

List of Selected LOIs under Plant & Agriculture Biotechnology Area-5th Call of BioCARE

Sl. No	Project Title	Applicant
1	Characterization of Arabidopsis thaliana glutamate receptor-like ion channels through transcriptomics and FRET approaches Loi No: [106]	Dr. Ruphi Naz
2	Modulation of stomatal aperture regulating genes to improve carbon gain and crop yield Loi No: [203]	Dr. Babitha KChandrashekar
3	Modulation of Embelin biosynthesis pathway by next generation metabolic engineering in Embelia Ribes Burm.: a step forward in Diabetes Therapeutics Loi No: [307]	Dr. SUMYA PATHAK
4	Development of Genetically Improved Phytate Mineralizing Microorganism and Analyzing its Nutritional and Environmental Significance. Loi No: [313]	Dr. Savita PDSouza
5	Exploring Chromosome Segment Substitution Lines from inter-specific crosses to decipher the genetics of grain weight and earliness Loi No: [402]	Dr. Divya Balakrishnan
6	Development of Association mapping panel and identification of molecular markers associated with grain yield, zinc and iron content in Little millet (Panicum miliare L) Loi No: [556]	Dr. Nandini
7	In vitro adventitious root production from Himalayan Mayapple (Podophyllum hexandrum) as an alternative source of nutraceutical ingredient Loi No: [639]	Dr. Shipra Jaiswal

8	Analysis of Phytochrome Interacting Factor (PIF4) and Histone Variant (H2A.Z)-Mediated Themosensory Regulatory Network in Arabidopsis thaliana Loi No: [642]	Dr. Neetu Verma
9	Role of MATE transporters in modulating rhizosphere microbiome and promoting low phosphate and acid soil tolerance in plants Loi No: [678]	Dr. Lavanya Bhagavatula
10	Identification of gene for high content in Pigeonpea through genome wide association mapping. Loi No: [689]	Dr. SUTAPA DUTTA
11	Harnessing under-utilized variation in pigeonpea germplasm pool for identification of novel QTLs/genes to combat the problem of waterlogging Loi No: [821]	Dr. Anuradha Singh
12	Fine mapping of genes for triple rust resistance in T. militinae derived introgression line TMD6-4. Loi No: [895]	Dr. Niharika Mallick
13	Investigation of Bradyrhizobium- Arachis infection and mechanism of crack invasion Loi No: [968]	Dr. Karishma Seem
14	Understanding Phosphorylation-Dephosphorylation network underlying CIPK9-AP2C1 interactions in potassium nutrition signaling in Arabidopsis thaliana. Loi No: [1200]	Dr. Malathi Bheri
15	Deep Sequencing Based Virome Analysis of Passion Fruit Viral Complex and Deciphering the Pathogenicity Mechanisms Loi No: [1220]	Dr. SUMITRA PHURAILATPAM
16	Host induced gene silencing (HIGS) of key pathogenicity factors in Verticillium dahliae to enhance resistance in eggplant against wilt disease Loi No: [1244]	Dr. Deepali Singh

17	Investigation of the Modulation of Cell Cycle Regulators in Plant Meiosis. Loi No: [1313]	Dr. Aparna Singh
18	Revealing the genetic secrets of Aegilops tauschii genome to shape future cereal crops Loi No: [20]	Dr. NITIKA SANDHU
19	Elucidating factors affecting shelf life of Nutri-cereal Pearl millet through genetic and integrated transcriptomics and metabolomics approach Loi No: [304]	Dr. Nirupma Singh
20	Improving domestication related traits (DRTs) for enhancing productivity in two nutricereals: Foxtail and Kodo millet Loi No: [978]	Dr. Deepika Cheruku
21	Physiological, biochemical evaluation and identification of superior blackgram genotypes for drought tolerance Loi No: [1123]	Dr. ARJUNAN SUMATHI
22	Association mapping for plant genomics components mediating microbial communities in Brassica juncea rhizosphere Loi No: [151]	Dr. Anna Goyal
23	Development of Genetic Male Sterility (GMS) in Indian mustard (Brassica juncea) through genome editing Loi No: [447]	Dr. Sushma Rani
24	Molecular-genetic characterization of plant responses in a set of Brassica juncea-B. fruticulosa introgression lines towards different Sclerotinia sclerotiorum (L.) isolates. Loi No: [1307]	Dr. Meenakshi Mittal

25	Creation of Apomeiotic resources through TILLING by sequencing in maize (<i>Zea mays</i> L.) Loi No: [547]	Dr. Abirami Subramanian
26	Deciphering Structural and Inducible Defense Mechanisms in Maize against <i>Sesamia inferens</i> Walker Loi No: [663]	Dr. LakshmiSoujanya Pamidi
27	Association mapping for low glycaemic index using landraces and wild relatives of rice (<i>O.sativa</i> L.) Loi No: [17]	Dr. Renu Singh
28	Investigations on roles of a HAP2 transcription factor in relation to seed traits in rice Loi No: [113]	Dr. Priyanka Deveshwar
29	Development of double haploid lines by in vitro androgenesis of commercial rice hybrids and their validation using molecular markers Loi No: [147]	Dr. Mamta Sharma
30	Elucidating germination specific Post Translational Modifications in rice. Loi No: [193]	Dr. Bornali Gohain
31	Functional characterization and regulatory network identification of a cultivar specific and drought responsive BHLH transcription factor in rice for drought tolerance. Loi No: [211]	Dr. Gitanjali Jiwani

