was conducted in the evening wherein all staff members with their families, students & researchers participated with full enthusiasm. The objective of this exercise is not just a one-day celebration but it aims to make all participants aware

of the immense rewards that the pursuit of Yoga can bring to the individual and thereby inspire them to practice Yoga on regular basis. Yoga is an invaluable gift of India's ancient tradition. It is not about exercise but to discover the sense of oneness with yourself, the world, and the nature. By making Yoga an integral part of our lifestyle, a healthy life can be attained both physically and emotionally. This has been an effort to inspire all members of NIPGR community to continue the practice of Yoga, beyond Yoga Day.



Yogabhyas

Hindi Workshop on “ऑनलाइन हिंदी शब्दकोश एवं विभिन्न हिंदी टूल्स” (June 29, 2022)

In pursuance of Official Language Act/Rules of the Government of India, the use of Hindi Language in the official functioning of the Institute is being progressively strengthened. Towards this, a workshop on “ऑनलाइन हिंदी शब्दकोश एवं विभिन्न हिंदी टूल्स” was organized on June 29, 2022 at the Institute. The staff members of the Institute enthusiastically participated in the said workshop.

Independence Day Celebrations (August 13 - 15, 2022)

The Independence Day has been celebrated in the Institute on August 15, 2022. On this occasion National Flag has been hoisted by the Director, NIPGR and various activities like painting competition, rangoli making etc. have been organized in which staff members & their children, students and researchers have participated. Besides, the Institute building has been illuminated

to mark the 75th year of India's independence under the 'Azadi Ka Amrit Mahotsava' campaign, during August 13-15, 2022.



Independence Day Celebrations

Hindi Pakhwara (September 14 - 29, 2022)

Hindi Pakhwara was observed during September 14-29, 2022 in the Institute. All the members of the staff, students and researchers were requested to do maximum work in Hindi during this period. The staff members were encouraged to use Hindi in the deliberations of the meetings, seminars, etc., organized during this period, to work in Hindi on computers and to opt for forms in Hindi which are used for various purposes in the Institute, besides all other official works. On 'Hindi Diwas', the message of the Cabinet Secretary, Government of India has been read out on September 14, 2022, in the presence of members of NIPGR Community. A Hindi Lecture on 'विज्ञान, प्रौद्योगिकी और समाज' has been organized on September 26, 2022 to exhibit the effortless use of Hindi in every field of research & education.

Additionally, various activities/competitions like Essay Competition, Poetry Recitation Competition, Calligraphy, and Dictation etc. in Hindi have been organised on September 27, 2022. Members of NIPGR community participated enthusiastically in the events. The best two entries in these events were selected to confer prizes and certificates on the occasion of Foundation Day of the Institute.

Hindi Workshop on “कार्यालय में प्रयुक्त पारिभाषिक शब्दावली एवं वाक्यांश” (September 29, 2022)

In pursuance of Official Language Act/Rules of the Government of India, the use of Hindi Language in the official functioning of the Institute is being progressively strengthened. Towards this, a workshop on “कार्यालय में प्रयुक्त पारिभाषिक शब्दावली एवं वाक्यांश” was organized on September 29, 2022 at the Institute. The staff members of the Institute enthusiastically participated in the said workshop.

Rashtriya Ekta Diwas (National Unity Day) - October 31, 2022

The Birth Anniversary of Sardar Vallabhbhai Patel has been commemorated as ‘Rashtriya Ekta Diwas (National Unity Day)’ on 31st October. In order to celebrate the occasion in a befitting manner and reinforce the message of national unity and awareness about Sardar Patel’s stellar contributions to the building modern India, all members of the Institute have taken the Rashtriya Ekta Diwas Pledge on October 31, 2022.

Vigilance Awareness Week (October 31 - November 06, 2022)

The ‘Vigilance Awareness Week’ was observed by NIPGR during October 31, 2022-November 06, 2022 with the theme ‘**Corruption free India for a developed Nation**’. An Integrity Pledge was organized on October 31, 2022, to create awareness, against corruption and refraining from indulging in dishonest and unethical activities, in which staff members/students/researchers of the Institute participated. To sensitize against corruption and other unethical activities, a slogan writing competition on the theme of VAW 2022 has been organized during this period in the Institute. All the members of NIPGR were sensitized to promote integrity, transparency, and accountability in their public life, by circulating the CVC instructions and displaying banners etc. The officials of NIPGR were motivated to follow the anti-corruption practices in their official procedures.



Integrity Pledge

National Conference on ‘Akash for Life’ at Dehradun (November 05 - 06, 2022)

NIPGR participated in the National Conference ‘Akash for Life’ held during November 05 - 06, 2022 at Uttarakhand University, Dehradun and showcased the R&D activities of the Institute. This Conference was based on the concept of significance of Pancha Bhutas, the five primal elements of Nature, Prithvi, Jal, Agni, Vayu and Akash associated in Indian thoughts and traditions, with the overall wellbeing of humanity. The Conference was organized by ISRO in association with VIBHA and all major scientific Ministries & Departments. This two-day event has been attended by eminent academics, scientists, thought leaders, industry leaders, scholars, social workers and students.



Participation in National Conference

Annual Student’s Research Symposium – SciEfflux-2022 (November 17 - 18, 2022)

The Student Research Symposia (SciEfflux – 2022) was organized during November 17-18, 2022. On this occasion, 2nd and 4th year students of the Institute made presentations related to theme and progress of their research work. The award for best presentation each by the 2nd and 4th year students, namely “Best Scientific Presentation Award” has been conferred which contains a medal and a certificate. The faculty members, students and researchers of the Institute participated in the deliberations of the symposia.



Inauguration of Annual Student's Research Symposium – SciEfflux-2022



Participants of Cultural Programme

Constitution Day (November 25, 2022)

The 'Constitution Day' has been observed on November 25, 2022 at NIPGR. On this occasion, the Preamble to the Constitution has been read out by the members of NIPGR community.

Foundation Day (November 29, 2022)

The Institute celebrated its 25th Foundation Day by organizing “J. C. Bose Memorial Lecture” on November 29, 2022. On this occasion Institute has organized a public lecture on *“Balancing plant growth and stress resistance through coordinated genetic engineering and chemical intervention”*, delivered via virtual mode by Dr. Jian-Kang Zhu, Dean, Institute of Advanced Biotechnology, Southern University of Science and Technology, China. Further, Keynote Lecture on *“A view from the edge: integrating physiology and gene expression for photosynthetic concentrating mechanisms”*, has been delivered by Prof. Howard Griffiths, Professor, Department of Plant Sciences, University of Cambridge, UK

Besides, researchers/students of the Institute were facilitated with medals/mementos/certificates for the best scores in Ph.D. course work, for best presentations in Students Research Symposium 2022, Best Paper Award 2022, winners of the events conducted during Hindi Pakhwara and sports activities. The invited guests as well as staff and students of the Institute attended the function through Hybrid mode.



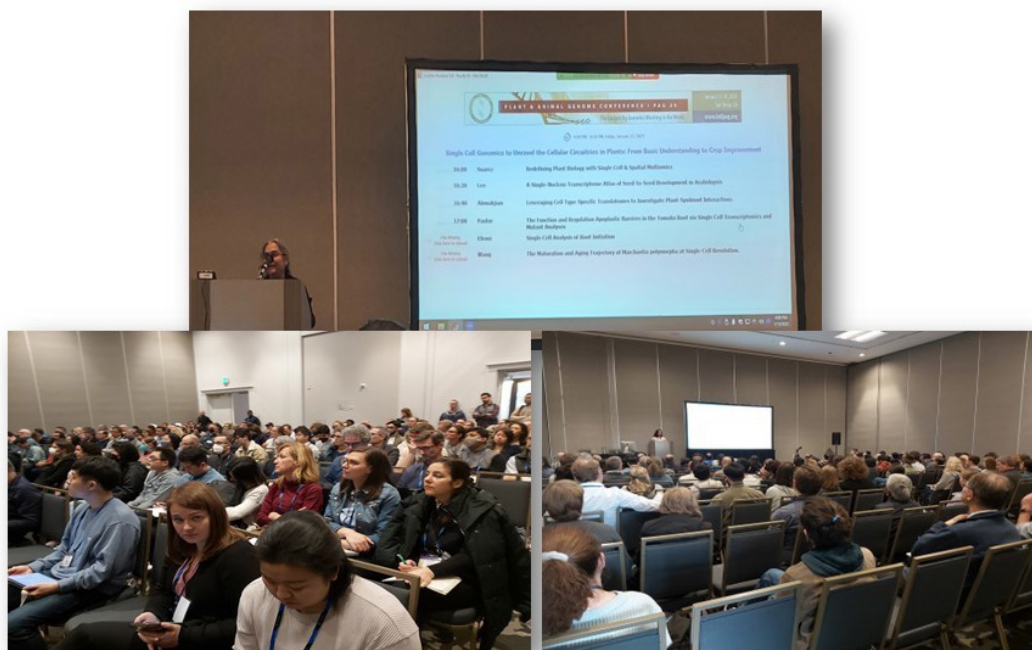
Foundation Day Celebrations

Hindi Workshop on “संघ की राजभाषा नीति: एक परिचय एवं विभिन्न हिंदी टूल्स” (December 15, 2022)

In pursuance of Official Language Act/Rules of the Government of India, the use of Hindi Language in the official functioning of the Institute is being progressively strengthened. Towards this, a workshop on “संघ की राजभाषा नीति: एक परिचय एवं विभिन्न हिंदी टूल्स” was organized on December 15, 2022 at the Institute. The staff members of the Institute enthusiastically participated in the said workshop.

Workshop on Single Cell Genomics in Plant and Animal Genome 30 Conference at San Diego, USA (January 13 - 18, 2023)

NIPGR has organized and conducted a workshop on “Single cell genomics to unravel the Cellular circuitries in plants: From basic understanding to crop improvement” in the International Plant & Animal Genome Conference (PAG 30) held in San Diego, California, USA during January 13-18, 2023. The Workshop aimed to cover the significant biological insights developed from single cell genomics studies in plants, overcoming methodological and data analysis challenges for the successful interpretation and integration of single cell genomics results to the organismal functions, and exploiting such studies in crop improvement programs. The Workshop was attended by scientists, academicians, young researchers, and students from all over the world.



Workshop

India International Science Festival (IISF) 2022 (January 21 - 24, 2023)

In order to give wide publicity to IISF 2022 and as part of the public outreach program to popularize science and showcase the various facets of research and development to young innovators, students, teachers, and individuals interested in the field of natural sciences, NIPGR participated and showcased achievements/products of the Institute in the India International Science Festival (IISF) 2022 organized at MANIT, Bhopal, Madhya Pradesh, during January 21-24, 2023.



Participation in IISF

Hindi Workshop on “कंठस्थ 2.0: स्मृति आधारित अनुवाद सॉफ्टवेयर” (March 10, 2023)

In pursuance of Official Language Act/Rules of the Government of India, the use of Hindi Language in the official functioning of the Institute is being progressively strengthened. Towards this, a workshop on “कंठस्थ 2.0: स्मृति आधारित अनुवाद सॉफ्टवेयर” was organized on March 10, 2023 at the Institute. The staff members of the Institute enthusiastically participated in the said workshop.

Other activities at NIPGR

Promotion of progressive use of Hindi in official working

Institute has taken major initiatives in promoting progressive use of Hindi in official working. Towards this, NIPGR has been awarded third prize in the category of “Boards/Autonomous Organizations/ Institutes/Societies in Region A”, for excellence in implementation of Official Language Policy of the Government of India for the year 2021-22, by the Department of Official Language, Ministry of Home Affairs, Government of India. The Award has been conferred on the occasion of Hindi Diwas (September 14, 2022) by the Hon’ble Minister of State for Home Affairs of India.



Award conferred by the Hon’ble Minister of State for Home Affairs of India

Setting up of Science Museum in the Aspirational District

DBT-NIPGR ‘Pandit Jaiwant Ram Upmanu Science Museum’ has been set up by the Institute at Govt. Boys’ Senior Secondary School, Chamba, HP, (Aspirational District), as part of the celebrations by the Govt. of India, “Azadi ka Amrit Mahotsav”, to commemorate 75 Years of Independence of India. The museum has been inaugurated on October 08, 2022 by Shri Jai Ram Thakur, Hon’ble Chief Minister of Himachal Pradesh along with Shri Anurag Singh Thakur,

Hon'ble Minister of Sports, Youth Affairs, Information & Broadcasting, and Dr. Jitendra Singh, Hon'ble Minister of State (I/C), Minister of Science & Technology & Earth Sciences, Government of India. The Science Museum has been developed with an aim to promote science education and awareness amongst citizens, particularly for school teachers and students towards the initiative of Govt. of India for Samagra Shiksha Abhiyan and Jan-Bhagidari.



Inauguration of Science Museum in the Aspirational District

Special Campaign for Swachhata and disposal of pending matters

In pursuance of the instructions issued by the Government of India to undertake Special Campaign for Swachhata in Government offices and disposal of pending matters during the month of October 2022, the SCDPM 2.0, special campaign on pending matters/record management has been scrupulously implemented in the Institute, under the guidance of DBT. The instructions issued during Swachhta Hi Seva (SHS) campaign have been followed up in the Institute with the focus on action towards effective ban of Single Use Plastic (SUP).

National Genomics and Genotyping Facility (NGGF)

The National Genomics and Genotyping Facility (NGGF)-Phase I has been established by Department of Biotechnology (DBT) at the National Institute of Plant Genome Research (NIPGR), New Delhi. NGGF would serve as a “Single-window service system” providing advanced

genomics-based solutions to the custom research stakeholders of Biotechnology. The high-throughput genotyping and sequencing platforms as well as the high throughput computational facility have been established and now completely functional at the facility for National use. This includes Fluorescent dye-labelled SNP genotyping platform (LGC Array Tape/KASP) with Real time PCR; Array-based SNP genotyping platform (Affymetrix GeneTitan Multichannel instrument and AGENA mass array); and NGS-based sequencing and genotyping platform (Nova-Seq 6000 and Next-Seq 550). Moreover, (i) a High-throughput Liquid Handling Platform (Beckman Coulter BioMek i7) for automated NGS library preparation and normalization, and (ii) a Computational Facility for High performance computing (HPC) and High-capacity data storage etc. along with Computational Genomics Softwares have also been established at NGGF. The Project Monitoring Unit (PMU) has standardized all protocols and functionally validated all the sequencing and genotyping platforms. It has successfully completed services for genome resequencing of 2400 chickpea accessions under Mission Mode Project using the Illumina Nova-Seq 6000 NGS platform established at NGGF.

Advanced Inter-Institutional Proteomics Facility

The Advanced Inter-Institutional Proteomics Facility of NIPGR is equipped with advanced state-of-the-art mass spectrometers. This advanced proteomics facilitates characterization and validation of interactome proteome and discovery proteomics as well as verification of biomarkers. Projects related to identification and characterization of different protein sets, proteoforms and interacting partners, large scale mapping of crop proteomes, finding the missing proteins from genome data, understanding the mechanistic details of plant processes, small molecules of agricultural and biomedical importance, etc are being implemented using this facility. This is helpful in understanding the function of a gene/protein which could be translated in application related to improvement of agricultural, medicinal products along with health care products. Further, the facility would continue to generate well trained young researchers with capability to further studies in related areas from different DBT institutes, nearby Universities/Institutes and across India. Moreover, advanced training in the field will be an integrated mandate of the facility for India and neighboring countries. The scientific and technical know-how generated in the facility will be shared with the users to conduct high quality research. The service of the facility is available to internal and external users.

Metabolomics Facility

The Metabolomics Facility at National Institute of Plant Genome Research (NIPGR) was set up with DBT-SAHAJ funding as a platform for plant metabolomics with advanced and high throughput equipments and using Mass Spectrometry as the key technology for the identification and quantitative characterization of both targeted and untargeted metabolites. The facility is one-of-the kind in the country and equipped with state-of-the-art analytical instrumentation designed for both targeted and untargeted quantification and profiling of plant phytohormones and low abundant metabolites. Low abundant plant metabolites are commonly functionally classified, as defense or growth-related phytohormones, primary and secondary metabolites. Methods are established for high throughput analysis of phytohormones, amino acids, flavonoids, other

targeted metabolites as envisaged in the project and metabolomics data has been generated in varying stress conditions in diverse plants. The staff at the facility were trained for phytohormone extraction in premier institutes worldwide including the Max Planck Institute for Chemical Ecology, Germany. Phytohormone profiling and metabolomics-based phenotyping has been done in diverse crop crops under abiotic and biotic stress as evident from publications and participation in various mission mode projects including in rice, maize and chickpea. The Metabolomics facility is the only dedicated facility in the whole country for specific plant metabolites including phytohormones and hence users from all over the country are utilizing it. The facility has run close to 9300 samples in its tenure and has over 20 publications from users.

Gene Function Analysis Platform for Crops (GFAPC)

The Advanced Research Platform for Crop Sciences, Gene Function Analysis Platform for Crops (GFAPC) was established at NIPGR, New Delhi in 2018. Since its establishment, the facility has developed high throughput plant transformation protocols in rice, tomato, brassica, and chickpea and has catered needs of several labs of the host institution. Plant transformation, development of transgenic and genome edited plants are the indispensable components of plant research and the trained and expert personnel at this facility contribute by developing genetically engineered crop plants in quickest possible time thus providing much needed expertise and helping hands to several labs of the institution for carrying forwards their researches efficiently and quickly. The facility has developed efficient rice transformation protocols for wide range of rice varieties such as IR64, MTU1010, Swarna (the *Indica* rice cultivars), Nipponbare and Taipei309 (the *Japonica* rice cultivars). Pusa Ruby is a popular high yielding variety of tomato widely cultivated in India and the facility has developed proficient tomato transformation protocol to develop genetically engineered plants in tomato. Chickpea is one of the mandate crops of the institution and the facility is associated with routine transformation of chickpea. Additionally, the facility has developed an efficient plant transformation protocol in *Brasica juncea*, the important oilseed crop of India. During the final project year (March 2022 to March 2023) the facility has processed 4 indents for rice and 1 for tomato and completed all of them by developing their respective transgenic plants. The facility is now serving several labs of the host institution as well as other institutions on a regular basis. This specialized facility is not only expected to accelerate plant-based research and crop improvement programs of the country but also function as an important avenue for employment of young researchers and income generation in the Biotechnology sector.

Plant Growth Facility (PGF)

The National Institute of Plant Genome Research (NIPGR) hosts a Plant Growth Facility (PGF). Established in the year 2010, this state-of-the-art facility is built for research product development and is housing 23 plant growth chambers providing 72 m² of environmentally controlled plant growth area, connected to a central control system. The facility is used to study the effects of environmental variables on crop growth, development & productivity. It is committed to a safe environment by using an integrative insect and disease management program to promote plant health and researcher safety. It has been successfully tested for crop plants such as rice, chickpea, tomato, mustard, millets, banana, and groundnut plus the model plants *Arabidopsis thaliana* and

Nicotiana benthamiana. The facility has benefitted plant scientists and researchers by allowing propagation and breeding of plants around the year and providing a better assessment of plant growth and yield under abiotic and biotic stress conditions.

Computational Biology and Bioinformatics Facility (CBBF)

The CBBF at NIPGR is engaged in providing the necessary IT-related infrastructure for the institute. This facility also hosts the NIPGR web servers and other online resources that have been developed for research, e-governance, and administration within NIPGR. At present, the CBBF staff members are responsible for handling all system integrator services as well as regular maintenance and upkeep of the LAN and institutional security firewall, hardware, accessories, and software. In addition, the CBBF handles web routing, access to WiFi network, IT-based training and capacity building of personnel, quarterly inspection (internal audits), all website-related certification (required by GoI), and other Cyber-Infrastructure related issues. The CBBF currently hosts 41 online tools and databases, the full list is available at https://nipgr.ac.in/facilities/nipgr_database.php. In the past year, we have completed the renovation of the NIPGR IT Networking infrastructure. This includes a complete restructuring of the LAN and fibre optic cables, expansion of WiFi access points throughout the NIPGR, creation of VLANs across various departments to improve access speeds and overall IT experience at the institute. The facility also provides training to first-year Ph.D. students in areas like IT practices, LAN-based networking, basics of IT administration, as well as computational and systems biology.

DST-INSPIRE Faculty Award

Understanding role of MAP Kinase signaling cascade in regulation of peptides encoded by pri-miRNAs in rice

PI: Dr. Deepika Sharma

This study aims to identify and characterize miRNA primary transcript encoded peptides (miPEPs) in rice that are involved in regulating miRNAs that play important role in rice growth and development. We also try to gain insight about the post-translational regulation of miPEPs and their mechanism of action.

The results obtained so far are as follows:

- Through in silico and histochemical GUS assay we have identified 6 biologically active miPEPs in rice (miPEP156, 159, 164, 166, 396 and 398).
- Transient over-expression of these miPEPs in rice to check the modulation in expression of their specific miRNAs revealed that they are inducing the expression of their respective miRNAs.
- We also explored interaction between miPEPs and MAPK by protein-protein interaction studies and found no interaction between miPEPs and MAP Kinase 3/4/6.
- We expressed miPEP398 in *E. coli* tagged with GST and through *in vitro* kinase assay we found that miPEP398 is phosphorylated by MAP Kinase 3/4/6.

- Study of miPEPs binding to its own promoter via Y1H, luciferase and EMSA assays is in progress as all construct were being prepared.
- Construct overexpressing miPEP398, CRISPR knockout and miPEP398 promoter were successfully transformed in rice callus to generate stable transgenic lines in rice.
- Application of synthetic peptide to understand the mechanism of action of miPEPs in rice.

Till date we have narrowed down to two miPEPs miPEP156 and miPEP398 that play pivotal role in rice development and stress regulation. We found that miPEP398 protein is phosphorylated by MPK3, MPK4 and MPK6 in rice. This is the first report of post-translational modification of miPEPs in rice. We will be making the transgenic for the same to explore the biological relevance of the study.

Whole genome *de novo* assembly and identification of functional genes associated with biosynthesis of quinazoline alkaloids in *Adhatoda vasica*, a potential medicinal plant

PI: Dr. Abinaya M.

Adhatoda vasica is a potential medicinal plant widely utilized as a vital ingredient in various Ayurvedic formulations to treat respiratory disorders. The plant possesses specific quinazoline alkaloids (QA) such as vasicine, vasicinone, adhatodine, and anisotine responsible for the antispasmodic activity. These metabolites are so far identified only in this plant. Although, the plant consists of important medicinal value and widely consumed in India, till date no information regarding the molecular markers and vital genes involved in the QA biosynthesis has been elucidated. Therefore, for the first time the present proposal aims to generate a high-quality whole genome assembly to decipher the QA metabolic pathway. An integrative approach of high-throughput RNA-sequencing based tissue specific transcriptome atlas will be constructed along with metabolite profiling which will be utilized for the identification of candidate genes involved in QA biosynthesis. The present project has been initiated with collection of plant materials from Banaras Hindu University, Kerala Agricultural university, and Tamil Nadu Agricultural University. The collected plant cuttings are presently grown at greenhouse, NIPGR. The collection consisted of two different morphotypes of plants with large (B-morphotype) and small (S-morphotype) leaf size. Initial metabolite analysis revealed the tissue specific accumulation of vasicinone, a potential lead molecule for bronchodilator drugs. Leaf tissue consisted of higher amount of vasicinone and the transcriptome sequencing is in progress. Further, untargeted metabolite analysis revealed the differential accumulation of primary metabolites in tissue specific manner. Further screening of plant materials, transcriptome atlas generation, genome size estimation, and computational docking investigations using vasicinone are under process.

Science Setu Webinar Series

Institute have been organizing Science Setu webinar series as a part of “Azadi ka Amrit Mahotsav” to commemorate “75 years of India’s Independence”.

Sl. No.	Speaker	Title	Date
1.	Dr. Swarup K. Parida	Next-generation molecular breeding for a food sufficient future	May 20, 2022

Seminar Series (2022-23)

Sl. No.	Speaker	Title	Date
1.	Dr. Pallavi Singh John Henry Coates Fellow, Emmanuel College, Cambridge, University of Cambridge, UK	Grafting as a tool for more robust agriculture in monocot crops	April 12, 2022
2.	Dr. Moumita Srivastava Protein Scientist, Iksuda Therapeutics, Newcastle, UK	SUMO: Small proteins with big roles in plant stress biology	May 27, 2022
3.	Dr. Shri Ram Yadav Associate Professor, IIT-Roorkee	Species-specific function of conserved cell fate determinants in orchestrating rice root architecture	July 07, 2022
4.	Dr. Ketki Bapat Adviser / Scientist 'G', Office of the Principal Scientific Adviser, Government of India, New Delhi	विज्ञान, प्रौद्योगिकी और समाज (Science, Technology and Society)	September 26, 2022
5.	Dr. Ramesha Thimmappa Associate Professor and Ramalingaswami Fellow, Amity Institute of Genome Engineering, Amity University	Triterpene biosynthesis and engineering in plants	October 27, 2022
6.	Dr. Pradeep Dahiya Leibniz Institute of Plant Biochemistry (IPB), Halle, Germany	High IQ is a pre-requisite to orient in right direction	November 14, 2022
7.	Prof. Animesh Ray Keck Graduate Institute, California, USA	The noncoding RNAs PRIGHTLY drives a lethal childhood brain cancer by forcing exon-skipping	January 09, 2023
8.	Prof. Wolf B Frommer Alexander von Humboldt Professor, Heinrich Heine University, Düsseldorf, Germany	Novel breeding methods for generating broad spectrum resistance to pathogens in rice	January 11, 2023
9.	Dr. Annapurna Devi Allu Assistant Professor, Department of Biology, Indian Institute of Science Education and Research (IISER), Tirupati	Molecular switches governing priming-induced plant heat stress response(s)	February 01, 2023

Sl. No.	Speaker	Title	Date
10.	Prof. Yves Poirier Department of Plant Molecular Biology, University of Lausanne, Switzerland	A CYBDOM protein from Arabidopsis acts as a ferric reductase, impacting iron and phosphate homeostasi	February 07, 2023
11.	Prof. Gary J Loake School of Biological Sciences, University of Edinburgh, UK	Nitric oxide signalling in deconvolution	February 16, 2023
12.	Prof. Cyril Zipfel Institute of Plant and Microbial Biology, University of Zurich, Switzerland	Regulation of receptor kinase-mediated immune signaling outputs	February 27, 2023
13.	Dr. Smrutisanjita Behera CSIR-IICB, Kolkata	Calcium signaling in plants: Follow the signals to decipher their function	March 28, 2023
14.	Dr. Sucheta Tripathy CSIR-IICB, Kolkata	Early Effectors of crop destroyers could hold a key in strategizing control of disease progression	March 28, 2023

Academic Courses and Training Programmes

Ph. D. Programme

As in the previous years, the response for admission to Institute's Ph. D. programme was very encouraging this year also. The candidates are selected after a national level test followed by interview conducted by NIPGR. Only CSIR-JRF/UGC-JRF/DBT-JRF/ICMR-JRF Fellowship awardees/DST INSPIRE Fellowship for pursuing full-time Ph. D. program are eligible to apply. The selected scholars are first required to do course work, which is followed by research work on different areas on Plant Genomics in various laboratories. A total number of 382 students have registered for the Programme leading to Ph. D. degree to JNU since the Academic year 2001-2002 and out of these, 195 students have been awarded with Ph. D. degree, and the rest at various stages of their Ph. D. work.

