Bio-data

Name: **Priyanka Siwach**

Qualification: Ph.D (Biotechnology and Molecular Biology)

Designation: **Professor & Chairperson**

Department of Biotechnology,

Dean faculty of Life Sciences

Date of Birth: October 29, 1974.

Mailing Address: Department of Biotechnology
Chaudhary Devi Lal University, Sirsa.
Ph- 08826975608 (M), 91-1666247143(O).
Fax- 01666-248123
E-mail- Psiwach29@gmail.com,

Specialization: **Plant Biotechnology and Genomics**

On-going research areas: 1. Genome annotation using bioinformatics' techniques
2. Functional genomics studies in Asiatic cotton using Expressed Sequence Tags (ESTs) analysis

3. Bioactivity informatics, plant tissue culture and genomic-finctional genomics studies in important medicinal plants

Recent collaborative research: Under a collaborative project with **'Supercomputing facility for Bioinformatics and Computational Biology' IIT Delhi**, developed a novel methodology for **annotation of genome sequence using DNA structure and energetic analysis**

Teaching areas:
1. Molecular Biology
2. Plant Biotechnology
3. Structural and functional Genomics
4. Bioinformatics (Basic course)

Teaching experience: More than **19 years** of **regular University teaching experience** (**16.10-2001-till date**)

1. 16 Oct 2001 to 21 Aug 2007- Lecturer, Department of Biotechnology, Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India
2. 22 Aug 2007 to 22 Aug 2010- Reader, Department of Biotechnology, Chaudhary Devi Lal University, Sirsa, Haryana, India
3. 22Aug 2010- to 22 Aug 2013- Associate Professor, Department of Biotechnology, Ch Devi Lal University, Sirsa, Haryana, India.
4. 22 Aug 2013 – to till date –Professor, Department of Biotechnology, Ch Devi Lal University, Sirsa, Haryana, India.

Gold medal and awards:

1. Silver Jubilee Gold Medal for Women Scientist for the year 2001 for the **Ph.D** work, by Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar, Haryana, India.

2. University Research fellowship for M.Sc (1995-1997) and Ph.D (1998-2001), By CCSHAU, Hisar.

3. Haryana State merit scholarship certificate (1989-90).

Patents Granted: **Indian Patent No.: 360050, Date of Grant: 02/03/2021**

Sequences submitted: 1. Sharma, P., Ramamurthy, S., **Siwach, P**. and Bhat, S.R. *Brassica juncea* cultivar Pusa Bold APETALA2-1 mRNA, complete cds **(GenBank: KJ482645.1).**

2. Sharma, P., Ramamurthy, S., **Siwach, P**. and Bhat, S.R. *Brassica juncea* cultivar Pusa Bold APETALA2-2 mRNA, complete cds (**GenBank: KJ482646.1**)

Externally funded Research projects

1. Major Research Project 'DNA fingerprinting of Isabgol germplasm' as **Principal Investigator**, funded by UGC, New Delhi, worth Rs 6.58 lacs (01.07.03-30.06.06)- **Completed**
2. Major Research Project titled "Association mapping of fibre traits in *Gossypium arboreum* L. accessions using SSR, ISSR and AFLP markers", **Principal Investigator**, worth Rs 11.91 lacs (01.07.12-31.12.15)- **Completed**

Membership of Academic bodies

1. Life member, Society for Plant Biochemistry and Biotechnology.
2. Life member, Society for Domestic Animal Biodiversity (SOCDAB).
3. Life member, Association of Microbiologist (AMI), India.
4. Life member, International Society of Applied Biology

Membership of various bodies at Parent University

1. Member, Departmental Research Committee (DRC), Department of Biotechnology, Chaudhary Devi Lal University (CDLU), Sirsa.
2. Member, Post Graduate Board of Studies in Biotechnology (PGBOS), CDLU, Sirsa.
3. Member, Faculty of Life sciences, CDLU, Sirsa.
4. Member, Academic Council (AC), CDLU, Sirsa.
5. Member, University Court, CDLU, Sirsa
6. Member, Executive Council, CDLU, Sirsa

