CURRICULUM VITAE

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ACADEMIC ACHIEVEMENTS

S.No.	Degree/Diploma	Subjects	University/ Institution	Class/ Division	Year	Rank/ prizes
1	Ph.D.	Biochemistry	Lucknow University		2004	
2	M.Sc	Biotechnology	Goa University	First	1996	First rank (Gold medal)
3	B.Sc	Biochemistry	Mumbai University	First	1994	
4	Intermediate	Science	Mumbai Board	First	1991	
5	High School	All Subjects	Mumbai Board	Distinction	1989	Second (In school)

AWARDS

1. Awarded **'Anil Kumar Bose Memorial Award 2010'** by INSA
2. Awarded **Young** Senior **Innovative Biotechnologist Award 2009** by DBT
3. Awarded **INSA Young Scientist Medal 2006** for development of artificial promoter systems for expression of transgenes in plants.
4. Awarded **Innovative Young Biotechnologist Award 2005** by DBT for proposing innovative idea in Agri-biotechnology.
5. **CSIR Technology Award 2005** for Biological sciences.

FELLOWSHIP: National Academy of Sciences, India (2015)

Fellows of International Society of Environmental Botanists (2017)

Experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To
1.	Scientist	National Botanical Research Institute, Rana Pratap Marg, Lucknow	January 2002	January 2006
2.	Senior Scientist	National Botanical Research Institute, Rana Pratap Marg, Lucknow	January 2006	January 2009
3.	Principal Scientist	National Botanical Research Institute, Rana Pratap Marg, Lucknow	January 2009	January 2014
4.	Senior Principal Scientist	National Botanical Research Institute, Rana Pratap Marg, Lucknow	January 2014	Till date

RESEARCH PROJECTS

S.no.	Title of the project	My role	Funding agencies	Duration of the project
1	Development of high throughput marker assisted selection systems for improvement of drought tolerance and fibre quality related traits in cotton	Principal Investigator	CSIR	April 2007-March 2012
2	Genetic improvement of cotton for insect resistance hybrid seeds and yield heterosis (TLP 401025).	Co-PI	CSIR	April 2007-March 2012
3	Enhancement for fishing long range enchancers involved in plant development (OLP0079)	Principal Investigator	CSIR	August 2010-March 2017
4	Biodiversity assessment prospection and conservation of plant resources of India	Activity Leader Genomics	CSIR	April 2007-March 2012
5	Enhancing water utilization efficiency in crop plants; prospecting plant diversity for genes and system biology for drought tolerance	Activity Leader Cotton Drought	CSIR	April 2007-March 2012
6	Transgenic crop plants and genes for resistance to insect pests	Activity Leader Promoters	CSIR	April 2007-March 2012

7	Pathway engineering and system biology approach towards homologous and heterologous expression of high value phytoceuticals	Activity Leader Promoters	CSIR	
8	**Phase-I** Development of universal expression vector for developing male sterile lines for improvement of crop varieties using hybrid vigor **Phase-II** Development of universal expression vector for developing male sterile lines for improvement of crop varieties using hybrid vigor	Principal Investigator Principal Investigator	DBT	April 2006 – March 2009 April 2009- March 2012
9	To Study the Role of Arabidopsis TBP-Associated Factors (TAFS) in Plants Defense	Principal Investigator	DBT	April 2010- March 2013
10	Development of saturated genetic linkage map of *Gossypium hirsutum* L. using SSR and SNP markers.	Principal Investigator	DBT	April 2012 March 2015
11	Development of F1-Hybrid Cotton using Novel Reversible Male Sterility System	Principal Investigator	DBT	March 2015 March 2018
12	To decipher protein interaction network of TAF4b (TBP Associate Factor 4b) involved in plant defense	Principal Investigator	DBT	July 2015 July 2018
13	Exploring transcriptional regulators involved in prickle formation in *Solanum khasianum*	Co-PI	SERB	April 2016 April 2019
14	Investigation of the role of MYB1 transcription factor and its regulatory microRNA in secondary cell wall biosynthesis in cotton (*Gossypium* spp) fibers	Project coordinator	DST	July 2016 July 2018
15	To decipher the histone acetylation dynamics regulating the yield and quality of cotton fiber	Project coordinator	DST	Aug 2016 Aug 2019
16	Anacardic Acid: A potential molecule to increase cotton fibre yield and quality	Principal Investigator	CSIR	Sep 2016 March 2018