Student enrolled for Ph. D. programme 2022-23

Sl. No.	Name of the Student	Name of the Supervisor/Co-supervisor
1.	Amrutha Laie	Dr. Jyothilakshmi Vadassery
2.	Anjala K.	Dr. Naveen Chandra Bisht
3.	Atul Bahukhandi	Dr. Debasis Chattopadhyay
4.	Awele Letro	Dr. Sundararajan Prabhakaran
5.	Budhibalabanta Bariha	Dr. Senthil-Kumar Muthappa
6.	Debasish Ghosh	Dr. Saloni Mathur
7.	Diksha	Dr. Ashutosh Pandey
8.	Falah Qasim	Dr. Pinky Agarwal
9.	Fiza Hamid	Dr. Shailesh Kumar
10.	Gokul Babu S.	Dr. Sundararajan Prabhakaran
11.	Himani Chhatwal	Dr. Ashutosh Pandey
12.	Jagannath Swain	Dr. Jagadis Gupta Kapuganti
13.	Josepheena Joseph	Dr. Jagadis Gupta Kapuganti
14.	Mandeep	Dr. Gitanjali Yadav
15.	Muskan Bansal	Dr. Alok Krishna Sinha
16.	Naveen Goel	Dr. Gopaljee Jha
17.	Nisha	Dr. Swarup K. Parida / Dr. Subhra Chakraborty
18.	Priya Soni	Dr. Debasis Chattopadhyay
19.	Rajarshi Sanyal	Dr. Aashish Ranjan
20.	Rajib Kumbhakar	Dr. Swarup K. Parida
21.	Richa Virmani	Dr. Saloni Mathur
22.	Sankhadeep Chowdhury	Dr. Hasthi Ram

Sl. No.	Name of the Student	Name of the Supervisor/Co-supervisor
23.	Saroj Laha	Dr. Manoj Majee
24	Shital Sandhya	Dr. Ashverya Laxmi
25	Shubhangi Pandey	Dr. Alok Krishna Sinha
26	Simran	Dr. Shailesh Kumar
27	Subham Agarwal	Dr. Aashish Ranjan / Dr Amar Pal Singh
28	Sushmita Seni	Dr. Manoj Prasad
29	Upasana Das	Dr. Pinky Agarwal
30	Vikash Bhadu	Dr. Senjuti Sinharoy
31	Vishakh Vijayan	Dr. Jyothilakshmi Vadassery

Students pursuing Ph. D. at the Institute (excluding those enrolled during 2022-23)

Sl. No.	Name of the Student	Name of the Supervisor/Co-supervisor
1.	Ms. Megha Choudhary	Dr. Debasis Chattopadhyay
2.	Ms. Archana Tiwari	Dr. Ashverya Laxmi
3.	Mr. Gourav Singh	Dr. Sabhyata Bhatia
4.	Ms. Chandni Bansal	Dr. Saloni Mathur
5.	Md. Yasir Arafat	Dr. Subhra Chakraborty
6.	Ms. Archana	Dr. Subhra Chakraborty
7.	Ms. Latika Bhola	Dr. Subhra Chakraborty
8.	Mr. Gopal Banerjee	Dr. Alok Krishna Sinha
9.	Mr. Baljinder Singh	Dr. Sabhyata Bhatia
10.	Mr. Anirban Chakraborty	Dr. Sabhyata Bhatia
11.	Ms. Harshita Bharti Saksena	Dr. Ashverya Laxmi
12.	Ms. Jaishri Rubina Das	Dr. Saloni Mathur
13.	Mr. Sunil Kumar	Dr. Subhra Chakraborty/Dr. Niranjana Chakraborty
14.	Ms. Atreyee Sengupta	Dr. Subhra Chakraborty
15.	Ms. Paheli Malakar	Dr. Debasis Chattopadhyay
16.	Ms. Rekha Agrawal	Dr. Jitendra K. Thakur
17.	Mr. Shubhashis Das	Dr. Jitendra K. Thakur
18.	Ms. Richa Priyadarshini	Dr. Pinky Agarwal
19.	Ms. Priya Jaiswal	Dr. Pinky Agarwal
20.	Ms. Aditi Dwivedi	Dr. Aashish Ranjan
21.	Ms. Sushma Sagar	Dr. Amarjeet Singh
22.	Mr. Bikash Raul	Dr. Senjuti Sinha Roy
23.	Mr. Jogindra Naik	Dr. Ashutosh Pandey
24.	Ms. Ruchika	Dr. Ashutosh Pandey
25.	Ms. Shilpa Singh	Dr. Subhra Chakraborty

Sl. No.	Name of the Student	Name of the Supervisor/Co-supervisor
26.	Mr. Dhanraj Singh	Dr. Alok Krishna Sinha
27.	Ms. Manisha	Dr. Sabhyata Bhatia
28.	Mr. Pawandeep Singh Kohli	Dr. Jitendra K. Thakur/Dr. Jitender Giri
29.	Ms. Pallabi Thakur	Dr. Jitendra K. Thakur
30.	Mr. Abhishek Prasad	Dr. Gitanjali Yadav
31.	Mr. Prakhar	Dr. Ashverya Laxmi
32.	Mr. Sanjay	Dr. Ashverya Laxmi
33.	Mr. Mohan Varghese	Dr. Naveen Chandra Bisht
34.	Ms. Bhanu Malhotra	Dr. Naveen Chandra Bisht
35.	Mr. Sourav Chatterjee	Dr. Aashish Ranjan
36.	Ms. Amrita Pradhan	Dr. Gopaljee Jha
37.	Ms. Akanksha Bhardwaj	Dr. Senjuti Sinharoy
38.	Ms. Deevita Srivastava	Dr. Senjuti Sinharoy
39.	Ms. Anshika Pandey	Dr. Amar Pal Singh
40.	Ms. Loitongbam Lorinda Devi	Dr. Amar Pal Singh
41.	Ms. Deepika	Dr. Amarjeet Singh
42.	Ms. Komal Vitthalrao Mali	Dr. Senthil-Kumar Muthappa
43.	Ms. Mohini Jaiswal	Dr. Shailesh Kumar
44.	Mr. A. T. Vivek	Dr. Shailesh Kumar
45.	Ms. Samiksha Saxena	Dr. Ashutosh Pandey
46.	Ms. Rumi	Dr. Alok Krishna Sinha/Dr. Jitender Giri
47.	Ms. Sarvesh Jonwal	Dr. Alok Krishna Sinha
48.	Mr. Asish Kumar Padhy	Dr. Sabhyata Bhatia
49.	Ms. Athira M. Nair	Dr. Jyothilakshmi Vadassery
50.	Ms. Jyoti Maurya	Dr. Manoj Prasad
51.	Ms. Kajol BM Singh	Dr. Jitendra K. Thakur
52.	Ms. Prabha	Dr. Gitanjali Yadav
53.	Mr. Halidev Krishna Botta	Dr. Ashverya Laxmi
54.	Mr. Rakesh Kumar Achary	Dr. Manoj Majee
55.	Ms. Avni Mann	Dr. Naveen Chandra Bisht
56.	Mr. Manbir	Dr. Jagadis Gupta Kapuganti
57.	Ms. Rekha	Dr. Jagadis Gupta Kapuganti
58.	Ms. Nidhi Gandhi	Dr. Amar Pal Singh
59.	Mr. Debashis Sahoo	Dr. Gopaljee Jha
60.	Ms. Anjali	Dr. Senthil-Kumar Muthappa
61.	Ms. Apoorva Gupta	Dr. Saloni Mathur
62.	Ms. Kanika Maurya	Dr. Jitender Giri
63.	Ms. Antima Yadav	Dr. Pinky Agarwal

Sl. No.	Name of the Student	Name of the Supervisor/Co-supervisor
64.	Mr. Jitendra Kumar Mohanty	Dr. Swarup K. Parida
65.	Ms. Shruti Mishra	Dr. Jyothilakshmi Vadassery
66.	Ms. Shreya Gupta	Dr. Amar Pal Singh
67.	Ms. Shobha	Dr. Subhra Chakraborty
68.	Ms. Kajal	Dr. Subhra Chakraborty
69.	Ms. Shalini Yadav	Dr. Debasis Chattopadhyay
70.	Ms. Subasty P.	Dr. Debasis Chattopadhyay
71.	Mr. Shubham Bhardwaj	Dr. Sabhyata Bhatia
72.	Ms. Susmita Sett	Dr. Manoj Prasad
73.	Ms. Kamlesh Kumari	Dr. Gitanjali Yadav
74.	Ms. Shikha Gautam	Dr. Manoj Majee
75.	Ms. Nidhi Yadav	Dr. Jagadish Gupta Kapuganti
76.	Mr. Aswin Reddy Chilakala	Dr. Senthil-Kumar Muthappa
77.	Mr. Rishabh Mirchandani	Dr. Senthil-Kumar Muthappa
78.	Ms. Monika Shrivastava	Dr. Saloni Mathur
79.	Ms. Aswathi P V	Dr. Pinky Agarwal
80.	Ms. Misha Kumari	Dr. Jyothilakshmi Vadassery
81.	Ms. Prakshi Aneja	Dr. Aashish Ranjan
82.	Ms. Priya Upadhyay	Dr. Senjuti Sinharoy
83.	Ms. Kamali S	Dr. Amarjeet Singh
84.	Ms. Kamankshi Sonkar	Dr. Amarjeet Singh
85.	Mr. Samar Singh	Dr. Ashutosh Pandey
86.	Mr. Adesh Kumar	Dr. Saloni Mathur
87.	Mr. Aman	Dr. Debasis Chattopadhyay
88.	Mr. Anurag Panchal	Dr. Manoj Prasad
89.	Mr. Ashis Majhi	Dr. Hasthi Ram
90.	Ms. Banita Yadav	Dr. Hasthi Ram
91.	Ms. Iqra Nafees Khan	Dr. Subhra Chakraborty
92.	Ms. Kajal	Dr. Naveen Chandra Bisht
93.	Ms. Kavita Joshi	Dr. Gitanjali Yadav
94.	Ms. Kratika Singh	Dr. Amar Pal Singh
95.	Ms. Lavanya Mittal	Dr. Alok Krishna Sinha
96.	Mr. Mahesh Kumar Panda	Dr. Aashish Ranjan
97.	Ms. Mandavi Pandey	Dr. Jitender Giri
98.	Ms. Mandira Roy	Dr. Gopaljee Jha
99.	Mr. Mohit Kumar	Dr. Subhra Chakraborty
100.	Ms. Pragya Nalwa	Dr. Subhra Chakraborty
101.	Ms. Rajni Yadav	Dr. Gopaljee Jha

Sl. No.	Name of the Student	Name of the Supervisor/Co-supervisor
102.	Mr. Sanjib Bal Samant	Dr. Jagadis Gupta Kapuganti
103.	Ms. Sapna	Dr. Manoj Prasad/Dr. Sabhyata Bhatia
104.	Ms. Shivangi Mahawar	Dr. Manoj Majee
105.	Mr. Shubhashish Ranjan	Dr. Senthil-Kumar Muthappa
106.	Mr. Tuhin Das	Dr. Manoj Prasad
107.	Mr. Uttam Pal	Dr. Alok Krishna Sinha
108.	Ms. Vasundara Devi S	Dr. Aashish Ranjan

Ph. D. Degree awarded to NIPGR Scholars

The Jawaharlal Nehru University, New Delhi awarded the degree of Doctoral of Philosophy to the following scholars of the Institute during the year (2022-23) under report:

Sl. No.	Name of the Student	Thesis Title	Name of the supervisor / co-supervisor
1.	Dr. Akanksha Pareek	Global analysis of high-temperature stress-responsive nuclear proteins in developing chickpea seedlings	Dr. Subhra Chakraborty / Dr. Niranjana Chakraborty
2.	Dr. Kriti Tyagi	Unraveling the pathogenicity determinants of rice sheath blight disease	Dr. Gopaljee Jha
3.	Dr. Sanjeet Kumar Mahtha	Computational analysis of the StAR-related lipid transfer (START) domains in plants	Dr. Gitanjali Yadav
4.	Dr. Hari Gowtham G	Genetic dissection of tolerance characteristics in tomato (<i>Solanum lycopersicum</i> L.) against Tomato Leaf Curl New Delhi Virus (ToLCNDV) infection	Dr. Manoj Prasad
5.	Dr. Jathar Vikram Dattatray	Understanding the genetic basis of leaf development differences across cultivated and wild rice	Dr. Aashish Ranjan
6.	Dr. Sarita Jha	Identification and characterization of heat-responsive microRNAs in inflorescence of <i>Solanum lycopersicum</i> L. (Tomato)	Dr. Saloni Mathur
7.	Dr. Poonam Panchal	Manipulating Organic Acid Metabolism for Improving Tolerance to Pi Deficiency and Other Stresses in Rice	Dr. Jitender Giri
8.	Dr. Jawahar Singh	Elucidation of molecular components and associated signaling involved in legume symbiosis	Dr. Praveen Verma
9.	Dr. Udit Basu	Delineation of molecular signatures governing plant architectural traits for yield enhancement in chickpea	Dr. Swarup K. Parida

Sl. No.	Name of the Student	Thesis Title	Name of the supervisor / co-supervisor
10.	Dr. Joyati Das	Identification and characterization of genes involved in bacterial mycophagy	Dr. Gopaljee Jha
11.	Dr. Laxmi	Genetic Dissection of Complex Plant Architecture and Yield Component Traits in chickpea	Dr. Swarup K. Parida
12.	Dr. Ramgopal Prajapati	Identification and characterization of calcium regulated plant defense strategies upon spodoptera litura herbivory in Arabidopsis	Dr. Jyothilakshmi Vadassery
13.	Dr. Pooja Singh	The role of Serine hydroxymethyltransferase6 (SHMT6) in plant response to biotic stress	Dr. Jagadis Gupta Kapuganti
14.	Dr. Lalita Pal	Role of the genes involved in the development of flower and seed coat color in chickpea (<i>Cicer arietinum</i> L.)	Dr. Debasis Chattopadhyay
15.	Dr. Kirti	Investigation of the role of Mitogen Activated Protein Kinase in regulating Argonaute proteins during small RNA dependent gene regulation	Dr. Alok K. Sinha
16.	Dr. Citu	Identification of key components and regulatory pathways of the biophysical carbon concentrating mechanism in <i>Chlamydomonas reinhardtii</i>	Dr. Gitanjali Yadav
17.	Dr. Namrata Singh	The role of Serine hydroxymethyltransferase7 (SHMT7) and Glycine decarboxylase (GDC) in plant response to biotic and abiotic stress	Dr. Jagadis Gupta Kapuganti
18.	Dr. Virevol Thakro	Genetic Dissection of Yield and Domestication-related Traits in Chickpea	Dr. Swarup K. Parida
19.	Dr. Sumaira Tayyeba	Investigation of Signaling Crosstalk During Submergence Stress in Rice	Dr. Alok K. Sinha
20.	Dr. Juhi Kumari	Tissue-specific manipulation of glucosinolate accumulation in Indian oilseed mustard (<i>Brassica juncea</i>) by genetically engineering GTR1 and GTR2 transporters	Dr. Naveen Chandra Bisht

Sl. No.	Name of the Student	Thesis Title	Name of the supervisor / co-supervisor
21.	Dr. Vishal Varshney	Molecular and Functional Characterization of F-box Protein (SKIP31) in <i>Arabidopsis thaliana</i>	Dr. Manoj Majee
22.	Dr. Abhijit Hazra	Molecular analysis and functional characterization of Methionine Sulfoxide Reductase (MSR) from rice	Dr. Manoj Majee
23.	Dr. Shambhavi	Molecular characterization of E3 ubiquitin ligase during stress response in tomato (<i>Solanum lycopersicum</i> L.)	Dr. Manoj Prasad
24.	Dr. Ajeet Singh	Computational approaches to study the long non-coding RNAs (lncRNAs) and fusion transcripts in plants	Dr. Shailesh Kumar
25.	Dr. Aleena Francis	Development of genomic resources for Rice bean (<i>Vigna umbellata</i>) for agronomic trait improvement	Dr. Debasis Chattopadhyay
26.	Dr. Ritu Singh	Genomics-assisted QTL mapping and divulging the molecular intricacies of biotic stress and yield in chickpea	Dr. Praveen Verma
27.	Dr. Ankita Shree	Elucidating the mechanism of fungal survival during host colonization	Dr. Praveen Verma
28.	Dr. Ruchi Tiwari	Molecular and functional characterization of Extra-Large G-proteins (XLGs)) from plants	Dr. Naveen Chandra Bisht
29.	Dr. Shafaque Zahra	Computational approaches to study the transfer RNA-derived fragments (tRFs) in plants	Dr. Shailesh Kumar
30.	Dr. Vinod Kumar Prajapati	Identification of effector proteins from generalist herbivore, <i>Spodoptera litura</i> and its targets in plants	Dr. Jyothilakshmi Vadassery

Researchers other than Ph.D. students

Research Associates

Sl. No.	Name of Researchers	Sl. No.	Name of Researchers
1	Abhijit Hazara	46	Neetu Verma
2	Abinaya Manivannan	47	Nidhi Singh
3	Abira Choudhuri	48	Nilesh Kumar Sharma
4	Afsana Praveen	49	Niraj Kumar Vishwakarma
5	Alka Devi	50	Niraj Singh
6	Anil Kumar	51	Palakurthi Ramesh
7	Anish Kundu	52	Paragya Barua
8	Ankit Singhal	53	Paramita Bera
9	Annesha Ghosh	54	Pawan Kumar
10	Anurag Vasantrao Daware	55	Pinky
11	Aprajita Kumar	56	Piyush Priya
12	Ashish Kumar Singh	57	Pooja Singh
13	Ashish Prasad	58	Poonam Kumari
14	Ashutosh Kumar	59	Prachi Pandey
15	Atul Kumar Jaiswal	60	Praveen Rai
16	Balaji M.	61	Pravin Kumar
17	Chitra Bhatia	62	Priyanka Deveshwar
18	D. Balasubramaniam	63	Rahul Kumar
19	Deepa Teotia	64	Ramgopal Prajapati
20	Deepika Sharma	65	Rashmi Gangwar
21	Donde Ravindra Dutta	66	Ravindra Kumar Chandan
22	Eshan Sharma	67	Rengasamy BalaKrishnan
23	Gauri Arora	68	Rishi Srivastava
24	Harsha Samnta	69	Ritesh Kumar Yadav
25	Heena Arora	70	Roshan Kumar Singh
26	J. Thebora	71	Ruchi Tiwari
27	Jadhav Mangesh Pralhad	72	Sameer Dixit
28	Jitender Kumar	73	Sangeeta Singh
29	Jitender Singh	74	Santosh Kumar
30	Joyati Das	75	Saqib Mahmood
31	Jyoti Bhadouria	76	Sathish Sundarajan

Sl. No.	Name of Researchers
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32	Kamble Nitin Uttam
33	Kanchan Jumrani
34	Kanika Narula
35	Kristi Kabyashree
36	Laxmi
37	Lekha T. Pazhamala
38	Lokesh Verma
39	Mahesh Patil
40	Mamta Rani
41	Manu Kandpal
42	Megha Gupta
43	Mrinalini Manna
44	Namisha Sharma
45	Nandita Pasari

Sl. No.	Name of Researchers
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77	Shambhavi Sharma
78	Shiksha Chaurasia
79	Shivi Tyagi
80	Shubhendu Shekhar
81	Sonam Chaudhary
82	Sudhakar Srivastava
83	Sunil Kumar Yadav
84	Surbhi Dutta Tripathi
85	Udita Basu
86	V.Chandra Kaladhar
87	Vijay Wardhan
88	Vimal Kumar Pandey
89	Vinod Kumar Jangid

Project Fellows

Sl. No.	Name of Researchers
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1	Aarzo Qamar
2	Achal Prasad
3	Akanksha Pareek
4	Akansha Singh
5	Akila S.
6	Amrutha Laie
7	Anjali Rawal
8	Ankit
9	Ankita Shree
10	Anupriya Singh
11	Arvind Kumar
12	Ashish Chauhan
13	Asim Gosh
14	Benedict Analin A
15	Bhagat Singh
16	Bhavya Shukla
17	Biswaranjan Rout
18	Boddu Tejaswani

Sl. No.	Name of Researchers
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47	Megha Choudhary
48	Nagendra Pratap Singh
49	Nidhi Varshney
50	Nikhil
51	Nirankush Kumar
52	Nitin Jain
53	Niyaz Ahmed
54	Oceania Chirom
55	Oindrila Bhattacharjee
56	Philip Francis
57	Poonam Panchal
58	Pragya Chitkara
59	Pritha Kundu
60	Priyanka Kumari
61	Priyanka Singh
62	Rajani Sharma
63	Rajshree Pattanayak
64	Rajul Tayal

19	Chetan Rawat	65	Reena Rathor
20	Deepak Bajaj	66	Rim Chaudhury
21	Deepali Tiwari	67	Ritesh Kumar Raipuria
22	Deepanshi Rathore	68	Ritesh Kumar Yadav
23	Dharmendra Nath Bhatt B	69	Rubiya Parveen
24	Divya Goyal	70	Sanjeet Kumar Mahtha
25	Dulla Sandeep	71	Shaswati Sardar
26	Durgadevi A.	72	Shivank Parashar
27	Farheen Saifi	73	Shuaib Khassin
28	Gagan Gupta	74	Simranjit Kaur
29	Ganpat Sharma	75	Sonia
30	Garima Kalakoti	76	Sonu Kumar
31	Gaurav Jain	77	Srija Chakraborty
32	Gourav Singh	78	Sudhir Kumar
33	Isha Joshi	79	Suprava Priyadarsini Nayak
34	Joyati Das	80	Supriya P Swain
35	Juhi Gupta	81	Tanvi Bajaj
36	Kamlesh Kumar Soni	82	Ujjwal Sirohi
37	Kavya Jeyakumar	83	Vadivel Muragan I
38	Khushboo Sharma	84	Vaishali Gautam
39	Kirti Singh	85	Vidhi Verma
40	Kirti Tyagi	86	Virevol Thakro
41	Komal Kumari	87	Vishal Jamuni
42	Lalita Pal	88	Vishnu S Babu
43	Mahendra Pawar	89	Vivek Kumar
44	Manish Kumar Sharma	90	Yamini Agarwal
45	Manisha	91	Zainab Mirza
46	Manvi Sharma		

Training Programme

The Institute accepts students from different Universities/Institutes as trainees and provides them facilities and guidance. A list of students from various universities/institutions trained by faculty of the Institute is given below:

Trainees at Under Graduate level

Mr. Paritosh Grover	12 th std school student Vasant Valley School New Delhi [school trainee]
Ms. Priya Dharshini M	B. Tech Biotechnology, Tamil Nadu Agricultural University (TNAU), Coimbatore
Mr. Praney Surha	B.Sc. (Hons), K.R. Mangalam University, Gurugram, Haryana
Ms. JVSS Gayatri	B. Tech (Bioinformatics), VFSTR Guntur, Andhra Pradesh
Ms. Harnoor Kaur Anand	B. Tech (Biotechnology), University School of Biotechnology, Guru Govind Singh Indraprastha University
Miss Garima Jain	B. Tech (Biotechnology), Jaipur National University, Jaipur
Mr. Saumyapriya Rana	BS-MS, IISER Berhampur, Odissa
Mr. Nagalla Lakshmi Venkat Sai Ram	B.Sc. Lovely Professional University, Punjab
Mr. Manish Kumar	B. Tech (Biotechnology), Delhi Technological University, Delhi
Mr. Abhinav Kumar	B. Tech, Lovely Professional University, Punjab
Ms. Muskaan Raghav	Integrated B. Tech + M. Tech in Biotechnology, Gautam Buddha University, Greater Noida
Ms. Irfana Thesni KT	BS-MS 4 th year, Indian Institute of Science Education and Research (IISER), Tirupati, Andhra Pradesh.

Trainees at Post Graduate level

Ms. Vaishali Dixit	M.Sc. Biotechnology, Banasthali Vidyapith, Jaipur
Ms. Vandana Gautam	M.Sc. Biotechnology, Guru Nanak Dev University, Amritsar.
Ms. Vaishali Kumari	M.Sc. Biotechnology, Guru Nanak Dev University, Amritsar.
Ms. Aditi Kar	Amity Institute of Microbial Technology, AUUP, Noida, Uttar Pradesh
Ms. Anuja Jha	M.Sc. CCS University, Meerut, UP
Ms. Lulu Cherikkammal	M.Sc. Botany, St. Joseph's College, Devagiri, Calicut
Mr. Akash Bhattacharjee	M.Sc. Biotechnology, Amity University, Kolkata

Ms. Shweta Hiralkar	M.Sc. (Bioinformatics), School of Biotechnology Devi Ahilya University, Khandwa Road Campus, Indore
Mr. Krishna R Acharya	M.Sc. Microbiology, DBT, Cochin University of Science and Technology, Cochin
Ms. Shourya Burnwal	M.Tech, Agriculture Biotechnology, IIT, Khargapur
Ms. Snehal Jayendra Murumkar	M.Sc. Biotechnology (5 year integrated), SPPU, Pune
Mr. Nishant Prasad	M.Sc. Central University of Gujarat
Mr. Dhananjay Sharma	M.Sc. (Bioinformatics), DAVV Indore, MP
Ms. Aastha Godwal	M.Sc. (Integrated Biotechnology), Institute of Integrated and Honours Studies, Kurukshetra
Ms. Shalini Vatsa	M.Sc., Department of Biotechnology, Central University of South Bihar, Gaya, Bihar
Ms. Upsana Shukla	M. Tech (Biotechnology), Gautam Buddha University, Greater Noida
Ms. Richa Gupta	M.Sc. (Biotechnology), Central University of Haryana, Haryana
Ms. Afrin Jamal	M.Sc. (Honours), Utkal University, Odisha
Ms. Sonia	M.Sc., Central University of Haryana
Mr. Aman	M.Sc. (Biotechnology), Jamia Millia Islamia, New Delhi
Mr. Kaushal Kumar Mishra	M.Sc., Gaya College, Gaya
Ms. Anamika Msihra	M.Sc. (Biotechnology), Department of Biosciences, School of Bio sciences and Technology, Vellore Institute of Technology, Vellore.
Mr. Shubhankar Singh	M.Sc. (Biotechnology), DBT, Central University of Haryana
Ms. Priyanshu Gautam	M.Sc. (Biotechnology), Amity Institute of Biotechnology, Amity University, Haryana
Ms. Nidhi Sharma	GD Goenka University, Gurugram
Ms. Aman Kaur	M.Sc. (Bioinformatics), Amity University, Noida
Mr. Himanshu Ranjan	M.Sc. (Biotechnology), Vinoba Bhave University, Hazaribagh, Jharkhand
Ms. Tanishka Uttam	DBT, TERI School of Advanced Studies, Delhi
Ms. Diksha Kumari	M.Sc. (Biotechnology), Banasthali Vidyapith, Rajasthan
Ms. Manika Bhatia	M.Sc. Biotechnology, TERI School of Advanced Studies, New Delhi
Ms. Asma Badr Khan	M.Sc. Bioinformatics, Jamia Millia Islamia, New Delhi

Ms. Amanpreet Kaur	M.Sc. Bioinformatics, Amity University, Noida
Mr. Pranay Upadhyay	M.Sc. (Department of Biotechnology), A.N. College, Patna
Ms. Prachi	M.Sc. (Biot.), A.N. College, Patna
Mr. Shri Prabhu	M. M.Sc. (Biotechnology), Bharathidasan University, Tamil Nadu
Mr. Dhruv Yadav	M.Sc. REVE University, Bengaluru
Ms. Aishwarya S Nair	M.Sc., St. Berchmans College, Kerala

Grant-in-Aid Schemes

Sl. No.	Investigator / Co-Investigator	Title of the Scheme	Funded by
1	Prof. Asis Datta	Decoding the N-acetylglucosamine signalling pathway in microbial pathogens for disease control	CSIR Govt. of India
2	Prof. Asis Datta	Biotechnological approaches to improve shelf life, productivity of vegetables- (Tomato)	DBT Govt. of India
3	Dr. Niranjan Chakraborty	Dissection of proteome dynamics of high temperature stress in wheat (<i>Triticum aestivum</i> L.) and identification of potential candidates for genetics engineering	CSIR Govt. of India
4	Dr. Subhra Chakraborty	Advanced Inter-Institutional Proteomics Facility- Advanced Research Platform for Crop Sciences	DBT Govt. of India
5	Dr. Subhra Chakraborty	Understanding mechanistic detail of growth promotion and stress tolerance in legume and cereal crops by fungal endophyte through seretome and metabolomics study	DBT Govt. of India
6	Dr. Subhra Chakraborty	Deciphering role(s) of post-translational modifications and chromatin regulation of immunity in rice	SERB Govt. of India
7	Dr. Subhra Chakraborty	J. C. Bose Fellowship	SERB Govt. of India
8	Dr. Subhra Chakraborty	Characterization of chickpea germplasm resource to accelerate genomics-assisted crop improvement”, under mission programme of “Characterization of genetic resources	DBT Govt. of India
9	Dr. Subhra Chakraborty	A National Mission Mode Program on Nutritional Improvement of Digestible Protein Content and Quality in Rice	DBT Govt. of India
10	Dr. Debasis Chattopadhyay	J. C. Bose Fellowship: Role of cytokinin oxidase in root development and mineral accumulation in chickpea	SERB Govt. of India