32	Cross-resistance in rice against pathogen and pest : commonality in defense against fungal blast and insect gall midge Loi No: [475]	Dr. Divya Dhanasekar
33	Comparative proteomic analysis of two contrasting rice cultivars (<i>Oryza sativa</i> L.) under ozone, carbon dioxide and temperature stress Loi No: [507]	Dr. POONAM PANDEY
34	Integration of Transcriptome and Metabolome to Decipher the Molecular Basis of Source-Sink Communication in Rice Loi No: [635]	Dr. Anuradha SinghYadav
35	Generation of high yielding NILs for grain yield through CRISPR/Cas9 mediated mutagenesis in rice Loi No: [1154]	Dr. PREETI SINGH
36	Deciphering Epigenetic Regulation of Cereal Cyst Nematode (CCN) Resistance in Wheat Loi No: [471]	Dr. Shiveta Sharma
37	Chromosomal localization and fine mapping of <i>Aegilops speltoides</i> Tausch derived novel leaf rust resistance in bread wheat stock Selection 2427 Loi No: [1044]	Dr. Niranjana Murukan
38	Studies on genome-wide epigenetic variations and their transgenerational inheritance in pearl millet under drought stress. Loi No: [1208]	Dr. Basava RamanaKumari

39	Exploring diploid wild species for cotton improvement: mapping QTLs for fibre quality and development of interspecific allotetraploid bridge species Loi No: [905]	Dr. VINITA PRASHANTGOTMARE
40	Elucidating the role of domesticated soil microbiome in mediating drought stress tolerance in tomato via rhizosphere engineering. Loi No: [326]	Dr. Annapurna Bhattacharjee
41	Understanding ribosome footprinting-engaged RNA splicing code of tomato leaf under variable heat stress and recovery in contrasting cultivars for enhanced thermotolerance Loi No: [912]	Dr. sonia balyan
42	Integrated management of root knot nematode, Meloidogyne species through resistant variety and plants mediated silver-nanoparticles in tomato Loi No: [1418]	Dr. Lalita Chhaleriya
43	Identification, isolation and gene profiling of the microorganism responsible for degradation of pesticides and homogeneity and long term stability studies on pesticide mixtures and heavy metals to prepare reference materials and matrix based quality control samples Loi No: [199]	Dr. Suchi Chawla

44	Characterization of functional exochitinases from Cr-resistant entomopathogenic fungi, <i>Purpureocillium lilacinus</i> and application as biopesticide Loi No: [939]	Dr. Alka Pandey
45	Detection of Pesticide residues (OPs) in Fruits and water samples based on metal nanoparticles: An, Dipstick immuno assay, Colorimetric and Electrochemical approach Loi No: [1197]	Dr. Chelladurai MalarkodiMalarkodi
46	Quantitative Proteomics and Phosphoproteomics to understand drought stress perception and response in lentil (<i>Lens culinaris</i>) Loi No: [73]	Dr. Ragini Sinha
47	Association mapping for identification of genomic regions /QTLs for drought tolerance in lentil (<i>Lens culinaris</i>) Loi No: [309]	Dr. Ruchi Bansal
48	Cytomorphological, Molecular characterization and identification of fertility restorer genes for diversified CMS sources in Sunflower (<i>Helianthus annus L.</i>) Loi No: [108]	Dr. Brunda Sondalagere Mohan
49	Metabolic engineering of groundnut oil: To improve omega-6 to omega-3 fatty acid ratio for enhancing human nutrition Loi No: [97]	Dr. MRINALINI MANNA

50	Development of sweet potato mutant lines by gamma irradiation and transcriptome analysis of genes for desirable traits Loi No: [178]	Dr. Sangeetha Balakrishnan Geetha
51	Molecular characterization of sulphur oxidizing and sulfate reducing bacteria in diverse ecosystem and exploitation of potent strains as bio-fertilizer Loi No: [235]	Dr. Kasthuri Rajamani
52	Investigation on the effects of targeted cytokinin oxidase (CKX) suppression on grain yield and stress tolerance in chickpea Loi No: [166]	Dr. Sunita Jindal
53	“Study of brassinosteroid receptor kinases in chickpea (<i>Cicer arietinum</i> L)” Loi No: [231]	Dr. Nidhi Singh
54	Mapping of genes for efficient Chickpea-rhizobia symb Loi No: [618]	Dr. Shayla Bindra
55	Allele mining for salt tolerance genes in landraces of chickpea (<i>Cicer arietinum</i> L) Loi No: [1149]	Dr. Nimmy Manduparambilsbramanian
56	Elucidating the role of small RNA based effectors involved in root colonization of a growth promoting endophytic fungus <i>Piriformospora indica</i> in chickpea (<i>Cicer arietinum</i>) Loi No: [1403]	Dr. Nandita Pasari