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SCHOLARSHIP/FELLOWSHIP AWARDED:

- Fulbright Nehru Senior Research Fellow 2011-2012 at Crop Science Department, N C State University, Raleigh, NC, USA
- Felicitated by Dr M L Ranga, Hon'ble Vice Chancellor Guru Jambheshwar University of Science & Technology, Hisar and Chief Guest at the **National Workshop on IPR and Patent awareness** held on August 9, 2011. Presented with a Certificate of Excellence and a memento for obtaining the **first ever Patents for Guru Jambheshwar University of Science & Technology Hisar and jointly shared by GJUS&T, Hisar & DBT, New Delhi**
- DBT Overseas Associateship-2006 for six months Tenable at Artificial Cell Technologies, Connecticut, New Haven, USA.
- Commonwealth Visiting Research Fellow 2003-2004 at Plant Sciences Division, School of Biosciences, University of Nottingham, Sutton Bonington Campus, Loughborough, LE12 5RD, UK by Association of Commonwealth Universities, London, UK
- Senior Research Fellowship by University of Delhi, Delhi under "Departmental Scheme".
- Junior Research Fellowship by University of Delhi, Delhi under "Departmental Scheme".
- UNDP Fellowship by Postgraduate School, Indian Agricultural Research Institute, New Delhi.
- Graduate Scholarship by College of Agriculture, Haryana Agricultural University, Hisar.

PATENTS GRANTED:

- 1 **Ashok Chaudhury and Minakshi Pal.** Method of Direct Regeneration and Shikonin Induction in Callus of *Arnebia hispidissima*. Patent Application # 2066/DEL/2004 dated 21-10-2004. Indian Patent Granted # 279667.
- 2 **Ashok Chaudhury and Minakshi Pal.** Method for Transformation of *Arnebia* species. Patent Application # 2483/DEL/2004 dated 14-12-2004. **Indian Patent granted.**
- 3 **Ashok Chaudhury and Minakshi Pal.** Method of Direct Regeneration, Shikonin Induction in Callus and *Agrobacterium*-mediated genetic transformation of *Arnebia hispidissima*. **Patent Application # 05256545 dated 21-10-05. European Patent Granted Published on 10th October, 2008.**

PROJECTS IMPLEMENTED:

1. HRD Program in M. Tech. (Nano Science & Tech) **Coordinator Prof A Chaudhury.** and Later on Prof N Dilbaghi. Funded by Department of Science & Technology, Ministry of Science & Technology under Nano mission Program, Govt. of India, New Delhi. **(Completed).**
2. Bioinformatics Infrastructure Facility (BIF) **Coordinator Prof A Chaudhury.** Funded by Department of Biotechnology, Ministry of Science & Technology, Govt. of India, New Delhi. **(Completed)**
3. Special Assistance Program (SAP-DRS-I) **Coordinator Prof A Chaudhury.** Funded by University Grants Commission, New Delhi. **(Completed).**
4. Funds for Improvement of Science & Technology Infrastructure level-I (FIST) **Coordinator Prof A Chaudhury.** Funded by Department of Science & Technology, Ministry of Science & Technology, Govt. of India, New Delhi **(Completed)**
5. Special Assistance Program (SAP-DRS-II) **Coordinator Prof A Chaudhury.** Funded by University Grants Commission, New Delhi. **(Ongoing).**
6. Genetic Transformation of Local Varieties of *Indica* Rice in Haryana for Introduction of Salinity Tolerance. **Principal Investigator Prof A Chaudhury.** Funded by University Grants Commission, New Delhi. April 2002-April 2005. **(Completed).**
7. Genetic Modification of Lignin Biosynthetic Pathway for Low Lignin Content in Poplars. **Principal Investigator Prof A Chaudhury.** Funded by Department of Biotechnology, Ministry of Science and Technology, Govt. of India, New Delhi. February 2003 - February 2006. **(Completed).**
8. Cataloguing the Genetic Diversity of *Trigonella* using DNA based Molecular Markers. **Principal Investigator Prof A Chaudhury.** Funded by University Grants Commission, New Delhi. University Grants Commission, New Delhi. January 2010 -January 2014. **(Completed).**
9. Expression analysis of galactomannan biosynthesis pathway genes in cluster bean Transcriptome sequencing. **Principal Investigator Prof A Chaudhury.** Funded by Department of Biotechnology, Ministry of Science and Technology, Govt. of India, New Delhi. September, 2014 – September, 2017. **(Completed).**

Research Guidance/Supervision:

S No.	Name of Degree	# of Students Enrolled	Thesis Submitted	Degree Awarded
1.	M.Sc. Biotechnology	112	106	106
2.	M.Sc. Microbiology	12	12	12
3.	M Phil Biotechnology	2	2	2
4.	M. Tech. Biotechnology	1	1	1
5.	M. Tech. Nano Science & Technology	9	9	9
6.	Ph D Biotechnology	3	2 (Awaiting Viva) 1 (Submitted)	24

SELECTED PUBLICATIONS:

Ila Joshi, Anil Kumar, Ashisk K Singh, Deshika Kohli, K V Raman, Anil Sirhoi, **Ashok Chaudhury**, Pradeep K Jain (2019). Development of nematode resistance in Arabidopsis by HD-RNAi-mediated silencing of the effector gene *Mi-msp2*. *Sci Rep* **9**, 17404 (2019). <https://doi.org/10.1038/s41598-019-53485-8>

Kavita Ahuja, Abhishek Vats, Mira Adil Beg, KKGDUL Kariyawasam, **Ashok Chaudhury**, Mitali Chatterjee, Nadira D Karunaweera, Angamuthu Selvapandiyam. (2019). High resolution melting based method for rapid discriminatory diagnosis of co-infecting *Leptomonas seymouri* in *Leishmania donovani*-induced leishmaniasis. *Parasitology International* 75:102047. <https://doi.org/10.1016/j.parint.2019.102047>

Ashok Chaudhury, Tanvi Kaila, Kishor Gaikwad. (2019). Transcriptome Sequencing of Seeds Collected at Different Developmental Stages of Commercially Important Indian Varieties of Cluster Bean (*Cyamopsis tetragonoloba* L.) for Elucidation of Galactomannan Biosynthesis Pathway Genes. *Scientific Reports*. 9:11539 | <https://doi.org/10.1038/s41598-019-48072-w>.

Ashok Chaudhury, Anita Devi Dalal, Nayan Tara Sheoran. (2019). Isolation, Cloning and Expression of *CCA1* Gene in Transgenic Progeny Plants of Japonica Rice Exhibiting Altered Morphological Traits. *PLOS ONE*. 14(8):e0220140 <https://doi.org/10.1371/journal.pone.0220140>

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Kavita Ahuja, Mirza Adil Beg, Ruby Sharma, Ajay Saxena, Nilofer Naqvi, Niti Puri, **Ashok Chaudhury**, Robert Duncan, Poonam Salotra, Hira Nakhasi, Angamuthu Selvapandiyan. 2018. A novel signal sequence negative multimeric glycosomal protein required for cell cycle progression of *Leishmania donovani* parasites. *Biochemia et Biophysica Acta (BBA)-Molecular Cell Research*. **1865**(8):1148-1159. doi.org/10.1016/j.bbamcr.2018.05.012 ISSN: 0167-4889.

Pooja Bangar, **Ashok Chaudhury**, Suraj Umdale, Ratna Kumari, Bhavana Tiwari, Sanjay Kumar, Ambika B. Gaikwad and K. V. Bhat. 2018. Detection and characterization of polymorphic simple sequence repeats markers for the analysis of genetic diversity in Indian mungbean [*Vigna radiata* (L.) Wilczek] Indian Journal Genetics and Plant Breeding. **78**(1):111-117. DOI: 10.5958/0975-6906.2018.00013.5

Pawan Kaur, Rajesh Thakur, Joginder Singh Duhan, **Ashok Chaudhury**. 2018. Management of wilt disease of chickpea in vivo by silver nanoparticles; biosynthesized by rhizospheric microflora of chickpea (*Cicer arietinum*). *Journal of Chemical Technology & Biotechnology*. Doi.org/10.1002/jctb.5680. ISSN:1097-4660.

Pawan Kaur, Rajesh Thakur, Himanshu Malwal, Anju Manuja, **Ashok Chaudhury**. 2018. Biosynthesis of biocompatible and recyclable silver/iron and gold/iron core-shell nanoparticles for water purification technology. *Biocatalysis and Agricultural Biotechnology* **14**:189–197. doi.org/10.1016/j.bcab.2018.03.002. ISSN: 1878-8181

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Uma Gaur, Madhu Sudan Tantia, Bina Mishra, S T Bharani Kumar, Ramesh Kumar Vijh and **Ashok Chaudhury** (2018). Mitochondrial D-loop analysis for uncovering the population structure and genetic diversity among the indigenous duck (*Anas platyrhynchos*) populations of India. *Mitochondrial Part A: DNA Mapping, Sequencing and Analysis*.**29**(2):212-219. Print ISSN: 2470-1394 Online ISSN: 2470-1408 doi.org/10.1080/24701394.2016.1267158.