17	Genotyping and molecular profiling of bioactive metabolites in *Hemidesmus indicus* and *costus speciosus* adopted to different phytogeographical zones and identification of candidate genes related to metabolic pathways	Co-PI	NASF/ICAR	Jan 2017 March 2018
18	Role of NPR1 in global nucleosomal remodelling in *Arabidopsis thaliana*	Principal Investigator	SERB	Feb2017 Feb 2020
19	Development of consensus genetic linkage map for Gossypium L. Spp. With SNP markers and QTL analysis for fiber traits	Principal Investigator	DBT	Feb2017 Feb 2020
20	Field trial for early maturity of cotton using Anacardic acid formulation and CIB registration of the product.	Principal Investigator	CSIR	July 2020 March 2022
21	Sub-genome dominance in endoreduplication and its implication in heterotic benefits to F1-hybrids for biomass and their adaptation (Phase-I).	Principal Investigator	CSIR	Nov 2018 March 2020
22	Sub-genome dominance in endoreduplication and its implication in heterotic benefits to F1-hybrids for biomass and their adaptation (Phase-II).	Principal Investigator	CSIR	July 2020 July2023
23	Exploring a novel role of SkMSM1 and SkE2R3-Myb315-like transcriptional regulators in the development of prickles of *Solanum khasianum*	Principal Investigator	DBT	Jan 2017 Jan 2020
24	Unraveling molecular details of drought tolerance in cotton	Principal Investigator	CSIR	July 2020- July2023
25	Facility and laboratory for Testing for COVID-19	Principal Investigator	CSIR	July 2020- March 2022

SIGNIFICANT RESEARCH ACHIEVEMENTS (COTTON GENOMICS)

- Development of large scale genomic resources (genes, miRNAs, promoters, transcription factors) from *G. hirsutum* and made them publically available through a website NBRI-Comprehensive Cotton Genomic database (NCGD; http://www.ncgd.nbri.res.in/).
- Enriched the public domain with the largest novel molecular marker dataset (SSRs and SNPs) for cotton.
- Development of first SNP chip for Cotton which has SNPs from Indian genotypes exclusively.

- SNP contributing partner of International Cotton SNP Consortium, a consortia developing SNP chip with SNPs developed from different countries.
- Enriched the public domain with gene expression datasets developed using microarray and transcriptome sequencing.

RESEARCH PAPERS PUBLISHED

List of Publications	International Impact Factors
Srivastava, Rakesh; Rai, Krishan Mohan; Srivastava, Meenal; Kumar, Verandra; Pandey, Bindu; Singh, Sudhir P; Bag, Sumit K; Singh, Brahma Deo; Tuli, Rakesh; Sawant, Samir V; 2014 Distinct role of core promoter architecture in regulation of light-mediated responses in plant genes Molecular plant 7, 626-641	13.164
Yadav, Vrijesh Kumar; Yadav, Vikash Kumar; Pant, Poonam; Singh, Surendra Pratap; Maurya, Rashmi; Sable, Anshulika; Sawant, Samir V; 2017 GhMYB1 regulates SCW stage-specific expression of the GhGDSL promoter in the fibres of Gossypium hirsutum L. Plant biotechnology journal 15, 1163-1174	9.803
Singh, Sudhir P; Pandey, Tripti; Srivastava, Rakesh; Verma, Praveen C; Singh, Pradhyumna K; Tuli, Rakesh; Sawant, Samir V; 2010 BECLIN1 from Arabidopsis thaliana under the generic control of regulated expression systems, a strategy for developing male sterile plants Plant biotechnology journal 8, 1005-1022	9.803
Rai, Krishan Mohan; Singh, Sunil Kumar; Bhardwaj, Archana; Kumar, Verandra; Lakhwani, Deepika; Srivastava, Apeksha; Jena, Satya Narayan; Yadav, Hemant Kumar; Bag, Sumit K; Sawant, Samir V; 2013 Large-scale resource development in G ossypium hirsutum L. by 454 sequencing of genic-enriched libraries from six diverse genotypes Plant Biotechnology Journal 11, 953-963	9.803
Nigam, Deepti; Kavita, Palacharla; Tripathi, Rajiv K; Ranjan, Alok; Goel, Ridhi; Asif, Mehar; Shukla, Alpika; Singh, Gunjita; Rana, Debashis; Sawant, Samir V; 2014 Transcriptome dynamics during fibre development in contrasting genotypes of G ossypium hirsutum L. Plant biotechnology journal 12, 204-218	9.803
Kiran, Kanti; Ansari, Suraiya A; Srivastava, Rakesh; Lodhi, Niraj; Chaturvedi, Chandra Prakash; Sawant, Samir V; Tuli, Rakesh; 2006 The TATA-box sequence in the basal promoter contributes to determining light-dependent gene expression in plants Plant physiology 142, 364-376	8.34
Ranjan, Amol; Ansari, Suraiya A; Srivastava, Rakesh; Mantri, Shrikant; Asif, Mehar H; Sawant, Samir V; Tuli, Rakesh; 2009 A T9G mutation in the prototype TATA-box TCACTATATATAG determines nucleosome formation and synergy with upstream activator sequences in plant promoters Plant physiology 151, 2174-2186	8.34