Academic profile

S.No	Degree	University	Year	Percentage
1.	Ph.D (Biotechnology & Mol Biology)	Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana, India	2001	88.4 %
2.	M.Sc (Biotechnology)	Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana, India	1998	85.2 %
3.	B.Sc	Maharishi Dayanand University, Rohtak, Haryana, India	1995	69.8%
4.	10+2	Haryana Board of School education	1991	77.0%
5.	Matric	Haryana Board of School education	1989	81%

Workshops/ training attended

1 Short-term training course on Genomics, Proteomics, Drug Design & HPC under continuing education program on Bioinformatics and Computational Biology, organized by Supercomputingg Facility For Bioinformatics & Computational Biology, IIT Delhi, on **14th Sept 2015 to 24th Sept 2015**.

2 National Workshop on Patent awareness: Issues and challenges, organized at Department of Biotechnology, CDLU, Sirsa, **Aug 10, 2011**.

2. National Workshop on Basic Techniques in Biotechnology, Food Technology and Bioinformatics, held at Department of Biotechnology, CDLU, Sirsa, **June 15-28, 2011**.
3. National workshop on Bioinformatics in Plant Sciences organized by Bioinformatics Section CCS Haryana Agricultural University, Hisar-125004, **March 12-19, 2010.**
4. State level workshop on 'Management and monitoring of field trial of genetically engineered crops in state agricultural university, at college of Basic sciences, CCS, HAU Hisar, **Jan 12, 2009.**
5. National workshop on 'Intellectual Property rights and its commercialization process', By IPR&TCC, GJUS&T, Hisar, (**Dec 4, 2008**).
6. UGC sponsored Orientation course organized by Academic Staff College, Kurukshetra University, Kurukshetra (**May 18 –June 14, 2005)**.

Workshops/Training/Conference organized

1. **Organizing secretary**, National Conference on Biotechnology: Emerging Trends, organized by Department of Biotechnology, CDLU, Sirsa, Feb 11-12, 2016.
2. **Organizing Secretary,** 'International Conference on Biotechnology: Emerging Trends', organized by Department of Biotechnology, CDLU, Sirsa, Sep 18-20, 2012.
3. **Organizing Secretary,** National Workshop on Patent awareness: Issues and challenges, sponsored by DST, Government of India, organized at Department of Biotechnology, CDLU, Sirsa., Aug 10, 2011
4. **Organizing Secretary**, UGC sponsored National Workshop on Basic Techniques in Biotechnology, Food Technology and Bioinformatics, organized by Department of Biotechnology, CDLU, Sirsa, June 15-28, 2011.
5. **Member, organizing committee,** International conference on Energy-Water-Water nexus for environmental management (Jan 28-30, 2012).
6. **Member, organizing committee**, Multidisciplinary national Seminar on Communal harmony, Peace and Social Justice (Dec 06, 2011), organized by University Grants Commission Cell for Coaching Schemes, Chaudhary Devi Lal University, Sirsa, Haryana.

Research Guidance

Ph.D.:	Completed	8
	Pursuing	5
M.Phil.:	Completed	12

Papers presented in Conference/Seminars

1. 'Advances in computational tools for plant microRNA identification', National conference on **Biotechnology: Emerging Trends**, organized by Department of Biotechnology, CDLU, Sirsa, Feb 11-12, 2016.
2. 'Pre-processing of raw EST sequences obtained from boll tissue of *Gossypium arboreum',* National Symposium on '**Emerging Trends in Agri-Bioinformatics**' (ETAB), organized by Directorate of Wheat research, Karnal, Dec 16-17, 2013.
3. 'Production of secondary metabolites through plant tissue culture: a case study of *Ficus religiosa* L.' at **First International and Third National Conference on Biotechnology, Bioinformatics and Bioengineering,** organized by Society for Applied Biotechnology, at Tirupati, Andhra Pradesh, India, June 28-29, 2013.
4. 'Effect of various conditions on in vitro rooting and transplantation of *Ficus religiosa* L.' at **First International and Third National Conference on Biotechnology, Bioinformatics and Bioengineering,** organized by Society for Applied Biotechnology, at Tirupati, Andhra Pradesh, India, June 28-29, 2013.
5. '**Food Security and Genetically Modified Food**' on National Science Day organized at JCD PG College of Education, Sirsa, Haryana, Feb 28, 2013. .

