## List of projects underway during F.Y. 2022-23

5.N.	Project Number	Project title	Funding Agency	Project Duration
1	GAP 2239	Establishment of a DUS Test Centre at CSIR-NBRI, Lucknow for Bougainvillea, Canna and Gladiolus crops.	PPV&FRA, Min. Agriculture, New Delh.	01-Feb-2012 to 31-Mar-2023
2	GAP 2542	EIACP Programme centre RP at National Botanical Research Institute (NBRI), Lucknow on Indicators of Plants & Pollution	MoEF&CC, New Delhi	01-Apr-2022 to 31-Mar-2026
3	GAP 3444	Bioaccumulation and bio-magnification study on flora and fauna of surrounding the ash filled South Balanda Mine Void	NTPC Ltd., Talcher Thermal Power Station, Angul , Odisha	20-Jan-2018 to 30-Sep-2022
4	GAP 3447	Molecular physiology of carbon and nitrogen metabolism under water stress in guar leaf ( <i>Cyamopsis</i> tetragonaloba)	DST, New Delhi	13-Jul-2018 to 12-Jul-2022
5	GAP 3452	Evolutionary significance of a miRNA and its role in shaping leaf morphology and bio-mass enhancement of Arabidopsis thaliana of West Himalaya	DBT, New Delhi	04-Sep-2018 to 03-Sep-2022
6	GAP 3458	CRISPR-mediated genome editing of plant for functional validation and biogenesis; Sub-project 1: CRISPR-mediated genome editing for functional characterization of plant miRNAs; Sub project 2: Editing of lower stem sequence of a pre-miRNA may suppress its biogenesis from primiRNA: A case study of pri-miRNA processing for crop improvement	DBT, New Delhi	28-Nov-2018 to 27-Nov-2022
7	GAP 3459	Unravelling the missing links of light signalling for the divergent plant responses to vegetation proximity	DBT, New Delhi	01-Jan-2019 to 31-Dec-2023
8	GAP 3464	Characterizing Patterns and Processes of Alpine Ecosystem in Indian Himalaya with Special Emphasis to Cryptogams	Space Application Centre, ISRO, Ahmedabad	22-Feb-2019 to 21-Feb-2023
9	GAP 3465	Taxonomy and Phylogeny of the genus Juniperus L. (Cupressaceae) in India	SERB, New Delhi	01-Jun-2019 to 28-Feb-2023
10	) GAP 3466	Biogeography, phylogenetic studies and development of e-monograph for the Arthoniales (lichenized fungi) in India	DST, New Delhi	01-May-2019 to 22-Jun-2022

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11	GAP 3468	Farm based S&T interventions for socio-economic development in the aspirational district of Nabarangpur, Odisha	Agriculture and Farmers' Empowerment Department, Govt. of Odisha through CSIR- IMMT, Bhubaneshwar	12-Sep-2019 to 31-Mar-2023
12	GAP 3470	Development of Rice-Grain Arsenic Removal Technique/Method for Rural Population of Arsenic Affected Areas	DST, New Delhi	27-Nov-2019 to 26-Nov-2022
13	GAP 3471	Monographic and phylogenetic studies in the genus Saxifraga L. (Saxifragaceae) from India	SERB, New Delhi	01-Nov-2019 to 31-Oct-2022
14	GAP 3472	Reducing Pathogenic damages in betelvine (Piper betle) using ACC deaminase containing microbes	DST, New Delhi	21-Nov-2019 to 20-May-2023
15	GAP 3473	Deciphering the role of nitric oxide in root development and zinc availability in rice plants	SERB, New Delhi	01-Nov-2019 to 28-Feb-2023
16	GAP 3474	Understanding transcriptional regulation of withanolide biosynthesis in Withania somnifera	SERB, New Delhi	08-Jan-2020 to 07-Jul-2022
17	GAP 3475	Study of spatio-temporal distribution in the F - and As levels in environmental matrices of F - contaminated districts of UP (Unnao, Kanpur and Raebarelly) and its relationship with the soil chemistry	SERB, New Delhi	05-Feb-2020 to 04-Aug-2023
18	GAP 3476	Ex-situ conservation studies of the Cycas species in India at CSIR-NBRI Botanic Garden	MoEF&CC, New Delhi	18-Jan-2020 to 17-Jan-2025
19	GAP 3477	Taxonomy and Phylogeny of the genus Uraria Desv., (Leguminosae) in India	SERB, New Delhi	10-Feb-2020 to 09-Feb-2023
20	GAP 3478	Leveraging genetic resources for accelerated genetic improvement of Linseed using comprehensive genomics and phenotyping approaches: Sub Project 2, Component-1:  "Development of reference genome and core set using molecular markers"	DBT, New Delhi	29-Feb-2020 to 28-Feb-2025
21	GAP 3479	Assessment of conservation status and phylogeny of Endemic hornworts (Anthocerotophyta) in India	SERB, New Delhi	18-Feb-2020 to 17-Feb-2023
22	GAP 3480	Construction of SNP based high-density consensus linkage map and QTL identification in linseed	SERB, New Delhi	11-Jun-2020 to 10-Jun-2023