Sawant, Samir V; Kiran, Kanti; Singh, Pradhyumna K; Tuli, Rakesh; 2001 Sequence architecture downstream of the initiator codon enhances gene expression and protein stability in plants Plant physiology 126, 1630-1636	8.34
Sawant, Samir V; Kiran, Kanti; Mehrotra, Rajesh; Chaturvedi, Chandra Prakash; Ansari, Suraiya A; Singh, Pratibha; Lodhi, Niraj; Tuli, Rakesh; 2005 A variety of synergistic and antagonistic interactions mediated by cis-acting DNA motifs regulate gene expression in plant cells and modulate stability of the transcription complex formed on a basal promoter Journal of experimental botany 56, 2345-2353	6.992
Chaturvedi, Chandra Prakash; Lodhi, Niraj; Ansari, Suraiya A; Tiwari, Siddharth; Srivastava, Rakesh; Sawant, Samir V; Tuli, Rakesh; 2007 Mutated TATA-box/TATA binding protein complementation system for regulated transgene expression in tobacco The Plant Journal 50, 917-925	6.417
Kumar, Verandra; Singh, Babita; Singh, Sunil K; Rai, Krishan M; Singh, Surendra P; Sable, Anshulika; Pant, Poonam; Saxena, Gauri; Sawant, Samir V; 2018 Role of Gh HDA 5 in H3K9 deacetylation and fiber initiation in Gossypium hirsutum The Plant Journal 95, 1069-1083	6.417
Satya Narayan Jena, Anukool Srivastava, Krishan Mohan Rai, Alok Ranjan, Sunil K. Singh, Tarannum Nisar, Meenal Srivastava, Sumit K. Bag, Shrikant Mantri, Mehar Hasan Asif, Hemant Kumar Yadav, Rakesh Tuli & Samir V. Sawant 2012 Development and characterization of genomic and expressed SSRs for levant cotton (Gossypium herbaceum L.) Theoretical and applied genetics 124, 565-576	5.699
Sawant, S; Singh, PK; Madanala, R; Tuli, R; 2001 Designing of an artificial expression cassette for the high-level expression of transgenes in plants Theoretical and Applied Genetics 102, 635-644	5.699
Verma, Praveen C; Chakrabarty, Debasis; Jena, Satya Narayan; Mishra, Devesh K; Singh, Pradhyumna K; Sawant, Samir V; Tuli, Rakesh; 2009 The extent of genetic diversity among Vanilla species: comparative results for RAPD and ISSR Industrial crops and products 29, 581-589	5.645
Maurya, Ramanuj; Gupta, Astha; Singh, Sunil Kumar; Rai, Krishan Mohan; Sawant, Samir V; Yadav, Hemant Kumar; 2013 Microsatellite polymorphism in Jatropha curcas L.—a biodiesel plant Industrial Crops and Products 49, 136-142	5.645
Lodhi, Niraj; Ranjan, Amol; Singh, Mala; Srivastava, Rakesh; Singh, Sudhir Pratap; Chaturvedi, Chandra Prakash; Ansari, Suraiya Anjum; Sawant, Samir V; Tuli, Rakesh; 2008 Interactions between upstream and core promoter sequences determine gene expression and nucleosome positioning in tobacco PR-1a promoter Biochimica et Biophysica Acta (BBA)-Gene Regulatory Mechanisms 1779, 634-644	4.49
Pandey, Shatrujeet; Goel, Ridhi; Bhardwaj, Archana; Asif, Mehar H; Sawant, Samir V; Misra, Pratibha; 2018 Transcriptome analysis provides insight into prickle development and its link to defense and secondary metabolism in Solanum viarum Dunal Scientific reports 8, 44531	4.379
Singh, Surendra Pratap; Singh, Sudhir P; Pandey, Tripti; Singh, Ram	4.379