6. Secondary metabolites production through plant tissue culture' at **AICTE sponsored 'National Seminar on Recent developments from drug discovery to drug delivery'**, April 28-29, 2012, organized by Lord Shiva College of Pharmacy, Sirsa.

7. 'Need and relevance of association mapping using molecular markers for fiber quality improvements in *Gossypium arboreum*' presented at **Silver Jubliee International Symposium** 'Global Cotton Production Technologies vis-à-vis Climatic Change' organized by CCS Haryana Agricultural University, Hisar, Oct 10-12, 2012.

8. 'Hairy root cultures of Medicinal Trees: a viable alternative for commercial production of high value secondary metabolites' presented at **International Conference on Biotechnology: Emerging Trends (ICB-2012)**, organized by Department of Biotechnology, Ch Devi Lal University, Sirsa Sept 18-20, 2012.

9. 'Efficient induction and proliferation of callus cultures of *Ficus religiosa* L. and comparative analysis of various phytochemicals in the aqueous extracts of in vivo and in vitro tissue' presented at **International Conference on Energy-Water-Waste nexus for environment management**, organized by Department of Energy and Environmental Sciences, Ch Devi Lal University, Sirsa, Haryana, India, January 28-30, 2012..

10. 'Optimization of conditions for enhanced biomass accumulation and flavonoid production in callus cultures of *F. religiosa* L.' presented in **International Conference on Current Trends in Medicinal Plants Research**, organized by Department of Botany, University of Pune, Maharashtra, January 10-12, 2012…

11. 'DNA markers and Molecular mapping' on 28.02.09 at **Winter school on Bioinformatics for Agricultural Sciences** (Feb19-March 11, 2009), Bioinformatics section, COBS&H, CCSHAU, Hisar.

12. 'Genetic diversity among important cultivars of *G. arboreum* L., the indigenous species of India, using microsatellite markers' presented in **World Congress for Man and Nature** 'Global Climatic Change & Biodiversity Conservation' (International conference) organized by Department of Zoology & Environmental science, Gurukul Kangri Vishwavidyalaya, Haridwar, Uttarkhand, India, November 11-13, 2011.

13. 'A comparative analysis of phytochemicals present in aqueous extract of callus cultures and stem segments of *F. religiosa* L.' presented in **World congress on Biotechnology 'Biotechnology-2011'** (International conference) organized by Omics publishing group, USA at Hyderabad International convention centre (HICC), Hyderabad, India, March 21-23, 2011

14. 'Large scale multiplication of pathogens free plantlets of kinnow mandarin using in vitro techniques' presented in **National conference on Multidisciplinary approach in frontier areas of environmental science and engineering**, organized by Department of Environmental Science and Engineering, GJUS&T, Hisar, March 4-5, 2011.

15. 'Genetic transformation techniques and Molecular Marker analysis in plants' at **UGC sponsored National Workshop on Basic Techniques in Biotechnology, Food Technology and Bioinformatics** organized by Department of Biotechnology, CDLU, Sirsa., **Aug 10, 2011**

16. 'Ín vitro induction and multiplication of shoots from shoot apices of F. religiosa L.-a woody medicinal plant', presented in **Zonal Seminar** on, "Abiotic Stress Tolerance in Plants – Physiological and Biotechnological Approaches", Centre for Plant Biotechnology, CCSHAU, Hisar (India), December 5, 2009.

17. 'Biodiversity conservation status for medicinal and aromatic plants-present status and development needs' in **National Seminar on role of medicinal and aromatic plants in Ayruvedic, Unani and Siddha system of medicine,** Department of Plant Breeding, CCSHAU, Hisar (March3-4, 2005).

18. 'Micropropagation studies on Dahlia variabilis' presented in 7th ISPBB **National Synposium on Biotechnology for sustainability in agriculture**' at GB Pant University of Agriculture & Technology, Pantnagar (April 27-29, 2000).

