

cleared by the GEAC and awaiting the Govt. of approval for release to the environment. In the programme, several DH mapping populations are being used for mapping different systems. Presently genome sequencing of several important *B. juncea* lines are being done for developing SNP based breeding platform.

Publications

Kajla, S., Mukhopadhyay, A., & Pradhan, A. K. (2017). Development of transgenic *Brassica juncea* lines for reduced 1 seed sinapine content by perturbing phenylpropanoid pathway genes. *PLoS One*, 12(8), e0182747.

Rajarammohan, S., Kumar, A., Gupta, V., Pental, D., Pradhan, A. K., & Kaur, J. (2017). Genetic architecture of resistance to *Alternaria brassicae* in *Arabidopsis thaliana*: QTL Mapping Reveals Two Major Resistance-Confering Loci. *Frontiers in Plant Science*, 8, 260.

Dhaka, N., Mukhopadhyay, A., Paritosh, K., Gupta, V., Pental, D., Pradhan, A. K. (2017). Identification of genic SSRs and construction of a SSR-based linkage map in *Brassica juncea*. *Euphytica*, 213, 15.

He, Z., Wang, L., Harper, A. L., Havlickova, L., Pradhan, A. K., Parkin, I. A., & Bancroft, I. (2017). Extensive homoeologous genome exchanges in allopolyploid crops revealed by mRNAseq-based visualization. *Plant Biotechnology Journal*, 15(5), 594-604.

Dhaka, N., Rout, K., Yadava, S. K., Sodhi, Y. S., Gupta, V., Pental, D., & Pradhan, A. K. (2017). Genetic dissection of seed weight by QTL analysis and detection of allelic variation in Indian and east European gene pool lines of *Brassica juncea*. *Theoretical and Applied Genetics*, 130(2), 293-307.

Sharma, M., Mukhopadhyay, A., Gupta, V., Pental, D., & Pradhan, A. K. (2016). BjuB. CYP79F1 regulates synthesis of propyl fraction of aliphatic glucosinolates in oilseed mustard *Brassica juncea*: functional validation through genetic and transgenic approaches. *PLoS One*, 11(2), e0150060.

Research Projects

DBT, 2016-2021, *DBT-UDSC Partnership Programme on Genetic Manipulation of Brassicas*, Rs. 1187.66 Lakhs

Faculty Strength – 06 (Project based)

CENTRE FOR INNOVATION IN INFECTIOUS DISEASE

RESEARCH, EDUCATION AND TRAINING

Major Activities and Achievements

The Centre, CIIDRET, was established under the ordinance XV-A of the University of Delhi in Oct. 2015 with due approvals of the Academic Council and the Executive Council. As per its mandate, it has initiated several activities, which include interaction with college students of science stream to inspire them to take up Research and Innovation as their career. CIIDRET has planned to promote Industry-Academia Interaction through Entrepreneurship Guest Public Lecture Series, which include lectures by Entrepreneurs and the facilitators of Innovation. CIIDRET has been providing state-of-the-art Proteomic and Genomic analytical facilities along with expert advice to scientists from both academia and Industry, and offers consultancy to the Biotech Industry. CIIDRET will soon start hands-on training courses covering different aspects of Genomics and Proteomics in collaboration with Industry Experts under the scheme Continuing Education and Skill Enhancement for Innovation in Biotechnology (CIIDRET-CESEIB).

CIIDRET has also developed reagents for immunochemical detection of Chikungunya Virus (CHIKV) infection; and for developing rapid immunoassays for the detection and confirmation of *M. tuberculosis* and NTMs in growing culture. The process for selecting Industrial partner(s) for co-development has been initiated.

Prof. Vijay K. Chaudhary, Director, CIIDRET is providing support as advisor/consultant to M/s. Yashraj Biotechnology Ltd., Navi Mumbai, from April 1, 2016, for which the CIIDRET received Rs. 5.00 Lakhs.

Honours / Distinctions

Prof. Vijay K. Chaudhary, Director:

Member, Scientific Advisory Committee of Surat Raktadan Kendra and Research Centre, Surat.

Member, Scientific Advisory Committee of M/s Yashraj Biotechnology Ltd., Navi Mumbai.

Member, Expert Committee on TB diagnostics of the Indian Council of Medical Research, New Delhi.

Member, Working Group on TB Diagnostics of India TB Research Consortium (ITRC), of the Indian Council of Medical Research, New Delhi.

Member, Joint Scientific Advisory Committee NJIL&OMD, Agra and NIRT, Chennai.

Research Projects

DBT, Govt. of India has approved *DBT-supported Genomic Facility at University of Delhi South Campus* till 2020 with a total outlay of approx. Rs. 200 Lakhs. This facility includes Sanger's DNA Sequencing using 96- and 16-capillary Applied Biosystems machines, Microarray on Agilent platform and Next Generation Sequencing on MiSeq platform. (PI, Prof. Vijay K. Chaudhary; Co-PI, Dr. Amita Gupta).

DBT, Govt. of India has approved a project *Identification of mycobacterial proteins and novel antigenic epitopes having immunodiagnostic potential and development of reagents for point of care test for tuberculosis* till 2020 with total outlay of approx. Rs. 99 Lakhs with NITRD, New Delhi as the Clinical Collaborator. (PI, Dr. Amita Gupta; Co-PI, Prof. Vijay K. Chaudhary, NITRD Co-PI, Dr. Rohit Sarin).

Conference / Workshop Organized

Organized 2nd National Workshop on Genome Informatics, on March 6-8, 2017 at University of Delhi South Campus, New Delhi. In this, hands-on training was provided in collaboration with M/s Bionivid Technology Private Limited, Bangalore.

Seminar / Conferences Presentation

Vijay K. Chaudhary, Lecture, The Magic of Antibodies under Faculty Development Programme on Recent Advances in Diagnostics and Therapeutics at Department of Biotechnology, Jaypee Institute of Information Technology, NOIDA on July 18, 2016.

Vijay K. Chaudhary, Plenary lecture, The Magic of Antibodies on the occasion of National Science Day at Central University of Haryana, Mahendragarh on Feb. 28, 2017.

Other Significant Information

On 24th Sept. 2016, a group of 25 students of B.Sc. (Analytical Chemistry) along with two teachers from Kirori Mal College visited the CIIDRET. and were apprised of the functioning and applications of various instruments such as 96- and 16-capillary Applied Biosystems DNA sequencing machines, Agilent platform for Microarray, MiSeq platform (Illumina) for Next Generation Sequencing, AKTA Protein purification system, BIACore 3000 for studying Protein interactions, etc. Prof. Vijay K. Chaudhary also delivered a lecture, Why choose Science and Technology as a career? to inspire the young students to take up Research and Innovation as their career.