Rakshpal; Sawant, Samir V; 2015 A novel male sterility-fertility restoration system in plants for hybrid seed production Scientific reports 5, 41640	
Sable, Anshulika; Rai, Krishan M; Choudhary, Amit; Yadav, Vikash K; Agarwal, Sudhir K; Sawant, Samir V; 2018 Inhibition of heat shock proteins HSP90 and HSP70 induce oxidative stress, suppressing cotton fiber development Scientific reports 8, 42736	4.379
Pant, Poonam; Iqbal, Zahra; Pandey, Bhoopendra K; Sawant, Samir V; 2018 Genome-wide comparative and evolutionary analysis of calmodulin-binding transcription activator (CAMTA) family in Gossypium species Scientific reports 8, 42736	4.379
Koul, B; Yadav, R; Sanyal, I; Sawant, S; Sharma, V; Amla, DV; 2012 Cis-acting motifs in artificially synthesized expression cassette leads to enhanced transgene expression in tomato (Solanum lycopersicum L.) Plant physiology and biochemistry 61, 131-141	4.27
Singh, Mala; Bag, Sumit Kumar; Bhardwaj, Archana; Ranjan, Amol; Mantri, Shrikant; Nigam, Deepti; Sharma, Yogesh Kumar; Sawant, Samir Vishwanath; 2015 Global nucleosome positioning regulates salicylic acid mediated transcription in Arabidopsis thaliana BMC plant biology 15, 44197	4.215
Ranjan, Alok; Pandey, Neha; Lakhwani, Deepika; Dubey, Neeraj Kumar; Pathre, Uday V; Sawant, Samir V; 2012 Comparative transcriptomic analysis of roots of contrasting Gossypium herbaceum genotypes revealing adaptation to drought BMC genomics 13, 44562	3.969
Ranjan, Alok; Nigam, Deepti; Asif, Mehar H; Singh, Ruchi; Ranjan, Sanjay; Mantri, Shrikant; Pandey, Neha; Trivedi, Ila; Rai, Krishan Mohan; Jena, Satya N; 2012 Genome wide expression profiling of two accession of G. herbaceum L. in response to drought BMC genomics 13, 43101	3.969
Pandey, Neha; Ranjan, Alok; Pant, Poonam; Tripathi, Rajiv K; Ateek, Farha; Pandey, Haushilla P; Patre, Uday V; Sawant, Samir V; 2013 CAMTA 1 regulates drought responses in Arabidopsis thaliana BMC genomics 14, 44927	3.969
Dubey, Neeraj Kumar; Goel, Ridhi; Ranjan, Alok; Idris, Asif; Singh, Sunil Kumar; Bag, Sumit K; Chandrashekar, Krishnappa; Pandey, Kapil Deo; Singh, Pradhyumna Kumar; Sawant, Samir V; 2013 Comparative transcriptome analysis of Gossypium hirsutum L. in response to sap sucking insects: aphid and whitefly BMC genomics 14, 43831	3.969
Imran, Md; Pant, Poonam; Shanbhag, Yogini P; Sawant, Samir V; Ghadi, Sanjeev C; 2017 Genome sequence of Microbulbifer mangrovi DD-13 T reveals its versatility to degrade multiple polysaccharides Marine Biotechnology 19, 116-124	3.619
Gupta, Astha; Maurya, Ramanuj; Roy, RK; Sawant, Samir V; Yadav, Hemant Kumar; 2013 AFLP based genetic relationship and population structure analysis of Canna—An ornamental plant Scientia Horticulturae 154, 44378	3.463

Chaudhry, Vasvi; Chauhan, Puneet S; Mishra, Aradhana; Goel, Ridhi; Asif, Mehar H; Mantri, Shrikant S; Bag, Sumit K; Singh, Sunil K; Sawant, Samir V; Nautiyal, Chandra Shekhar; 2013 Insights from the draft genome of Paenibacillus lentimorbus NRRL B-30488, a promising plant growth promoting bacterium Journal of biotechnology 168, 737-738	3.307
Chaturvedi, Chandra Prakash; Sawant, Samir V; Kiran, Kanti; Mehrotra, Rajesh; Lodhi, Niraj; Ansari, Suraiya Anjum; Tuli, Rakesh; 2006 Analysis of polarity in the expression from a multifactorial bidirectional promoter designed for high-level expression of transgenes in plants Journal of biotechnology 123, 44531	3.307
Ashraf, Shadma; Singh, PK; Yadav, Dinesh K; Shahnawaz, Md; Mishra, Satish; Sawant, Samir V; Tuli, Rakesh; 2005 High level expression of surface glycoprotein of rabies virus in tobacco leaves and its immunoprotective activity in mice Journal of biotechnology 119, 41640	3.307
Srivastava, Rakesh; Rai, Krishan Mohan; Pandey, Bindu; Singh, Sudhir P; Sawant, Samir V; 2015 Spt-Ada-Gcn5-Acetyltransferase (SAGA) complex in plants: genome wide identification, evolutionary conservation and functional determination PloS one 10, e0134709	3.24
Hulse-Kemp, Amanda M; Lemm, Jana; Plieske, Joerg; Ashrafi, Hamid; Buyyarapu, Ramesh; Fang, David D; Frelichowski, James; Giband, Marc; Hague, Steve; Hinze, Lori L; 2015 Development of a 63K SNP array for cotton and high-density mapping of intraspecific and interspecific populations of Gossypium spp. G3: Genes, Genomes, Genetics 5, 1187-1209	3.154
Gupta, Priya; Idris, Asif; Mantri, Shrikant; Asif, Mehar Hasan; Yadav, Hemant Kumar; Roy, Joy Kumar; Tuli, Rakesh; Mohanty, Chandra Sekhar; Sawant, Samir Vishwanath; 2012 Discovery and use of single nucleotide polymorphic (SNP) markers in Jatropha curcas L. Molecular Breeding 30, 1325-1335	2.589
Maurya, Ramanuj; Gupta, Astha; Singh, Sunil Kumar; Rai, Krishan Mohan; Katiyar, Ratna; Sawant, Samir V; Yadav, Hemant Kumar; 2015 Genomic-derived microsatellite markers for diversity analysis in Jatropha curcas Trees 29, 849-858	2.58
Ranjan, Alok; Sawant, Samir; 2015 Genome-wide transcriptomic comparison of cotton (Gossypium herbaceum) leaf and root under drought stress 3 Biotech 5, 585-596	2.406
Gupta, Astha; Jaiswal, Vandana; Sawant, Samir V; Yadav, Hemant Kumar; 2020 Mapping QTLs for 15 morpho-metric traits in Arabidopsis thaliana using Col-0× Don-0 population, Physiology and Molecular Biology of Plants 26, 1021-1034	2.391
Trivedi, Ila; Ranjan, Alok; Sharma, YK; Sawant, Samir; 2012 The histone H1 variant accumulates in response to water stress in the drought tolerant genotype of Gossypium herbaceum L. The protein journal 31, 477-486	2.371
Yadav, Hemant Kumar; Ranjan, Alok; Asif, Mehar Hasan; Mantri, Shrikant; Sawant, Samir V; Tuli, Rakesh; 2011 EST-derived SSR markers in Jatropha curcas L.: development, characterization, polymorphism, and	2.297