Conference/Events participation as delegate

1. National Seminar on 'Nano-school: Emerging Techniques, Novel and Innovative Strategies' Organized by JCDM college of Pharmacy, JCD Vidyapeeth, Sirsa, Haryana, **September 24-25, 2011.**
2. National Seminar on Current trends in Pharmaceutical education and research, organized by JCD Memorial college of Pharmacy, **March 12, 2011**.
3. National conference on Biodiversity: Challenges and opportunities, organized by Department of Botany, M D U, Rohtak, **Feb 18-19, 2011**.
4. First Science Conclave- A Congregation of Nobel Laureates at IIIT-Allahabad, organized by Ministry of Science and Technology in collaboration with ministry of Human resource Development, Government of India, **Dec 15-21, 2008**.

List of publications

Research Papers

1. Akhilesh Mishra**, Priyanka Siwach**, Pallavi Misra, Simran Dhiman, Parul Srivastava and B. Jayaram (2021). Intron-Exon boundary junction in human genome have in-built unique structural and energetic signals. Submitted to Nucleic Acids Research, vol 49 (5) 2674-2683.

2. Akhilesh Mishra, Sahil Dhanda**, Priyanka Siwach**, Shruti, B Jayaram, 2020. A novel method *SEProm* for prokaryotic promoter prediction based on DNA structure and energetics. Bioinformatics, btz941, Jan issue (doi: 10.1093/bioinformatics/btz941) (IF-5.6)

3. Sheetal Saini, Harisankar Singha, **Priyanka Siwach** and B. N. Tripathi (2019). Recombinant horse IL-4 and IL-10 induced a mixed inflammatory cytokine response in horse peripheral blood mononuclear cells (PBMCs). Veterinary World Journal, Volume 12:496-503. (IF 1.22)

4. Sheetal Saini, Harisankar Singha, **Priyanka Siwach** and B. N. Tripathi (2019). Investigating immunomodulating activities of recombinant horse IL-2, IL-18 and IFN-γ in peripheral blood mononuclear cells (PBMCs). Indian Journal of Animal Research, DOI: 10.18805/ijar.B-3818. (IF-0.395)

5. Megha Sihag, Suresh Kumar Gahlawat, **Priyanka Siwach** (2019). Assembly and Annotation of Expressed sequence tags (ESTs) for Functional analysis of G. arboretum transcriptome. Annals of Biology 35 (2): 160-166. (IF- 0.07)

6. Akhilesh Mishra, **Priyanka Siwach**, Pallavi Misra, B Jayaram, Manju Bansal, Wilma K. Olson, Kelly Thayer and David L. Beveridge 2018. Towards a universal structural and energetic model for prokaryotic promoter. Biophysical Journal, 115, 7, 1180-1189, doi 10.1016/j.bpj.2018.08.002. (3.66)

7. Sharma P, Watts A, Kumar V, Srinivasan R, Siwach P 2018. Cloning, characterization and expression analysis of APETELA2 genes of Brassica juncea (L.) Czern. Indian journal of Experimental Biology, 56 (8). (0.783)

8. Khushboo Sethi, Priyanka **Siwach**, Surender Kumar Verma, 2017. Linkage disequilibrium and association mapping of fiber quality traits in elite Asiatic cotton (*Gossypium arboreum*) germplasm populations. Czech journal of genetics and plant breeding, doi. 10.17221/142/2016-CJGPB.

9. Pooja Sharma, Vajinder Kumar, Sunil K Singh, Shweta Thakur, **Priyanka Siwach**, Yelen Sreenivasulu, Ramamurthy Srinivasan, Shripad Ramachandra Bhat, 2017. Promoter Trapping and Deletion analysis show Arabidopsis thaliana APETALA2 Gene Promoter is bidirectional and functions as a pollen and ovule specific promoter in the reverse orientation. Applied Biochemistry and Biotechnology, 182:1591–1604, DOI 10.1007/s12010-017-2420-9.

10. Khushboo Sethi**, Priyanka Siwach** and Surender Kumar Verma 2016. "Simple sequence repeats (SSR) and interspersed sequence repeats (ISSR) markers for genetic diversity analysis among selected genotypes of *Gossypium arboreum* race 'bengalense'." African Journal of Biotechnology 15, no. 1: 7-19.

