Curriculum Vitae

Pranav Pankaj Sahu, (Ph.D.)
Institute of Experimental Botany AS CR, Olomouc, Czech Republic
Email: sahu@ueb.cas.cz; sahu.p@czechglobe.cz

Education and Academic Degrees

2013–2016	University: Jawaharlal Nehru University, New Delhi, India Degree: PhD in Life Science
2005–2007	University: Amity University, Uttar Pradesh, India Degree: M.Sc. in Biotechnology
2001–2005	University: Indira Gandhi Agriculture University, Raipur, India Degree: B.Sc. Agriculture Sciences

Position and Employment

2020-at present	Junior Researcher, Global Change Research Institute, CAS, Brno, Czech Republic
2018-at present	Marie Skłodowska-Curie Fellow, Institute of Experimental Botany AS CR, Olomouc, Czech Republic
2017-2018	Marie Skłodowska-Curie Fellow, Max Planck Institute for Plant Breeding Research, Cologne, Germany
2016-2017	Post-Doctoral Fellow, Institute of Biological, Environmental and Rural Sciences (IBERS), Aberystwyth University, United Kingdom
2013-2016	Research Scholar, School of Life Sciences, Jawaharlal Nehru University New Delhi, India
2010-2013	Senior Research Fellow, National Institute of Plant Genome Research (NIPGR), New Delhi, India
2008-2010	Junior Research Fellow Institute: National Institute of Plant Genome Research (NIPGR), New Delhi, India
2007-2008	Project Assistant Institute: National Institute of Plant Genome Research (NIPGR), New Delhi, India

Research Funding

1. GACR-Junior Grant by Czech Science Foundation (2020-2022)
2. COPE-50, H2020-MSCA-IF, European Commission (2017-2019). 166K€
3. Senior Research Fellowship Grant by Council of Scientific and Industrial Research (CSIR), Government of India. (2010-2012).

Prizes and Awards

1. Lightning-Talk Award (2019) by EMBO-India, New Delhi.
2. Young Scientist Award (2018) by The Society for Experimental Biology, United Kingdom.
3. Marie Skłodowska-Curie Individual Fellowship (2017) by the European Commission.

4. Non-NET fellowship (2013-2016) by University Grant Commission (UGC), India.
5. Senior Research fellowship (2010) by Council of Scientific and Industrial Research (CSIR), Government of India.

Publication Activity

No of Publication-25,
Citations-1189
H-index-14

Research Publication

1. Nirbhay Kumar Kushwaha, Mansi, Pranav Pankaj Sahu, Manoj Prasad and Supriya Chakraborty (2019). Chilli leaf curl virus infection downregulates the expression of the genes encoding chloroplast proteins and stress-related proteins. Physiology and Molecular Biology of Plants, doi.org/10.1007/s12298-019-00693-1
2. Saumik Basu, Nirbhay Kumar Kushwaha, Ashish Kumar Singh, Pranav Pankaj Sahu, R. Vinoth Kumar and Supriya Chakraborty (2018). Dynamics of a geminivirus-encoded pre-coat protein and host RNA-dependent RNA polymerase 1 in regulating symptom recovery in tobacco. Journal of Experimental Botany, 69:2085-2102
3. SV Ramesh, Pranav Pankaj Sahu, Manoj Prasad, Shelly Praveen, Hanu R Pappu (2017) Geminiviruses and plant hosts: A closer examination of the molecular arms race. Viruses 9, 256.
4. Nayaka SC et al. (2017) Draft genome sequence of *Sclerospora graminicola*, the pearl millet downy mildew pathogen. Biotechnology Reports, 20:18-20.
5. Swati Puranik, Jason Kam, Pranav Pankaj Sahu, Rama Yadav, Rakesh Kumar Srivastava, Hennry Ojulong, Rattan Yadav (2017) Harnessing Finger Millet to Combat Calcium Deficiency in Humans: Challenges and Prospects. Frontiers in Plant Science, 8:1311.
6. Garima Pandey, Chandra Bhan Yadav, Pranav Pankaj Sahu, M Muthamilarasan and Prasad M (2017) Salinity induced differential methylation patterns in contrasting cultivars of foxtail millet (*Setaria italica* L.). Plant Cell Reports, 36:759–772
7. Pranav Pankaj Sahu, Namisha Sharma, Swati Puranik, Supriya Chakraborty, Manoj Prasad (2016) Tomato 26S Proteasome subunit RPT4a regulates ToLCNDV transcription and activates hypersensitive response in tomato. Scientific Reports, 6:27078.
8. Garima Pandey, Namisha Sharma, Pranav Pankaj Sahu and Manoj Prasad (2016) Chromatin-Based Epigenetic Regulation of Plant Abiotic Stress Response. Current Genomics, 17, 490-498.
9. Nirbhay Kushwaha, Pranav Pankaj Sahu, Manoj Prasad, Supriya Chakraborty (2015) Chilli leaf curl virus infection highlights the differential expression of genes involved in protein homeostasis and defense in resistant chilli plants. Applied Microbiology and Biotechnology, 99:4757-4770.
10. Pranav Pankaj Sahu, Manoj Prasad (2015) Application of molecular antiviral compounds: novel approach for durable resistance against geminiviruses. Molecular Biology Reports, 42:1157-1162.
11. Pranav Pankaj Sahu, Namisha Sharma, Swati Puranik, Manoj Prasad (2014) Post-transcriptional and epigenetic arms of RNA silencing: a defense machinery of naturally tolerant tomato plant against tomato leaf curl New Delhi virus. Plant Molecular Biology Reporter, 32:1015-1029.
12. Pranav Pankaj Sahu, Garima Panday. Namisha Sharma, Swati Puranik, M Muthamilarasan, Manoj Prasad (2014) Epigenetic mechanisms of plant stress responses and adaptation. Plant Cell Reports, 32:1151-1159.
13. Pranav Pankaj Sahu, Namisha Sharma, Swati Puranik, M Muthamilarasan, Manoj Prasad (2014) Involvement of host regulatory pathways during geminivirus infection: a novel platform for generating durable resistance. Functional and Integrative Genomics, 14:47-58.