transferability across the species/genera Tree genetics & genomes 7, 207-219	
Asif, Mehar H; Mantri, Shrikant S; Sharma, Ayush; Srivastava, Anukool; Trivedi, Ila; Gupta, Priya; Mohanty, Chandra S; Sawant, Samir V; Tuli, Rakesh; 2010 Complete sequence and organisation of the Jatropha curcas (Euphorbiaceae) chloroplast genome Tree Genetics & Genomes 6, 941-952	2.297
Jena, Satya Narayan; Srivastava, Anukool; Singh, Uma Maheswar; Roy, Sribash; Banerjee, Nandita; Rai, Krishan Mohan; Singh, Sunil Kumar; Kumar, Verandra; Chaudhary, Lal Babu; Roy, Joy Kumar; Rakesh Tuli and Samir V. Sawant 2011 Analysis of genetic diversity, population structure and linkage disequilibrium in elite cotton (Gossypium L.) germplasm in India Crop and Pasture Science 62, 859-875	2.286
Pandey, Shatrujeet; Patel, Preeti; Prasad, Archana; Sawant, Samir V; Misra, Pratibha; 2020 Assessment of direct shoot organogenesis and genetic fidelity in Solanum viarum Dunal—a commercially important medicinal plant In Vitro Cellular & Developmental Biology-Plant 56, 538-547	2.252
Sawant, Samir V; Singh, Pradhyumna Kumar; Tuli, Rakesh; 2000 Pretreatment of microprojectiles to improve the delivery of DNA in plant transformation BioTechniques 29, 246-248	1.993
Srivastava, Anukool; Jena, Satya Narayan; Ranjan, Alok; Kavita, Palacharla; Asif, Mehar H; Bag, Sumit K; Shukla, Ravi Prakash; Yadav, Hemant K; Sawant, Samir V; 2013 Development of molecular markers from Indian genotypes of two Gossypium L. species Plant Breeding 132, 506-513	1.832
Roy, Sribash; Tyagi, Antariksh; Tiwari, Siddharth; Singh, Ankit; Sawant, Samir V; Singh, Pradhyumna K; Tuli, Rakesh; 2010 Rabies glycoprotein fused with B subunit of cholera toxin expressed in tobacco plants folds into biologically active pentameric protein Protein expression and purification 70, 184-190	1.65
Srivastava, Anukool; Sawant, Samir V; Jena, Satya Narayan; 2015 Microarray-based large scale detection of single feature polymorphism in Gossypium hirsutum L. Journal of genetics 94, 669-676	1.166
Mehrotra, Rajesh; Kiran, Kanti; Chaturvedi, Chandra Prakash; Ansari, Suraiya Anjum; Lodhi, Niraj; Sawant, Samir; Tuli, Rakesh; 2005 Effect of copy number and spacing of the ACGT and GTcis elements on transient expression of minimal promoter in plants Journal of genetics 84, 183-187	1.166
Dubey, Neeraj Kumar; Mishra, Devesh Kumar; Idris, Asif; Nigam, Deepti; Singh, Pradhyumna Kumar; Sawant, Samir V; 2018 Whitefly and aphid inducible promoters of Arabidopsis thaliana L. Journal of genetics 97, 109-119	1.166
Sawant, Samir V; Singh, Pradhyumna K; Gupta, Shiv K; Madnala, Raju; Tuli, Rakesh; 1999 Conserved nucleotide sequences in highly expressed genes in plants Journal of Genetics 78, 123-131	1.166