Sl. No.	Investigator / Co-Investigator	Title of the Scheme	Funded by
11	Dr. Alok Krishna Sinha	Editing MPK3, a mitogen activated protein kinase gene using CRISPER/Cas9 tool in rice to study the role of gene in cell cycle and grain yield	DBT Govt. of India
12	Dr. Alok Krishna Sinha	J.C. Bose fellowship – Investigation of molecular mechanism of submergence tolerance rice	SERB Govt. of India
13	Dr. Alok Krishna Sinha	Gene Functional Analysis Platform for Crops- Advanced Research Platform for Crop Sciences	DBT Govt. of India
14	Dr. Sabhyata Bhatia	Generating genomic resources for facilitating genetic enhancement of selective Vigna species and Horse gram- Genetic Enhancement of Minor Pulse	DBT Govt. of India
15	Dr. Sabhyata Bhatia	Targeted exome and transcriptome sequencing of lentil for discovery of genetic polymorphisms and construction of gene expression atlas	SERB Govt. of India
16	Dr. Manoj Prasad	Multi-omics study on the factors affecting the shelf-life of model nutricereal, foxtail millet (<i>Setaria italica</i> L.)	SERB Govt. of India
17	Dr. Manoj Prasad	J.C. Bose fellowship – Functional characterization of Ubiquitin conjugation pathway genes for delineating its role in Tomato leaf curl disease tolerance in tomato	SERB Govt. of India
18	Dr. Manoj Prasad	Germplasm Characterization and Trait Discovery in Wheat using Genomics Approaches and its Integration for Improving Climate Resilience, Productivity and Nutritional quality” under mission programme of “Characterisation of Genetic Resources”, Sub Project- I: “Germplasm genomics for trait discovery”	DBT Govt. of India
19	Dr. Manoj Prasad	Genetic engineering of ubiquitin-proteasome pathway gene (SIRPT4a) for providing tolerance against ToLCNDV in tomato	DBT Govt. of India
20	Dr. Gitanjali Yadav	Characterization of 3-Hydroxy-3-methylglutaryl co-enzyme A reductase (HMGR) gene family in <i>Cicer arietinum</i> , and its role in abiotic stress	CSIR Govt. of India
21	Dr. Gitanjali Yadav	Transforming India's Green Revolution by Research and Empowerment for Sustainable food Supplies” (TIGR2ESS)	University of Cambridge Govt. of UK

Sl. No.	Investigator / Co-Investigator	Title of the Scheme	Funded by
22	Dr. Ashverya Laxmi	J.C. Bose fellowship	SERB Govt. of India
23	Dr. Ashverya Laxmi	Cytokinin regulation of shade avoidance response in plants	SERB Govt. of India
24	Dr. Ashverya Laxmi	Exploration of heat and cytokinin signaling interaction for enhancing thermomemory in plants	DBT Govt. of India
25	Dr. Manoj Majee	National Bioscience Award: Investigation of chemical war between isoASp mediated protein damage and repair in seed towards understanding seed deterioration during aging and seed storage	DBT Govt. of India
26	Dr. Naveen C. Bisht	Nutritional Improvement of Indian Oilseed Mustard Using CRISPR-Cas9 Mediated Genome Editing	DBT Govt. of India
27	Dr. Naveen C. Bisht	Genomics-led improvement of biotic and abiotic stress tolerance in mustard rape for economic and environmental sustainability	DBT Govt. of India
28	Dr. Naveen C. Bisht	Investigating the molecular-genetic basis of multifunctional glucosinolate transporters (GTR1/GTR2) in Brassica crops- S. Ramachandran National Bioscience Award	DBT Govt. of India
29	Dr. Naveen C. Bisht	Fruit composition profile of brinjal, capsicum and tomato varieties grown under different crop growth conditions	DRDO Govt. of India
30	Dr. Jagadis Gupta Kapuganti	Unravelling the interaction of mineral nutrition (N and K) and vitamin B6 metabolism for sustainable agricultural practices	INDO-SWISS joint research project
31	Dr. Jagadis Gupta Kapuganti	Development of an engineered box for increasing shelf-life of fruits and vegetables using hypoxia induced nitric oxide	BIRAC Govt. of India
32	Dr. Jagadis Gupta Kapuganti	The role of phytooglobin-nitric oxide cycle in oxygen sensing and plasticity of mitochondrial response to low oxygen stress in plants	SERB Govt. of India

Sl. No.	Investigator / Co-Investigator	Title of the Scheme	Funded by
33	Dr. Jagadis Gupta Kapuganti	Novel and cost-effective technology to prevent post-harvest losses of fruits- Sree Padmavathi Venkateswara Foundation (Sree PVF)	Sree Ramkrishna Paramahansa Research Grants
34	Dr. Jagadis Gupta Kapuganti	Platform for Measurement of Free Radicals (PMFR)	DBT Govt. of India
35	Dr. Saloni Mathur	Investigating the microRNA169: Nuclear Factor-YA module as a potential target for early maturation and yield enhancement under control and heat stress conditions in tomato	SERB Govt. of India
36	Dr. Gopaljee Jha	Enhancing sheath blight disease tolerance in rice under Swarna Jayanti Fellowship	DST Govt. of India
37	Dr. Gopaljee Jha	Imparting sheath blight disease tolerance in rice	DBT Govt. of India
38	Dr. Senthil Kumar Muthappa	Development of integrated multi-omics database for understanding combined stress tolerance in plants	SERB Govt. of India
39	Dr. Jitender Giri	Improving crop yield in dry and nutrient-poor soil via more resilient rice varieties	University of Nottingham, UK
40	Dr. Jitender Giri	Beyond transgenic plants: use of precise genome editing for improving plant growth under low phosphorus input	INDO-SWISS joint research project
41	Dr. Jitender Giri	Unlinking phosphate deficiency responses from their adverse effects on growth in rice	DST Govt. of India
42	Dr. Jitender Giri	Targeting Pup 1 independent mechanisms for improving low soil phosphorus tolerance and use- efficiency in rice	DBT Govt. of India
43	Dr. Swarup K. Parida	Integrated genomic strategy for accelerating domestication of rice bean (<i>Vigna umbellata</i>)- Genetic Enhancement of Minor Pulse	DBT Govt. of India
44	Dr. Swarup K. Parida	Genetic dissection of flowering-and-podding-efficiency for enhancing yield stability and productivity in chickpea- S-Ramachandran National Bioscience Award	DBT Govt. of India

Sl. No.	Investigator / Co-Investigator	Title of the Scheme	Funded by
45	Dr. Pinky Agarwal	A novel miRNA-target module controlling rice grain size: Identification, confirmation and elucidation of its role in grain development and other seed-related traits, targeting crop improvement	SERB Govt. of India
46	Dr. Jyothilakshmi Vadassery	EMBO Global Investigator Network Grant	Govt. of Germany
47	Dr. Jyothilakshmi Vadassery	The chemical ecology of high L-DOPA containing plants and their interaction with herbivores	DBT Govt. of India
48	Dr. Jyothilakshmi Vadassery	Plant analytical Platform for Phytohormones and low abundant Molecules- Advanced Research Platform for Crop Sciences	DBT Govt. of India
49	Dr. Jyothilakshmi Vadassery	Development of sustainable management tools for the invasive pest, Fall Armyworm <i>Spodoptera frugiperda</i> (J. E. Smith) in maize	ICAR Govt. of India
50	Dr. Jyothilakshmi Vadassery	Metabolomic analysis of fungal endophyte induced systemic resistance in <i>Solanum lycopersicum</i> on herbivory by <i>Spodoptera litura</i>	SERB Govt. of India
51	Dr. Aashish Ranjan	Understanding genetic and molecular intricacies of high ambient temperature-regulated leaf size	SERB Govt. of India
52	Dr. Aashish Ranjan	Characterization of Genetic Resources: Mainstreaming rice landraces diversity in varietal development through genome-wide association studies: A model for large scale utilization of gene bank collections of rice	DBT Govt. of India
53	Dr. Senjuti Sinharoy	Determination the role of (Cysteine-Rich Secretory Proteins, Antigen 5, and Pathogenesis-Related 1 Proteins (CAP) during <i>Arachis- Bradyrhizobium</i> symbiosis	DBT Govt. of India
54	Dr. Senjuti Sinharoy	Understanding the role of nodule specific PIN-LIKES (PILS) protein in peanut root nodule development	DST Govt. of India
55	Dr. Senjuti Sinharoy	Generation of a retrotransposon-based mutant population of chickpea for functional genomics studies	DBT Govt. of India

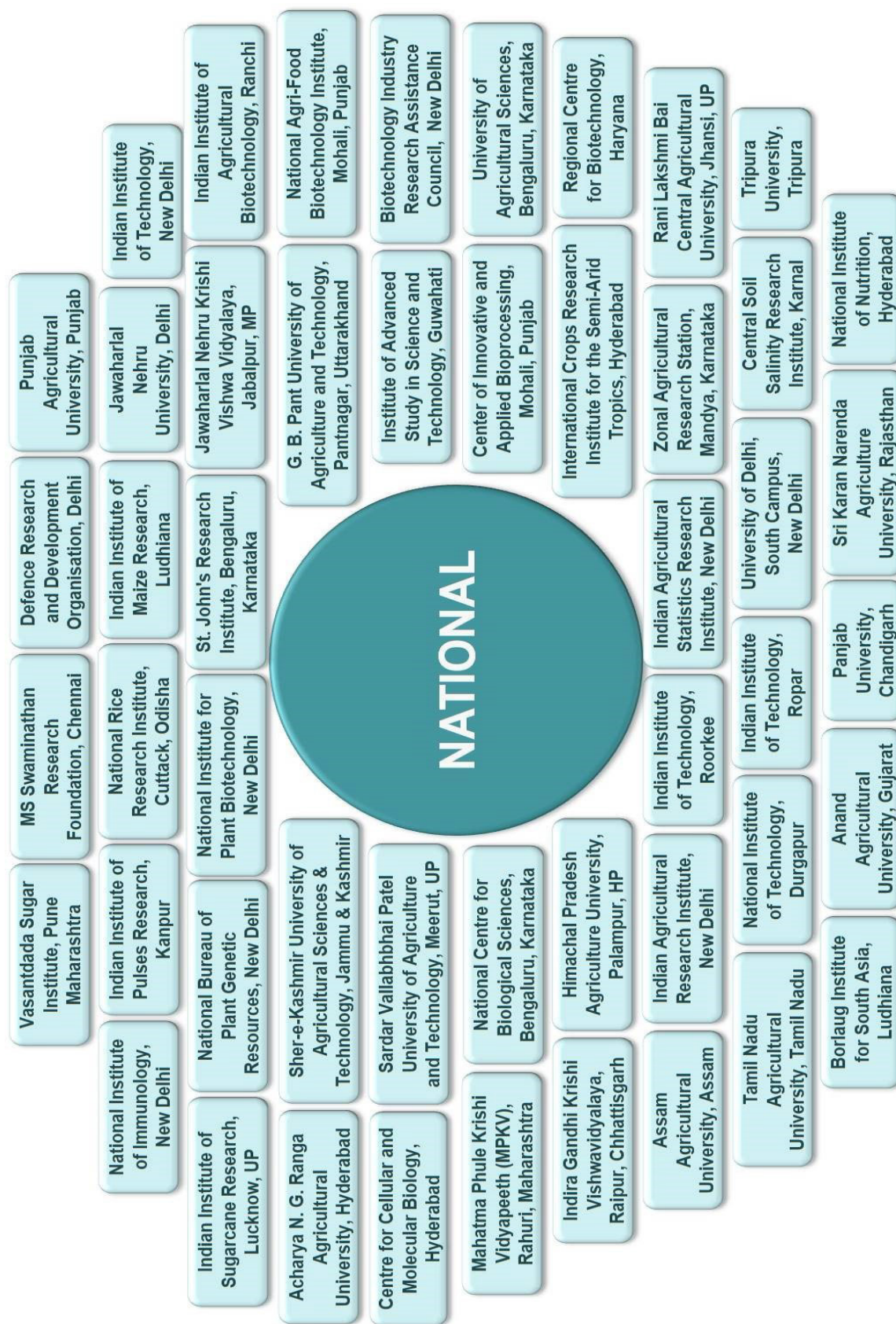
Sl. No.	Investigator / Co-Investigator	Title of the Scheme	Funded by
56	Dr. Amar Pal Singh	Physiological and molecular characterization of root developmental plasticity under low nitrogen availability	DST Govt. of India
57	Dr. Amarjeet Singh	Genetic dissection of 13-lipoxygenases to modulate JA biosynthesis for enhanced N, P, K deficiency tolerance in rice	SERB Govt. of India
58	Dr. Amarjeet Singh	Molecular and genetic analysis of phosphorus (P) deficiency related phospholipases for enhanced P deficiency tolerance in rice	SERB Govt. of India
59	Dr. Shailesh Kumar	Genome-wide identification and characterization of fusion event in different plant species	SERB Govt. of India
60	Dr. Shailesh Kumar	Plan Genomics, Gene Regulatory Network and Novel RNA Molecules and NNP Project: Network Project on Crop Bioinformatics”, under “Establishment of Bioinformatics and Computational Biology Centre	DBT Govt. of India
61	Dr. Shailesh Kumar	Integrated Multi-omics for Knowledge-based Crop Improvement for Abiotic Stress Tolerance	DBT Govt. of India
62	Dr. Ashutosh Pandey	National Certification System for Tissue Culture Raised Plants (NCS-TCP)	DBT Govt. of India
63	Dr. Ashutosh Pandey	Development of D-allulose based nano-formulations for enhanced stress tolerance and increased crop productivity	DBT Govt. of India
64	Dr. Ashutosh Pandey	Genome editing mediated nutritional improvement of potato (<i>Solanum tuberosum</i> L.)	DBT Govt. of India
65	Dr. Hasthi Ram	INSPIRE Faculty Award	DST Govt. of India
66	Dr. Hasthi Ram	Construction and functional testing of genome-wide CRISPR-Cas9 library for genome-editing of seed specific genes in <i>Indica</i> Rice	SERB Govt. of India
67	Dr. Hasthi Ram	Increasing Iron Level in Rice Grains through Altering the Expression of Vacuolar Iron Transporter (VIT)-Like genes	DBT Govt. of India

Sl. No.	Investigator / Co-Investigator	Title of the Scheme	Funded by
68	Dr. Vineet Gaur	Structure and biochemical characterization of plant SLX1, a novel structure-specific endonuclease involved in DNA repair and recombination	SERB Govt. of India
69	Dr. Vineet Gaur	Ramalingaswami Fellowship: Structural studies of proteins involved in DNA repair and recombination in plants	DBT Govt. of India
70	Dr. Prabhakaran Soundararajan	Evolutionary developmental (evo-devo) genetics study on stem cell fate and cell identity transition between diverse <i>Brassica oleracea</i> morphotypes	SERB Govt. of India
71	Dr. Mrinalini Manna (NPDF)	Understanding mitogen-activated protein kinase mediated regulation of PIN1a auxin transporter for manipulating tiller number in rice (<i>Oryza sativa</i>)”	SERB Govt. of India
72	Dr. Nandita Pasari (BioCARE Women Scientist)	Elucidating the role of small RNA based effectors involved in root colonization of a growth promoting endophytic fungus <i>Piriformospora indica</i> in chickpea	DBT Govt. of India
73	Dr. Namisha Sharma (DST-Women Scientist)	Integrating omics approaches to understand the molecular mechanism underlying plants’ response to Tomato Leaf Curl disease	SERB Govt. of India
74	Dr. Depika Sharma (INSPIRE Fellow)	Understanding role of MAP Kinase signaling cascade in regulation of peptides encoded by pri-miRNAs in rice	DST Govt. of India
75	Dr. Sameer Dixit M K Bhan Fellow	Screening and identification of <i>Spodoptera litura</i> effectors proteins using RNA interference and its functional validation in plants	DBT Govt. of India
76	Dr. Deepa Teotia M K Bhan Fellow	Understanding the molecular mechanism of higher nitrogen fixation efficiency in <i>Cicer arietinum</i> and <i>Medicago truncatula</i> root nodules: A multi-omics approach	DBT Govt. of India
77	Dr. Abinaya Manivannan (INSPIRE Fellow)	Whole genome de novo assembly and identification of functional genes associated with biosynthesis of quinaxoline alkaloids in <i>Adhatoda vasica</i> , a potential medicinal plants	DST Govt. of India
78	Dr. Chitra Bhatia M K Bhan Fellow	Investigating post-transcriptional regulation of jasmonate signalling for improving rice response to environmental stresses	DBT Govt. of India

Sl. No.	Investigator / Co-Investigator	Title of the Scheme	Funded by
79	Dr. Sonam Chaudhary (NPDF)	Functional characterization of myrosinases encoding genes for enhanced plant defence in Brassica crop	SERB Govt. of India
80	Dr. Shiksha Chaurasia (NPDF)	Unravelling the key genomic regions/QTLs associated with salt tolerance traits in Lentil (Lens culinaris Medikus) using Genotyping-by-Sequencing approaches	SERB Govt. of India



Collaborating/ Interacting Institutions







Committees of the Institute

Society

Dr. Jitendra Singh

Hon'ble Union Minister of State (IC) for
Ministry of Science & Technology
and Earth Sciences
Government of India, New Delhi
(President)

Shri Manish Sisodia

Hon'ble Deputy Chief Minister
and Minister in-charge of Higher Education
Government of Delhi, New Delhi

Dr. Rajesh S. Gokhale

Secretary
Department of Biotechnology
Ministry of Science & Technology
Government of India, New Delhi

Dr. Shekhar C. Mande

Director General, Council of Scientific
and Industrial Research and Secretary,
Department of Scientific & Industrial Research
Government of India, New Delhi

Dr. Trilochan Mohapatra

Secretary, Department of Agricultural
Research and Education
and Director General,
Indian Council of Agricultural Research,
Government of India, New Delhi

Shri H. Rajesh Prasad

Pr. Secretary (Higher Education)
Government of Delhi, New Delhi

Shri Chaitanya Murti

Joint Secretary (Administration)
Department of Biotechnology
Ministry of Science & Technology
Government of India, New Delhi

Shri Vishvajit Sahay

Financial Adviser
Department of Biotechnology
Ministry of Science & Technology
Government of India, New Delhi

Dr. Bhushan Patwardhan

Former Vice-Chairman
University Grants Commission, New Delhi

Dr. Ramesh Venkata Sonti

Director
International Centre for Genetic Engineering
and Biotechnology
New Delhi

Dr. Dinakar M. Salunke

Former Director
International Centre for Genetic Engineering
and Biotechnology, New Delhi

Shri Siba Prasad Mohanty

Chairman and Managing Director
Hindustan Insecticides Ltd., New Delhi

Professor Akhilesh Tyagi

Department of Plant Molecular Biology
South Campus, University of Delhi
New Delhi

Dr. Ram Vishwakarma

Former Director
CSIR-Indian Institute of Integrative Medicine,
Jammu

Dr. Subhra Chakraborty

Director
National Institute of Plant Genome Research
New Delhi
(Member-Secretary)

Governing Body

Dr. Rajesh S. Gokhale

Secretary
Department of Biotechnology
Ministry of Science & Technology
Government of India, New Delhi
(Chairperson)

Shri Chaitanya Murti

Joint Secretary (Administration)
Department of Biotechnology
Ministry of Science & Technology
Government of India, New Delhi

Shri Vishvajit Sahay

Financial Adviser
Department of Biotechnology
Ministry of Science & Technology
Government of India, New Delhi

Dr. Subhra Chakraborty

Director, NIPGR
New Delhi

Dr. Debasis Chattopadhyay

Scientist - VII
National Institute of Plant Genome Research
New Delhi

Dr. Amit P. Parikh

Scientist 'F'
Department of Biotechnology
Ministry of Science & Technology
Government of India, New Delhi

Dr. Chandrima Shaha

President
Indian National Science Academy
New Delhi

Dr. Saroj Kanta Barik

Director
CSIR-National Botanical Research Institute,
Lucknow (UP)

Dr. K. Gurumurthi

Former Director
Institute of Forest Genetics and Tree Breeding
Coimbatore (TN)

Dr. Anil Tripathi

Former Director
CSIR-Central Institute of Medicinal and
Aromatic Plants
Lucknow (UP)

Dr. Sundeep Sarin

Scientist 'G'
Department of Biotechnology
Ministry of Science & Technology
Government of India
New Delhi

Shri Sandeep Datta

Controller of Administration
National Institute of Plant Genome Research
New Delhi
(Member-Secretary)

Finance Committee

Shri Vishwajit Sahay

Additional Secretary &
Financial Adviser
Department of Biotechnology,
Ministry of Science and Technology
Government of India, New Delhi
(Chairperson)

Dr. Subhra Chakraborty

Director, NIPGR
New Delhi

Shri Sandeep Datta

Controller of Administration
NIPGR, New Delhi

Dr. Ramesh Venkata Sonti

Director
International Centre for Genetic Engineering
and Biotechnology
New Delhi

Ms. Neeru Abrol

Former CMD
National Fertilizers Ltd.
New Delhi

Shri M. Satish Kumar Reddy

Former Commissioner
Central Goods and Services Tax and Customs
Government of India

Dr. Sundeep Sarin

Scientist 'G'
Department of Biotechnology
Ministry of Science & Technology
Government of India
New Delhi

Shri Rakesh Mohan

Finance Officer
National Institute of Plant Genome Research
New Delhi
(Member-Secretary)

Scientific Advisory Committee

Prof. Umesh Varshney

Professor & Chair
Division of Biological Sciences
Indian Institute of Science, Bengaluru

Dr. Chandrima Shaha

President
Indian National Science Academy
New Delhi

Dr. Saroj Kanta Barik

Director
CSIR-National Botanical Research Institute,
Lucknow (UP)

Dr. K. Gurumurthi

Former Director
Institute of Forest Genetics and Tree Breeding
Coimbatore (TN)

Dr. Anil Tripathi

Former Director
CSIR-Central Institute of Medicinal and
Aromatic Plants, Lucknow (UP)

Dr. A. K. Singh

Professor & Head
Genetics Division
ICAR-Indian Agricultural Research Institute
New Delhi

Professor Usha Vijayraghavan

Professor
Microbiology and Cell Biology
Indian Institute of Science, Bengaluru

Professor Joseph Ecker

Director
Genomic Analysis Laboratory
Salk Institute for Biological Studies
La Jolla, California, USA

Dr. Rajeev Kumar Varshney

Director, State Agricultural Biotechnology
Centre
Director, Centre for Crop & Food Innovation
International Chair in Agriculture & Food
Security
Food Futures Institute, Murdoch University

Dr. Sundeep Sarin

Scientist 'G'
Department of Biotechnology
Ministry of Science & Technology
Government of India
New Delhi

Dr. Subhra Chakraborty

Director, NIPGR
New Delhi (Member-Secretary)

Academic Committee

Dr. Subhra Chakraborty

Director, NIPGR
New Delhi (Chairperson)

Prof. K. Natarajan

School of Life Sciences
Jawaharlal Nehru University
New Delhi – 110067

Prof. Rakesh K. Tyagi

Special Centre for Molecular Medicine
Jawaharlal Nehru University
New Delhi – 110067

Dr. Debashish Mohanty

Scientist VII
National Institute of Immunology
New Delhi – 1100 67

Dr. Neel Sarovar Bhavesh

Group Leader
International Centre for Genetic Engineering
and Biotechnology (ICGEB)
New Delhi

Dr. Debasis Chattopadhyay

Scientist
National Institute of Plant Genome Research
New Delhi

Dr. Ashverya Laxmi

Scientist
National Institute of Plant Genome Research
New Delhi

Prof. Ajay Kumar Dubey

Rector
Jawaharlal Nehru University
New Delhi – 110067
(Special Invitee)

Building Committee

Dr. Dinakar M. Salunke

Executive Director
International Centre for Genetic Engineering and
Biotechnology, New Delhi
(Chairman)

Prof. Rakesh Bhatnagar

Vice Chancellor
Banaras Hindu University
Varanasi, Uttar Pradesh

Shri Harendra Singh

Executive Engineer
National Institute of Immunology
New Delhi, India

M/s. S. D. Sharma and Associates

Institute's Architect
Panchkula (Haryana)

Consultant Engineer

NIPGR, New Delhi

Shri Sandeep Datta

Controller of Administration
NIPGR, New Delhi
(Member-Secretary)

Institutional Biosafety Committee

Dr. Subhra Chakraborty

Director, NIPGR
New Delhi (Chairperson)

Prof. Subrata Sinha

All India Institute of Medical Science (AIIMS)
New Delhi

Prof. Alok Bhattacharya

Ashoka University
Sonapat, Haryana

Prof. M. V. Rajam

University of Delhi South Campus (UDSC)
New Delhi

Dr. M. K. Reddy

International Centre for Genetic Engineering and
Biotechnology (ICGEB), New Delhi

Dr. Senthil K. Muthappa

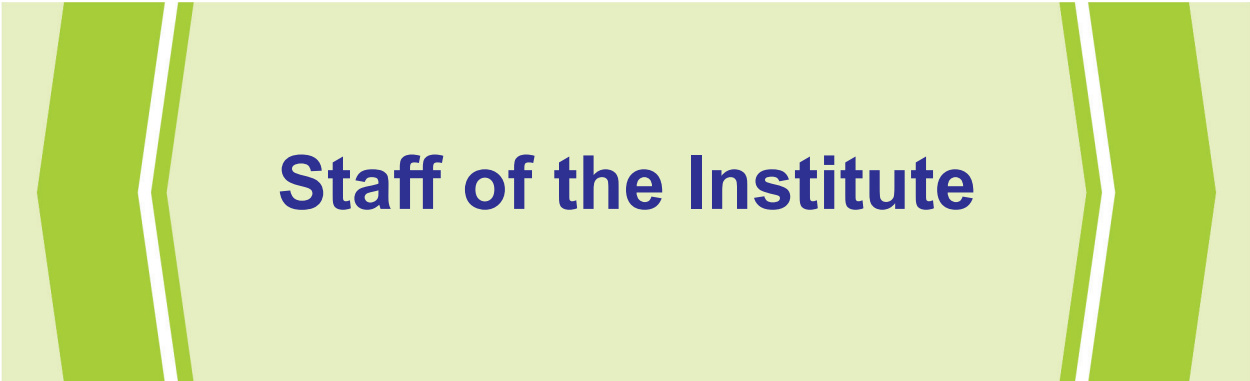
Scientist
NIPGR, New Delhi

Dr. Senjuti Sinharoy

Scientist
NIPGR, New Delhi

Dr. Naveen Chandra Bisht

Scientist
NIPGR, New Delhi
(Member-Secretary)



Staff of the Institute

Scientific Staff

1. Dr. Subhra Chakraborty, Director
2. Dr. Niranjana Chakraborty, POE & INSA Senior Scientist
3. Prof. Asis Datta, Distinguished Emeritus Scientist
4. Dr. Debasis Chattopadhyay, Scientist VII
5. Dr. Alok Krishna Sinha, Scientist VII
6. Dr. Sabhyata Bhatia, Scientist VII
7. Dr. Manoj Prasad, Scientist VII
8. Dr. Praveen Verma, Scientist VI*
9. Dr. Jitendra Kumar Thakur, Scientist VI**
10. Dr. Manoj Majee, Scientist VI
11. Dr. Gitanjali Yadav, Scientist V
12. Dr. Ashverya Laxmi, Scientist V
13. Dr. Naveen Chandra Bisht, Scientist V
14. Dr. Jagadish Gupta Kapuganti, Scientist V
15. Dr. Ananda Kumar Sarkar, Scientist V*
16. Dr. Gopaljee Jha, Scientist V
17. Dr. Senthil K. Muthappa, Scientist V
18. Dr. Jitender Giri, Scientist V
19. Dr. Saloni Mathur, Scientist V
20. Dr. Swarup K. Parida, Scientist V
21. Dr. Pinky Agarwal, Scientist V
22. Dr. Jyothilakshmi Vadassery, Scientist V
23. Dr. Aashish Ranjan, Scientist V
24. Dr. Vineet Gaur, Scientist V
25. Dr. Senjuti Sinharoy, Scientist IV
26. Dr. Amarpal Singh, Scientist IV
27. Dr. Amarjeet Singh, Scientist IV
28. Dr. Shailesh Kumar, Scientist III
29. Dr. Ashutosh Pandey, Scientist III
30. Dr. Prabhakaran Soundarajan, Scientist III
31. Dr. Pawan Kumar Jewaria, Scientist III
32. Dr. Hasthi Ram, Scientist II
33. Dr. Mukesh Kumar Meena, Scientist II

* lien terminated on August 05, 2022 and technical resignation submitted

** on lien up to July 2023

Technical Staff

1. Ms Umamaheswari Rajamani, Senior Technical Officer
2. Shri Prem Singh Negi, Senior Technical Officer
3. Shri Sunil Kumar Avasthi, Senior Technical Officer
4. Dr. Santosh Kumar Gupta, Senior Technical Officer
5. Shri Arun Kumar, Senior Technical Officer
6. Dr. Bhavnesh Kumar, Senior Technical Officer
7. Shri Ravi Kant, Senior Technical Officer
8. Shri Shobharam Valmeeki, Senior Technical Officer
9. Dr. Ajima Begum, Senior Technical Officer*
10. Shri Jagdeep Singh, Senior Technical Officer
11. Shri Shankar Acharya, Senior Technical Officer
12. Shri Naga Vara Prasad G, Senior Technical Officer
13. Shri Neeraj Nim, Senior Programmer
14. Shri C. Ravi Shankar, Technical Officer
15. Shri Anand Singh Rana, Technical Officer
16. Shri Ashok Kumar, Technical Officer
17. Shri Rajendra, Technical Officer
18. Shri Naveen Kumar Sudda, Technical Officer
19. Shri Dinesh Mehta, Technical Officer
20. Shri Ratneshwar Thakur, Technical Officer
21. Shri Subhasish Mondal, Technical Officer
22. Shri Shailendra Kharwal, Technical Officer
23. Shri Anand Dangi, Technical Officer
24. Shri Achal Prasad, Technical Officer
25. Shri Mohit, Technical Assistant
26. Shri Brihaspati Narayan Shukla, Technical Assistant
27. Shri Arabinda Das, Technician-II
28. Shri P. K. Mishra, Technician-II
29. Ms Neeta Maurya, Technician-II
30. Ms Sapna Rastogi, Technician-I
31. Shri Sagar Ambawata, Technician-II
32. Shri Tul Bahadur Thapa, Multi-Tasking Staff#
33. Shri Mahender Singh, Multi-Tasking Staff

* Resigned on 06/12/2022 (A/N)

Retired on 28/02/2023 (A/N)

Administrative and Finance Staff

1. Shri Sandeep Datta, Controller of Administration
2. Dr. Vinod Kumar Sharma, Librarian cum Documentation Officer
3. Shri Rajinder Raina, Purchase cum Stores Officer
4. Shri Sudhir Patwal, Administrative Officer
5. Shri Rakesh Mohan, Finance Officer
6. Shri Kamal Kumar, PS to Director
7. Ms Vinita Sharma, Section Officer
8. Ms Rajani Aswal, Section Officer
9. Shri Gulsher Ali, Section Officer
10. Ms Sonali, Assistant Section Officer
11. Shri Tapas Shit, Assistant Section Officer
12. Shri Mitesh Raj Bhardwaj, Assistant Section Officer
13. Shri Achint Gupta, Assistant Section Officer
14. Shri Devender Singh Bhandari, Assistant
15. Shri Om Prakash Sah, Junior Hindi Translator
16. Shri Ramesh Singh, Junior Assistant
17. Shri Hari Singh Negi, Junior Assistant
18. Shri Vipin Goyal, Hindi Typist
19. Shri Kuldeep Singh, Driver
20. Shri Bhargunath Manjhi, Multi-Tasking Staff
21. Shri Manmohan Singh Rawat, Multi-Tasking Staff



Budget/Auditor's Reports & Audited Accounts

BUDGET

The Financial resources of the National Institute of Plant Genome Research are the core grant provided by the Govt. of India, Department of Biotechnology, comprising of Grants for Creation of Capital Assets, Grants-in-Aid Salaries and Grants-in-Aid General.