14. Neeraj Kumar Rai, Pranav Pankaj Sahu, Sarika Gupta, M K Reddy, KV Ravishankar, Major Singh, Manoj Prasad (2014) Identification and validation of an ISSR marker linked to Tomato leaf curl New Delhi virus resistant gene in a core set of tomato accessions. Vegetable Science, 40:1-6.
15. Swati Puranik, Pranav Pankaj Sahu, Sambhu Nath Mandal, Venkata Suresh B, Swarup Kumar Parida, Manoj Prasad (2013) Comprehensive Genome-Wide Survey, Genomic Constitution and Expression Profiling of the NAC Transcription Factor Family in Foxtail Millet (*Setaria italica* L.). PLoS ONE, 8:e64594.
16. Pranav Pankaj Sahu, Neeraj Kumar Rai, Swati Puranik, Anirab Roy, Moinuddin Khan, Manoj Prasad (2012) Dynamics of defense related components in two contrasting genotypes of tomato upon infection with *Tomato Leaf Curl New Delhi Virus*. Molecular Biotechnology, 52:140-150.
17. Pranav Pankaj Sahu, Sarika Gupta, DR Malaviya, Ajoy Kumar Roy, Pankaj Kaushal and Manoj Prasad (2012) Transcriptome analysis of differentially expressed genes during embryo-sac development in apomeiotic non-parthenogenetic interspecific hybrid of *Pennisetum glaucum*. Molecular Biotechnology, 51:262-271.
18. Swati Puranik, Pranav Pankaj Sahu, Prem S. Srivastava, Manoj Prasad. (2012) NAC proteins: regulation and role in stress tolerance. Trends in Plant Science, 17:369-381.
19. Namisha Sharma, Pranav Pankaj Sahu, Swati Puranik, Manoj Prasad (2012) Recent advances in plant–virus interaction with emphasis on small interfering RNAs (siRNAs). Molecular Biotechnology 55:63-77.
20. Pranav Pankaj Sahu, Swati Puranik, Moinuddin Khan, Manoj Prasad (2012) Recent advances in tomato functional genomics: Utilization of VIGS. Protoplasma, 249:1017-1027. DOI: 10.1007/s00709-012-0421-7
21. Sarika Gupta, Kajal Kumari, Pranav Pankaj Sahu, Sudhakar Vidapu, Manoj Prasad (2011) Sequence-based novel genomic microsatellite markers for robust genotyping purposes in foxtail millet [*Setaria italica*(L.) P. Beauv.], Plant Cell Report, 31:1-15.
22. Pranav Pankaj Sahu, Neeraj Kumar Rai, Supriya Chakraborty, Major Singh, H C Prasanna, Bandurapalli Ramesh, Debasis Chattopadhyay and Manoj Prasad (2010) Tomato cultivar tolerant to *Tomato leaf curl New Delhi virus* infection induces virus-specific siRNA accumulation and defense associated host gene expression. Molecular Plant Pathology, 11:531-544.
23. Charu Lata, Pranav Pankaj Sahu and Manoj Prasad (2010) Comparative transcriptome analysis of differentially expressed genes in foxtail millet (*Setaria italica* L.) during dehydration stress. Biochemical Biophysical Research Communications, 393:720-727.
24. Ananthi Jayaraman, Swati Puranik, Neeraj Kumar Rai, Sudhakar Vidapu, Pranav Pankaj Sahu, Charu Lata, Manoj Prasad (2008) cDNA-AFLP analysis reveals differential gene expression in response to salt stress in foxtail millet (*Setaria italica* L.). Molecular Biotechnology, 40:241–251.