Gupta, Shiv K; Singh, Pradhyumna K; Sawant, Samir V; Chaturvedi, Ratnesh; Tuli, Rakesh; 2000 Effect of light intensity on in vitro multiple shoot induction and regeneration of cotton (Gossypium hirsutum L. cv Khandawa-2) Indian Journal of Experimental Biology , 38, 399-401	0.818
Kumar, U; Sawant, SV; Yadav, HK; 2021 Exploring genetic variability in ethyl methane sulfonate mediated mutant population of Wagad cultivar of Gossypium herbaceum Journal of Environmental Biology 42, 589-596	0.781
Gupta, Astha; Sawant, Samir V; Yadav, Hemant Kumar; 2020 Assessment of phenotypic developmental traits and hybrid vigour in Arabidopsis thaliana Indian Journal of Biotechnology , 19, 102-112	0.414
Gupta, Astha; Bhardwaj, Archana; Sawant, Samir V; Yadav, Hemant Kumar; 2019 Utilization and Characterization of Genome-wide SNP Markers for Assessment of Ecotypic Differentiation in Arabidopsis thaliana Int. J. Curr. Microbiol. App. Sci 8, 158-173	na
Misra, Pratibha; Shukla, Sudhir; Pandey, Shatrujeet; Sawant, Samir; Singh, SP; Prasad, Archana; Purshottam, DK; Patel, Preeti; Shukla, Pragya; 2020 Nishkantak prickleless (IC0629502; ingr19030), a Solanum viarum germplasm for prickleless, alkaloids content higher than the prickly plant type Indian Journal of Plant Genetic Resources 33, 269-270	na
Chaudhry, Vasvi; Asif, Mehar H; Bag, Sumit; Goel, Ridhi; Mantri, Shrikant S; Singh, Sunil K; Chauhan, Puneet S; Sawant, Samir V; Nautiyal, Chandra Shekhar; 2013 Draft genome sequence of Pseudomonas putida strain MTCC5279 Genome announcements 1, e00560-13	na
Nigam, Deepti; Sawant, Samir V; 2013 Identification and Analyses of AUX-IAA target genes controlling multiple pathways in developing fiber cells of Gossypium hirsutum L Bioinformation 9, 996	na
Prasad, Priti; Prakash, Shantanu; Sahu, Kishan; Singh, Babita; Shukla, Suruchi; Mishra, Hricha; Khan, Danish Nasar; Prakash, Om; Bhatt, MLB; Barik, SK; 2020 Unique mutational changes in SARS-CoV-2 genome: A case study for the largest state of India bioRxiv ,	na
Prasad, Priti; Khatoon, Uzma; Verma, Rishi Kumar; Kumar, Ajay; Mohapatra, Debashish; Bhattacharya, Parthasarthi; Bag, Sumit K; Sawant, Samir V; 2021 Unravelling cotton RNAseq repositories to the fiber development specific modules and their alliance with the fiber-related traits bioRxiv ,	na

CONTRIBUTION TO BOOKS

1. Singh SP, Roy JK, Kumar D and Sawant SV. Tools for generating male sterility in plants. Bentham E-Book. **Current Advances in Plant Sciences**, 1: 67-85.
2. Singh M, Ranjan A, Rai KM, Singh SK, Kumar V, Trivedi I, Lodhi N, Sawant SV(2012). Analysis of chromatin structure in plant cells. **Methods Mol Biol.,** 833: 201-23 (Humana press).

3. Trivedi I, Rai KM, Singh SK, Kumar V, Singh M, Ranjan A, Lodhi N, Sawant SV (2012). Analysis of histones and histone variants in plants. **Methods Mol Biol.,** 833: 225-36 (Humana press).
4. Pandey, N., Iqbal, Z., Pandey, B. K. and Sawant, S. V(2017). Phytohormones and Drought Stress: Plant Responses to Transcriptional Regulation. **Mechanism of Plant Hormone Signaling under Stress,** 477-504 (John Wiley & Sons).

PATENTS

1. Chemically synthesised artificial promoter for high level expression of transgenes and a method for its synthesis.
    a. USA reference: US 6,639,065
    b. European reference: 99301419.0-2106 dated 11-5-99
2. Method for preparation of microprojectiles for efficient delivery of biologicals using a particle gun.
    a. European reference: 00113541.7 dated 18-12-00
    b. USA reference: US Patent US 6406852
3. Chemically synthesized artificial promoter for high level expression of transgenes and a method for its synthesis.
    a. European Patent Application: 99301419.0-2106 (appl. no. 263692 dt. 5-3-99)
4. Method for preparation of microprojectiles for efficient delivery of biologicals using a particle gun.
    a. European Patent Appliction: EP 1170374 A1
5. A novel δ-endotoxin protein improved for insecticidal activity and host range and gene for its high level expression in plants.
    a. USA Patent Application: 10/107581
6. Chimeric delta endotoxin protein with extraordinarily high insecticidal activity.
    a. Filed for PCT, NF 0165 NF 2002 dated 28-3-2002
7. An artificially designed DNA sequence for activation of gene expression and regulation of transcription in both the directions.
    a. Filed for PCT (0250 NF 2003; US, 10/814858 dt. 30-6-2003).
8. Recombinant chimeric G-protein of rabies virus produced in transgenic plants and a synthetic gene for development of vaccine.
    a. Filed for PCT: (0218 NF 2004 / dated 28-4-2004).
9. S.V. Sawant, R. Tuli, S.P. Singh, C.P. Chaturvedi, Tripti Pandey. A two component plant expression module for tightly regulated and high level anther specific expression in plants. Patent Application No. 626DEL2009.
10. S.V. Sawant, Rakesh Srivastava, Meeanl Srivastava, P.K. Singh, Suchi Srivastava, P.C. Verma, Bhupendra Koul, Anoop Kumar Shukla, C.S. Nautiyal, and D.V. Amla. A