11. Khushboo Sethi, **Priyanka Siwach**, Surender Kumar Verma 2015. Assessing genetic diversity among six populations of *Gossypium arboreum* L. using microsatellites markers. Plant Physiology and Molecular Biology DOI 10.1007/s12298-015-0326-y

12. Khushboo Sethi, **Priyanka Siwach**, Surender Kumar Verma and Megha Sihag 2015. Assessing genetic diversity among *Gossypium arboreum* L. genotypes using ISSR markers. International Journal of Pharma and Bio Sciences, Jan 6 (1): (B) 201-208.

13. Leena Seasotyiya, **Priyanka Siwach**, Pooja Bharti, Sheema bai, Anupama Malik, Ravinder Kumar and Sunita Dalal, 2015. A cross sectional study on prevalence of antibiotic resistance and role of Efflux pumps in fluroquinolone resistance by using efflux pump inhibitors in isolated cultures from poultry, dairy farms and MTCC strains from reservoirs, British Microbiology Research journal, 5(2), 107-116.

14. Leena Seasotiya, **Priyanka Siwach**, Sheema bai, Anupma Malik, Pooja Bharti, Sunita Dalal, 2014. Phytochemical evaluation and HPTLC fingerprint profile of Cassia fistula, International Journal of Advances in Pharmacy, Biology, and Chemistry, Vol 3 (3), 604-611.

15. Leena Seasotiya, **Priyanka Siwach**, Sheema bai, Anupma Malik, Pooja Bharti, Sunita Dalal, 2014. Free radical scavenging activity, phenolic content and phytochemical analysis of seeds of *Trigonella foenum graecum*, Asian pacific journal of health sciences, 1 (3), 219-226.

16. Khushboo Sethi, **Priyanka Siwach**, Surender Kumar Verma, 2014. 'Genetic improvement of *Gossypium arboreum* L. using molecular markers: status and development needs'**,** African Journal of Agricultural Sciences, Vol 9 (29), pp 2238-2249.

17. Anita Rani Gill and **Priyanka Siwach, 2014,** 'Production of selected secondary metabolites in callus in callus and shoot cultures of Ficus religiosa L.- a valuable medicinal plant' Research journal of Biotechnology, 9 (3), March, pp 63-73.

18. **Priyanka Siwach**, Anita Rani Gill, 2014. Influence of casein hydrolysate on in vitro rooting of *Ficus religiosa* microshoots and survival rate during transplantation, Annals of Biology 30: 21-24.

19. **Priyanka Siwach**, Anita Rani Gill, 2013. Optimization of conditions for cultures establishment of nodal explants of Ficus religiosa L., Journal of Applied Bioscience, 9 (2): 102-108.

20. **Priyanka Siwach**, Anita Rani Gill, 2013. Effect of adenine sulphate on growth and secondary metabolites profile of callus cultures of Ficus religiosa L. , Haryana Journal of Horticultural Science , Vol 40

21. Girish Chander Pandey, S Sareen, **Priyanka Siwach** and Ratan Tiwari, 2013. Molecular characterization of heat tolerance in Bread Wheat (*Triticum aestivum* L.) using differences in Thousand-Grain Weights (dTGW) as a potential Indirect Selection Criterion. Cereals Research Communications, DOI 10.1556/CRC.2013.0041.

22. **Priyanka Siwach**, Anita Rani Gill, 2013. Micropropagation of *Ficus religiosa* L. via leaf explants and comparative evaluation of acetylcholinesterase inhibitory activity in the micropropagated and conventionally grown plants. 3Biotech DOI 10.1007/s13205-013-0175-8.

23. Manoj Siwach, **Priyanka Siwach**, Priyanka Solanki and Anita Rani Gill, 2013. Biodiversity conservation of Himalayan medicinal plants in India: A retrospective analysis for a better vision. International Journal of Biodiversity and Conservation, Vol 5 (9), 604-615.

24. Girish Chander Pandey, Jagdish Rane, Sindhu Sareen, **Priyanka Siwach**, N K Singh and Ratan Tiwari, 2013. Molecular investigations on grain filling rate under terminal heat stress in bread wheat (Triticum aestivum L.). African Journal of Biotechnology, Vol 12(28): 4439-4445.