The Department of Biotechnology in their projections for financial year 2022-2023 have allocated grant of ₹ 8450.00 lakhs including ₹ 3600.00 lakhs for infrastructure facilities in respect of NIPGR. The source and application of funds during the financial year 2022-2023 in respect of Institute is as under:

Sources of Funds

The Govt. of India, Department of Biotechnology, released grants of ₹ 8450.00 lakhs during 2022-2023 as detailed below:

Grants for Creation of Capital Assets	₹ 3600.00 lakhs
Grants-in-Aid Salaries	₹ 1450.00 lakhs
Grants-in-Aid General	₹ 3400.00 lakhs

Besides, the Institute has earned, an interest of ₹ 66,31,700/- on bank deposits of the Institute and miscellaneous receipts including User Charges & Overhead Charges of ₹ 1,06,34,140/- during the year, apart from the opening balance of ₹ 1,86,69,901/- (including balance of accumulated Internal Receipts) carried forward from previous year.

Application of Funds

(As per Utilization Certificate furnished to the Department of Biotechnology for the year 2022-2023)

The total expenditure on research activities and infrastructure development during the year 2022-2023 was ₹ 84,42,90,277/- including ₹ 36,00,00,000/- on infrastructure development.

OVER ALL EXPENDITURE AT A GLANCE	
<u>A-Grants for creation of Capital Assets</u>	<u>Amount in ₹</u>
1. Land & Building	17,04,17,735
2. Equipment	18,46,28,976
3. Furniture & Fixtures	13,29,135
4. Vehicle	-
5. Books/Scientific Journals	36,24,154
Total =	<u>36,00,00,000</u>
<u>B-Grants-in-Salaries</u>	
1. Manpower	14,43,00,476
Total =	<u>14,43,00,476</u>
<u>C-Grant-in-Aid General</u>	
1. Consumables	7,69,04,675
2. Contingencies (Infrastructure Maintenance)	22,22,58,517
3. Training/Networking/Fellowship	2,62,10,798
4. Campus/Field Development	84,98,658
5. Travel	61,17,153
Total =	<u>33,99,89,801</u>
D- Refund of Interest during the year 2022-2023 to DBT through Bharatkosh	<u>88,64,308</u>
Closing balance at the end of the year 2022-2023	
Accumulated Internal Receipts	2,30,40,948
Balance against Assignment of Grants- in- Aid	69,72,816
Interest to be refunded to DBT	66,31,700
Total =	<u>3,66,45,464</u>

Goyal Parul & Co.

Chartered Accountants

B.O. : 54-55, Meedo Complex, Near Saharanpur Chowk
DEHRADUN – 248 001, Uttarakhand,
Ph.: 91- **9811324387, 9899612242**
H.O. : # 78, J Extension, 3rd Floor,
Near Guru Ramdass Nagar School
Laxmi Nagar, **DELHI**-110092,
Ph. 011-22451632, Fax: 011- 22057847
E-mail : capgoyal@gmail.com, goyalgoyal_p@rediffmail.com

To,
The Director
National Institute Of Plant Genome Research
New Delhi

Report on the Audit of the Financial Statements

Qualified Opinion

We have audited the accompanying financial statements of “**NATIONAL INSTITUTE OF PLANT GENOME RESEARCH**”, Aruna Asaf Ali Marg, J.N.U Campus, New Delhi-110067 which comprises the Balance Sheet as at March 31, 2023, Income & Expenditure A/c and the Receipt and Payment A/c for the year ended March 31, 2023, and summary of significant accounting policies and other explanatory information thereon.

In our opinion and to the best of our information and according to the explanations given to us, except for the possible effects of the matter described in the Basis for Qualified Opinion paragraph, the aforesaid financial statements of the institute give a true and fair view in conformity with the accounting principles generally accepted in India.

Basis of Qualified Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs). Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section together with notes and summary of significant accounting policies thereon section of our report. We are independent of the entity in accordance with the Code of Ethics that are relevant to audit of our Financial Statement, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified opinion. The reasons for our qualified opinion are:

1. A demand of Rs 70,780/- is reflecting at traces portal of income-tax which seems to be settled by the Income tax department as no further notice etc has been raised by the department for the last seven years.
2. The “NIPGR” has booked excess amount under the head “Receivable from Income-tax” Rs. 8,598. [as “NIPGR” has TDS receivable of Rs.9,55,908 & Rs.8,48,923 for A.Y. 2022-23 & A.Y 2023-24 respectively [Rs 8,48,923 includes TCS of Rs 716/=]. But as per 26AS, i.e. at Traces Portal of Income Tax department, total amount “receivable from income-tax” is 18,04,831.



Other Offices:

GURGAON | NOIDA | PUNE | MUMBAI | BANGLORE | CHANDIGARH | BHOPAL | LUCKNOW | GUWAHATI | INDORE | LUDHIANA |, NAGPUR
| JABALPUR | SURAT | JAMSHEDPUR | RAMGARH (Jh) | BHAGALPUR | AMRAVATI | KOLKATA | TRIPURA | AHMEDABAD | SHAMLI-UP |
JAIPUR | JAMMU (J&K) | GWALIOR | VAPI -Gujrat | KANPUR | KANGRA (HP) | BHATINDA |

3. In the financial statement of "NIPGR", Rs. 32,08,213 is as "Sponsored fellowship payable" as at 31st March, 2023. For want of sufficient appropriate audit evidence it is subject to confirmation.

Emphasis of Matter

- 1 We draw attention to Significant accounting policies, as the fixed assets have been created with grants received from the Department of Bio-Technology. The condition of these grants, inter alia, stipulates that assets will be the property of Government, who will be free to sell or otherwise dispose-off the same. The Govt. of India has the discretion to gift the assets to the Institute if it considers appropriate, but no such gifts have been made so far. Therefore, in effect the ownership of the assets lies with Govt. of India and not with the Institute. But, during the course of audit we have observed that, the revenue out of disposal of (Condemned/Unserviceable) assets lies with the "NIPGR" i.e. revenue raised out of disposal of (Condemned/Unserviceable) assets have been treated as Receipts of the "NIPGR". During the F.Y 2022-23, Thus an amount of **RS.8, 22,168/-**, which is on account of disposal of condemned/ unserviceable assets during **F.Y 2014-15, 2015-16, 2017-18 & 2020-21**, have been treated as "**Prior period income**". Our opinion is not modified in respect of this matter.
2. We draw attention to "Schedule no-21" which describes that, during the F.Y 2022-23, "Prior period expense" of Rs.43, 95,049/- have been paid by "NIPGR". Our opinion is not modified in respect of this matter.
3. We draw attention to "**Schedule No-7**" which describes that, during F.Y. 2022-23 interest payable to DBT is **Rs.66,31,701** Interest earned on deposits with the banks is treated as income as per instructions contained in Uniform Format of accounts for Autonomous Bodies. However, as per provisions contained in GFR 230 (8) Interest earned on Government Grants is required to be remitted to the Consolidated Fund of India after finalization of accounts. Accordingly, interest on Savings bank account/ Term deposits earned during financial year 2021-22, amounting to ₹88,64,308/- in respect of Grants in Aid has been remitted to DBT during the financial year 2022-2023. Our opinion is not modified in respect of this matter.



Responsibilities of Management & Those Charged with Governance for the Financial Statement together with notes and summary of significant accounting policies thereon.

The Management is responsible for the preparation of these financial statements together with notes and summary of significant accounting policies that give true & fair view of financial position & financial performance of the institute in accordance with accounting standards issued by institute of chartered accountant of India & for such internal control as management determines is necessary to enable the preparation of financial statement together with notes and summary of significant accounting policies thereon that are free from material misstatement, whether due to fraud or error.

In preparing the financial statement together with notes & summary of Significant Accounting policies thereon, Management is responsible for assessing the entity's ability to continue as going concern, disclosing, as applicable, matter related to going concern and using the going concern basis of accounting unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Those Charged with Governance are responsible for overseeing the entity's financial reporting process.



Auditor's Responsibilities for the Audit of the Consolidated Financial Statements together with notes and summary of significant accounting policies

Our objectives are to obtain reasonable assurance about whether the financial Statements together with notes and summary of significant accounting policies as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements together with notes and summary of significant accounting policies.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the Institute internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If, we conclude that a material uncertainty exists, We are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.



Report on other matters:

1. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.
2. in our opinion proper books of accounts as required by law have been kept by the institute so far as it appears from our examination of those books except the possible effects of qualified opinion;
3. The Financial statement give information required by governing law/rules /regulation in the manner so required and give fair view in conformity with the accounting policies.
 - a) In case of Balance Sheet, of the financial position as at 31st March 2023
 - b) In case of income & Expenditure account, of income & expenditure incurred during the year ended.
 - c) In case of Receipt & Payment Accounts for the year ended on that date.
4. The Balance Sheet, the Statement of Income & Expenditure and the Statement of receipt & Payment dealt with by his report are in the agreement with the books of accounts.
5. The Institute has, substantially and in all material respects, complied with governing laws/rules/regulation while carrying its operations.

This Report is intended solely for the information of operating committee members only. This report is not to be used, referred to, or distributed for any other purpose without our prior written consent.

For Goyal Parul & Co. Date:
Chartered Accountants
Firm Reg. No. - 016750N

Place: New Delhi





CA Parul Goyal

(Partner) Membership No. - 099172

UDIN: 23099172BGVZAS7735

NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
BALANCE SHEET AS ON 31st MARCH 2023

LIABILITIES	Schedule	AMOUNT IN ₹	
		Current Year	Previous Year
Corpus/Capital Fund	1	1,34,32,34,314	1,24,28,61,303
Reserves and Surplus	2	(7,37,13,170)	(7,34,79,506)
Earmarked/Endowment Funds	3	11,40,23,933	9,87,64,655
Secured Loans and Borrowings	4	-	-
Unsecured Loans and Borrowings	5	-	-
Deferred Credit Liabilities	6	-	-
Current Liabilities and Provisions	7	24,36,56,577	28,58,18,058
TOTAL		1,62,72,01,654	1,55,39,64,510
ASSETS			
Fixed Assets			
Tangible Assets	8	1,29,07,99,770	96,33,41,314
Intangible Assets	8	1,05,41,530	1,14,70,994
Investments-From Earmarked/Endowment Funds	9	10,07,52,496	9,76,72,253
Investments- Others	10	-	-
Current Assets, Loans, Advances etc.	11	22,51,07,858	48,14,79,949
Miscellaneous Expenditure (to the extent not written off or adjusted)		-	-
TOTAL		1,62,72,01,654	1,55,39,64,510
Significant Accounting Policies and notes on accounts	24		
Contingent Liabilities	-	-	-

Schedules 1 to 24 form the Integral part of Accounts

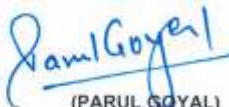
AS PER OUR SEPARATE REPORT
OF EVEN DATE ATTACHED.

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
CONTROLLER OF
ADMINISTRATION


(DR. SUBHRA CHAKRABORTY)
DIRECTOR


(PARUL GOYAL)
PARTNER

PLACE: NEW DELHI
DATE: August 28, 2023

Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
INCOME & EXPENDITURE FOR THE YEAR ENDED 31st MARCH 2023

		AMOUNT IN ₹	
INCOME	Schedule	Current Year	Previous Year
Income from Sales/ Services	12	-	-
Grants / Subsidies (Recurring)	13	48,50,00,000	40,99,74,516
Fees/ Subscriptions	14	-	-
Income from Investments (Income on Investment from Earmarked/ Endowment Fund)	15	98,94,495	34,26,217
Income from Royalty, Publication etc.	16	-	-
Interest Earned	17	1,14,65,496	1,46,82,940
Other Income	18	1,14,63,876	1,21,43,375
Deferred Income- Fixed Assets	18	9,39,07,875	6,28,80,543
Increase / (decrease) in stock of Finished goods and works-in-progress	19	-	-
TOTAL (A)		61,17,31,742	50,31,07,591
EXPENDITURE			
Income from Investments (Income on Investment from Earmarked Fund) Endowment Fund transferred to NIPGR Fund A/c	15	98,94,495	34,26,217
Interest earned transferred to respective Project/ Current Liabilities	17	1,12,24,693	1,44,27,174
Establishment Expenses	20	15,90,67,160	13,86,75,724
Other Administrative Expenses etc.	21	33,34,76,134	30,57,81,754
Prior Period Expenses	21	43,95,049	-
Expenditure on Grants, Subsidies etc.	22	-	-
Interest	23	-	-
Depreciation (Net Total at the year-end - corresponding to Schedule-8)		9,39,07,875	6,28,80,543
TOTAL (B)		61,19,65,406	52,51,91,412
Balance being excess of Income over Expenditure (A - B)			-
Balance being excess of Expenditure over Income (B - A)		2,33,664	2,20,83,821
Transfer to Special Reserve (Specify each)		-	-
Transfer to / from General Reserve		-	-
BALANCE BEING DEFICIT/ SURPLUS CARRIED TO RESERVES/ SURPLUS		2,33,664	2,20,83,821
Significant Accounting Policies and notes on accounts	24	-	-
Contingent Liabilities		-	-

Schedules 1 to 24 form the Integral part of Accounts


(RAKESH MOHAN)
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(SANDEEP DATTA)
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ADMINISTRATION


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

AS PER OUR SEPARATE REPORT
OF EVEN DATE ATTACHED.
For GOYAL PARUL & Co.
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Firm Registration No.: 016750N

(PARUL GOYAL)
PARTNER

Membership No.099172

PLACE: NEW DELHI
DATE: August 28 , 2023



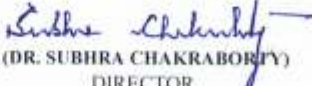
NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE 1	Current Year		Previous Year	
CORPUS /CAPITAL FUND				
Grants in Aid Non recurring				
Balance as at the beginning of the year	58,95,88,109		50,71,05,202	
Add: Contributions received during the year	36,00,00,000		18,25,00,000	
Less: Grants lapsed to Government	-		3,71,36,550	
Less : Reduced during the year	9,49,97,576		6,28,80,543	
		85,45,90,533		58,95,88,109
Fixed Assets Fund				
Balance as at the beginning of the year	65,22,17,234		74,09,97,264	
Add: Contributions received during the year	1,91,19,645		15,45,04,739	
Less: Contribution refunded/lapsed during the year	23,10,183		1,35,63,914	
Add : Value of Project Equipment transferred back	-		-	
Less:Reduced during the year	18,14,38,875		22,97,20,855	
		48,75,87,821		65,22,17,234
Research Fund				
Balance as at the beginning of the year	8,62,696		8,62,696	
Add: Contributions received during the year	-		-	
		8,62,696		8,62,696
Students & Staff Welfare Fund				
Balance as at the beginning of the year	1,93,264		1,93,264	
Add: Contributions received during the year	-		-	
		1,93,264		1,93,264
BALANCE AS AT THE YEAR- END		1,34,32,34,314		1,24,28,61,303


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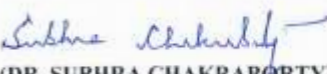
NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

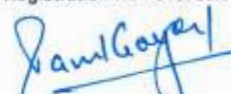
SCHEDULE 2- RESERVES AND SURPLUS:	Current Year		Previous Year	
1.Capital Reserve:				
As per last Account	-		-	
Addition during the year	-		-	
Less: Deduction during the year	-		-	
		-		-
2.Revaluation Reserve:				
As per last Account	-		-	
Addition during the year	-		-	
Less: Deduction during the year	-		-	
		-		-
3.Special Reserves: 11 ISRFG FUND				
As per last Account	6,13,888		6,13,888	
Addition during the year	-		-	
Less: Deduction during the year	-		-	
		6,13,888		6,13,888
4. General Reserve:				
As per last Account	(7,40,93,394)		(5,20,09,573)	
Addition during the year	-		-	
Less: Deduction during the year	2,33,664		2,20,83,821	
Less: Short & Excess	-		-	
		(7,43,27,058)		(7,40,93,394)
TOTAL		(7,37,13,170)		(7,34,79,506)


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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE 3	Current Year		Previous Year	
Fund Debt Employees Provident Fund				
a) Opening balance of the fund	9,87,64,655		8,74,25,409	
b) Additions to the fund				
i) Donations/grant	-		-	
ii) Income from Investments/Savings Account	98,94,495		34,26,217	
iii) Regular Subscription/Refund of Advance received	70,62,000		65,91,800	
iv) Receipt towards Management share & Interest (Deficit only)	6,41,182		39,69,404	
Total (a+b)		11,63,62,332		10,14,12,830
c) Utilization/Expenditure towards objectives of fund	-		-	
i. <u>Capital Expenditure</u>				
* Fixed Assets	-		-	
* Others	-		265	
ii <u>Revenue Expenditure</u>				
Advance payment to Subscribers	-		-	
Part final withdrawal	6,00,000		-	
Final payment to Subscribers	17,38,399		26,47,910	
Total (c)		23,38,399		26,48,175
TOTAL (a+b-c) (Annexure-101)		11,40,23,933		9,87,64,655


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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE 4- SECURED LOANS AND BORROWINGS:	Current Year		Previous Year	
1. Central Government	-		-	
2. State Government (Specify)	-		-	
3. Financial Institutions				
a) Term Loans	-		-	
b) Interest accrued and due	-		-	
4. Banks:				
a) Term Loans	-		-	
-Interest accrued and due	-		-	
b) Other Loans (Specify)	-		-	
-Interest accrued and due	-		-	
5. Other Institutions and Agencies	-		-	
6. Debentures and Bonds	-		-	
TOTAL		-		-

AMOUNT IN ₹

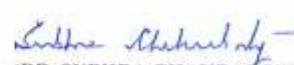
SCHEDULE 5- UNSECURED LOANS AND BORROWINGS	Current Year		Previous Year	
1. Central Government	-		-	
2. State Government (Specify)	-		-	
3. Financial Institutions	-		-	
4. Banks:				
a) Terms Loans	-		-	
b) Other Loans (Specify)	-		-	
5. Other Institutions and Agencies	-		-	
6. Debentures and Bonds	-		-	
7. Fixed Deposits	-		-	
8. Others (Specify)	-		-	
TOTAL		-		-

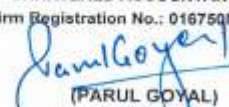
AMOUNT IN ₹

SCHEDULE-6 DEFERRED CREDIT LIABILITIES	Current Year		Previous Year	
a. Acceptances secured by hypothecation of capital equipment and other assets	-	-	-	-
b. Others	-	-	-	-
TOTAL		-		-


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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

SCHEDULE 7-		AMOUNT IN ₹	
CURRENT LAIBILITIES AND PROVISIONS		Current Year	Previous Year
A. CURRENT LIABILITIES			
1. Acceptances	-	-	-
2. Sundry Creditors	-	-	-
a) For Goods	-	-	-
b) Others	-	-	-
3. Advances Received	-	-	-
(i) Security deposits from contractors	1,32,71,633	1,71,78,715	1,32,71,633
Add: Variations during the year	-	-	-
Less: Variations during the year	4,67,457	39,07,082	-
(ii) Earnest Money deposit	-	1,28,04,176	-
Add: Variations during the year	-	-	-
Less: Variations during the year	-	-	-
(iii) Hostel Security from Students	3,15,000	3,49,000	-
Add: Variations during the year	-	-	-
Less: Variations during the year	66,500	34,000	-
4. Projects Grants/Fellowships	-	2,48,500	3,15,000
(i) CSIR	3,223	10,00,008	-
(ii) DBT	6,36,00,037	10,89,50,498	-
(iii) DST/ SERB	97,58,692	1,54,15,350	-
(iv) NASI	-	-	-
(v) INSA/ ICAR/EMBO/INVAS	26,64,662	33,57,482	-
(vi) Fellowships	32,08,213	33,10,613	-
(vii) PSI & AOAP Conference	-	-	-
(viii) Sattelite Symposium	-	-	-
(Annexure-1 to 100)	-	7,92,34,827	13,20,33,952
5. Interest accrued but not due on :	-	-	-
(a) Secured Loans / borrowings	-	-	-
(b) Unsecured Loans / borrowings	-	-	-
6. Statutory Liabilities	-	-	-
a) GSTDS / TDS	16,14,385	21,78,283	-
b) Others(NPS)	-	-	-
7. Other Current Liabilities:	-	16,14,385	21,78,283
Audit fees payable	47,200	47,200	-
Outstanding Expenses payable	2,88,26,085	2,73,72,652	-
8. Miscellaneous Liabilities:	-	2,88,73,285	2,74,19,852
9. Interest refundable to DBT	2,10,528	2,10,528	2,41,340
	66,31,701	66,31,701	88,64,308
TOTAL (A)		12,96,17,402	18,43,24,367
B. PROVISIONS			
1. For Taxation	-	-	-
2. Gratuity	5,02,60,840	4,51,95,114	-
3. Superannuation/Pension	-	-	-
4. Accumulated Leave Encashment	6,37,78,335	5,62,98,577	-
5. Others (Specify)	-	-	-
	-	11,40,39,175	10,14,93,691
TOTAL (B)		11,40,39,175	10,14,93,691
TOTAL (A+B)		24,36,56,577	28,58,18,058


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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st March 2023

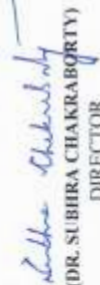
SCHEDULE 8- FIXED ASSETS

ASSETS	RATE	W.D.V.As on 01.04.2022	Additions/Sales		Total As on 31.03.2023 Rs	Depreciation for the year Rs	W.D.V. As on 31.03.23
			Upto 30.09.2022	On or After 01.10.2022			
I. Land							
a) Free Hold	0%	4,32,00,000	-	-	4,32,00,000	-	4,32,00,000
b) Lease hold			-	-	-	-	-
2.(A) Building							
a) On Freehold Land	10%	26,34,98,889	-	-	26,34,98,889	2,63,49,889	23,71,49,000
b) On Leasehold Land			-	-	-	-	-
c) Ownership flats/premises	10%		-	-	-	-	-
d) Superstructures on Land not belonging to the entity	10%	3,12,916	-	-	3,12,916	31,292	2,81,624
2.(B) Building (Projects)	10%	1,83,91,873	-	-	1,83,91,873	18,39,187	1,65,52,686
3. Plant Machinery & Equipment							
a) Lab Equipments(Corr)	40%	2,79,97,405	31,53,853	2,35,42,696	83,856	1,71,35,500	3,74,74,598
b) Lab Equipment (Project)	40%	34,87,96,342	86,95,619	18,30,14,519	-	17,95,99,688	36,09,06,792
4. Vehicles	15%	27,12,988	-	-	1,49,939	3,84,457	21,78,592
5. Furniture & Fixtures	10%	2,26,39,083	5,40,083	7,89,052	2,531	23,57,116	2,16,08,571
6. Office Equipments	15%	2,45,23,073	11,00,545	34,44,558	-	41,01,885	2,49,66,291
7. Computer / Peripherals	40%	1,46,47,911	1,75,27,727	13,58,59,597	31,207	4,00,29,692	12,79,74,336
8. Books & Scientific Journals	40%	89,618	-	13,39,277	-	3,03,703	11,25,192
9. E-Journals	25%	1,14,70,994	4,87,859	17,97,018	-	32,14,341	1,05,41,530
Total of Current Year		77,82,81,092	3,15,05,686	34,97,86,717	2,67,533	27,53,46,750	88,39,59,212
Capital work in Progress		19,65,31,216	4,20,279	16,99,97,456	-	-	36,69,48,951
CWIP Equipments (Projects)		-	-	5,04,33,137	-	-	5,04,33,137
Grand Total		97,48,12,308	3,19,25,965	57,02,17,310	2,67,533	27,53,46,750	1,30,13,41,300

Note : CWIP includes advances and deposits for Equipments/Buildings.