Annu Sindhu, S K Tehlan **Ashok Chaudhury**. 2017. Analysis of genetic diversity among medicinal therapist *Trigonella foenum-graecum* L. genotypes through RAPD and SSR Markers. *Acta Physiologiae Plantarum*. **39**:100-114. DOI:10.1007/s11738-017-2395-8. ISSN: 0137-5881 (Print) 1861-1664 (Online)

Nayan Tara **Ashok Chaudhury**. 2016. Promotive effect of partial desiccation on plant regeneration efficiency of indica rice (*Oryza sativa* L.) varieties HKR-120 and HKR-126. *International Journal on Agricultural Sciences* **7**(2):186-189. ISSN: 0976-450x

Tanvi Kaila, Pavan K Chaduvula, Swati Saxena, Kaushalendra Bahadur, Santosh J Gahukar, **Ashok Chaudhury**, T R Sharma, N K Singh, Kishor Gaikwad. (2016) Chloroplast Genome Sequence of pigeonpea (*Cajanus cajan* (L.) Millspaugh) and *Cajanus scarabaeoides*. Genome organization and Comparison with other legumes. *Frontiers in Plant Science* **7**:1847. ISSN: 1664-462X. doi:10.3389/fpls.2016.01847

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Alpana Kulhari, Rohtas Singh, **Ashok Chaudhury**, Ashok K Dhawan, and Rajwant K Kalia 2015. Assessment of genetic variability through ISSR and RAPD markers in *Commiphora wightii* (Arn.) Bhandari. Acta Physiologiae Plantarum **37**:113-127. DOI 10.1007/s11738-015-1869-y **Impact Factor 1.584**

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Alpana Kulhari, Arun Sheorayan, Susheel Sarkar, **Ashok Chaudhury** and Rajwant K Kalia 2014. Quantitative determination of guggulsterone in existing natural populations of *Commiphora wightii* (Arn.) Bhandari for identification of germplasm having higher guggulsterone content. Physiol Mol Biol Plants DOI 10.1007/s12298-014-0271-1 ISSN: 0971-5894.

Pawan Kaur, Meenu Chopra, Anju Manuja, **Ashok Chaudhury** and Rajesh Thakur. 2014. Synthesis, characterisation and in vitro evaluation of cytotoxicity and antimicrobial activity of chitosan-metal nanocomposites. Journal of Chemical Technology & Biotechnology ISSN: 1097-4660 DOI: 10.1002/jctb.4383

Anuradha Singh, Shrikant Mantri, Monica Sharma, **Ashok Chaudhury**, Rakesh Tuli and Joy Roy 2014. Genome-wide transcriptome study in wheat identified candidate genes related to processing quality, majority of them showing interaction (quality x development) and having temporal and spatial distributions. BMC Genomics 15:29. ISSN: 1471-2164. doi: 10.1186/1471-2164-15-29.

Inderjit S. Yadav, Prajwal P. Nandekar, Shambhavi Srivastava, Abhay Sangamwar, **Ashok Chaudhury**, and Subhash Mohan Agarwal. 2014. Ensemble docking and molecular dynamics identify knoevenagel curcumin derivatives with potent anti-EGFR activity. Gene 539: 82–90. *Gene*. doi:10.1016/j.gene.2014.02.035.

Inderjit S Yadav, Harinder Singh, **Ashok Chaudhury**, G.P.S. Raghava and Subhash M. Agarwal 2014 EGFRIndb: Epidermal Growth Factor Receptor Inhibitor database. *Anti-Cancer Agents in Medicinal Chemistry*. **14**(7) 928-935 DOI: 10.2174/1871520614666140323203140

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Satish Kumar, Dharminder Kumar, **Ashok Chaudhury** (2013) A Comparative Analysis of Tandem Repeat Patterns in Viral Oncogene (BRAF) Across Homologous Species *International Journal of Advanced Research in Computer Science and Software Engineering*. **3**: (11) 106-110. ISSN: 2277 128X

Satish Kumar, Dharminder Kumar, **Ashok Chaudhury** (2013) Mining and Analysis of Tandem Repeated Patterns in Oncogenic Sequences involved in Cancer progression. *International Journal of Computer Science Issues*. **10**:(6,#2), 250-255. ISSN (Print): 1694-0814 ISSN (Online): 1694-0784