25. **Priyanka Siwach**, Swati Chanana, Anita Rani Gill, Kavita, Poonam Dhanda, Jyoti, Hitesh, Deepika, 2012. Effects of adenine sulphate, glutamine and casein hydrolysate on in vitro shoot multiplication and rooting of kinnow mandarin (*Citrus reticulata* Blanco)', African Journal of Biotechnology, Vol 11 (92), 15852-15862

26. Priyanka Solanki and **Priyanka Siwach**, 2012. Optimization of conditions for in vitro seed germination and shoot multiplication of *Aconitum heterophyllum* Wall. International Journal of Medicinal and Aromatic Plants, Vol 2, No 3, 481-487.

27. Sandeep jaglan, **Priyanka Siwach**, Namita Singh and O P Yadav, 2012. Optimization of DNA extraction for RAPD studies in Plantago ovate. Annals of Biology 28 (1), 1-4.

28. Sandeep Jaglan, **Priyanka Siwach**, Namita Singh, O P Yadav and Sarika Punia, 2011. Optimization of ISSR markers to evaluate genetic diversity in *Plantago ovata* germplasm. Annals of Agri-Bio research, 16 (1), 17-21.

29. **Priyanka Siwach** and Anita Rani Gill, 2011. Enhanced shoot multiplication in *Ficus religiosa* L. in the presence of adenine sulphate, glutamine and phloroglucinol. Physiology and Molecular Biology of Plants, Vol 17, No. 3, 271-280.

30. **Priyanka Siwach**, Anita Rani Gill and Kavita Kumari, 2011. Effect of season, explants, growth regulators and sugar level on induction and long term maintenance of callus cultures of *Ficus religiosa* L. African Journal of Biotechnology, vol 10 (24), 4879-4886.

31. **Priyanka Siwach**, Kiran Grover and Anita Rani Gill, 2011. The influence of Plant Growth regulators, explant nature and sucrose concentration on in vitro callus growth of *Thevetia peruviana* Schum, Asian Journal of Biotechnology, 3, 280-292.

32. Anita Rani Gill and **Priyanka Siwach**, 2009. *In vitro* culture establishment and shoot regeneration of *Ficus religiosa* L. Haryana Journal of Horticultural Science 38 (3&4): 173-177.

33. Priyamvada, Ratan Tiwari, M S Saharan, R Chatrath, **Priyanka Siwach** and B Mishra 2009. 'STS marker based tracking of slow rusting Lr34 gene in Indian wheat genotypes': Indian Journal of Biotechnology, Vol 8, 207-213.

34. Priyamvada, Ratan Tiwari, M S Saharan, **Priyanka Siwach** and B Mishra 2008. Selection of a breeder friendly marker for durable wheat leaf rust resistance gene Lr34'; Journal of Wheat Research 2 (1); 31-32.

35. Priyamvada, **Priyanka Siwach**, Ratan Tiwari, Jag Shoran and B Mishra; 2007. 'Molecular Mechanism of Disease Resistance in Wheat', Advanced Biotech, Jan, 29-31.

36. Neeru Yadav, Namita Singh, **Priyanka Siwach**, O P Yadav, 2006.'Neutraceutical composition of selected genotypes of *Plantago ovata* for vigorous genotype selection as health food; International Journal of Plant Sciences, Vol 1 (2), 167-171.

37. J P Yadav, Suresh Kumar and **Priyanka Siwach**, 2006. 'Folk medicine used in gynecological and other relted problems by rural population in Haryana', Indian Journal of Traditional Knowledge, Vol5 (3), 323-326.

38. Vinod Chhokar, D R Sood, **Priyanka Siwach** and Meenu Rani, 2006. 'Fatty acid composition of some promosing genotypes of garlic (*Allium sativum* L.), Annals of Biology 22 (1), 23-24.

39. **Priyanka Siwach**, Sunita Jain, Navinder Saini, Vijay K Chowdhary and Rajinder K Jain, 2004; Allelic diversity among Basmati and Non-Basmati Long grain Indica rice varieties using microsatellite markers, Journal of Plant Biochemistry and Biotechnology, vol 13, 25-32.

40. **Priyanka Rana**, Varghese T M, Yadav N R, Chowdhury V K and Chowdhury J B, 2001. In vitro studies in dahlia variabilis Cav. Annals of Agri-Bio Research 6 (1): 9-13.