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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE -9			
INVESTMENTS FROM FUND DEBT EMPLOYEES			
PROVIDENT FUND			
	Current Year	Previous Year	
1. In Government Securities	-	-	
2. Other approved Securities	-	-	
3. Shares	-	-	
4. Debentures and Bonds	-	-	
5. Subsidiaries and Joint Ventures	-	-	
6. Others-Financial Institutions	10,07,52,496	9,76,72,253	
	10,07,52,496		9,76,72,253
TOTAL	10,07,52,496		9,76,72,253

AMOUNT IN ₹

SCHEDULE 10 -			
INVESTMENTS - OTHERS			
	Current Year	Previous Year	
1. In Government Securities	-	-	
2. Other approved Securities	-	-	
3. Shares	-	-	
4. Debentures and Bonds	-	-	
5. Subsidiaries and Joint Ventures	-	-	
6. Others	-	-	
	-		-
TOTAL	-		-


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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE -11	Current Year		Previous Year	
CURRENT ASSETS, LOANS, ADVANCES ETC.				
A. CURRENT ASSETS:				
1. Inventories:				
a) Stores and Spares	-		-	
b) Loose Tools	-		-	
c) Stock-in- trade				
Finished Goods	-		-	
Work-in-progress	-		-	
Consumables	35,15,006		20,27,612	
		35,15,006		20,27,612
2. Sundry Debtors				
a) Debts Outstanding for a period exceeding six months	-		-	
b) Others	-		-	
		-		-
3. Cash balance in hand (including cheques/drafts and imprest)	-		-	
		-		-
4. Bank Balances:				
a) With Schedules Banks:				
-On Current Accounts	-		-	
-On Deposit Accounts (includes margin money)	71,40,171		33,87,87,340	
-On SBI Savings Account	8,80,90,657		12,00,39,777	
-NIPGR CPF Account	1,18,63,340		58,849	
- NIPGR Account	13,75,239		14,58,633	
- NIPGR HDFC Savings Account	21,04,440		94,47,091	
- NIPGR-NCS-TCP Savings Account	1,12,72,342		30,48,221	
NIPGR BRD Scheme- ICICI ZBSA	9,04,12,728			
NIPGR DST Scheme- Bank of Maharashtra ZBSA	22,73,713			
		21,45,32,630		47,28,39,910
b) With non- Scheduled Banks:				
-On Current Accounts	-		-	
-On Deposit Accounts	-		-	
-On Savings Accounts	-		-	
		-		-
5. Post Office- Savings Accounts	-		-	
		-		-
TOTAL (A)		21,80,47,636		47,48,67,522


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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

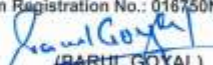
AMOUNT IN ₹

SCHEDULE- 11	Current Year		Previous Year	
CURRENT ASSETS, LOANS, ADVANCES ETC.				
B. LOANS,ADVANCES AND OTHER ASSETS:				
1. Loans:				
a) Staff		-		-
b) To other Entities engaged in activities/objectives similar to that of the entity		-		-
2. Advances and other amounts recoverable in cash or in kind for value to be received				
a) On Capital Account (Equipment Adv.)	-		-	
b) On Capital Account (Equipment Adv.projects)	-		-	
c) Contingencies Advance	7,396		16,991	
d) Consumable Advance	18,880		5,664	
e) Advance for assets	-		-	
f) Security				
(i) Delhi Vidyut Board	24,000		24,000	
ii) Reliance Inds Ltd.	26,000		26,000	
iii) BSES (consumption deposit)	29,43,000		29,43,000	
iv) VSNL (Internet Lease)	70,000		70,000	
(v) Reliance Comm.Infrast.Ltd.(Telephone)	2,000		2,000	
vi) Queens Road Service Station	50,000		50,000	
vii) Tata Communications Ltd	94,688		94,688	
viii) Indraprastha Gas Ltd (PNG Connection)	4,52,102		4,14,974	
ix) M/s Balmer Lawrie & Company(Rolling Deposit)	5,00,000		5,00,000	
		41,88,066		41,47,317
3. Income Accrued:				
a) On Investments from Earmarked/Endowment Funds	-		-	
b) On Investments - Others	-		-	
c) On Loans and Advances	-		-	
d) Others -(M/s RITES Ltd)	7,43,260		7,43,260	
e) BSES	1,85,409		1,85,409	
(includes income due unrealised - ₹Nil)				
		9,28,669		9,28,669
4. Claims Receivable				
a) Refund from Income Tax	18,13,429		14,28,413	
b) Other Receivables	1,05,379	19,18,808	1,08,028	15,36,441
5. Prepaid Expenses	24,680		-	
		24,680		-
TOTAL (B)		70,60,223		66,12,427
TOTAL (A+B)		22,51,07,858		48,14,79,949


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
CONTROLLER OF
ADMINISTRATION


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N

(PARUL GOYAL)
PARTNER

Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE- 12				
INCOME FROM SALES/SERVICES	Current Year		Previous Year	
1. Income from Sales				
a) Sales of Finished Goods	-		-	
b) Sales of Raw Material	-		-	
		-		-
2. Income from Services				
a) Labour and Processing Charges	-		-	
b) Professional/Consultancy Services	-		-	
c) Agency Commission and Brokerage	-		-	
d) Maintenance Services (Equip./Property)	-		-	
e) Others (Specify)	-		-	
		-		-
TOTAL		-		-

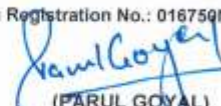
AMOUNT IN ₹

SCHEDULE -13				
GRANTS/SUBSIDIES	Current Year		Previous Year	
(Irrevocable Grants & Subsidies Received)				
a) Central Government 48,50,00,000				
Less :Lapsed to Government -	48,50,00,000		40,99,74,516	
b) State Government(s)	-		-	
c) Government Agencies	-		-	
d) Institutions/Welfare Bodies	-		-	
e) International Organisation	-		-	
f) Others (Specify)	-		-	
		48,50,00,000		40,99,74,516
TOTAL		48,50,00,000		40,99,74,516


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
CONTROLLER OF
ADMINISTRATION


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016759N

(PARUL GOYAL)
PARTNER

Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE 14 - FEES/SUBSCRIPTIONS	Current Year		Previous Year	
a) Entrance Fees	-		-	
b) Annual Fees/Subscriptions	-		-	
c) Seminar/Programme Fees	-		-	
d) Consultancy Fees	-		-	
e) Others (Specify)	-		-	
TOTAL		-		-

AMOUNT IN ₹

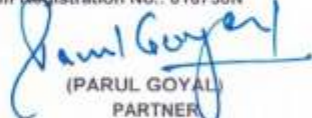
SCHEDULE 15 - INCOME FROM INVESTMENTS	Current Year		Previous Year	
(Income on Invest. from Earmarked/Endow. Funds transferred to Funds)				
1) Interest				
a) On Govt. Securitites	-		-	
b) Other Bonds/Debentures/Term Deposits	98,94,495	98,94,495	34,26,217	34,26,217
2) Dividends				
a) On Shares	-		-	
b) On Mutual Fund Securities	-		-	
3) Rents	-	-	-	-
4) Other (Specify)	-	-	-	-
TOTAL		98,94,495		34,26,217
TRANSFERRED TO EARMARKED/ENDOWMENT FUND		98,94,495		34,26,217


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
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ADMINISTRATION


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER

Membership No 095172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE 16	Current Year		Previous Year	
INCOME FROM ROYALTY, PUBLICATION ETC.				
1) Income form Royalty	-		-	-
2) Income form Publications	-		-	-
3) Service Charges	-		-	-
		-		-
TOTAL		-		-

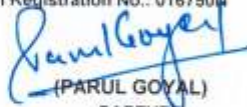
AMOUNT IN ₹

SCHEDULE 17	Current Year		Previous Year	
INTEREST EARNED				
1) On Term Deposits:				
a) With Scheduled Banks	91,98,844		1,19,02,110	
b) With Non- Scheduled Banks	-		-	
c) With Institutions	-		-	
d) Others-(M/s.RITES Ltd.)	-		-	
		91,98,844		1,19,02,110
2) On Savings Accounts:				
a) With Scheduled Banks	20,25,849		25,25,064	
b) With Non- Scheduled Banks	-		-	
c) Post Office Savings Accounts	-		-	
d) Others	-	20,25,849	-	25,25,064
3) On Loans:				
a) Employees/Staff	-		-	
b) Others	-		-	
		-		-
4) Interest on Security Deposit/ Receivables				
a) BSES	2,06,010		2,06,010	
b) Refund from Income Tax	34,793	2,40,803	49,756	2,55,766
TOTAL		1,14,65,496		1,46,82,940
Interest transferred to respective project	45,92,993	45,92,993	55,62,866	55,62,866
Interest refundable to DBT trf to Current Liabilities	66,31,700	66,31,700	88,64,308	88,64,308
Note - Tax Deducted at source to be indicated				


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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE 18 - OTHER INCOME	Current Year		Previous Year	
1) Profit on Sale/disposal of Assets:				
a) Owned assets	-		-	
b) Assets acquired out of grants or recd. free of cost	-		-	
2) Export Incentives realised	-		-	
3) Other Income				
a. Licence fee from Staff Quarters/Canteen	3,81,126		3,90,617	
b. Guest House Charges/ Rent received for Other facilities	8,04,798		4,99,955	
c. Hostel fee/Rent recovery/Admission/Application Fee	9,20,680		10,33,381	
d. Miscellaneous Income(RTI charges, Medical Subscription received from Retired employees, Prior Period Income towards collection on disposal of condemned assets)	11,25,478		1,43,020	
e. Sample Analysis Charges	57,47,640		56,48,500	
f. Overhead Charges				
i) Funding Agencies	23,32,154		30,82,902	
ii) From DBT	1,52,000		13,45,000	
4) Deferred Income - Fixed Assets	9,39,07,875		6,28,80,543	
		10,53,71,751		7,50,23,918
TOTAL		10,53,71,751		7,50,23,918

AMOUNT IN ₹

SCHEDULE 19 - INCREASE/(DECREASE) IN STOCK OF FINISHED GOODS & WORK IN PROGRESS	Current Year		Previous Year	
a) Closing Stock:				
- Finished Goods	-		-	
- Work-in-progress	-		-	
		-		-
b) Less: Opening Stock				
- Finished Goods	-		-	
- Work-in-progress	-		-	
		-		-
NET INCREASE/(DECREASE) [a-b]		-		-

AMOUNT IN ₹

SCHEDULE 20 ESTABLISHMENT EXPENSES	Current Year		Previous Year	
a) Salaries and Wages	14,47,00,859		12,35,49,980	
b) Allowances and Bonus	-		-	
c) Contribution to Provident Fund	6,41,182		39,69,404	
d) Contribution to Other Fund (Specify)	-		-	
e) Staff Welfare Expenses	-		-	
f) Expen.on Empl. Retirement and Terminal Benefits	1,37,25,119		1,11,56,340	
g) Others (Specify)	-		-	
		15,90,67,160		13,86,75,724
TOTAL		15,90,67,160		13,86,75,724


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
CONTROLLER OF
ADMINISTRATION


(DR. SUBHIRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

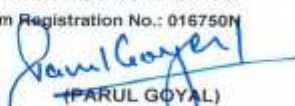
AMOUNT IN ₹

SCHEDULE 21 - OTHER ADMINISTRATIVE EXPENSES ETC.		Current Year		Previous Year	
1 Consumables					
a. Chemicals ,Glasswares & Consumables	7,78,70,037			7,73,00,099	
b. Other Lab Items	-	7,78,70,037		-	7,73,00,099
2 Contingencies					
a. Publication of Papers	38,06,689			32,42,135	
b. Electricity and water charges	9,45,16,812			9,13,06,117	
c. Seminar,Conference & Workshops	18,19,425			8,53,626	
d. Maintenance of Equipment	2,78,61,323			2,69,57,416	
e. Generator Running Expenses	5,44,770			7,30,345	
f. Maintenance of AC Plant	1,45,05,835			71,13,996	
g. Maintenance of Building	67,62,432			34,08,612	
h. Housekeeping, Sanitation Services	79,75,813			77,35,376	
i. Vehicles Running and Maintenance					
i) Petrol ,Oil & Lubricants	6,04,521			7,88,815	
ii) Maintenance	1,99,056			3,70,166	
j. Postage, Telephone and Comm. Charges					
i) Postage	18,947			13,441	
ii) Telephone & Fax	3,64,437			3,29,917	
k. Printing and Stationary	15,57,529			24,82,730	
l. Security expenses	1,69,29,866			1,87,72,692	
m. Auditors Fees	47,200			47,200	
n. Committee Meeting Expenses	19,35,944			6,36,040	
o. Legal fees	3,60,382			4,86,396	
p. Journals and periodicals	3,32,800			2,99,384	
q. Advertisement and Publicity	78,060			1,15,374	
r. Miscellaneous Contingencies	4,43,511			3,90,299	
s. Contractual Manpower Services	2,17,84,445			1,79,53,217	
t. Rates & Taxes	42,03,810			42,03,810	
u. IPR/ Patent Filing Charges	41,92,015			37,15,823	
v. Extra Curricular Activities for Students	1,69,495			52,925	
w. NCR Cluster Expenses	81,387			1,04,464	
x. Prior Period Expenses	43,95,049			-	
y. Science Outreach Activities	40,06,963	21,94,98,516		-	19,21,10,315
3 Campus/Field Development	83,17,308	83,17,308		1,44,95,325	1,44,95,325
4a. Training affiliation and Others	28,53,831			26,60,134	
4b. NIPGR Fellowship	2,30,83,302	2,59,37,133		1,88,20,087	2,14,80,221
5 Travelling and Conveyance Expenses					
i) Travelling	61,77,771			3,84,571	
ii) Conveyance & Transport	70,418	62,48,189		11,223	3,95,794
TOTAL		33,78,71,183			30,57,81,754


(RAKESH MOHAN)
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Firm Registration No.: 016750N

(PARUL GOYAL)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH 2023

AMOUNT IN ₹

SCHEDULE 22	Current Year		Previous Year	
EXPENDITURE ON GRANTS,SUBSIDIES ETC.				
a) Grants given to Institutions/ Organisations	-		-	
b) Subsidies given to Institutions / Organisations	-		-	
		-		-
TOTAL		-		-

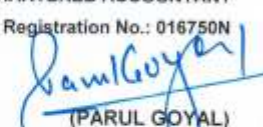
AMOUNT IN ₹

SCHEDULE 23 - INTEREST	Current Year		Previous Year	
a) On Fixed Loans	-		-	
b) On Other Loans (including Bank Charges)	-		-	
c) Others(specify)	-		-	
		-		-
TOTAL		-		-


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH

(Formerly National Centre for Plant Genome Research)

ACCOUNTING POLICIES AND NOTES FORMING PARTS OF THE BALANCE SHEET AS AT AND INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON 31st MARCH, 2023

1. The annual accounts have been prepared in the format of accrual system of accounting, except for Interest Income, Extramural Funds and Contributory Provident Fund, which are accounted for on cash basis.
2. (a) Recurring Grants have been recognised in the Income & Expenditure account and Non-Recurring Grants have been shown as addition to grants in aid in the year of receipts.

(b) Grants for core funds relatable to depreciable fixed assets are treated as deferred income and recognised in the Income and Expenditure Account on a systematic and rational basis over the useful life of such assets i.e. such grants are allocated to income over the periods and in the proportions in which depreciation is charged and same are matching for the year. During the year income recognised in respect of such Grants amounts to ₹9,39,07,875/-.
3. (a) The depreciation has been provided w.e.f. the date of purchase of fixed assets as per the rates prescribed by Income Tax Rules, 1961. The depreciation on lab equipment has been charged at 40% p.a at par with depreciation rates prescribed for medical equipments under section 32(1)(i) and Appendix I under Rule 5(1). The rate of depreciation in respect of Computers & Pheripherals and Books & Journals has been revised to 40% as per the notification No.103/2016/F.No.370142/29/2016-TPL dated November 7,2017.

(b) Full depreciation is charged during the year of acquisition in case the assets is acquired in the first half and 50% of rate of depreciation for assets acquired during the second half of the financial year.No depreciation is provided during the year of disposal of assets.

(c) Depreciation of ₹18,14,38,875/- has been provided during the year and directly debited to fixed assets fund.These assets were created out of the Non-Recurring Grants of the projects.
4. (a) Fixed assets have been created with grants received from the Department of Bio-Technology. The condition of these grants, inter alia, stipulates that assets will be the property of Government, who will be free to sell or otherwise dispose off the same.The Govt. of India has the discretion to gift the assets to the Institute if it considers appropriate, but no such gifts have been made so far.Therefore, in effect the ownership of the assets lies with Govt. of India and not with the Institute.

(b) Excercise towards physical verification of fixed assets and its reconciliation with the financial records was completed upto the financial year 2022-23.
5. All purchases of chemicals, glass-ware, consumables and stationery have been charged to consumption at the time of purchase. However at the end of the accounting year the value of the quantities in stock is reflected as Closing Inventory.The closing stock has been worked out on cost basis and shown in the respective schedule.The closing stock of these items amounting to ₹35,15,006/- was available at the end of the year.
6. (a) Construction Cost and Overheads incidental to construction of building of institute are added to the capital work in progress to be capitalized along with the building.
(b) The cost of phase –II of the building of the Institute has been capitalized during previous financial year 2018-19, after vetting of final cost by the Building Committee and approval by the Governing Body as per Institutional norms.



7. The Institute has a policy of allocating the overheads and transfer of expenditure from Institute to different projects at the end of year on proportionate basis after taking into account the amount of maximum permissible limits for overheads sanctioned by the funding agency in each project. During the year institute has allocated ₹24,84,154/- as overheads which includes ₹23,32,154/- from different agencies & ₹1,52,000/- from DBT projects.
8. The Institute has made a provision of ₹1,37,25,119/- during current financial year 2022-23 towards the terminal benefits payable to staff, as per Actuarial Valuation. The total accumulated value of provisions towards terminal benefits payable as on 31.03.2023 is ₹11,40,39,175/-.
9. Interest earned on deposits with the banks is treated as income as per instructions contained in Uniform Format of accounts for Autonomous Bodies. However, as per provisions contained in GFR 230 (8) Interest earned on Government Grants is required to be remitted to the Consolidated Fund of India after finalization of accounts. Accordingly, interest on Savings bank account/ Term deposits earned during financial year 2021-22, amounting to ₹88,64,308/- in respect of Grants in Aid has been remitted to DBT during the financial year 2022-2023.
10. As per approval of the competent authority a reserve fund with name 11th ISRFG Fund has been created and to be used for the purposes specified in this regard.
11. The Institute has been designated as CNA under IED Scheme by DBT merely for assigning limits to Sub-agencies under said scheme. The Institute has no say over funds allocated under the scheme by DBT.
12. The Institute hereby make following disclosures :
 - (a) An Arbitration Case was filed by M/s Arora Construction Co. Pvt. Ltd (a Contractor engaged by M/s RITES Ltd, Construction Management Consultants of NIPGR for construction of NIPGR buildings) and the Arbitrator has awarded an amount of ₹4.873 Crore alongwith Interest @12% p.a. in favour of M/s Arora Constructions Co. Pvt. Ltd.. M/s RITES Ltd, on behalf of the Institute has filed appeal in Hon'ble High Court against the Award and Hon'ble High Court has stayed the order of the Arbitrator. The Institute has deposited an amount of ₹2.10 Crore with the Hon'ble High Court as per Orders, through M/s RITES Ltd. Now the court proceedings are in process.
 - (b) The Jawaharlal Nehru University has raised demand of monthly rent of ₹62.30 lakhs towards the land allotted to the Institute. The matter has been deliberated by the Finance Committee and Governing Body of the Institute in light of Agreement executed between JNU and NIPGR in this regard, dated 17.06.1999, and resolved that the demand raised by JNU is not justified and this amount is not payable by the Institute.
13. Previous year figures have been re-grouped/re-arranged wherever considered necessary.


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
CONTROLLER OF
ADMINISTRATION


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For Goyal Parul & Co.
CHARTERED ACCOUNTANTS
Firm Registration No.: 016750N

(PARUL GOYAL)
PARTNER
Membership No.099172

Place: New Delhi
Date: August 28, 2023



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
RECEIPTS & PAYMENTS FOR THE YEAR ENDED 31st MARCH 2023

AMOUNT IN ₹

<u>RECEIPTS</u>	<u>Current Year</u>		<u>Previous Year</u>	
Particulars				
Opening Balance				
In Saving Account/Short Term deposits	47,27,81,062		36,69,28,384	
Reserve & Surplus	-		-	
Grants Received from Deptt of Biotechnology				
Non recurring	36,00,00,000		18,25,00,000	
Recurring	48,50,00,000		41,00,00,000	
Projects & Fellowships				
Sponsored Projects (Including all receipts, Re-assignments/ Assignments & recoverable amounts)	20,79,17,107		63,75,41,869	
	32,55,84,637			
Sponsored Fellowship	1,39,99,130		81,87,379	
PSI & AOAPO Conference 2016	-		-	
Sponsored Seminar/ Conference/ Conclave	-		-	
Interest Earned	1,12,24,693		1,44,27,174	
Security Deposit from Contractors	51,91,368		36,99,671	
New pension Scheme	1,48,480		17,332	
GSTDS received/recovered/GST Payable	1,04,59,302		58,99,516	
Remittances	5,80,976		4,95,454	
Other Liabilitites	17,700		19,631	
Refund of Consumable advance	-		-	
Refund of Equipment advance	-		-	
Refund of Contingency advance	2,45,392		53,135	
Receivables from Income Tax	4,98,700		5,85,324	
Hostel/Mess Security	33,000		26,000	
Other Income	57,54,937		40,12,862	
TOTAL		1,89,94,36,484		1,63,43,93,731

AS PER OUR SEPARATE REPORT
OF EVEN DATE ATTACHED.

For GOYAL PARUL & Co.

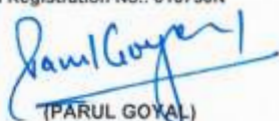
CHARTERED ACCOUNTANT

Firm Registration No.: 016750N


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(PARUL GOYAL)
PARTNER

Membership No.099172

PLACE: NEW DELHI
DATE: August 28 , 2023



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre For Plant Genome Research)
RECEIPTS & PAYMENTS FOR THE YEAR ENDED 31st MARCH 2023

AMOUNT IN ₹

PAYMENTS	Current Year		Previous Year	
Particulars				
Grants under TSA lapsed to Government				
Non recurring	-		3,71,36,550	
Recurring	-		25,484	
Remittance of Refund of Tax to NIPGR C P Fund	4,03,044		8,50,999	
Building under Construction (WIP)	17,04,17,735		12,42,99,087	
Lab Equipment	2,66,77,030		24,66,849	
Office Equipment	45,45,103		1,21,12,661	
Computer/Peripherals	15,34,06,843		1,27,20,611	
Furniture & Fixture	13,29,135		3,04,333	
Books & Scientific Journals/ E-Journals	36,24,154		33,63,752	
Vehicle	-		16,65,455	
Manpower				
Salaries and Wages	14,36,59,294		12,41,44,717	
Contribution to Provident fund	6,41,182		39,69,404	
Consumables				
a) Chemicals ,Glasswares & Consumables	7,63,02,364		7,47,66,049	
b) Other Lab Items	-		-	
Contingencies				
a) Publication of Papers	48,68,835		30,06,524	
b) Electricity and water charges	9,68,56,398		9,74,07,805	
c) Seminar,Conference & Workshops	19,12,230		6,36,029	
d) Maintenance of Equipment	2,91,73,053		2,60,52,333	
e) Maintenance of AC Plant	1,44,94,364		71,03,645	
f) Maintenance of Building	81,68,404		17,81,780	
g) Vehicles Running and Maintenance				
(i) Petrol ,Oil & Lubricants	5,81,662		7,41,648	
(ii) Maintenance	1,70,571		4,83,079	
h) Postage, Telephone and Comm. Charges				
(i) Postage	12,277		4,781	
(ii) Telephone	3,64,417		3,30,400	
i) Printing and Stationary	16,29,023		25,04,899	
j) Security expenses	1,98,47,000		1,78,61,772	
k) Auditors Remuneration	40,000		47,200	
l) Committee Meeting Expenses	18,45,650		6,24,009	
m) Legal fees	4,83,227		4,65,296	
n) Newspaper and Periodicals	3,32,604		3,06,927	
o) Advertisement and Publicity	62,309		61,958	
p) Misc.contingencies	4,05,444		1,84,716	
q)Houskeeping,sanitation & Contract services	3,10,25,793		2,56,28,055	
r) IPR/Patent Filing Charges	29,27,493		31,11,913	
s)Rates & Taxes	42,03,810		42,03,810	
t)Science Outreach/Extra Curricular Activities	41,76,898		3,715	
u)Generator Running Expenses	5,44,770		7,29,745	
v)Campus/ Field Development	84,76,891		1,43,59,611	
w) Training affiliation and Others	28,53,831		26,60,134	
x) NIPGR Fellowships	2,33,56,967		1,93,30,544	
y) Travelling and Conveyance Expenses				
(i) Travelling	55,51,042		2,96,105	
(ii) Conveyance & Transport	51,360		11,223	
z) NIPGR NCR Cluster Expenses	81,387		1,04,464	

Continued



Others				
a) Contingency Advance	10,90,013		5,74,968	
b) Consumable Advance	4,88,220		4,97,734	
c) Equipment advance	-		-	
d) Security Deposit paid	56,38,276		75,51,153	
e) New Pension Scheme Subscription	1,48,480		1,90,168	
f) Hostel/Mess Security	99,500		60,000	
g) Remittances	6,34,209		4,90,254	
h) Reserve & Surplus	-		-	
Interest refunded to DBT	88,64,308		1,36,44,666	
Sponsored Projects	44,90,25,992		46,86,73,418	
Refund to Agencies(DBT/DST)/Funds lapsed	36,00,94,225		2,89,26,978	
Sponsored Fellowship	1,41,05,662		83,18,844	
Receivable from Income Tax	39,037		12,308	
Sponsored Seminar/ Conference/ Conclave	-		-	
Miscellaneous Liabilities				
GSTDS/GST/TDS Deposited	1,09,79,200		47,70,157	
Security Deposit (IGL/M/s Balmer Lawrie)	37,128		-	
GST Input Tax	19,350		31,950	
Closing Balance				
In Saving Bank Account/Short term Deposit	20,26,69,290		47,27,81,062	
TOTAL		1,89,94,36,484		1,63,43,93,731

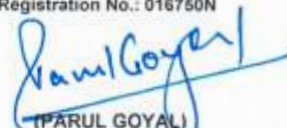
AS PER OUR SEPARATE REPORT
OF EVEN DATE ATTACHED.

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DAPTA)
CONTROLLER OF
ADMINISTRATION


(DR. SUBHRA CHAKRABORTY)
DIRECTOR


(PARUL GOYAL)
PARTNER

Membership No. 099172

PLACE: NEW DELHI
DATE: August 28 , 2023



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

CSIR PROJECT

R/P entitled Characterization of 3-Hydroxy-3-methylglutaryl co-enzyme A reductase (HMGR) GENE in
Cicer arietinum, and its role in abiotic stress

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c	4,75,892	33,877	
Grant- In- Aid for			
i) Staff	-	57,619	
ii) Contingencies	-	3,98,564	
iii) Overheads	-	-	
Interest Earned	266	518	
TOTAL		4,76,158	4,90,578

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Staff	60,159	-	
ii) Contingencies	4,04,969	-	
iii) Overheads	-	-	
Refund to Agency			
Interest	-	14,686	
Recurring	11,030		
CLOSING BALANCE			
With Bank in Saving A/c	-	4,75,892	
TOTAL		4,76,158	4,90,578


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

CSIR PROJECT

R/P entitled Dissection of Proteome Dynamics of high temperature stress in wheat (Triticum AestivumL.)
and identification of potential candidates for Genetic Engineering

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	3,775		24,229
<u>Grant- In- Aid for</u>			
i) Staff	-		4,51,114
ii) Contingencies	-		4,50,000
iii) Overheads			
<u>Interest Earned</u>	85		99
TOTAL		3,860	9,25,442

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Staff	-		4,72,193
ii) Contingencies	-		4,49,474
iii) Overheads			
<u>Refund to Agency</u>			
Interest	637		-
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	3,223		3,775
TOTAL		3,860	9,25,442


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER

Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

CSIR PROJECT

R/P entitled Decoding the N-Acetylglucosamine Signaling Pathway in Microbial Pathogens for disease control

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c	5,20,341	13,515	
Grant- In- Aid for			
i) Staff	-	5,03,710	
ii) Contingencies	-	5,92,639	
iii) Overheads			
Interest Earned	12,878	365	
TOTAL	5,33,219		11,10,229

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Staff	-	-	
ii) Contingencies	-	5,89,888	
iii) Overheads			
Refund to Agency			
Recurring	5,33,219		
CLOSING BALANCE			
With Bank in Saving A/c	-	5,20,341	
TOTAL	5,33,219		11,10,229


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA) COA


(DR. SUBHRA CHAKRABORTY) DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL) PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

R/P entitled Identification and characterization of effectors from necrotrophic blight fungus *Ascochyta rabiei* and their targets from the chickpea.

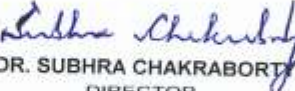
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,18,789		1,15,666
Equipment	-		-
<u>Grant- In- Aid for</u>			
i) Equipment			
ii) Manpower	-		-
iii) Consumable	-		-
iv) Travel	-		-
v) Contingencies	-		-
<u>Interest Earned</u>	184		3,123
TOTAL		1,18,973	1,18,789

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Equipment	-		-
ii) Manpower	1,05,139		-
iii) Consumable	-		-
iv) Travel	-		-
v) Contingencies	-		-
<u>Refund to Agency</u>			
Interest	13,834		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-		1,18,789
Equipment	-		-
TOTAL		1,18,973	1,18,789


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

R/P entitled Introgression of begomovirus resistance genes in tomato (*Solanum lycopersicum* L.) using
MAS and Genomic approach.

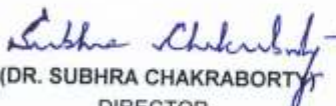
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	77,807	75,761	
<u>Grant- In- Aid for</u>			
i) Manpower	-	-	
ii) Consumable	-	-	
iii) Travel	-	-	
iv) Contingencies	-	-	
<u>Interest Earned</u>	132	2,046	
TOTAL	77,939	77,807	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	68,056	-	
ii) Consumable	-	-	
iii) Travel	-	-	
iv) Contingencies	-	-	
<u>Refund to Agency</u>			
Interest	9,883		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-	77,807	
TOTAL	77,939	77,807	


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
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For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
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Membership No.099172



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NEW DELHI

DBT PROJECT

DBT's R/P entitled Investigation of molecular and genetic basis of plant development regulation in response to environmental changes.

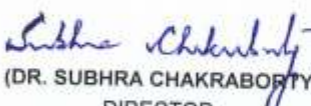
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	116	113	
<u>Grant- In- Aid for</u>			
i) Manpower	-	-	
ii) Research/Contingency grant	-	-	
<u>Interest Earned</u>	2	3	
TOTAL	118		116

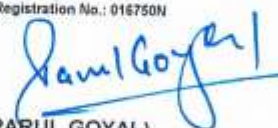
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	-	-	
ii) Research/Contingency grant	-	-	
<u>Refund to Agency</u>			
Interest	118		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	-	116	
TOTAL	118		116


(RAKESH MOHAN)
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(SANDEEP DATTA)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

ANNEXURE-7

DBT PROJECT

R/P entitled Challenge Programme on Chickpea Functional Genomics.