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23	GAP 3481	Development of nutraceutical supplement for diarrheal conditions	DST, New Delhi	08-Jun-2020 to 07-Jun-2023
24	GAP 3482	Conservation, Improvement Management and Promotion of Sandalwood (Santalum album Linn.) cultivation in India	Indian Council of Forestry Research & Education, Dehradun through MoEF&CC, New Delhi	13-Dec-2019 to 12-Dec-2024
25	GAP 3483	Conservation and productivity improvement of Red Sanders (Prerocarpus santalinus L.f.)	Indian Council of Forestry Research & Education, Dehradun through MoEF&CC, New Delhi	13-Dec-2019 to 12-Dec-2024
26	GAP 3486	National coordination of scheme of Young Scientists and Technologies (SYST)	DST, New Delhi	12-Nov-2020 to 11-Nov-2023
27	GAP 3487	Agriwaste management by developing hygroscopic rice straw pellets for alleviating drought stress and improving soil fertility through microbial intervention	DST, New Delhi	01-May-2020 to 30-Apr-2023
28	GAP 3488	Threat assessment of traded forest flora of Madhya Pradesh	Madhya Pradesh State Biodiversity Board	09-Dec-2020 to 08-Dec-2023
29	GAP 3489	Cumulative impact assessment for cascading interventions in Himalayan rivers (Ci2HR)	GB Pant National Institute of Himalayan Environment (NIHE), Almora, Uttarakhand	22-Dec-2020 to 13-Jul-2023
30	GAP 3491	Deciphering limb regeneration potential in ladybird beetles	SERB, New Delhi	30-Dec-2020 to 29-Dec-2023
31	GAP 3493	Rapid composting of rice straw in field for crop residue management in rice wheat cropping system through microbial intervention"	DBT, New Delhi	18-Jan-2021 to 17-Jan-2024
32	GAP 3494	Deciphering the role of <i>Paenibacillus lentimorbis</i> NRRL B-30488 in controlling the early blight in Tomato caused by <i>Alternaria solani</i> by using metabolomics approach.	SERB, New Delhi	01-Jan-2021 to 31-Dec-2023
33	GAP 3495	Application of selenium for reducing arsenic level in rice ( <i>Oryza sativa</i> L.) during arsenic stress	The National Academy of Sciences (NASI), Prayagraj	04-Jan-2021 to 03-Jan-2024
34	GAP 3496	Development of Cost effective and iron fortified herbal supplement for dysmenorrheal (menstrual disorder)	DST, New Delhi	08-Apr-2021 to 07-Apr-2024
35	GAP 3497	Evaluation of nutritional and anti- nutritional properties and neurotoxicity of <i>Cycas sphaerica</i>	DST, New Delhi	01-Apr-2021 to 31-Jul-2023