Books

1. **Priyanka Siwach**, Namita Singh, **2007**; Molecular Biology-Principles and Practices', **Laxmi Publications**, New Delhi. ISBN 978-81-318-0270-0.

2. Biotechology: Prospects and Applications (**Editors**: R.K. Salar, S.K. Gahlawat, **P. Siwach**, J.S. Duhan), 2014, **Springer**, ISBN: 978-81-322-1683-4)

3. Plant Biotechnology: Recent Advancements and Developments (**Editors**: S.K. Gahlawat, R. K. Salar, **Priyanka Siwach,** J.S Duhan, Suresh Kumar, Pawan Kaur), 2017, **Springe**r, ISBN: 978-981-10-4731-2, DOI 10.1007/978-981-10-4732-9.

4. Advances in Animal Biotechnology and its Applications **(Editors:** S.K. Gahlawat, J.S Duhan, R. K. Salar, **Priyanka Siwach,** Suresh Kumar, Pawan Kaur), 2018, **Springer**, ISBN: 978-981-10-4702-2.

Book Chapters

1. Akhilesh Mishra, **Priyanka Siwach**, Poonam Singhal, B. Jayaram, 2019. 'Chemgenome2.1: An ab initio gene prediction software' in Gene Predcition: Methods and Protocols (Editor: Martin Kollmar), Series title: Methods in Molecular Biology, Springer Publishing House.

2. Sundeep Jaglan, Rakesh Yadav, **Priyanka Siwach** and Namita Singh, 2017. 'Recent updates on Molecular Biotechnological Intervention in Isabgol' in Plant Biotechnology: Recent Advancements and Develpments (Editors: S.K. Gahlawat, R. K. Salar, Priyanka Siwach, J.S Duhan, Suresh Kumar, Pawan Kaur), 2017, ISBN: 978-981-10-4731-2, DOI 10.1007/978-981-10-4732-9.

3. Megha Sihag, Khushboo sethi, S. K. Gahlawat and **Priyanka Siwach**, 2017. 'Advances in computational tools for plant microRNA identification' in Plant Biotechnology: Recent Advancements and Develpments (Editors: S.K. Gahlawat, R. K. Salar, Priyanka Siwach, J.S Duhan, Suresh Kumar, Pawan Kaur), 2017, ISBN: 978-981-10-4731-2, DOI 10.1007/978-981-10-4732-9.

4. **Priyanka Siwach**, Anita Rani gill, Khushboo Sethi, 2014. Hairy root cultures of Medicinal Trees: a viable alternative for commercial production of high value secondary metabolites in Biotechnology: Prospects and Applications, Springer-Verlag, Germany.

5. **Priyanka Siwach** and Priyanka Solanki, 2013. Conservation of *Aconitum heterophyllum*: The critically endangered species of Indian Himalayas-Status and Future needs, in 'Impact of Global Climate change on earth ecosystems'(Eds-D R Khanna, A K Chopra, Gagan Matta, Vikas Singh and Rakesh bhutani), Biotech Books Publishing House, New Delhi.

6. Anita Rani Gill, **Priyanka Siwach** and Khushboo Sethi, 2012. Efficient induction and proliferation of callus cultures of *Ficus religiosa* L. and comparative analysis of various phytochemicals in the aqueous extracts of in vivo and in vitro tissue, in 'Energy-Water-Waste Nexus for environment management' (Eds Rani Devi, M M Kidwai, P K Rose & A K saran). Narosa Publishing House, ISBN 978-81-8487-206-4.

Papers in conference proceedings

1. **Priyanka Siwach**, Namita Singh, J P Yadav and O P Yadav, 2005. "Conservation strategies for medicinal and aromatic plants; Present status and development needs. Proceedings of National Seminar on role of medicinal and aromatic plants in Ayurvedic, Unani and Siddha system of medicine, Department of Plant Breeding, CCSHAU, Hisar., Feb 13-15.

Reviewer for Scientific Journals

- Journal of Plant Biochemistry and Biotechnology
- Applied Biochemistry and Biotechnology
- Journal of Medicinal Plant Research
- Scientiae Horticulturae (Elsevier)
- Journal of Wheat Research
- *In Vitro* Cellular and Developmental Biology-Plant
- Czech Journal of Genetics and Plant Breeding