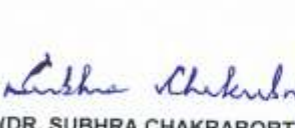
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	6,25,552	1,47,240	
Equipment	-	-	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	61,172	44,47,879	
iii) Consumable	-	-	
iv) Travel	-	-	
v) Contingencies	-	-	
vi)Overheads	-	-	
Interest Earned	-	3,871	
TOTAL	6,86,724	45,98,990	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	-	39,69,567	
iii) Consumable	-	-	
iv) Travel	-	-	
v) Contingencies	-	-	
vi)Overheads	-	-	
Refund to Agency	-	-	
Interest	-	3,871	
Recurring	6,86,724	-	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	-	6,25,552	
Equipment	-	-	
TOTAL	6,86,724	45,98,990	


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

R/P entitled To study the interaction between glucose and salicylic acid signal transduction pathway in
model plant Arabidopsis thaliana

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c Recurring	5,00,230		8,740
<u>Grant- In- Aid for</u>			
i) Consumable/Contingencies/Travel	-		4,91,490
<u>Interest Earned</u>	3,375		230
TOTAL		5,03,605	5,00,460

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Consumable/Contingencies/Travel	-		-
<u>Refund to Agency</u>			
Interest	-		230
Recurring	5,03,605		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c Recurring	-		5,00,230
TOTAL		5,03,605	5,00,460


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
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For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 0167506


(PARUL GOYAL)
PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

R/P entitled Study of vascular wilt responsive proteome in chickpea-Fusarium

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	1,00,866	1,00,866	
Grant- In- Aid for			
i) Manpower	-	-	
ii) Consumable	-	-	
iii) Travel	-	-	
iv) Contingencies	-	-	
v) Overheads charges	-	-	
Interest Earned	1,362	2,652	
TOTAL		1,02,228	1,03,518

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	-	-	
ii) Consumable	-	-	
iii) Travel	-	-	
iv) Contingencies	-	-	
v) Overheads charges	-	-	
Refund to agency	-	-	
Interest	-	2,652	
Recurring	1,02,228		
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	-	1,00,866	
TOTAL		1,02,228	1,03,518


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER

Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

R/P entitled Advanced Research Platform for Crop Sciences

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	19,25,454	8,60,446	
Equipment	-	1,14,38,413	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	57,52,118	59,04,304	
iii) Consumable	13,53,333	54,73,678	
iv) Travel	-	-	
v) Contingencies	5,80,044	11,54,935	
Interest Earned	5,872	14,625	
TOTAL		96,16,821	2,48,46,401

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	50,73,859	43,33,550	
iii) Consumable	14,52,852	53,53,333	
iv) Travel	-	-	
v) Contingencies	5,25,051	13,87,044	
Refund to Agency			
Interest	20,497	2,67,971	
Recurring	1,00,000	-	
Refund of Equipment grant			
Amount under TSA lapsed to	-	1,14,38,413	
Govt. Account	-	1,40,636	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	24,44,562	19,25,454	
Equipment	-	-	
TOTAL		96,16,821	2,48,46,401


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

Determination the role of(Cysteine-Rich Secetory Proteinsantigen 5 and Pathogenesis-Related 1
Proteins(CAP) during Arachis-Bradyrhizobium symbiosis

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	1,83,074	9,65,462	
Equipment	-1,48,081	-1,48,081	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	-	-	
iii) Consumable	-	-	
iv) Travel	-	-	
v) Contingencies	-	-	
vi) Overhead Charges	-	-	
Interest Earned	444	920	
TOTAL		35,437	8,18,301

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	32,893	4,26,119	
iii) Consumable	-	3,52,216	
iv) Travel	-	-	
v) Contingencies	1,180	-	
vi) Overhead Charges	-	-	
Refund to Agency			
Interest	1,364	4,973	
Recurring			
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	1,48,081	1,83,074	
Equipment	-1,48,081	-1,48,081	
TOTAL		35,437	8,18,301


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N

(PARUL GOYAL)
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Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

ANNEXURE-12

DBT PROJECT

Editing MPK3 a mitogen activated protein kinase gene using CRISPR/Cas9 tool in rice to study its role in cell cycle and grain yield

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	1,31,797	1,56,721	
Equipment	2,63,154	2,63,154	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	-	-	
iii) Consumable	-	-	
iv) Travel	-	-	
v) Contingencies	-	-	
vi) Overhead Charges	-	-	
Interest Earned	1,639	10,383	
TOTAL		3,96,590	4,30,258

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	-	-	
iii) Consumable	-	-	
iv) Travel	-	-	
v) Contingencies	-	-	
vi) Overhead Charges	-	-	
Refund to Agency			
Interest	12,022	35,307	
Recurring	1,21,414		
Equipment	2,63,154		
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	-	1,31,797	
Equipment	-	2,63,154	
TOTAL		3,96,590	4,30,258


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N

(FARUL GOYAL)
PARTNER

Membership No. 099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

National Genomics and Genotyping Facility (NGGF) Phase I of the NGGF

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	3,67,36,505	2,29,20,249	
Equipment	15,29,97,000	11,36,11,095	
Grant- In- Aid for			
i) Equipment/Non-recurring	-	4,23,85,905	
ii) Manpower	-	50,92,254	
iii) Consumable	-	10,00,000	
iv) Travel	-	-	
v) Contingencies	-	20,00,000	
vi) Other Expenses	-	-52,33,482	
vii) Overhead Charges	-	10,00,000	
Interest Earned	21,20,454	32,90,921	
Advance Receipts towards Sample Analysis		2,62,16,550	
TOTAL	19,18,53,959	21,22,83,492	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment/Non-recurring	15,28,24,337	30,00,000	
ii) Manpower	32,36,607	51,46,710	
iii) Consumable	2,62,12,988	29,51,797	
iv) Travel	-	-	
v) Contingencies	25,55,507	13,84,514	
vi) Other Expenses	44,326	-	
vii) Overhead Charges	-	10,00,000	
Refund of Interest	54,11,375	90,66,966	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	13,96,156	3,67,36,505	
Equipment	1,72,663	15,29,97,000	
TOTAL	19,18,53,959	21,22,83,492	


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUDHIRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N

(PARUL GOYAL)
PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

Generating genomic resources for facilitating genetic enhancement of selective *Vigna species* and Horse gram Sub-Project-1, Component-2

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	48,70,341	18,25,165	
Equipment	11,62,826	11,62,826	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	-	33,62,400	
iii) Consumable	-	5,57,894	
iv) Travel	-	-	
v) Contingencies	-	50,000	
vi) Overhead Charges	-	50,000	
Interest Earned	58,957	72,580	
TOTAL	60,92,124	70,80,865	

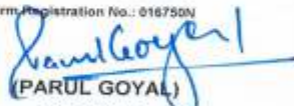
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	6,33,522	8,65,544	
iii) Consumable	5,68,595	27,200	
iv) Travel	-	-	
v) Contingencies	72,998	26,399	
vi) Overhead Charges	-	50,000	
Refund to agency			
Interest	1,31,537	78,555	
Equipment	11,62,826		
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	35,22,646	48,70,341	
Equipment	-	11,62,826	
TOTAL	60,92,124	70,80,865	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT
Integrated Genomic Strategy for Accelerating Domestication of Rice Bean (*Vigna umbellata*) Sub-Project-2, Component-1

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	44,14,497	4,79,980	
Equipment	-	28,750	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	-	33,55,200	
iii) Consumable	-	23,04,855	
iv) Travel	-	14,065	
v) Contingencies	-	50,000	
Interest Earned	28,768	5,385	
TOTAL	44,43,265		62,38,235

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	17,84,708	17,50,168	
iii) Consumable	23,52,445	-	
iv) Travel	16,128	-	
v) Contingencies	49,141	-	
Refund of Interest	34,153	44,820	
Refund to Agency			
Equipment	-	28,750	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	2,06,690	44,14,497	
Equipment	-	-	
TOTAL	44,43,265		62,38,235


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Genomic-led improvement of biotic and abiotic stress tolerance in mustard rape for economic and environmental sustainability

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	1,14,038	8,00,674	
Equipment	-	-	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	-	10,16,774	
iii) Consumable	-	5,00,000	
iv) Travel	-	(1,80,285)	
v) Contingencies	-	-	
vi) Others	-	-	
Interest Earned	458	2,998	
TOTAL		1,14,496	21,40,161

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	54,000	9,61,051	
iii) Consumable	32,085	8,86,157	
iv) Travel	-	-	
v) Contingencies	-	49,164	
vi) Others	7,717	1,04,822	
Refund to Agency			
Interest	3,456	15,749	
Recurring	17,238		
Amount under TSA lapsed to Govt. Account	-	9,180	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	-	1,14,038	
Equipment	-	-	
TOTAL		1,14,496	21,40,161


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Analysis of Phytochrome interacting Factor (PIF4) and Histone Variant (H2A.Z)-Mediated Thermosensory
Regulatory Network in Arabidopsis thaliana

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	80,187	6,54,869	
Equipment	-	47,253	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	-	-	
iii) Consumable	2,00,000	-	
iv) Travel	-	-	
v) Contingencies	20,000	-	
vi) Overheads Charges	52,500	-	
Interest Earned	882	2,108	
TOTAL	3,53,569	7,04,230	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	-	5,74,194	
iii) Consumable	1,99,733	-	
iv) Travel	-	-	
v) Contingencies	19,950	-	
vi) Overheads Charges	52,500	-	
Refund of Interest	2,108	2,596	
Refund to Agency			
Equipment	-	47,253	
Recurring	79,278	-	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	-	80,187	
Equipment	-	-	
TOTAL	3,53,569	7,04,230	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Transforming India's Green Revolution by Research and Empowerment for Sustainable food Supplies
(TIGR2ESS) under the Global Challenges Research Fund programme

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c Recurring	8,28,840	10,27,608	
<u>Grant- In- Aid for</u>			
i) Staff Fund	-	9,05,505	
ii) Research Fund	6,01,590	34,36,252	
iii) Overheads	-	-	
<u>Interest Earned</u>	5,220	3,031	
TOTAL	14,35,650	53,72,396	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Staff Fund	-	11,67,742	
ii) Research Fund	7,40,171	33,75,814	
iii) Overheads	-	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c Recurring	6,95,479	8,28,840	
TOTAL	14,35,650	53,72,396	


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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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DBT PROJECT

Nitric oxide signalling in response to Botrytis cinerea infection Tomato fruits

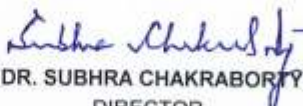
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	5,93,434		15,39,482
Equipment	-		-
<u>Grant- In- Aid for</u>			
i) Equipment	-		-
ii) Manpower	-		4,57,911
iii) Consumable	-		-
iv) Travel	-		-
v) Contingencies	-		-
<u>Interest Earned</u>	-		3,563
TOTAL		5,93,434	20,00,956

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Equipment	-		-
ii) Manpower	-		3,73,800
iii) Consumable	-		9,60,028
iv) Travel	-		-
v) Contingencies	-		36,288
<u>Refund to Agency</u>			
Interest	-		37,406
Recurring	5,93,434		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-		5,93,434
Equipment	-		-
TOTAL		5,93,434	20,00,956


(RAKESH MOHAN)
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DBT PROJECT

Understanding mechanistic detail of growth promotion and stress tolerance in legume crop by fungal endophyte through secretome and metabolomics study

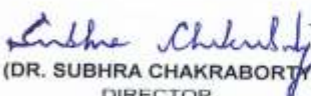
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	6,89,855	5,08,323	
Equipment	2,841	2,841	
<u>Grant- In- Aid for</u>			
i) Equipment	-	-	
ii) Manpower	-	5,87,389	
iii) Consumable	-	99,563	
iv) Travel	-	776	
v) Contingencies	-	-	
<u>Interest Earned</u>	5,555	3,343	
TOTAL		6,98,251	12,02,235

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	2,27,480	5,09,480	
iii) Consumable	50,400	-	
iv) Travel	-	-	
v) Contingencies	-	-	
<u>Refund to Agency</u>			
Interest	8,898	59	
Recurring	4,08,632	-	
Equipment	2,841	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-	6,89,855	
Equipment	-	2,841	
TOTAL		6,98,251	12,02,235


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER

Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT
Indo-Swiss Unravelling the interaction of mineral nutrition (N and K) and vitamin B6 metabolism
for sustainable agricultural practices

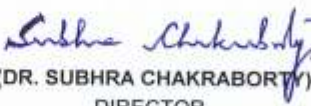
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	8,96,587		7,78,954	
Equipment	-		36,366	
Grant- In- Aid for				
i) Equipment	-		-	
ii) Manpower	-		9,33,041	
iii) Consumable	-		14,56,416	
iv) Travel	-		2,26,174	
v) Contingencies	-		26,645	
vi) Others	-		48,499	
Interest Earned	7,354		9,524	
TOTAL		9,03,941		35,15,619

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	3,27,840		9,83,520	
iii) Consumable	33,995		14,94,485	
iv) Travel	3,00,906		-	
v) Contingencies	19,998		29,996	
vi) Others	-		56,148	
Refund of Interest Earned	16,878		18,517	
Refund to Agency				
Equipment	-		36,366	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	2,04,324		8,96,587	
Equipment	-		-	
TOTAL		9,03,941		35,15,619


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Indo-Swiss Beyond transgenic plants: use of precise genome editing for improving growth under low phosphorus input

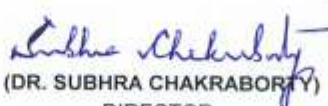
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	19,33,043	22,83,847	
Equipment	-	-	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	-	16,92,517	
iii) Consumable	-	16,85,349	
iv) Travel	-	-1,50,000	
v) Contingencies	-	-	
vi) Others	-	3,15,620	
Interest Earned	16,453	24,279	
TOTAL		19,49,496	58,51,612

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	8,10,960	14,62,704	
iii) Consumable	5,57,652	21,94,552	
iv) Travel	38,886	-	
v) Contingencies	91,660	-	
vi) Others	-	2,53,033	
Refund of Interest	40,732	8,280	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	4,09,606	19,33,043	
Equipment	-	-	
TOTAL		19,49,496	58,51,612


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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Investigation of chemical war between isoAsp mediated protein damage and repair in seeds towards understanding seed deterioration during aging and seed storage

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c Recurring	6,055		8,620
<u>Grant- In- Aid for</u>			
i) Consumable/Contingencies/ Travel	4,94,104		-
<u>Interest Earned</u>	80		159
TOTAL		5,00,239	8,779

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Consumable/Contingencies/ Travel	4,98,679		2,600
<u>Refund to Agency</u>			
Interest	239		124
Recurring	1,321		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c Recurring	-		6,055
TOTAL		5,00,239	8,779


(RAKESH MOHAN)
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DBT PROJECT

Structural studies of proteins involved in DNA repair and recombination in Plants

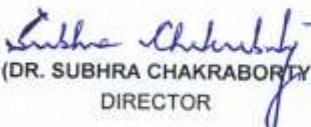
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	2,62,537	2,17,848	
Grant- In- Aid for			
i) Fellowship	14,22,000	14,22,000	
ii) Reseach/Contingency grant	7,50,000	7,30,233	
iii)Overhead Charges	50,000	50,000	
Interest Earned	18,718	534	
TOTAL	25,03,255	24,20,615	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Fellowship	4,54,887	14,22,000	
ii) Reseach/Contingency grant	3,15,309	6,83,377	
iii)Overhead Charges	50,000	50,000	
Refund of Interest	534	2,701	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	16,82,525	2,62,537	
TOTAL	25,03,255	24,20,615	


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DBT PROJECT

Nutritional Improvement of Indian Oilseed Mustard using CRISPR-Cas9 Mediated Genome Editing

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	52,174		6,65,299
<u>Grant- In- Aid for</u>			
i) Manpower	-		4,22,048
ii) Consumable	-		4,27,000
iii) Travel	-		-
iv) Contingencies	-		-
v) Overhead Charges	-		1,00,000
<u>Interest Earned</u>	491		1,372
TOTAL		52,665	16,15,719

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Manpower	14,400		9,15,360
ii) Consumable	26,675		4,99,720
iii) Travel	-		-
iv) Contingencies	-		46,541
v) Overhead Charges	-		1,00,000
<u>Refund to Agency</u>			
Interest	1,863		1,924
Recurring	9,727		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-		52,174
TOTAL		52,665	16,15,719

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Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

Elucidating the role of small RNA based effectors involved in root colonization of a growth promoting endophytic fungus Piriformospora indica in chickpea(Cicer arletinum)

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	63,766	85,549	
<u>Grant- In- Aid for</u>			
i) Manpower	-	6,00,000	
ii) Consumable	-	3,49,670	
iii) Travel	-	-	
iv) Contingencies	-	19,850	
v) Overhead Charges	-	45,000	
<u>Interest Earned</u>	419	1,676	
TOTAL		64,185	11,01,745

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	-	6,00,000	
ii) Consumable	-	3,48,336	
iii) Travel	-	-	
iv) Contingencies	-	42,394	
v) Overhead Charges	-	45,000	
<u>Refund to Agency</u>			
Interest	1,676	2,249	
Recurring	62,509		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-	63,766	
TOTAL		64,185	11,01,745


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

Imparting sheath blight disease tolerance in rice

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	16,55,614	79,54,444	
Equipment	-1,54,360	-1,54,360	
<u>Grant- In- Aid for</u>			
i) Equipemnt	-	-	
ii) Manpower	3,26,399	-	
iii) Consumable	-1,51,075	-	
iv) Travel	-1,73,459	-	
v) Contingencies	-1,865	-	
<u>Interest Earned</u>	16,603	39,468	
TOTAL	15,17,857	78,39,552	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipemnt	-	-	
ii) Manpower	2,36,902	25,94,369	
iii) Consumable	8,89,005	36,33,153	
iv) Travel	1,867	-	
v) Contingencies	1,27,651	62,817	
Refund of Interest Earned	56,071	47,959	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	3,60,721	16,55,614	
Equipment	-1,54,360	-1,54,360	
TOTAL	15,17,857	78,39,552	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

Characterization of Genetic Resources: Germplasm characterization and Trait discovery in Wheat using Genomics Approaches and its intergration for improving climate Resilience, Productivity and Nutritional quality

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	18,89,431		20,17,573
Equipment	-		18,32,407
<u>Grant- In- Aid for</u>			
i) Equipment	-		-
ii) Manpower	4,48,213		29,33,224
iii) Consumable	3,97,778		4,84,235
iv) Outsourcing	1,90,00,000		-
v) Travel	-		-
vi) Contingencies	49,935		35,211
<u>Interest Earned</u>	13,813		46,656
TOTAL		2,17,99,170	73,49,306

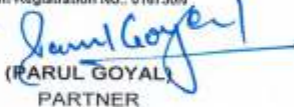
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Equipment	-		-
ii) Manpower	21,33,761		24,32,053
iii) Consumable	-		4,97,778
iv) Outsourcing	-		5,48,808
v) Travel	9,702		-
vi) Contingencies	-		44,935
Refund of Interest Earned	58,770		1,03,894
<u>Refund to Agency</u>			
Unspent equipment Grant	-		18,32,407
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,95,96,937		18,89,431
Equipment	-		-
TOTAL		2,17,99,170	73,49,306


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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DBT PROJECT
Investigating the molecular-genetic basis of multifunctional glucosinolate transporters (GTR1/GTR2) in Brassica crops

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

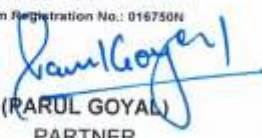
RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c Recurring	30,936	1,09,853	
Grant- In- Aid for			
i) Cash Award	-	-	
ii) Research Grant	-	3,93,035	
Interest Earned	59	813	
TOTAL	30,995	5,03,701	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Cash Award	-	-	
ii) Research Grant	30,091	4,47,557	
Refund of Interest Earned	872	2,888	
Amount under TSA lapsed to Govt. Account	-	22,320	
CLOSING BALANCE			
With Bank in Saving A/c Recurring	32	30,936	
TOTAL	30,995	5,03,701	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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DBT PROJECT

Characterization of Genetic Resources: Main-streaming rice landraces diversity in varietal development through genome-wide association studies: A model for large-scale utilization of gene bank collections or rice

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	2,60,136	1,89,745	
Equipment	213	3,75,063	
<u>Grant- In- Aid for</u>			
i) Equipment	-	-	
ii) Manpower	6,54,720	11,90,400	
iii) Consumable	7,00,000	-	
iv) Travel	50,000	-	
v) Contingencies	75,000	-	
<u>Interest Earned</u>	1,952	1,049	
TOTAL	17,42,021	17,56,257	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	3,74,850	
ii) Manpower	8,71,206	10,69,160	
iii) Consumable	6,99,915	-	
iv) Travel	20,288	13,125	
v) Contingencies	73,879	-	
Refund of Interest Earned	2,172	38,773	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	74,348	2,60,136	
Equipment	213	213	
TOTAL	17,42,021	17,56,257	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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DBT PROJECT

Plant Genomics, Gene Regulatory Network and Novel RNA Molecules

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	7,55,702	23,66,485	
Equipment	2,62,380	25,00,000	
<u>Grant- In- Aid for</u>			
i) Equipment	49,86,420	-	
ii) Manpower	23,95,680	-	
iii) Consumable	4,00,000	-	
iv) Travel	50,000	-	
v) Contingencies	50,000	-	
vi) Others	5,00,000	-	
<u>Interest Earned</u>	1,775	26,766	
TOTAL	94,01,957	48,93,251	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	2,48,800	22,37,620	
ii) Manpower	15,37,829	16,02,920	
iii) Consumable	1,04,056	-	
iv) Travel	-	-	
v) Contingencies	4,828	2,000	
vi) Others			
Refund of Interest Earned	28,541	32,629	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	24,77,903	7,55,702	
Equipment	50,00,000	2,62,380	
TOTAL	94,01,957	48,93,251	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Characterization of Chickpea Germplasm Resource to accelerate Genomics assisted Crop Improvement
under mission programme of "Characterization of Genetic Resources" Project Management Unit (PMU)
Component-1

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	37,16,767	26,49,838	
Equipment	1,59,62,905	1,66,60,000	
Grant- In- Aid for Other Agencies			
Non-Recurring	-	2,19,14,500	
Recurring	5,42,48,279	2,85,01,060	
Grant- In- Aid for NIPGR			
i) Equipment	-	-	
ii) Works			
ii) Manpower	11,11,079	12,27,600	
iii) Travel	1,21,934	1,00,000	
iv) Contingencies	2,00,000	1,00,000	
v) Other Expenses	17,93,600	10,50,000	
Interest Earned	1,73,437	4,48,440	
TOTAL	7,73,28,001	7,26,51,438	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
Released to Other Agencies			
Non-Recurring	-	2,19,14,500	
Recurring	5,42,48,279	2,85,01,060	
i) Equipment	1,58,64,610	6,97,095	
ii) Manpower	19,48,000	11,11,079	
iii) Travel	1,09,546	1,10,738	
iv) Contingencies	2,19,497	1,71,456	
v) Other Expenses	-	2,93,600	
Refund of Interest Earned	6,21,877	1,72,238	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	42,17,897	37,16,767	
Equipment	98,295	1,59,62,905	
TOTAL	7,73,28,001	7,26,51,438	

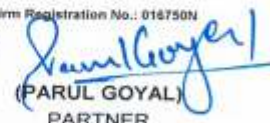
For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT

Firm Registration No.: 016750N


(RAKESH MOHAN)
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(SANDEEP DATTA)
COA


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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Characterization of Chickpea Germplasm Resource to accelerate Genomics assisted Crop Improvement
under mission programme of "Characterization of Genetic Resources" Component-2

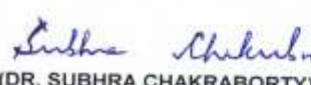
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	46,45,311	4,13,95,659	
Equipment	1,64,27,377	1,48,63,750	
Grant- In- Aid for			
i) Equipment & Works	-	1,33,34,250	
ii) Manpower	38,70,816	32,43,840	
iii) Consumable	2,39,25,323	3,75,00,000	
iv) Travel	50,000	25,000	
v) Contingencies	23,726	25,000	
vi) Field & Farm Expenses	2,00,000	1,00,000	
vii) Overhead Charges	-	-	
Interest Earned	2,45,452	4,79,948	
TOTAL	4,93,88,005	11,09,67,447	

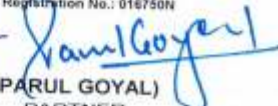
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	1,04,29,996	1,17,70,623	
ii) Manpower	48,10,965	38,70,816	
iii) Consumable	2,51,62,195	7,35,00,780	
iv) Travel	16,114	67,075	
v) Contingencies	40,463	23,726	
vi) Field & Farm Expenses	2,35,005	1,59,920	
Refund of Interest Earned	7,25,400	5,01,819	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	19,70,486	46,45,311	
Equipment	59,97,381	1,64,27,377	
TOTAL	4,93,88,005	11,09,67,447	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

The chemical ecology of high L-DOPA containing plants and their interaction with herbivores

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,07,970		
Equipment	-		
<u>Grant- In- Aid for</u>			
i) Equipment	-	-	
ii) Manpower	4,17,200	5,20,800	
iii) Consumable	2,98,469	3,00,000	
iv) Travel	-	-	
v) Contingencies	-	-	
<u>Interest Earned</u>	52	2,839	
TOTAL		8,23,691	8,23,639

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	4,05,067	4,17,200	
iii) Consumable	2,72,469	2,98,469	
iv) Travel	-	-	
v) Contingencies	-	-	
Refund of Interest Earned	2,891	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,43,264	1,07,970	
Equipment	-		
TOTAL		8,23,691	8,23,639

For GOYAL PARUL & Co.

CHARTERED ACCOUNTANT

Firm Registration No.: 016750N


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DBT PROJECT

Genetic dissection of flowering and podding efficiency for enhancing yield stability and productivity in chickpea

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	42,232		
Equipment	-		
<u>Grant- In- Aid for</u>			
i)Research Grant	-	5,00,000	
ii)Cash Award	-	2,00,000	
<u>Interest Earned</u>	17	793	
TOTAL	42,249		7,00,793

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i)Research Grant	40,182	4,58,561	
ii)Cash Award	-	2,00,000	
Refund of Interest Earned	810		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,257	42,232	
Equipment	-		
TOTAL	42,249		7,00,793


(RAKESH MOHAN)
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DBT PROJECT

Biotechnological approaches to improve shelf life, productivity of vegetables- (Tomato)

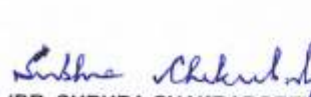
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
<u>OPENING BALANCE</u>				
With Bank in Saving A/c				
Recurring				
Equipment				
<u>Grant- In- Aid for</u>				
i) Equipment	-		-	
ii) Manpower	5,20,800		5,20,800	
iii) Consumable	9,20,000		9,20,000	
iv) Travel	-		-	
v) Contingencies	-		-	
<u>Interest Earned</u>	-		-	
TOTAL		14,40,800		14,40,800

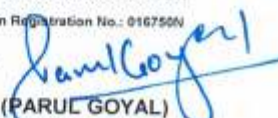
PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	2,38,700		2,54,800	
iii) Consumable	9,19,894		8,98,463	
iv) Travel	-		-	
v) Contingencies	-		-	
Refund of Interest Earned	-		-	
Amount under TSA lapsed to Govt. Account	-		2,87,537	
<u>CLOSING BALANCE</u>				
With Bank in Saving A/c				
Recurring	2,82,206			
Equipment	-			
TOTAL		14,40,800		14,40,800


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Targeting Pup1 independent mechanisms for improving low soil phosphorus tolerance and use-efficiency in rice

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	45,72,341		
Equipment	11,96,000		
<u>Grant- In- Aid for</u>			
i) Equipment	-	11,96,000	
ii) Manpower	-	13,24,320	
iii) Consumable	-	25,00,000	
iv) Travel	-	50,000	
v) Contingencies	-	50,000	
vi) Other Expenses	-	8,00,000	
<u>Interest Earned</u>	67,063	51,452	
TOTAL	58,35,404		59,71,772

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	10,91,414	-	
ii) Manpower	11,18,761	2,03,431	
iii) Consumable	24,73,365	-	
iv) Travel	16,618	-	
v) Contingencies	32,095	-	
vi) Other Expenses	4,04,738	-	
<u>Refund to Agency</u>			
Interest Earned	1,18,515	-	
Equipment	1,04,586		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	4,75,312	45,72,341	
Equipment	-	11,96,000	
TOTAL	58,35,404		59,71,772

For GOYAL PARUL & Co.