Books, Chapters, and Research Monographs

1. Namisha Sharma, Pranav Pankaj Sahu, Ritika Kulshreshtha and Manoj Prasad (2018) Surfacing the role of epigenetics in host-virus interaction. In Genes, Genetics and Transgenics for Virus Resistance in Plants (Ed. Basavaprabhu L. Patil), Caister Academic Press, UK (ISBN: 978-1-910190-81-4).
2. Saurabh Pandey, Pranav Pankaj Sahu, Ritika Kulshreshtha and Manoj Prasad (2018) Role of host transcription factors in modulating defense response during plant-virus interaction. In Genes, Genetics and Transgenics for Virus Resistance in Plants (Ed. Basavaprabhu L. Patil), Caister Academic Press, UK (ISBN: 978-1-910190-81-4).
3. Pranav Pankaj Sahu, Namisha Sharma and Manoj Prasad (2016) Plant's defense and survival strategies versus pathogen's anti-defense and infection capability: The hormone-based mechanisms. In "Mechanism of Plant Hormone Signalling under Stress" (Ed. G. K. Pandey), Wiley (In press).
4. Roshan Kumar Singh, Pranav Pankaj Sahu, M. Muthamilarasan M, Annvi Dhaka and Manoj Prasad (2017) Genomics-assisted breeding for improving stress tolerance of graminaceous crops to biotic and

abiotic stresses: Progress and prospects. In: Senthil-Kumar M (ed), Plant Tolerance to Individual and Concurrent Stresses. Springer International Publishing, Switzerland, (In Press).

Invited talk and presentations in conferences

1. Invited speaker to deliver the talk on "Looking into the Future: How plant will respond to the impending climate change?" by India-EMBO, New Delhi, India.
2. Invited speaker to deliver the talk on "Understanding the phenotypic and epigenetic response to simulated climate change in plants" by The Society of Experimental Biology (SEB), Florence, Italy.
3. Invited speaker to deliver the talk on "Effect of Climate Change on Plant's Morphology and Physiology" by CzechGlobe - Global Change Research Institute of the Czech Academy of Sciences (GCRI) Brno, Czech Republic (2017).
4. Invited speaker in short-term training course VIGS-2016 (sponsored by Department of Biotechnology, Government of India) Hindustan College of Science and Technology, Mathura, India.

Media Dissemination

1. PotravinyAV21 News (2019): https://www.potravinyav21.cz/olomoucky-vyzkum-vlivu-klimatickych-zmen-na-rostliny-boduje-ve-svete/
2. PotravinyAV21 News (2018): http://www.potravinyav21.cz/vedec-z-olomoucke-laboratore-ustavu-experimentalni-botaniky-boduje- in-the-world-with-research-influence-climatic-change-of-plants /
3. AS CR NEWS: http://www.avcr.cz/en/pro-media/aktuality/Indicky-vedec-z-Hane-zaujal-vyzkumem-vlivu -climate-change-on-plants /
4. Application Laboratory for Agricultural Research http://aplab.ueb.cas.cz/vedec-z-olomoucke-laboratore-ustavu- experimental-botany-points-in-the-world-with-research-influence-climatic-change-on-plants /
5. Center of Plant Structural and Functional Genomics: http://olomouc.ueb.cas.cz/spolar-of-olomouc-laboratory- institute-experimental-botany-points-in-the-world-with-research-influence-climate
6. The Olomouc scientist has taken a worldwide interest in research into the effects of climate change on plants http://www.ueb.cas.cz/en/content/olomoucky-vedec-zaujal-ve-svete-vyzkumem-vlivu-klimatickych- change-of-plants
7. A scientist examining the impact of climate change on plants has taken on the world https://www.zurnal.upol.cz/nc/zprava/clanek/vedec-jenz-zkouma-vliv-zmen-klimatu- on-plants-intrigued-in-the-world /
8. Positive News: Olomouc scientist received a prize for research into the influence of climate on plants http://pozitivni-zpravy.cz/olomoucky-vedec-ziskal-oceneni-za-vyzkum-vlivu-klimatu-na-rostlin/