

India

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Please describe any new experimental resources and/or software tools available to Arabidopsis researchers that have been initiated or funded in your country in 2020 or early 2021

Almost all the Arabidopsis labs have generated mutants and genetic resources related to plant development, metabolism, biotic and abiotic stress tolerance, symbiosis etc. **Realizing the importance of a model system like Arabidopsis for plants, the Society of Plant Biochemistry and Biotechnology (SPBB) brought out a special issue of the Journal of Plant Biochemistry and Biotechnology entitled, "Advances in Plant Biology: Impact of Arabidopsis Research" (<https://link.springer.com/journal/13562/volumes-and-issues/29-4>).**

This issue carries several comprehensive reviews written by pioneers in the field on role of light in plant development, various aspects of biotic and abiotic stresses biology etc. A majority of articles are from Indian labs, which provide a flavour of the work being carried out and the expertise available related to Arabidopsis and plant biology in India. We are sure that the readers of this special issue of JPBB on Arabidopsis will find it a very useful resource.

Please provide a paragraph describing the general impact of the COVID19 pandemic on the scientific community in your country

Several labs across the country were completely shut down from March to September 2020. All the students including postgraduate and postdoctoral fellows were asked to vacate campus accommodation in several universities and Institutes. Even later as and when new Covid cases were identified in and around a lab, the labs were closed. Such intermittent closure of labs has severely hampered research activities across the country.

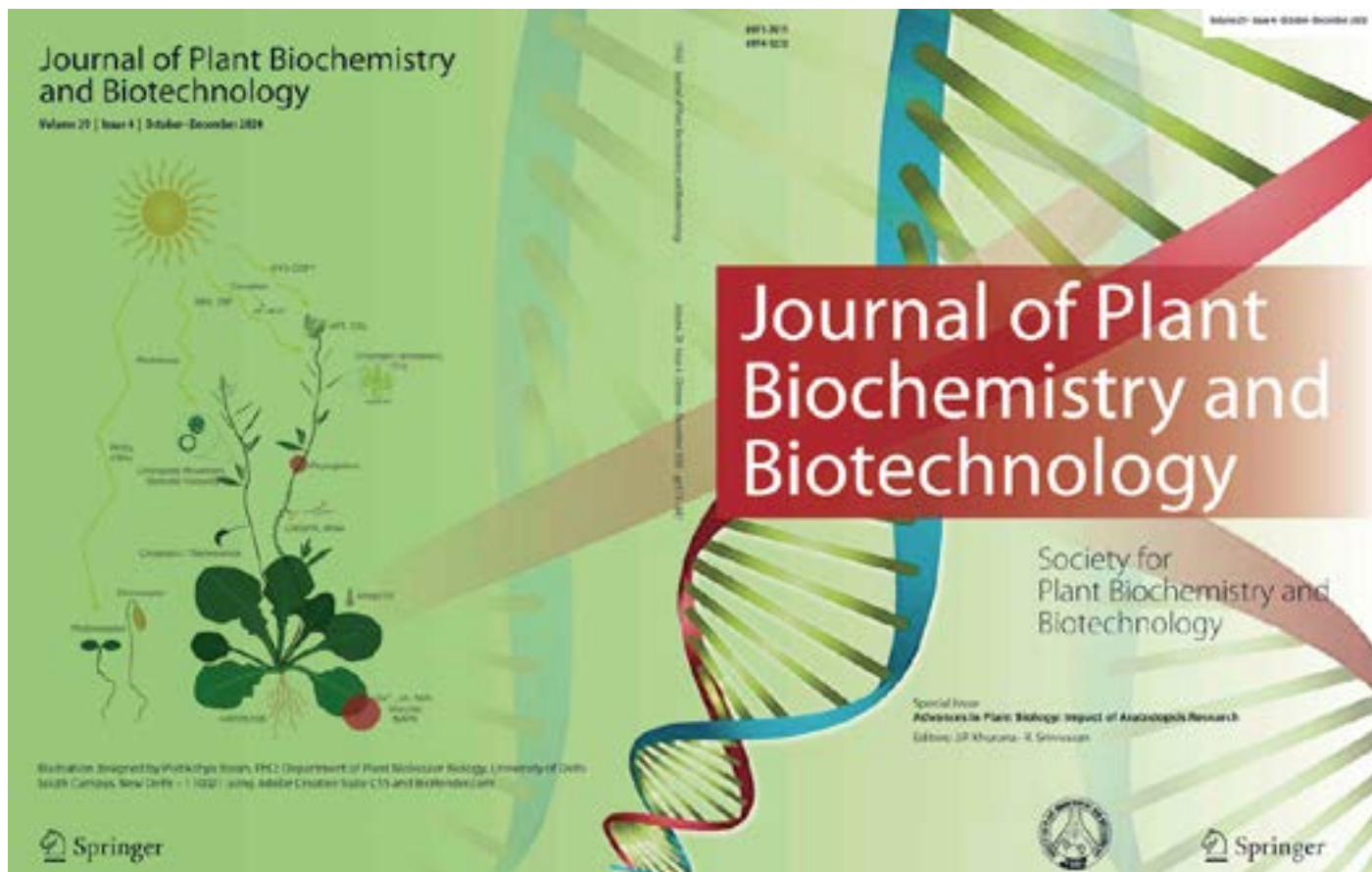
Planned events for 2021 and 2022

A few conferences/ workshops are being planned by SPBB and Indian Plant Physiology Society during 2021 and 2022. However, because of the recent wave of Covid and the uncertainties involved the exact details have not been finalized

Selected Publications

- Majumdar P, Karidas P, Siddiqi I and Nath U (2020) The ubiquitin-specific protease TNI/UBP14 functions in ubiquitin recycling and affects auxin response. *Plant Physiol.* 184:1499-1513

This article shows that a Mutation in TARANI/ UBIQUITIN-SPECIFIC PROTEASE 14(TNI/UBP14) leads to reduced auxin response and widespread auxin-related phenotypic defects in *Arabidopsis thaliana*.



- Sharma A, Badola PK, Bhatia C, Sharma D and Trivedi PK (2020) Primary transcript of miR858 encodes regulatory peptide and controls flavonoid biosynthesis and development in Arabidopsis. *Nature Plants* 6:1262–1274

This article provides evidence for the role of a peptide encoded by a microRNA transcript in a metabolic process in plants.

- Yadukrishnan P, Rahul PV, Ravindran N, Bursch K, Johansson H, Datta S. (2020). CONSTITUTIVELY PHOTOMORPHOGENIC1 promotes ABA-mediated inhibition of post-germination seedling establishment. *Plant J.* 103: 481-496

This article shows that the light signaling protein COP1 positively regulates ABA signaling by promoting the binding of ABI5 with its target promoters and inhibiting seedling establishment.

Major Funding Sources

- Council of Scientific and Industrial Research (CSIR), New Delhi <http://www.csirhrdg.res.in/>
- Department of Biotechnology (DBT), Government of India <http://dbtindia.nic.in/index.asp>
- Department of Science & Technology (DST), Government of India <http://www.dst.gov.in/scientific-programme/serindex.html>
- Council of Scientific and Industrial Research (CSIR), New Delhi <http://www.csirhrdg.res.in/>
- Indian Council of Agricultural Research (ICAR), New Delhi <http://www.icar.org.in/>
- University Grants Commission, New Delhi <https://www.ugc.ac.in/>