(RAKESH MOHAN)
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DBT PROJECT

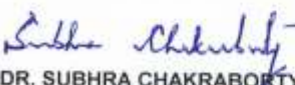
National Certification System for Tissue Culture raised Plants (NCS-TCP)

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	1,49,70,756		
Equipment	15,03,837		
Grant- In- Aid for Other Agencies			
Non-Recurring	-	1,22,43,550	
Recurring	-	1,96,64,240	
Grant- In- Aid for			
i) Non-recurring	-	24,98,000	
ii) Website Development	-	19,24,000	
iii) Manpower	-	54,17,000	
iv) Website Maintenance	-	5,00,000	
v) Organisation of Site Visits	-	15,00,000	
vi) Organizing meeting of APEX	-	3,00,000	
vii) Organizing awareness programs/Stakeholders meet	-	10,00,000	
viii) Outsourcing for Management	-	10,00,000	
ix) Consumables	-	10,00,000	
x) Contingencies	-	3,00,000	
xi) CONSUMABLES Including Diagnostic Kits	-	1,50,00,000	
Receipts against Testing/Cerification	2,49,49,842	30,41,260	
Interest Earned	2,97,903	1,71,081	
TOTAL		4,17,22,338	6,55,59,131

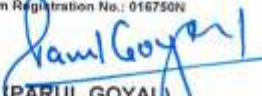

(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT

Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER

Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

DBT PROJECT

National Certification System for Tissue Culture raised Plants (NCS-TCP)

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
Released to Other Agencies			
Non-Recurring	-	1,22,43,550	
Recurring	-	1,96,64,240	
	-	-	
i) Non-recurring	15,30,549	9,32,163	
ii) Website Development	4,99,990	-	
iii) Manpower	48,00,163	3,20,552	
iv) Website Maintenance	2,16,857	24,599	
v) Organisation of Site Visits	14,43,131	48,000	
vi) Organizing meeting of APEX	50,890	-	
vii) Organizing awareness programs/Stakeholders meet	-	-	
viii) Outsourcing for	1,49,936	-	
ix) Consumables	3,99,018	5,79,692	
x) Contingencies	2,22,155	21,426	
xi) CONSUMABLES Including Diagnostic Kits	89,858	1,48,85,753	
Refund to Agency	-	-	
Interest Earned	3,92,870		
Receipts against Testing/Cerification	1,67,94,874		
Amount under TSA lapsed to Govt. account	-	3,64,563	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	1,51,58,759	1,49,70,756	
Equipment	(26,712)	15,03,837	
TOTAL	4,17,22,338	6,55,59,131	


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DBT PROJECT

Development of D-allulose based nano-formulations for enhanced stress tolerance and increased crop productivity

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	9,67,247		
Equipment	-		
<u>Grant- In- Aid for</u>			
i) Equipment	-	-	
ii) Manpower	-	6,91,920	
iii) Consumable	-	5,00,000	
iv) Travel	-	30,000	
v) Contingencies	-	20,000	
<u>Interest Earned</u>	8,700	6,485	
TOTAL		9,75,947	12,48,405

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Equipment	-	-	
ii) Manpower	3,39,760	28,520	
iii) Consumable	2,21,338	2,50,638	
iv) Travel	-	-	
v) Contingencies	3,379	2,000	
Refund of Interest Earned	15,185	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	3,96,285	9,67,247	
Equipment	-		
TOTAL		9,75,947	12,48,405

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DBT PROJECT

Platform for Measurement of Free Radicals (PMFR)

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	37,50,100		
Equipment	3,53,34,000		
<u>Grant- In- Aid for</u>			
i) Equipment	-	3,53,34,000	
ii) Manpower	-	21,87,360	
iii) Consumable	-	16,00,000	
iv) Travel	-	50,000	
v) Contingencies	-	50,000	
<u>Interest Earned</u>	5,24,098	2,62,049	
TOTAL		3,96,08,198	3,94,83,409

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	4,49,000	-	
ii) Manpower	4,39,041	-	
iii) Consumable	11,99,676	3,99,309	
iv) Travel	46,903	-	
v) Contingencies	49,000	-	
	-	-	
Refund of Interest Earned	7,86,147	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	17,53,431	37,50,100	
Equipment	3,48,85,000	3,53,34,000	
TOTAL		3,96,08,198	3,94,83,409


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DBT PROJECT

A National Mission Mode Program on Nutritional improvement of digestible protein content and quality
in rice

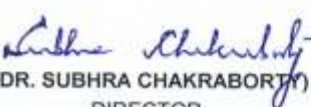
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	52,77,007		
Equipment	5,72,00,000		
Grant- In- Aid for			
i) Equipment	1,07,72,435	5,72,00,000	
ii) Manpower	-	31,47,120	
iii) Consumable	-	15,00,000	
iv) Travel	-	50,000	
v) Contingencies	-	2,00,000	
vi) Other Expenses	-	1,00,000	
Interest Earned	8,35,661	2,79,887	
TOTAL		7,40,85,103	6,24,77,007

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	5,59,31,878	-	
ii) Manpower	11,27,293	-	
iii) Consumable	14,98,148	-	
iv) Travel	-	-	
v) Contingencies	1,45,630	-	
vi) Other Expenses	2,000	-	
Refund of Interest Earned	11,15,548	-	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	22,24,049	52,77,007	
Equipment	1,20,40,557	5,72,00,000	
TOTAL		7,40,85,103	6,24,77,007


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DBT PROJECT

Genetic engineering of Ubiquitin-proteasome pathway gene (SIRT4a) for providing tolerance against ToLCNDV in tomato

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	20,92,769		
Equipment	-		
<u>Grant- In- Aid for</u>			
i) Equipment	-	-	
ii) Manpower	-	12,05,280	
iii) Consumable	-	9,00,000	
iv) Travel	-	50,000	
v) Contingencies	-	50,000	
	-	-	
<u>Interest Earned</u>	16,860	2,712	
TOTAL		21,09,629	22,07,992

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	6,37,740	1,14,788	
iii) Consumable	8,55,002	-	
iv) Travel	527	-	
v) Contingencies	43,753	435	
Refund of Interest Earned	19,572	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	5,53,035	20,92,769	
Equipment	-	-	
TOTAL		21,09,629	22,07,992


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DBT PROJECT

DBT R/P entitled "Increasing Iron Levels in Rice Grains Through Altering the Expression of Vacuolar Iron Transporter (VIT)-Like genes".

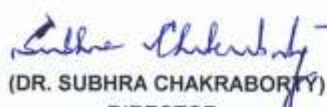
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	11,34,345			
Equipment	-			
Grant- In- Aid for				
i) Equipment	-		-	
ii) Manpower	-		6,91,920	
iii) Consumable	-		4,50,000	
	-		-	
Interest Earned	10,569		5,082	
TOTAL		11,44,914		11,47,002

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	3,26,816		-	
iii) Consumable	4,16,047		12,657	
Refund of Interest Earned	15,651		-	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	3,86,400		11,34,345	
Equipment	-		-	
TOTAL		11,44,914		11,47,002


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DBT PROJECT

Generation of a retrotransposon-based mutant population of chickpea for functional genomics studies

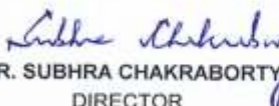
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	19,44,620		
Equipment	30,13,000		
<u>Grant- In- Aid for</u>			
i) Equipment	-	30,13,000	
ii) Manpower	-	10,43,520	
iii) Consumable	-	8,00,000	
iv) Travel	-	50,000	
v) Contingencies	-	50,000	
	-	-	
<u>Interest Earned</u>	55,148	1,100	
TOTAL		50,12,768	49,57,620

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	7,46,282	-	
ii) Manpower	9,50,677	-	
iii) Consumable	7,90,168	-	
iv) Travel	16,861	-	
v) Contingencies	22,093	-	
Refund of Interest Earned	56,248	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,63,721	19,44,620	
Equipment	22,66,718	30,13,000	
TOTAL		50,12,768	49,57,620


(RAKESH MOHAN)
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NEW DELHI

DBT PROJECT

Genome Editing mediated Nutritional Improvement of Potato (*Solanum tuberosum* L.)

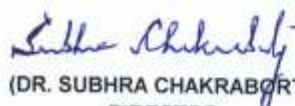
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	192		
Equipment	9,00,000		
Grant- In- Aid for			
i) Equipment	-	9,00,000	
ii) Manpower	4,61,280	-	
iii) Consumable	7,00,000	-	
iv) Travel	20,000	-	
v) Contingencies	50,000	-	
vi) Overhead Charges	50,000	-	
Interest Earned	12,150	192	
TOTAL		21,93,622	9,00,192

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
ii) Manpower	3,41,000	-	
iii) Consumable	6,98,279	-	
iv) Travel	-	-	
v) Contingencies	42,700	-	
vi) Overhead Charges	50,000	-	
Refund of Interest Earned	12,342	-	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	1,49,301	192	
Equipment	9,00,000	9,00,000	
TOTAL		21,93,622	9,00,192


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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DBT PROJECT

Screening and Identification of Spodoptera litura effectors proteins using RNA interference and its functional validation in plants

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	14,58,491		
Equipment	10,00,000		
<u>Grant- In- Aid for</u>			
i) Equipment	-	10,00,000	
ii) Manpower	-	-	
iii) Consumable/Travel/Contingency	-	10,00,000	
iv) Fellowship	-	9,00,000	
<u>Interest Earned</u>	25,465	8,491	
TOTAL		24,83,956	29,08,491

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Equipment	-	-	
ii) Manpower	-	-	
iii) Consumable/Travel/Contingency	7,78,297	-	
iv) Fellowship	4,50,000	4,50,000	
Refund of Interest Earned	33,956	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	2,21,703	14,58,491	
Equipment	10,00,000	10,00,000	
TOTAL		24,83,956	29,08,491

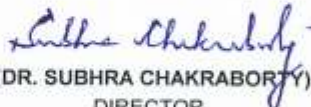
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DBT PROJECT

Understanding the molecular mechanism of higher nitrogen fixation efficiency in *Cicer arietinum* and
Medicago truncatula root nodules: A multi-omics approach

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
<u>OPENING BALANCE</u>				
With Bank in Saving A/c				
Recurring	17,68,040			
Equipment	10,00,000			
<u>Grant- In- Aid for</u>				
i) Equipment	-		10,00,000	
ii) Manpower	-		6,91,920	
iii) Consumable/Travel/Contingency	-		5,38,720	
iv) Fellowship	-		9,00,000	
<u>Interest Earned</u>	28,738		12,400	
TOTAL		27,96,778		31,43,040

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	2,42,757		-	
ii) Manpower	37,324		-	
iii) Consumable/Travel/Contingency	2,75,680		-	
iv) Fellowship	1,57,500		3,75,000	
<u>Refund to Agency</u>				
Interest	41,138		-	
Recurring	12,85,136			
Equipment	7,57,243			
<u>CLOSING BALANCE</u>				
With Bank in Saving A/c				
Recurring	-		17,68,040	
Equipment	-		10,00,000	
TOTAL		27,96,778		31,43,040


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DBT PROJECT

Exploration of heat and cytokinin signaling interaction for enhancing thermomemory in plants

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	-			
Equipment	-			
Grant- In- Aid for				
i) Equipment	-		-	
ii) Manpower	4,32,165		-	
iii) Consumable	20,00,000		-	
iv) Travel	-		-	
v) Contingencies	50,000		-	
vi) Overhead Charges	-		-	
Interest Earned	-		-	
TOTAL		24,82,165		-

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	4,05,020		-	
iii) Consumable	19,03,379		-	
iv) Travel	-		-	
v) Contingencies	49,996		-	
vi) Overhead Charges	-		-	
	-		-	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	1,23,770		-	
Equipment	-		-	
TOTAL		24,82,165		-


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DBT PROJECT

Investigating post-transcriptional regulation of jasmonate signalling for improving rice response to environmental stresses

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	-			
Equipment	-			
Grant- In- Aid for				
i) Equipment	-		-	
ii) Manpower	4,61,280		-	
iii) Consumable/Travel/Contingency	5,38,720		-	
iv) Fellowship	9,00,000		-	
Interest Earned	-		-	
TOTAL		19,00,000		-

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	1,31,440		-	
iii) Consumable/Travel/Contingency	5,37,716		-	
iv) Fellowship	9,00,000		-	
	-		-	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	3,30,844		-	
Equipment	-		-	
TOTAL		19,00,000		-


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NEW DELHI

DBT PROJECT

R/P Towards Identification isolation and characterization of Exobasidium vexans strains and their pathogenic determinants/effectors, form Blisters blight infested tea plantations of Assam and development of future road-map for effective management practices

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS			AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
<u>OPENING BALANCE</u>				
With Bank in Saving A/c				
Recurring	-			
Equipment	-			
<u>Grant- In- Aid for</u>				
i) Equipment	-		-	
ii) Manpower	-		-	
iii) Consumable/Travel/Contingency	-		-	
iv) Fellowship	-		-	
<u>Interest Earned</u>	-		-	
TOTAL		-		-

PAYMENTS			AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	1,81,161		-	
iii) Consumable/Travel/Contingency	-		-	
iv) Fellowship	-		-	
	-			
<u>CLOSING BALANCE</u>				
With Bank in Saving A/c				
Recurring	(1,81,161)		-	
Equipment	-		-	
TOTAL		-		-


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

SERB PROJECT

Targeted exome and transcriptome sequencing of lentil for discovery of genetic polymorphisms and construction of a gene expression atlas

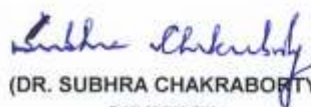
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	10,54,203	4,26,451	
<u>Grant - In - Aid for</u>			
i) Manpower	-	-	
ii) Consumable/Contingencies/Travel	-	10,16,437	
iii)Overheads	-	1,83,563	
<u>Interest Earned</u>	414	993	
TOTAL	10,54,617	16,27,444	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	-	-	
ii) Consumable/Contingencies/Travel	10,17,366	3,89,678	
iii)Overheads	-	1,83,563	
<u>Refund to Agency</u>			
Recurring	37,251		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-	10,54,203	
TOTAL	10,54,617	16,27,444	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Understanding the role of nodule specific PIN-LIKES (PILS) protein in peanut root nodule development

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	49,721		93,234
Equipment	-		19,219
<u>Grant - In - Aid for</u>			
i) Equipment	-		-
i) Manpower	1,52,080		4,94,940
ii) Consumable/Contingencies/Travel	3,97,920		3,55,060
iii) SSR	-		-
iv)Overheads	-		1,00,000
<u>Interest Earned</u>	615		1,419
TOTAL		6,00,336	10,63,872

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Equipment	-		-
i) Manpower	1,33,713		4,97,683
ii) Consumable/Contingencies/Travel	3,53,389		3,97,076
iii) SSR	-		-
iv)Overheads	-		1,00,000
<u>Refund to Agency</u>			
Equipment	-		19,219
Interest on Equipment grant	-		173
Recurring	1,13,234		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-		49,721
Equipment	-		-
TOTAL		6,00,336	10,63,872


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Deciphering Jasmonic Acid biosynthesis pathway and its role in potassium (K) deficiency tolerance in chickpea (*Cicer arietinum*)"

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring		37,528		81,945
Equipment		19,140		19,140
Grant - In - Aid for				
i) Equipment		-		-
i) Manpower		-		4,20,000
ii) Consumable/Contingencies/Travel		-		5,10,000
iii) SSR		-		-
iv) Overheads		-		70,000
Interest Earned		-		1,490
TOTAL		56,668		11,02,575

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment		-		-
i) Manpower		-		4,15,762
ii) Consumable/Contingencies/Travel		-		5,60,145
iii) SSR		-		-
iv) Overheads		-		70,000
Refund to Agency				
Recurring		37,528		
Equipment grant		19,140		
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring		-		37,528
Equipment		-		19,140
TOTAL		56,668		11,02,575

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT

Firm Registration No.: 016750N


(RAKESH MOHAN)
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(SANDEEP DATTA)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Physiological and molecular characterization of root developmental plasticity under low nitrogen availability

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	47,460	95,404	
Equipment	393	393	
<u>Grant - In - Aid for</u>			
i) Equipment	-	-	
i) Manpower	-	4,22,840	
ii) Consumable/Contingencies/Travel	4,00,000	2,81,733	
iii) SSR	-	-	
iv) Overheads	-	1,45,427	
<u>Interest Earned</u>	538	1,258	
TOTAL	4,48,391	9,47,055	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	-	
i) Manpower	1,37,766	3,07,520	
ii) Consumable/Contingencies/Travel	2,48,210	4,46,255	
iii) SSR	-	-	
iv) Overheads	-	1,45,427	
<u>Refund to Agency</u>			
Recurring	62,022		
Equipment	393		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	-	47,460	
Equipment	-	393	
TOTAL	4,48,391	9,47,055	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT
J.C.Bose Fellowship- Dr.Manoj Prasad

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	1,08,686	2,17,979	
Grant - In - Aid for			
i) Fellowship	2,75,000	2,00,000	
ii) Consumable/Travel/Contingencies /Equipment	14,15,000	14,00,000	
iii)Overheads	1,00,000	1,00,000	
Interest Earned	919	1,526	
TOTAL	18,99,605	19,19,505	

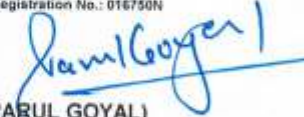
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Fellowship	3,00,000	3,00,000	
ii) Consumable/Travel/Contingencies /Equipment	12,62,295	14,10,819	
iii)Overheads	1,00,000	1,00,000	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	2,37,310	1,08,686	
TOTAL	18,99,605	19,19,505	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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DST PROJECT
INSPIRE Fellow Award- Dr. Deepika Sharma

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c	71,145	23,16,920	
Grant- In- Aid for			
i) Manpower	15,70,533	-	
ii) Consumable/Contingency/Travel/Equipment	6,00,582	-	
iii) Overhead Charges	31,610	-	
Interest Earned	59	1,870	
TOTAL	22,73,929	23,18,790	

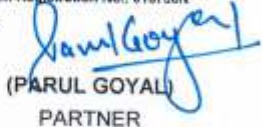
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	15,70,041	16,17,967	
ii) Consumable/Contingency/Travel	6,37,719	6,23,521	
iii) Overhead Charges	62,056	-	
Refund of Interest Earned	1,870	6,157	
CLOSING BALANCE			
With Bank in Saving A/c	2,243	71,145	
TOTAL	22,73,929	23,18,790	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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SERB (TARE) PROJECT

Financial Sanction under Teacher Associateship for Research Excellence (TARE) to Dr. Raghuvendra Kumar Mishra

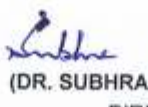
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	17,998	87,425	
<u>Grant- In- Aid for</u>			
i) Manpower	-	-	
ii) Consumable/Contingency/Travel	-	-	
iii) Overhead Charges	-	-	
<u>Interest Earned</u>	-	473	
TOTAL	17,998	87,898	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	-	60,000	
ii) Consumable/Contingency/Travel	-	-	
iii) Overhead Charges	-	9,900	
<u>Refund to Agency</u>			
Recurring	17,998		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	-	17,998	
TOTAL	17,998	87,898	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH

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NEW DELHI

SERB PROJECT

Transcriptional repressors as friends or foes: Utilization to increase seed size in rice

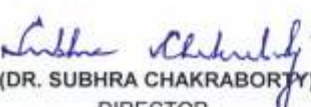
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	47,082	2,95,357	
Grant - In - Aid for			
i) Manpower	-	2,30,000	
ii) Consumable/Contingencies/Travel	8,65,732	4,70,000	
iii) SSR	-	-	
iv) Overheads	84,268	1,00,000	
Interest Earned	530	1,238	
TOTAL	9,97,612	10,96,595	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	-	2,22,249	
ii) Consumable/Contingencies/Travel	5,91,046	7,27,264	
iii) SSR	-	-	
iv) Overheads	84,268	1,00,000	
Refund to Agency			
Recurring	3,22,298	-	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	-	47,082	
TOTAL	9,97,612	10,96,595	


(RAKESH MOHAN)
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NEW DELHI

SERB PROJECT

Genome-wide identification and characterization of fusion events in different plant species

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	2,63,845		1,65,846
Equipment	340		340
<u>Grant - In - Aid for</u>			
i) Equipment	-		-
ii) Manpower	70,000		4,80,000
iii) Consumable/Contingencies/Travel	4,98,500		88,500
iv) SSR	-		-
v)Overheads	31,500		81,500
<u>Interest Earned</u>	3,618		4,487
TOTAL		8,67,803	8,20,673

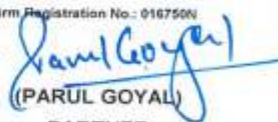
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Equipment	-		-
ii) Manpower	2,99,600		2,55,755
iii) Consumable/Contingencies/Travel	3,13,215		2,19,233
iv) SSR	9,870		-
v)Overheads	31,500		81,500
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	2,13,278		2,63,845
Equipment	340		340
TOTAL		8,67,803	8,20,673


(RAKESH MOHAN)
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NEW DELHI

SERB PROJECT

Development of integrated multi-omics database for understanding combined stress tolerance in plants

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

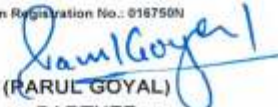
RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	62,511		14,927	
Equipment				
Grant - In - Aid for				
i) Equipment	-		-	
ii) Manpower	4,00,000		5,20,800	
iii) Consumable/Contingencies/Travel	-		2,54,808	
iv) SSR	-		-	
v) Overheads	-		74,392	
Interest Earned	647		403	
TOTAL		4,63,158		8,65,330

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	3,90,600		5,20,800	
iii) Consumable/Contingencies/Travel	47,946		2,07,627	
iv) SSR	-		-	
v) Overheads	-		74,392	
Refund to Agency				
Recurring	24,612			
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	-		62,511	
Equipment	-		-	
TOTAL		4,63,158		8,65,330


(RAKESH MOHAN)
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SERB PROJECT
J.C.Bose Fellowship- Dr.Subhra Chakraborty

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	68,162	1,60,925	
Grant - In - Aid for			
i) Fellowship	3,00,000	3,00,000	
ii) Consumable/Travel/Contingencies /Equipment	14,00,000	13,50,000	
iii)Overheads	1,00,000	1,00,000	
Interest Earned	1,840	509	
TOTAL	18,70,002	19,11,434	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Fellowship	3,00,000	2,94,828	
ii) Consumable/Travel/Contingencies /Equipment	13,38,672	14,48,444	
iii)Overheads	1,00,000	1,00,000	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	1,31,330	68,162	
TOTAL	18,70,002	19,11,434	


(RAKESH MOHAN)
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SERB PROJECT

Deciphering role(s) of post-translational modifications and chromatin regulation of immunity in rice

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	65,416		14,91,575
Grant - In - Aid for			
i) Manpower	8,03,520		-
ii) Consumable/Contingencies/Travel	8,46,787		3,84,161
iii) SSR	-		-
iv) Overheads	1,49,693		1,15,839
Interest Earned	1,766		1,720
TOTAL		18,67,182	19,93,295

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Manpower	8,03,520		6,02,640
ii) Consumable/Contingencies/Travel	8,18,439		12,09,400
iii) SSR	8,226		
iv) Overheads	1,49,693		1,15,839
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	87,304		65,416
TOTAL		18,67,182	19,93,295


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SERB PROJECT

The role of phytohemoglobin nitric oxide cycle in oxygen sensing and plasticity of mitochondrial response to low oxygen stress in plants

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,27,137	1,56,758	
Equipment	3,19,998	3,19,998	
<u>Grant - In - Aid for</u>			
i) Equipment	-	-	
ii) Manpower	2,60,400	5,20,800	
iii) Consumable/Contingencies/Travel	4,32,869	5,72,470	
iv) SSR	-	-	
v) Overheads	1,06,731	1,06,730	
<u>Interest Earned</u>	2,119	11,701	
TOTAL	12,49,254	16,88,457	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	3,19,998		
ii) Manpower	3,03,800	5,20,800	
iii) Consumable/Contingencies/Travel	4,38,120	6,13,792	
iv) SSR	-		
v) Overheads	1,06,731	1,06,730	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	80,605	1,27,137	
Equipment	-	3,19,998	
TOTAL	12,49,254	16,88,457	

(RAKESH MOHAN)
FINANCE OFFICER

(SANDEEP DATTA)
COA

(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N

(PARUL GOYAL)
PARTNER

Membership No. 099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

SERB PROJECT

Financial Approval of the SwarnaJayanti Fellowship to Dr. Jitender Giri

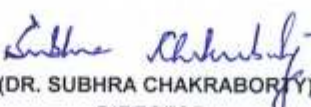
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	3,99,622	2,54,967	
Grant - In - Aid for			
i) Fellowship	-	6,50,000	
ii) Consumable/ Travel/Contingencies /Equipment	-	-	
iii) Overhead Charges	-	-	
Interest Earned	2,690	2,619	
TOTAL	4,02,312	9,07,586	

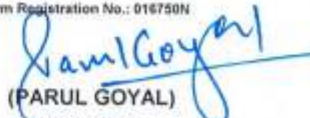
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Fellowship	3,00,000	3,25,000	
ii) Consumable/ Travel/Contingencies /Equipment	-	1,78,219	
iii) Overhead Charges	-	-	
Refund of Interest Earned	-	4,745	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	1,02,312	3,99,622	
TOTAL	4,02,312	9,07,586	


(RAKESH MOHAN)
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NEW DELHI

SERB PROJECT

Unlinking phosphate deficiency responses from their adverse effects on growth in rice

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	23,42,685	2,33,586	
Equipment	30,408	75,916	
<u>Grant - In - Aid for</u>			
i) Equipment	-	-	
ii) Manpower	-	13,58,380	
iii) Consumable/Contingencies/Travel	-	19,40,168	
iv) Overheads	-	4,01,452	
<u>Interest Earned</u>	6,053	6,271	
TOTAL	23,79,146	40,15,773	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	45,508	
ii) Manpower	9,27,120	7,81,021	
iii) Consumable/Contingencies/Travel	11,03,053	5,33,439	
iv) Overheads	1,18,740	2,82,712	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,99,825	23,42,685	
Equipment	30,408	30,408	
TOTAL	23,79,146	40,15,773	


(RAKESH MOHAN)
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NEW DELHI

SERB(NPDF) PROJECT

The role of non-symbiotic haemoglobin, nitrate nutrition to increase energy efficiency under hypoxia in rice and wheat

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
OPENING BALANCE			
With Bank in Saving A/c	1,39,749		1,36,075
Grant- In- Aid for			
i) Manpower	-		-
ii) Consumable/Contingency/Travel	-		-
iii) Overhead Charges	-		-
Interest Earned	-		3,674
TOTAL		1,39,749	1,39,749

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Manpower	-		-
ii) Consumable/Contingency/Travel	-		-
iii) Overhead Charges	-		-
Refund to Agency			
Recurring	1,39,749		
CLOSING BALANCE			
With Bank in Saving A/c	-		1,39,749
TOTAL		1,39,749	1,39,749


(RAKESH MOHAN)
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NEW DELHI

SERB (NPDF) PROJECT

Exploring the role of post-translational modification of jasmonate signaling genes in low phosphate tolerance

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	2,32,411		8,34,723
<u>Grant- In- Aid for</u>			
i) Manpower	-		4,09,200
ii) Consumable/Contingency/Travel	-		-
iii) Overhead Charges	-		-
<u>Interest Earned</u>	-		384
TOTAL		2,32,411	12,44,307

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Manpower	-		8,18,400
ii) Consumable/Contingency/Travel	-		1,93,496
iii) Overhead Charges	-		-
<u>Refund to Agency</u>			
Recurring	2,32,411		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	-		2,32,411
TOTAL		2,32,411	12,44,307


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Integrating omics approaches to understand the molecular mechanism underlying plants response to tomato leaf curl disease- Woman Excellence Award

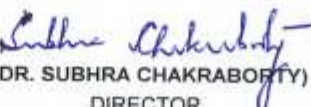
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	81,074	14,485	
<u>Grant- In- Aid for</u>			
i) Consumable/Contingency/Travel	-	5,00,000	
ii) Overhead Charges	-	1,00,000	
<u>Interest Earned</u>	1,652	391	
TOTAL	82,726		6,14,876

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Consumable/Contingency/Travel	19,897	4,33,802	
ii) Overhead Charges	-	1,00,000	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	62,829	81,074	
TOTAL	82,726		6,14,876


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

J.C.Bose Fellowship- Dr.Debasis Chattopadhyay

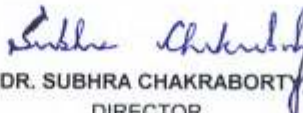
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	8,53,654	2,93,160	
Grant - In - Aid for			
i) Fellowship	2,75,000	1,75,000	
ii) Consumable/Travel/ Contingencies /Equipment	6,71,000	13,25,000	
iii)Overheads	1,00,000	1,00,000	
Interest Earned	516	2,209	
TOTAL	19,00,170		18,95,369

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Fellowship	3,00,000	3,00,000	
ii) Consumable/ Travel /Contingencies /Equipment	14,80,538	6,41,715	
iii)Overheads	1,00,000	1,00,000	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	19,632	8,53,654	
TOTAL	19,00,170		18,95,369


(RAKESH MOHAN)
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NEW DELHI

SERB PROJECT

Financial Approval of the SwarnaJayanti Fellowship to Dr. Gopaljee Jha

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	2,06,626	2,08,078	
Grant - In - Aid for			
i) Fellowship	-	-	
ii) Consumable/ Travel/	-	3,00,000	
Contingencies /Equipment	-	-	
iii) Overhead Charges	179	174	
Interest Earned			
TOTAL	2,06,805	5,08,252	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Fellowship	2,00,000	3,00,000	
ii) Consumable/ Travel/	-	-	
Contingencies /Equipment	-	1,626	
iii) Overhead Charges	-	-	
Refund of Interest Earned			
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	6,805	2,06,626	
TOTAL	2,06,805	5,08,252	


(RAKESH MOHAN)
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(SANDEEP DATTA)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT
Enhancing Sheath Blight disease tolerance in rice

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	27,58,491	23,71,029	
Grant - In - Aid for			
i) Manpower	-	7,09,648	
ii) Consumable	-	15,00,000	
iii) Travel	-	2,25,000	
iv) Contingencies	-	25,000	
v) Overheads	-	2,40,352	
Interest Earned	11,826	20,472	
TOTAL	27,70,317	50,91,501	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	8,03,520	6,69,600	
ii) Consumable	14,46,861	13,99,458	
iii) Travel	43,212	-	
iv) Contingencies	26,903	23,600	
v) Overheads	-	2,40,352	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	4,49,821	27,58,491	
TOTAL	27,70,317	50,91,501	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Structure and Biochemical characterization of plant SLX1, a novel structure-specific endonuclease involved in DNA repair and recombination

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
<u>OPENING BALANCE</u>				
With Bank in Saving A/c				
Recurring	11,76,165		12,17,810	
Equipment	4,743			
<u>Grant - In - Aid for</u>				
i) Equipment	-		1,50,000	
ii) Manpower	-		6,99,360	
iii) Consumable/ Travel/Contingencies	-		4,01,758	
(iv) SSR	-		-	
v) Overhead Charges	-		98,882	
<u>Interest Earned</u>	2,371		7,322	
TOTAL		11,83,279		25,75,132

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		1,45,257	
ii) Manpower	6,92,216		6,59,880	
iii) Consumable/ Travel/Contingencies	4,00,873		4,90,205	
(iv) SSR	-			
v) Overhead Charges	-		98,882	
<u>CLOSING BALANCE</u>				
With Bank in Saving A/c				
Recurring	85,447		11,76,165	
Equipment	4,743		4,743	
TOTAL		11,83,279		25,75,132


(RAKESH MOHAN)
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NEW DELHI

SERB PROJECT

Multi-omics study on the factors affecting the shelf-life of model nutriceal, foxtail millet (*Setaria italica* L.)