method for developing pathogen tolerant transgenic plants (2010). Patent filed for application IPMD Ref. No. 0166NF2010.

11. Samir V Sawant, Rakesh Tuli, Sudhir Pratap Singh. A gene for inducing male sterility in plants (2011). Patent filed for application,IPMD Ref. NoPCT/IB2009/007561(NFNO 0075NF2008/WO)
12. Samir V Sawant, Rakesh Tuli, Sudhir Pratap Singh. A gene for inducing male sterility in plants (2011). Patent filed for application,IPMD Ref. No 20093221261 (NFNO 0075NF2008/AU)
13. Samir V Sawant, Rakesh Tuli, Sudhir Pratap Singh. A gene for inducing male sterility in plants (2011). Patent filed for application,IPMD Ref. No13/124984 (NFNO 0075NF2008/US)
14. Samir V Sawant, Rakesh Tuli, Sudhir Pratap Singh. A gene for inducing male sterility in plants (2011). Patent filed for application,IPMD Ref. NoEP09795538.9 (NFNO 0075NF2008/EP)
15. Samir V Sawant, Rakesh Tuli, Sudhir Pratap Singh. A gene for inducing male sterility in plants (2011). Patent filed for application,IPMD Ref. No2009 80147541.4 (NFNO 0075NF2008/CN)
16. Samir V Sawant, Rajiv Kumar Tripathi, Asif Idris. A method for production of transgenic plants having increased ball number, size and lint yield in cotton and gene for it (2013). Patent filed for application.
17. Samir V. Sawant, Surendra Pratap Singh. Novel reversible expression system for transgene;174NF2014 (2015).
18. Samir V. Sawant, Sunil K Singh, Babita Singh, P Bhattacharya A noval formulation for improving the yield and quality of fiber in cotton plants;231/DEL/2015 (2017).

ACADEMIC CONTRIBUTION.

1. Guidance to Ph.D. students working on the following research topics

1	Dr. Sudir Pratap Singh	Development of anther specific gene expression cassettes and conditional expression of a cytotoxic gene for generating male sterile plants (**Awarded 2011)**.
2	Dr. Amol Ranjan	The Role of sequence architecture of the TATA Box and global Nucleosome position in determining transcription regulation of plants genes (**Awarded 2011)**

3	Dr. Rakesh Kumar Srivastava	Role of TATA Box and initiator element sequences0 in light regulation transcriptions in plants. (**Awarded 2013)**
4	Dr. Alok Ranjan	Studies of global gene expression profilling of *Gossypium spp*. during Drought condition and fiber development. **(Awarded 2013)**
5	Dipti Nigam	In Silico Expression Analysis during fiber Development in Contrasting Cotton Germplasms for Deciphering unique genes and their related pathways governing good fiber quality. **(Awarded)**
6	Neha Pandey	The Functional Characterization of Calmodulin Binding Transcription Activator (CAMTA) in response to Drought stress in plant **(Awarded)**
7	KM Rai	To explore the role of JmjC domain containing histone demethylases in epigenetic regulation of fiber development in *Gossypium hirsutum.* **(Awarded)**
8	Rajeev K. Tripathi	Functional validation of squamosa promoter binding like (*SPLs*) transcription factors in cotton fiber development. **(Awarded)**
9	Meenal Srivastava	Role of *Arabidopsis thaliana* Transcription Co-activator TATA Binding Protein Associated Factor 4b (Taf4b) in plants defense mechanism **(Awarded)**
10	Mala Singh	Role of histone acetyl transferases in epigenetic regulation of PR-1 gene expression in Arabidopsis thaliana. **(Awarded)**
11	Ila Trivedi	Study of the role of chromatin and chromatin modifying machinery in the genome regulation of cotton plant during water stress condition.**(Awarded)**
12	Anukool Srivastava	Development of high throughput DNA marker systems and their utilization for genetic mapping in upland cotton (*Gossypium hirsutum*) **(Awarded)**
13	Sunil K. Singh	The role of histone modifier in cotton fiber development and their target. **(Awarded)**
14	Verandra Kumar	To explore the role of histone deacetylases in epigenetic regulation of fiber development in *Gossypium hirsutum.* **(Awarded)**
15	Surendra P. Singh	Novel strategy for developing male sterile plants and fertility restoration of F1 hybrid through regulated expression system.**(Awarded)**
16	Vrijesh K. Yadav	Molecular characterization of fiber specific promoter in cotton **(Awarded)**
17	Vikash K. Yadav	Identification and characterization of long range chromatin interactions involved in regulation of gene expression in *Arabidopsis thaliana.* **(Awarded)**
18	Bindu Pandey	Exploring the genetic interactions of TBP associated factor 4b (TAF4b) with other transcriptional regulators of phytohormonal pathways related to plant defense in *Arabidopsis thaliana***. (Awarded***)***
19	Anshulika Sable	Exploring the role of heat shock proteins in cotton fiber development. **(Awarded)**
20	Rashmi Maurya	Deciphering protein interaction network of TAF4b and its role in plant defense in *Arabidopsis thaliana*.**(Awarded***)*