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Alpana Kulhari, Arun Sheorayan, Somvir Bajar, Susheel Sarkar, **Ashok Chaudhury** and Rajwant K Kalia (2013) Investigation of heavy metals in frequently utilized medicinal plants collected from environmentally diverse locations of north western India Investigation of heavy metals in frequently utilized medicinal plants collected from environmentally diverse locations of north western India. SpringerPlus, **2**:676-684. <http://www.springerplus.com/content/2/1/676> DOI: 10.1186/2193-1801-2-676 ISSN: 2193-1801

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LIST OF PHD SCHOLARS THESIS SUPERVISED:

Race identification of *Macrophomina phaseolina* causal agent of root rot of cluster bean using Molecular Markers. Ms. Purkayastha Sharmishtha. Prof. A Chaudhury Registration Number 0109902. (Ph. D. Degree Awarded).

Studies on DNA fingerprinting of Some Superior Guar Genotypes by RAPD. Ms. Anita Punia, Prof. A Chaudhury Registration # 0109901. (Ph. D. Degree Awarded).

Identification of races of *Xanthomonas axonopodis* pv. *Cyamopsidis* using Molecular Markers. Ms. Kaur Bhavneet. Prof. A Chaudhury Registration Number-0109904. (Ph. D. Degree Awarded).

***In Vitro* Culture and induction of Shikonin Production in *Arnebia* Sp. Mrs. Pal Minakshi. Prof. A Chaudhury Registration Number-0109905. (Ph. D. Degree Awarded).**

Genetic Transformation of Local Variety of Rice in Haryana for Enhancing Its Salinity Tolerance. Ms. Gaurva Priyanka. Prof. A Chaudhury Registration Number- 0209902. (Ph. D. Degree Awarded).

Genetic Transformation of Tomato (*Lycopersicon esculentum*) for Enhancement of Salinity Tolerance. Ms. Bansal Monika. Prof. A Chaudhury Registration Number-0209903. (Ph. D. Degree Awarded).

Biochemical and Molecular Marker Studies for Bread Quality Improvement in Wheat (*Triticum aestivum* L.) Umesh Gautam. Prof. A Chaudhury & Dr. Ratan Tiwari and R K Gupta Principal Scientists, Indian Institute of Wheat and Barley Research (Formerly DWR), Registration # is 0409901. (Ph. D. Degree Awarded).

Molecular Approaches for the Development of SCAR Assay as a Diagnostic Tool for the Detection and Distribution of dsRNA Among Isolates of *Macrophomina phaseolina*. Ms. Pooja Arora. Prof. A Chaudhury Registration # is 0609901. (Ph. D. Degree Awarded).

Studies on Genetic Modification of Lignin Biosynthesis Pathway in Poplars for Low Lignin Content. Mr. Rakesh Yadav. Prof. A Chaudhury Registration # is 0609903. (Ph. D. Degree Awarded).

Genetic Characterization of Indian Duck Populations (*Anas platyrhynchos*) Using Molecular Markers. Ms. Uma Gaur. Registration # 0709901.(Ph. D. Degree Awarded).

Knowledge Mining for Tandem Repeat Patterns from Biological Data. Mr Satish Kumar Registration # 0601901. Prof Dharmender Kumar & Prof A Chaudhury. (Ph. D. Degree Awarded).

Synthesis of Nano Particles & Application in Plant Disease Control. Mrs Pawan Kaur Registration # 011099011 Dr Rajesh Thakur & Prof A Chaudhury. (PhD Degree Awarded).

Molecular Characterization of elite genotypes of *Trigonella* using DNA Based Molecular markers. Ms Annu Sindhu Prof. A Chaudhury Registration # 1109901 (Ph. D. Degree Awarded).

Characterization of Germplasm of *Commiphora wightii* (Arnot.) Bhamdari using DNA Based Molecular Markers and on the Basis of Guggulsterones. Content Ms Alpana Kulhari Registration # 1109902. Prof. A Chaudhury & Dr Rajwant K Kalia, Senior Scientist, CPB, Hisar. (Ph. D. Degree Awarded).

Micropropagation of *Lawsonia inermis* L. and *in vitro* Manipulations for Induction of Lawsone Content. Ms Poonam Duhan Registration # 1109903. Prof. A Chaudhury & Dr. Subhash Kajla, Senior Scientific Officer-II, CPB, Hisar. (PhD Degree Awarded).