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	8,53,884		15,02,734	
Grant - In - Aid for				
i) Manpower	4,67,000		-	
ii) Consumable/ Travel/Contingencies	2,18,000		4,50,000	
iii) Overhead Charges	65,000		1,00,000	
Interest Earned	4,615		20,330	
TOTAL		16,08,499		20,73,064

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Manpower	6,99,360		3,78,820	
ii) Consumable/ Travel/Contingencies	6,68,586		7,40,360	
iii) Overhead Charges	65,000		1,00,000	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	1,75,553		8,53,884	
TOTAL		16,08,499		20,73,064


(RAKESH MOHAN)
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NEW DELHI

SERB (NPDF) PROJECT

Understanding mitogen-activated protein kinase mediated regulation of PIN1a auxin transporter for
manipulating tiller number in rice (*Oryza sativa*)

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

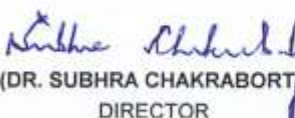
RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c	3,757	9,55,614	
Grant- In- Aid for			
i) Manpower	8,18,400	-	
ii) Consumable/Contingency			
/Travel	2,00,000	-	
iii) Overhead Charges	50,000	-	
Interest Earned	91	99	
TOTAL	10,72,248		9,55,713

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	8,18,400	7,52,400	
ii) Consumable/Contingency/			
Travel	2,00,401	1,99,556	
iii) Overhead Charges	50,000	-	
Refund to Agency			
Recurring	3,447		
CLOSING BALANCE			
With Bank in Saving A/c	-	3,757	
TOTAL	10,72,248		9,55,713

For GOYAL PARUL & Co.


(RAKESH MOHAN)
FINANCE OFFICER


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NEW DELHI

SERB (TARE) PROJECT

Financial Sanction under Teacher Associateship for Research Excellence (TARE) to Dr. Punjab Singh Malik

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	66,371	67,688	
<u>Grant- In- Aid for</u>			
i) Manpower	-	-	
ii) Consumable/Contingency/Travel	-	-	
iii) Overhead Charges	-	-	
<u>Interest Earned</u>	1,493	2,100	
TOTAL		67,864	69,788

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	-	-	
ii) Consumable/Contingency/Travel	-	3,417	
iii) Overhead Charges	-	-	
<u>Refund to Agency</u>			
Recurring	67,864		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	-	66,371	
TOTAL		67,864	69,788


(RAKESH MOHAN)
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SERB PROJECT

Understanding genetic and molecular intricacies of high ambient temprature-regulated leaf size

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	2,77,634	12,38,900	
Equipment	2,559	3,00,000	
Grant- In- Aid for			
i) Equipment	-	-	
ii) Manpower	4,34,000	-	
iii) Consumable/Contingencies/Travel	4,67,800	-	
iv) SSR	-	-	
v) Overheads	98,200	-	
Interest Earned	889	9,943	
TOTAL	12,81,082	15,48,843	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	-	2,97,441	
ii) Manpower	5,20,800	4,34,000	
iii) Consumable/Contingencies/Travel	6,28,276	4,39,209	
iv) SSR	-	-	
v) Overheads	98,200	98,000	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	31,247	2,77,634	
Equipment	2,559	2,559	
	12,81,082	15,48,843	



(RAKESH MOHAN)
FINANCE OFFICER

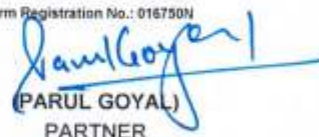


(SANDEEP DATTA)
COA



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DST PROJECT

INSPIRE Fellow Award- Dr. Hasthi Ram

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	5,84,275		9,47,849
<u>Grant- In- Aid for</u>			
i) Manpower	-		-
ii) Consumable/Contingency/			
Travel/Equipment	-		2,52,856
iii) Overhead Charges	-		35,000
Interest earned	246		10,814
TOTAL		5,84,521	12,46,519

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
i) Manpower	-		-
ii) Consumable/Contingency/			
Travel	5,72,149		6,20,889
iii) Overhead Charges	-		35,000
<u>Refund to Agency</u>			
Interest	-		6,355
Recurring	12,372		
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	-		5,84,275
TOTAL		5,84,521	12,46,519


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SERB PROJECT

Genetic dissection of 13-lipoxygenases to modulate JA biosynthesis for enhanced N, P, K deficiency tolerance in rice

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	12,00,080		
Equipment	8,00,000		
Grant- In- Aid for			
i) Equipment	-	8,00,000	
ii) Manpower	-	4,81,120	
iii) Consumable/Contingencies/Travel	-	7,00,000	
iv) SSR	-	10,000	
v) Overheads	-	1,16,080	
Interest Earned	23,720	8,960	
TOTAL		20,23,800	21,16,160

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	49,950	-	
ii) Manpower	4,21,600	-	
iii) Consumable/Contingencies/Travel	6,49,999	-	
iv) SSR	-	-	
v) Overheads	-	1,16,080	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	1,52,201	12,00,080	
Equipment	7,50,050	8,00,000	
		20,23,800	21,16,160

(RAKESH MOHAN)
FINANCE OFFICER

(SANDEEP DATTA)
COA

(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N

(PARUL GOYAL)
PARTNER

Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

SERB PROJECT

Construction and Functional Testing of Genome-wide CRISPR-Cas9 Library for Genome-editing of Seed Specific Genes in Indica Rice

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c			
Recurring	11,28,612	-	
Equipment	4,58,898	-	
<u>Grant- In- Aid for</u>			
i) Equipment	-	6,30,000	
ii) Manpower	-	4,61,280	
iii) Consumable/Contingencies/Travel	-	6,50,220	
iv) SSR	-	10,000	
v) Overheads	-	1,14,500	
<u>Interest Earned</u>	4,205	7,112	
TOTAL		15,91,715	18,73,112

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	4,58,172	1,71,102	
ii) Manpower	3,13,720	-	
iii) Consumable/Contingencies/Travel	6,49,869	-	
iv) SSR	10,000	-	
v) Overheads	-	1,14,500	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c			
Recurring	1,59,228	11,28,612	
Equipment	726	4,58,898	
		15,91,715	18,73,112


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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SERB PROJECT
J.C.Bose Fellowship- Dr.Ashverya Laxmi

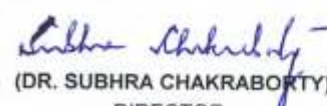
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	2,64,764	-	
Grant - In - Aid for			
i) Fellowship	1,40,000	3,00,000	
ii) Consumable/Travel/	3,70,000	15,00,000	
Contingencies /Equipment			
iii)Overheads	1,00,000	1,00,000	
Interest Earned	882	2,945	
TOTAL	8,75,646		19,02,945

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Fellowship	3,00,000	1,39,516	
ii) Consumable/Travel/	4,42,115	13,98,665	
Contingencies /Equipment			
iii)Overheads	1,00,000	1,00,000	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	33,531	2,64,764	
TOTAL	8,75,646		19,02,945


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

J.C.Bose Fellowship- Dr. Alok Krishna Sinha

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	40,817		
Grant - In - Aid for			
i) Fellowship	3,00,000	3,00,000	
ii) Consumable/Travel/Contingencies /Equipment	14,95,000	15,00,000	
iii)Overheads	1,00,000	1,00,000	
Interest Earned	513	1,073	
TOTAL	19,36,330	19,01,073	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Fellowship	3,00,000	2,98,333	
ii) Consumable/Travel/Contingencies /Equipment	13,48,430	14,61,923	
iii)Overheads	1,00,000	1,00,000	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	1,87,900	40,817	
TOTAL	19,36,330	19,01,073	


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Cytokinin regulation of shade avoidance response in plants

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c Recurring	18,553		
<u>Grant - In - Aid for</u>			
ii) Consumable/Travel/ Contingencies /Equipment	9,80,000	10,00,000	
ii)Overheads	80,000	80,000	
<u>Interest Earned</u>	106	328	
TOTAL	10,78,659	10,80,328	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
ii) Consumable/Travel/ Contingencies /Equipment	9,94,611	9,81,775	
ii)Overheads	80,000	80,000	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c Recurring	4,048	18,553	
TOTAL	10,78,659	10,80,328	


(RAKESH MOHAN)
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(SANDEEP DATTA)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

A novel miRNA-target module controlling rice grain size: Identification, confirmation and elucidation of its role in grain development and other seed-related traits, targeting crop improvement

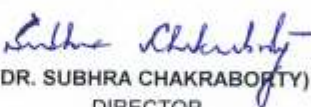
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	-			
Equipment	-			
Grant- In- Aid for				
i) Equipment	4,98,590		-	
ii) Manpower	6,99,360		-	
iii) Consumable/Contingencies/Travel	9,00,000		-	
iv) SSR	10,000		-	
v) Overheads	1,41,510		-	
Interest Earned	16,748		-	
TOTAL		22,66,208		-

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	2,52,056		-	
iii) Consumable/Contingencies/Travel	7,92,531		-	
iv) SSR	-		-	
v) Overheads	1,41,510		-	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	5,81,521		-	
Equipment	4,98,590		-	
		22,66,208		-


(RAKESH MOHAN)
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NEW DELHI

SERB PROJECT

Investigating the microRNA169: Nuclear Factor-YA module as a potential target for early maturation and yield enhancement under control and heat stress conditions in tomato

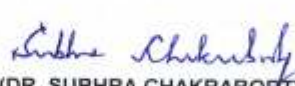
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
<u>OPENING BALANCE</u>				
With Bank in Saving A/c				
Recurring	-			
Equipment	-			
<u>Grant- In- Aid for</u>				
i) Equipment	4,00,000		-	
ii) Manpower	6,99,000		-	
iii) Consumable/Contingencies/Travel	7,45,000		-	
iv) SSR	10,000		-	
v) Overheads	1,26,000		-	
<u>Interest Earned</u>	8,579		-	
TOTAL		19,88,579		-

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	4,00,000		-	
ii) Manpower	1,65,440		-	
iii) Consumable/Contingencies/Travel	7,43,854		-	
iv) SSR	-		-	
v) Overheads	1,26,000		-	
<u>CLOSING BALANCE</u>				
With Bank in Saving A/c				
Recurring	5,53,285		-	
Equipment	-		-	
		19,88,579		-


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Metabolomics analysis of fungal endophyte induced systemic resistance in Solanum lycopersicum on herbivory by Spodoptera litura

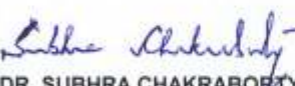
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	-		
Equipment	-		
Grant- In- Aid for			
i) Equipment	3,14,000	-	
ii) Manpower	6,99,000	-	
iii) Consumable/Contingencies/Travel	8,23,000	-	
iv) SSR	10,000	-	
v) Overheads	1,30,000	-	
Interest Earned	6,001	-	
TOTAL		19,82,001	-

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	3,05,080	-	
ii) Manpower	3,19,600	-	
iii) Consumable/Contingencies/Travel	7,76,828	-	
iv) SSR	-	-	
v) Overheads	1,30,000	-	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	4,41,573	-	
Equipment	8,920	-	
		19,82,001	-


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Evolutionary development (evo-devo) genetics study on stem cell fate and cell identity transition
between diverse Brassica oleracea morphotypes

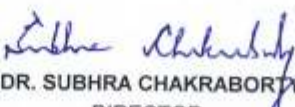
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	-		
Equipment	-		
Grant- In- Aid for			
i) Equipment	8,97,459	-	
ii) Manpower	4,61,280	-	
iii) Consumable/Contingencies/Travel	4,95,420	-	
iv) SSR	10,000	-	
v) Overheads	1,12,800	-	
Interest Earned	8,254	-	
TOTAL	19,85,213		-

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Equipment	65,448	-	
ii) Manpower	96,720	-	
iii) Consumable/Contingencies/Travel	4,79,116	-	
iv) SSR	-	-	
v) Overheads	1,12,800	-	
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	3,99,118	-	
Equipment	8,32,011	-	
	19,85,213		-


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

SERB PROJECT

Molecular and genetic analysis of phosphorus (P) deficiency related phospholipases for enhanced P deficiency tolerance in rice

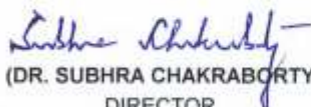
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	-			
Equipment	-			
Grant- In- Aid for				
i) Equipment	65,000		-	
ii) Manpower	4,81,120		-	
iii) Consumable/Contingencies/Travel	7,30,060		-	
iv) SSR	10,000		-	
v) Overheads	97,820		-	
Interest Earned	5,788		-	
TOTAL		13,89,788		-

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	-		-	
ii) Manpower	-		-	
iii) Consumable/Contingencies/Travel	-		-	
iv) SSR	-		-	
v) Overheads	97,820		-	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	12,26,968		-	
Equipment	65,000		-	
		13,89,788		-


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DST PROJECT
INSPIRE Faculty Award to Dr Abinaya Manivannan

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c	-		-	
Grant- In- Aid for				
i) Manpower	15,00,000		-	
ii) Consumable/Contingency/ Travel/Equipment	6,65,000		-	
iii) Overhead Charges	35,000		-	
Interest earned	-		-	
TOTAL		22,00,000		-

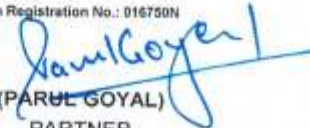
PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Manpower	9,11,290		-	
ii) Consumable/Contingency/ Travel	5,08,410		-	
iii) Overhead Charges	35,000		-	
CLOSING BALANCE				
With Bank in Saving A/c	7,45,300		-	
TOTAL		22,00,000		-


(RAKESH MOHAN)
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SERB PROJECT

Exploring the role of sugar metabolism and signaling for molecular intervention strategies against sheath blight disease of rice

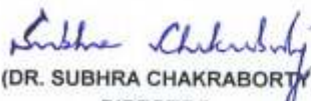
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	-		-	
Grant - In - Aid for				
i) Manpower	8,38,200		-	
ii) Consumable	2,00,000		-	
iii) Travel	25,000		-	
iv) Contingencies	25,000		-	
v) Overheads	87,056		-	
Interest Earned	-		-	
TOTAL		11,75,256		-

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Manpower	1,54,001		-	
ii) Consumable	-		-	
iii) Travel	-		-	
iv) Contingencies	-		-	
v) Overheads	87,056		-	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	9,34,199		-	
TOTAL		11,75,256		-


(RAKESH MOHAN)
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NEW DELHI

SERB-(NPDF) PROJECT

Functional characterization of myrosinases encoding genes for enhanced plant defence in Brassica crop

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	-	-	
<u>Grant- In- Aid for</u>			
i) Manpower	8,18,400	-	
ii) Consumable/Contingency/Travel	2,00,000	-	
iii) Overhead Charges	1,00,000	-	
<u>Interest Earned</u>	5,609	-	
TOTAL	11,24,009		-

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	1,71,600	-	
ii) Consumable/Contingency/Travel	15,878	-	
iii) Overhead Charges	1,00,000	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	8,36,531	-	
TOTAL	11,24,009		-

(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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SERB(NPDF) PROJECT

Unravelling the key genomic regions/QTLs associated with salt tolerance traits in Lentil (Lens culinary Medikus) using Genotyping-by-Sequencing approaches

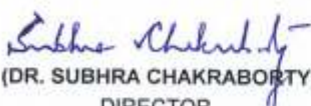
RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
<u>OPENING BALANCE</u>				
With Bank in Saving A/c	-		-	
<u>Grant- In- Aid for</u>				
i) Manpower	8,18,400		-	
ii) Consumable/Contingency/Travel	2,00,000		-	
iii) Overhead Charges	1,00,000		-	
<u>Interest Earned</u>	5,716		-	
TOTAL		11,24,116		-

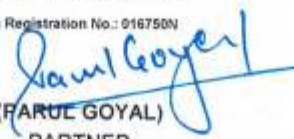
PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Manpower	1,71,600		-	
ii) Consumable/Contingency/Travel	-		-	
iii) Overhead Charges	1,00,000		-	
<u>CLOSING BALANCE</u>				
With Bank in Saving A/c	8,52,516		-	
TOTAL		11,24,116		-


(RAKESH MOHAN)
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DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(PARUL GOYAL)
PARTNER
Membership No.099172



NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
(Formerly National Centre for Plant Genome Research)
NEW DELHI

ICAR Project

**ICAR-NASF Development of sustainable management tools for the invasive pest, Fall Armyworm
Spodoptera frugiperda (J.E. Smith) in maize**

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

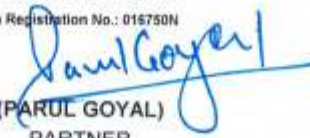
RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
OPENING BALANCE			
With Bank in Saving A/c	5,86,394	63,549	
Grant - In - Aid for			
i) Manpower	-	4,63,760	
ii) Consumables	-	5,80,719	
iii) Travel/Workshop	-	5,000	
iv) Contingencies	-	-	
v) Overheads	-	52,940	
Interest Earned	1,375	1,716	
TOTAL	5,87,769	11,67,684	

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	2,17,000	2,30,640	
ii) Consumables	3,00,000	2,97,710	
iii) Travel	18,758	-	
iv) Contingencies	-	-	
v) Overheads	-	52,940	
CLOSING BALANCE			
With Bank in Saving A/c	52,011	5,86,394	
TOTAL	5,87,769	11,67,684	


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


(DR. SUBHRA CHAKRABORTY)
DIRECTOR

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N

(PARUL GOYAL)
PARTNER

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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

EMBO Global Investigator Network Grant

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
OPENING BALANCE			
With Bank in Saving A/c			
Recurring	6,39,160		5,96,947
Grant - In - Aid for			
Research Grant	-		5,34,689
Interest Earned	437		2,777
TOTAL		6,39,597	11,34,413

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
Research Expenditure	6,22,986		4,95,253
CLOSING BALANCE			
With Bank in Saving A/c			
Recurring	16,611		6,39,160
TOTAL		6,39,597	11,34,413


(RAKESH MOHAN)
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Sree PVF "Novel and cost effective technology to prevent post-harvest losses of fruits"

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c				
Recurring	20,31,928		-	
Equipment	1,00,000			
Grant - In - Aid for				
i) Equipment	-		1,00,000	
ii) Consumables	5,08,576		12,70,000	
iii) Manpower	1,27,144		2,30,000	
iv) Travel	1,65,840		2,50,000	
v) Contingency	1,93,480		3,50,000	
vi) Field Trail/Front Line Demonstrations	1,93,480		1,00,000	
vii) Awareness Program	1,38,200		1,00,000	
viii) Overhead	55,280		1,00,000	
Interest Earned	14,755		33,057	
TOTAL		35,28,683		25,33,057

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
i) Equipment	99,263		-	
ii) Consumables	13,67,747		2,62,418	
iii) Manpower	-		-	
iv) Travel	2,45,544		34,764	
v) Contingency	3,17,236		3,947	
vi) Field Trail/Front Line Demonstrations	44,786		-	
vii) Awareness Program	-		-	
viii) Overhead	55,280		1,00,000	
CLOSING BALANCE				
With Bank in Saving A/c				
Recurring	13,98,090		20,31,928	
Equipment	737		1,00,000	
TOTAL		35,28,683		25,33,057


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DRDO PROJECT

Fruit composition profile of brinjal, capsicum and tomato varieties grown under different crop growth conditions

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	-	-	
<u>Grant- In- Aid for</u>			
i) Manpower	5,82,800	-	
ii) Contingency	10,000	-	
iii) Others	3,97,200	-	
<u>Interest Earned</u>	3,369	-	
TOTAL	9,93,369		-

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
i) Manpower	2,71,973	-	
ii) Contingency	6,411	-	
iii) Others	2,12,514	-	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	5,02,471	-	
TOTAL	9,93,369		-


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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NEW DELHI

DST INSPIRE Fellowship

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
OPENING BALANCE				
With Bank in Saving A/c	14,17,393		10,10,717	
Amt. received from DST for Research Fellowships & Associateships	22,69,965		15,36,505	
Interest Earned	4,132		5,598	
TOTAL		36,91,490		25,52,820

PAYMENTS		AMOUNT-IN-RUPEES		
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
Amount paid for Research Fellowships & Associateships	28,61,306		11,35,427	
CLOSING BALANCE				
With Bank in Saving A/c	8,30,184		14,17,393	
TOTAL		36,91,490		25,52,820



(RAKESH MOHAN)
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FELLOWSHIP GRANT CSIR

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	5,61,357	9,24,396	
Amt. received from CSIR for Research Fellowships & Associateships	6,09,779	1,53,637	
TOTAL	11,71,136	10,78,033	

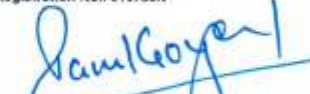
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
Amount paid for Research Fellowships & Associateships	4,73,101	4,72,782	
<u>Refund to Agency</u>	32,575	43,894	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	6,65,460	5,61,357	
TOTAL	11,71,136	10,78,033	

For GOYAL PARUL & Co.
CHARTERED ACCOUNTANT
Firm Registration No.: 016750N


(RAKESH MOHAN)
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(DR. SUBHRA CHAKRABORTY)
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(PARUL GOYAL)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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FELLOWSHIP GRANT DBT

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

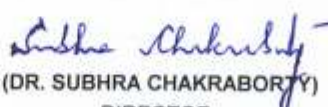
RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	13,26,831	15,50,947	
Amt. received from DBT for Research Fellowships & Associateships	1,11,19,386	64,37,237	
TOTAL	1,24,46,217		79,88,184

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR	PREVIOUS YEAR	
Amount paid for Research Fellowships & Associateships	1,07,09,513	65,64,529	
Refund to Funding Agency	29,167	96,824	
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	17,07,537	13,26,831	
TOTAL	1,24,46,217		79,88,184

For GOYAL PARUL & Co.
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Firm Registration No.: 016750N


(RAKESH MOHAN)
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FELLOWSHIP GRANT ICMR

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
OPENING BALANCE			
With Bank in Saving A/c	32		32
Amt. received from ICMR for Research Fellowships & Associateships	-		-
TOTAL		32	32

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
Amount paid for Research Fellowships & Associateships	-		-
Refund to Agency	-		-
CLOSING BALANCE			
With Bank in Saving A/c	32		32
TOTAL		32	32


(RAKESH MOHAN)
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FELLOWSHIP GRANT AIRTF

RECEIPT AND PAYMENT ACCOUNT FOR THE PERIOD FROM 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
<u>OPENING BALANCE</u>			
With Bank in Saving A/c	5,000		15,000
Amt. received from ICMR for Research Fellowships & Associateships	-		5,000
TOTAL		5,000	20,000

PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
Amount paid for Research Fellowships & Associateships	-		-
<u>Refund to Agency</u>	-		15,000
<u>CLOSING BALANCE</u>			
With Bank in Saving A/c	5,000		5,000
TOTAL		5,000	20,000


(RAKESH MOHAN)
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NATIONAL INSTITUTE OF PLANT GENOME RESEARCH
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RECEIPT AND PAYMENT ACCOUNT OF NIPGR EMPLOYEES CONTRIBUTORY PROVIDENT FUND ACCOUNT

FOR THE PERIOD 1st APRIL 2022 TO 31st MARCH 2023

RECEIPTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
OPENING BALANCE			
In Savings Account	58,849		6,00,356
In Fixed Deposit	9,76,72,253		8,56,25,840
SUBSCRIPTIONS			
(i) Amount of Regular Subscription	70,62,000		65,91,800
(ii) Refund of advances received from Subscribers	-		-
Amount received from NIPGR Core grant to meet Institute's liability towards Contribution & Deficit of Interest	6,41,182		39,69,404
INTEREST EARNED			
Savings Account/ Investments	95,19,951		35,91,877
Other Receipts	-		-
TOTAL		11,49,54,235	10,03,79,277

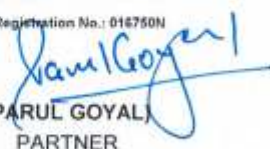
PAYMENTS		AMOUNT-IN-RUPEES	
PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
Advances paid to Subscribers	6,00,000		-
Part final withdrawal	-		26,47,910
Other Charges	-		265
Full & Final payment of Subscribers	17,38,399		-
CLOSING BALANCE			
In Savings Account	1,18,63,340		58,849
In Fixed Deposit	10,07,52,496		9,76,72,253
TOTAL		11,49,54,235	10,03,79,277


(RAKESH MOHAN)
FINANCE OFFICER


(SANDEEP DATTA)
COA


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PARTNER

Membership No. 099172



COMMENTS ON AUDITOR'S REPORT ON ACCOUNTS FOR THE YEAR ENDED MARCH 31,2023

Para

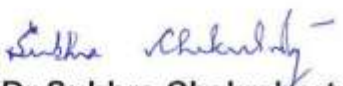
1. A demand of ₹70,780/- is reflecting at traces portal of income-tax which seems to be settled by the Income tax department as no further notice etc. has been raised by the department for the last seven years.
2. The "NIPGR" has booked excess amount under the head Receivable from Income-tax ₹8,598/- (as NIPGR has TDS receivable of ₹.9,55,908/- & ₹.8,48,923/- for A.Y.2022-23 & A.Y. 2023-24 respectively (₹8,48,923/- includes TDS of ₹716/-). But as per 26 AS, i.e. at Traces Portal of Income Tax department, total amount receivable from income tax is ₹18,04,831/-.
3. In the financial statement of NIPGR, ₹32,08,213/- is as Sponsored Fellowship payable as at 31st March,2023. For want of sufficient appropriate audit evidence it is subject to confirmation.

Reply

1. The amount mentioned in the para is the old pending demands mostly prior to the F. Yr. 2014-15 pertaining to short deduction & interest on delay payments of TDS levied by Income tax department. The issue was taken up during previous years and relevant documents containing details of amount deposited by the Institute/concerned employees were submitted physically to Income Tax department evidencing that foregoing demand levied by IT department is not factual. No further demand notice has been received from Income Tax Department and the matter has been considered settled.
2. The Institute has not booked Income Tax Receivable in the previous years (prior to financial year 2016-17). However, as and when refunds were received from income tax department, the same were credited under the head Income Tax Receivable in the respective years. However, as suggested by Audit the Institute will reconcile the figure of ₹8,598/-and will be shown to Audit during their next visit.
3. The Sponsored fellowship amount as on 31.03.2023 is payable to researchers/ fellows of the Institute which includes fellowship of old researchers also which is payable upon receipt of claim of the concerned fellow or funding agency. The Institute is maintaining complete subsidiary records in this regard which have also shown to Audit. It is reiterated that amount mentioned in this regard in the financial statement is confirmed.


(Rakesh Mohan)
Finance Officer


(Sandeep Datta)
Controller of Administration


(Dr.Subhra Chakraborty)
Director



National Institute of Plant Genome Research

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