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		(Cycadaceae) - a food plant used by the tribals of Eastern Ghats of India		
36	GAP 3498	Seasonal impact on the phytoconstituents of <i>Moringa oleifera</i> Lam. and their shelf life study	UPCST, Lucknow	18-Aug-2021 to 17-Aug-2024
37	GAP 3499	Elevated CO2 induced small RNA directed DNA methylation regulation and miRNA expression in low and high altitude populations of Arabidopsis thaliana for adaptive advantages	SERB, New Delhi	18-Oct-2021 to 17-Oct-2024
38	GAP 3500	Development of rapid and cost effective 'on-farm' diagnostics for plant viruses	DST, New Delhi	01-Sep-2021 to 07-Oct-2023
39	GAP 3501	Did most Cycas species originate from India? Genetic evidence through phylogenetic and phylogeographic studies	SERB, New Delhi	22-Dec-2021 to 21-Dec-2023
40	GAP 3502	Systematic study in the family Poaceae from Western Himalaya	SERB, New Delhi	29-Dec-2021 to 28-Dec-2024
41	GAP 3503	Unravelling the induced defense response in the neighbouring crops as a consequences of over-expressed methanol	SERB, New Delhi	27-Dec-2021 to 26-Dec-2024
42	GAP 3504	Development of novel microbial formulation to bioremediate Cr(VI) toxicity in hexavalent chromium contaminated sites	SERB, New Delhi	07-Feb-2022 to 06-Feb-2024
43	GAP 3505	Taxonomy and ecology of lichenicolous fungi in Eastern Himalaya	SERB, New Delhi	21-Feb-2022 to 20-Feb-2025
44	GAP 3506	Systematic studies of the tribe Boehmerieae Gaud. (Utricaceae) in India	SERB, New Delhi	21-Feb-2022 to 20-Feb-2025
45	GAP 3507	Assessment of Pteridophytic diversity in Kotgarh Wildlife Sanctuary, Odisha	SERB, New Delhi	05-Mar-2022 to 04-Mar-2025
46	GAP 3508	Taxonomic and Phylogenetic Studies on Impateins sect. Annuae (Balsaminaceae)	SERB, New Delhi	18-Feb-2022 to 17-Feb-2025
47	GAP 3509	Dehydrated flowers and foliages for women empowerment	DSIR, New Delhi	17-Mar-2022 to 16-Mar-2025
48	GAP 3510	Exploration of native legumes and characterization of associated nitrogen fixing microsymbionts in North-Eastern India for development of biofertilizers	DBT, New Delhi	09-Mar-2022 to 08-Mar-2025

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49	GAP 3511	An integrative revision of the genus Swertia L (Gentianaceae) in India and threat assessment of its species	SERB, New Delhi	02-Mar-2022 to 01-Mar-2024
50	GAP 3512	Development of high laccase producing mutants of <i>Trichoderma asperellum</i> strain NBRI-K14 using gamma ray mutagenesis	BRNS, DAE, Mumbai	19-May-2022 to 18-May-2025
51	GAP 3513	Rapid and on-site diagnostic for viruses and viroid infecting apple	SERB, New Delhi	29-Apr-2022 to 23-Jul-2023
52	GAP 3514	Establishment of Amrut Biodiversity Park at New Delhi	DDA, New Delhi	18-Aug-2022 to 17-Aug-2029
53	GAP 3515	Characterization of cotton fiber- specific microRNA-encoded peptides (miPEPs)	DBT, New Delhi	26-Sep-2022 to 25-Sep-2025
54	GAP 3516	Exploring roles of tissue specific circadian clock in regulating plant organogenesis and adaptive growth	DBT, New Delhi	01-Sep-2022 to 31-Aug-2027
55	GAP 3518	Mapping nitrogen pollution in Gangetic Plains utilizing lichens as bioindicators	UPCST, Lucknow	20-Dec-2022 to 19-Dec-2025
56	GAP 3519	Biotechnological Interventions for Management of Protected Areas	DBT, New Delhi	17-Feb-2023 to 16-Feb-2026
57	GAP 3520	Identification of adulterants/substitutes for Ayurveda plant raw material in trade using pharmacognostic and phytochemical parameters	CCRAS, New Delhi	18-Mar-2023 to 17-Mar-2026
58	HCP 0007	CSIR Aroma Mission-IInd Phase: Catalyzing rural empowerment through cultivation processing, value addition and marketing of aromatic plants	CSIR	30-Dec-2020 to 31-Mar-2023
59	HCP 0023	Next Generation Insect Resistance in Cotton: Development of next- generation transgenic cotton for broad spectrum resistance to field pests for yield protection (2nd Phase)	CSIR	10-Dec-2020 to 31-Mar-2025
60	HCP 0037	CSIR Floriculture Mission	CSIR	18-Jan-2021 to 31-Mar-2023
61	HCP 0047	Phenome India- CSIR Health Cohort Knowledgebase	CSIR-IMD, New Delhi	03-Aug-2022 to 31-Mar-2027
62	HCP 0101	Pilot Implementation of "CSIR-Virtual Laboratory (for school student)	CSIR	02-Dec-2020 to 31-Mar-2023