21	Babita Singh	Exploring the role of allelic epigenetic modifications and physical interactions responsible for heterosis in *Arabidopsis thaliana.* **(Awarded)**
22	Devesh Kumar Mishra	Identification and validation of wound inducible promoter from *Arabidopsis thaliana.***(Awarded).**
23	Poonam Pant	Computational analysis of Calmodulin –binding transcription activator (CAMTA)gene family in Gossypium species: Identification, Evolutionary analysis and transcriptional gene regulatory networks**. (Awarded).**
24	Neha Agarwal	Role of NPR1 in global nucleosomal remodeling in *Arabidopsis Thaliana.*
25	Bhoopendra Kumar Pandey	Exploring the role of splice variants of CAMTA 1 in stress physiology of *Arabidopsis thaliana.* **(Awarded**)
26	Zahra Iqbal	Exploring the genome wide targets of *AtCAMTA5* associated with drought regulated gene networks. **(Awarded)**
27	UzmaKhatoon	Exploring the role of TATA binding protein associated factor 4b (TAF 4b) in seed development of *Arabidopsis thaliana.*
28	Priti Prasad	Evolutionary Conservation pattern of methylation in cotton.
29	Amit Choudhary	The functional characterization of HSP90-7 and HSP70-8 in cotton fiber development.
30	Rishi Verma	Development of F1-Hybrid Cotton using Novel Reversible Male Sterility System
31	Anamika Sengar	Role of *GheCAMTA* under abiotic stress in cotton.
32	KishanSahu	Unravelling mechanistic details of sub-genome dominance during endoreduplication in F1-hybrids of *Arabidopsis thaliana.*
33	Alka Singh	To investigate the interacting partner of Taf4b under different stress and hormone condition and explore their mechanistic detail.
34	Vipin Tiwari	Exploring the mechanistic details of *GhHDA5* in cotton fiber initiation
35	Aakash Verma	NPR1 dependent SA mediated chromatin remodeling in *Arabidopsis thaliana*
36	Aparna	Role of Histone acetyltransferases in cotton fiber development.
37	Deeksha Sharma	Exploring the role of Histone-lysine methyltransferase in cotton fiber development.
38	Sanjeev Yadav	Understanding the role of Gh*Tafb* in cotton fiber development
39	Anupam Sonowal	Title yet not decided
40	Sagar Dhama	Exploring the mechanistic details of CAMTA in regulating root development during abiotic stress

2. Teaching Course on Transcription and Epigenetic Regulation

3. **Advisor to several post-graduate trainees**

MANEGERIAL CONTRIBUTIONS

1. Coordinator NBRI-MGM collaborative research programme
2. Coordinator NBRI-Tierra Seeds collaborative research programme
3. Member of DBT's (National) task force on Accelerated Crop Improvement programme.
4. DBT's Nominee in Bio-safety Committee of IIPR, Kanpur
5. Member of Several managerial committees of CSIR-NBRI

SPECIAL ATTAINMENTS

Coordinator of Academy of Scientific and Innovative Research (AcSIR) in CSRI-NBRI (2011-2017).

Association/members in national and international Committees

A. International Committees

i. International coordinator of Cotton genomics for development of Cotton SNP chip.

B. National Committees

i. Project Evaluation Committee SERB (DST)
ii. Project Evaluation Committee DBT
iii. Biosafety Committee at CSIR-IITR, Lucknow
iv. Biosafety Committee at CSIR-CDRI, Lucknow
v. Biosafety Committee at UP Council of Sugarcane Research, Shahjahanpur.
vi. Coordinator for DBT National Umbrella Project on Cotton QTL Mapping.
vii. Member of DBT's (National) task force on Accelerated Crop Improvement programme.
viii. Coordinator for NBRI, Tierra Seeds Sciences Pvt. Ltd, collaborative project.
ix. Coordinator for NBRI, Nuzuveedu Seeds, collaborative project.
x. Coordinator for NBRI, UCP chemicals, collaborative project.