Micropropagation of *Glycyrrhiza glabra* Linn. & Induction of Glycyrrhizin Through *in vitro* Manipulations Ms Manisha Gupta Registration # 1109904. Prof A Chaudhury & co-supervision of Dr. Subhash Kajla, Senior Scientific Officer-II, CPB, Hisar. (PhD Degree Awarded).

Characterization of *Tinospora cordifolia* (Wild.) Miers Germplasm Using Molecular Marker and Berberin Content. Mr. Arun Sheorayan Registration # 1109905. Prof. A Chaudhury and co-supervision of Dr. Subhash Kajla, Senior Scientific Officer-II, CPB, Hisar. (PhD Degree Awarded).

Shikonin: Comparative study of signaling pathways in multiple therapeutic areas. Ms. Bhawana Gupta Registration # 12099003. Prof. A Chaudhury & Joint Supervisor Dr. Sabyasachi Chakraborty (Associate Director) TCGLS, Kolkata (West Bengal). (PhD Degree Awarded).

Identification of Genomic regions Associated with Spot Blotch Resistance in Wheat (*Triticum aestivum* L.) Mr Virender Singh Registration # 12099005. Prof. A Chaudhury & Joint Supervisor Dr. Gyanendra Singh, Principal Scientist (Plant Breeding), Indian Institute of Wheat and Barley Research (Formerly DWR), Karnal. (PhD Degree Awarded).

Modulation of Scion through Graft Transmissible Signals from Rootstock, Using *Arabidopsis* as a Model System. Ms. Anita Kumari Registration # 12099008. Prof. A Chaudhury & Joint Supervisor Dr. Rakesh Tuli Executive Director, National Agri-Food Biotechnology Institute (NABI) Mohali. (Thesis Submitted).

Identification and Characterization of Infection specific Antigen from Proteome of *Trypanosoma evansi* and its Application in Sero-diagnosis. Mr. Jaideep Singh Registration # 13099004. Prof. A Chaudhury & Joint Supervisor Dr S C Yadav, Principal Scientist, NRCE, Hisar. (Ph. D. Degree Awarded).

Studies on Regulation of *CCA1* gene Expression in *Indica* Rice. Ms. Nayan Tara Registration # 13099007. Prof. A Chaudhury. (PhD Degree Awarded).

Micropropagation of *Andrographis paniculata* and *in vitro* Manipulations for the Induction of its Secondary Metabolites. Ms. Nidhi Jindal Registration #13099008 Prof. A Chaudhury. (PhD Degree Awarded).

Expression Analysis of Starch Biosynthesis Pathway Genes and Their Effects on Starch Quality in Wheat. Ms. Anuradha Singh Registration #13099009. Prof. A Chaudhury & Joint Supervisor Dr. Rakesh Tuli Executive Director, National Agri-Food Biotechnology Institute (NABI) Mohali. (Ph. D. Degree Awarded).

Functional Genomics for Understanding the Molecular Mechanisms Governing Male Sterility in Pigeon pea. Ms. Tanvi Kaila Registration # 14099011. Prof. A Chaudhury & Co-Supervisor Dr. Kishor Gaikwad, Principal Scientist, NRCPB, IARI, New Delhi-110012. (Ph. D. Degree Awarded).

Identification and characterization of SNP markers in mungbean [*Vigna radiata* (L.) Wilczek] for cultivar identification. Ms. Pooja Bangar Registration # 14099012. Prof. A Chaudhury & Co-Supervisor Dr. K V Bhat, Principal Scientist, NBPGR, IARI Campus, New Delhi-110012. (Thesis submitted Awaiting Viva).

Characterization of Amastigote specific genes of *Leishmania donovani* by Genetic modulation in the parasite. Ms. Kavita Registration # 15099001. Prof. A Chaudhury and Co-Supervisor Dr A Selvapandiyar, JH Institute of Molecular Medicine, New Delhi (Thesis submitted Awaiting Viva).

Study on Host-delivered RNAi-mediated resistance in *Arabidopsis* against root-knot nematode (*Meloidogyne incognita*). Ms. Ila Joshi. Registration # 15099002. Prof. A Chaudhury and Co-Supervisor Dr P K Jain, Principal Scientist, NRC Plant Biotechnology, Delhi.

Studies on Regulation of *CCA1* gene Expression in Transgenic *japonica* Rice Variety Taipei 309. Ms. Anita Devi Registration # 15099009. Prof. A Chaudhury.

Studies on Characterization of *Murraya Koenigii* L. for its antioxidant and antimicrobial activities. Rajesh K Patheria Registration # 17099006. Prof A Chaudhury.