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63	MLP 0006	Small RNAs and associated factors for enhanced post-harvest life (sRNA-Life) - Phase II	CSIR	28-Jan-2021 to 31-Mar-2023
64	MLP 0007	Genome editing for crop improvement (GE Crop)	CSIR	28-Jan-2021 to 31-Mar-2023
65	MLP 0027	Characterization and value addition of plant-based resins, gums and waxes (Phase II)	CSIR	28-Jan-2021 to 31-Mar-2023
66	MLP 0029	Pathway elucidation and identification of genes involved in guggulsterones biosynthesis in commiphora spp. (Phase II)	CSIR	28-Jan-2021 to 31-Mar-2023
67	MLP 0030	Sub-genome dominance in endoreduplication and its implication in heterotic benefits to F1-hybrids for biomass and their adaptation (Phase II)	CSIR	28-Jan-2021 to 31-Mar-2023
68	MLP 0033	A novel herbal product for vulvovaginal candidiasis	CSIR	15-Jul-2020 to 30-Sep-2022
69	MLP 0035	Unravelling molecular details of drought tolerance in cotton	CSIR	28-Jan-2021 to 31-Mar-2023
70	MLP 0036	Epigenetic modifications in Rhizoctonia solani during interaction with Bacillus amyloliquefaciens and its implication for biotic stress management in rice	CSIR	28-Jan-2021 to 31-Mar-2023
71	MLP 0037	Regulation of pectin methylesterase inhibitor for enhancing plant-generated methanol for broad spectrum insect resistance	CSIR	28-Jan-2021 to 31-Mar-2023
72	MLP 0038	Deciphering the role of sRNA during synergistic interaction between two Trichoderma spp.	CSIR	28-Jan-2021 to 31-Mar-2023
73	MLP 0039	Fe and Zn bio-fortification in rich through integrated microbial and soil nitrogen management in crop field	CSIR	28-Jan-2021 to 31-Mar-2023
74	MLP 0040	Arsenic (As) risk assessment in vegetable crops in arsenic affected areas and mitigation through microbial consortia containing AsMT activity	CSIR	28-Jan-2021 to 31-Mar-2023
75	MLP 0041	Conservation of threatened plant species of India	CSIR	28-Jan-2021 to 31-Mar-2023
76	MLP 0042	Plant resource mapping of Chambal Ravines	CSIR	28-Jan-2021 to 31-Mar-2023

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77	MLP 0043	Leveraging genetic resources for accelerated genetic improvement of grain amaranth using genomics and phenotyping approaches	CSIR	28-Jan-2021 to 31-Mar-2023
78	MLP 0044	To identify the potential Aloe species for cultivation in salt affected soils	CSIR	28-Jan-2021 to 31-Mar-2023
79	MLP 0045	Conservation, Agronomics, Metabolomics and genomics of Indian Lotus (KAMAL)	CSIR	28-Jan-2021 to 31-Mar-2023
80	MLP 0046	Targeted metabolite genetics in two underutilized narcotic crops (Cannabis and Opium poppy) for Cannabinoids and Oripavine improvement	CSIR	28-Jan-2021 to 31-Mar-2023
81	MLP 0047	Characterization of Boll-Weight (BW) QTL Hotspots for cotton yield improvement	CSIR	28-Jan-2021 to 31-Mar-2023
82	MLP 0048	Deciphering the mechanism(s) of host endophytes coevolution enhanced secondary metabolite production and crop productivity	CSIR	28-Jan-2021 to 31-Mar-2023
83	MLP 0049	Bio-stimulants for stress amelioration, enhanced plant productivity and soil health	CSIR	28-Jan-2021 to 31-Mar-2023
84	MLP 0055	Unraveling the post-translational control of ripening by the MAP kinase pathways in mango	CSIR	25-May-2022 to 31-Mar-2024
85	MLP 0056	Preparation of certified reference material of important phytomolecules	CSIR	18-Aug-2022 to 31-Jul-2024
86	MLP 0057	Optimization of Beta 1.3 glucan production using heterotrophic microalga	CSIR	18-Aug-2022 to 31-Jul-2024
87	MLP 0168	Understanding food energy water nexus in dynamics of critical zone WRJ-1 critical zone observatory	CSIR	17-Jan-2022 to 31-Mar-2023
88	MLP 0208	Synthesis of zeolites from flyash for agriculture applications	CSIR	28-Jan-2021 to 31-Mar-2023
89	NWP 0100	CSIR Integrated Skill Initiative Phase II	CSIR	16-Oct-2020 to 31-Mar-2025
90	OLP 0099	Plant conservation, botanical garden, plant houses and development of new varieties of ornamental and floricultural crops	CSIR-NBRI	01-Apr-2017 to 31-Mar-2023

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91	OLP 0100	Socio-economic development through enhancing production of agricultural systems, skill development and outreach programmes	CSIR-NBRI	01-Apr-2017 to 31-Mar-2023
92	OLP 0101	Bio-resource inventory, systematics and conservation of diverse plant groups	CSIR-NBRI	01-Apr-2017 to 31-Mar-2023
93	OLP 0106	Herbal product development for industrial application	CSIR-NBRI	01-Apr-2017 to 31-Mar-2023
94	OLP 0108	Response of plant species to climate change and screening pollution ameliorating plants	CSIR-NBRI	07-Aug-2020 to 31-Mar-2023
95	OLP 0109	Endophytes and biostimulants for enhancing crop production	CSIR-NBRI	07-Aug-2020 to 31-Mar-2023
96	OLP 0110	Mapping of arsenic pollution & mitigation of arsenic contamination to crops using bioremediation.	CSIR-NBRI	07-Aug-2020 to 31-Mar-2023
97	OLP 0111	Microbial enzymes for environment and agriculture	CSIR-NBRI	07-Aug-2020 to 31-Mar-2023
98	OLP 0112	Enhancing cotton yield through GM and non-GM approaches	CSIR-NBRI	07-Aug-2020 to 31-Mar-2023
99	OLP 0113	Genetic improvement of Hemp (Cannabis sativa L.) for industrial and medicinal purposes through the intervention of conventional and molecular breeding	CSIR-NBRI	07-Aug-2020 to 31-Mar-2023
100	SSP 2904	Breeding and genetic improvement of Hemp (Cannabis sativa L.) for industrial and medicinal purposes	Sir Dorabji Tata Trust & Atulya Krishi Foundation (AKF) on behalf of BOHECO, Mumbai	07-Sep-2018 to 06-Sep-2023
101	CLP 2905	Development and Promotion of non- POPs alternatives to DDT, CSIR-NBRI Component: Propagation of new dwarf cultivars of neem with early maturity and higher limonoids yield	UNIDO, Vienna, Austria	16-Nov-2018 to 31-Dec-2024
102	CNP 3048	Preparation of Biodiversity Management Plan for Nongtrai Limestone Mine of Lafarge Umiam Mining Pvt. Ltd. in Meghalaya	Holtec Consulting Private Limited (HPCL), Gurgaon, Haryana	14-Jul-2022 to 13-Oct-2022

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