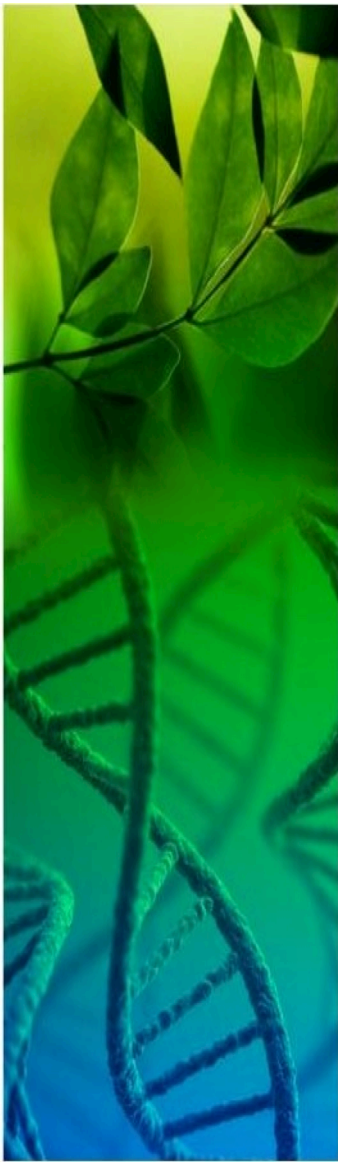

(Picture courtesy: www.packagingdigest.com)

Functional Genomics for Plant Abiotic stress tolerance (sponsored by MHRD Scheme on Global Initiative on Academic Network, GIAN)

In the era of global climatic change, environmental stress has been a great concern as it is bringing morphological, physiological, biochemical and molecular changes to plants resulting in loss in crop yield. To understand the plant behavior under such stress following with strategies for crop improvement programmes, Functional genomics approach is playing a revolutionary role. With advantage of large sequencing data and the rapid growing technologies for functional genomics, it is making possible to broadly assign functions to unknown genes. It is a genome wide approach where genes related to stress regulatory proteins, their signaling pathway and their functions are studied to understand the homeostasis in plants. It further can accelerate the tolerance of important crops by utilizing high throughput methodologies like mutagenesis, gene silencing, genome editing along with transcriptomic, proteomic and metabolomics approach for developing tolerant agronomic traits. In the present course, we will take up topics on abiotic stress, Plant signaling communication, iron homeostasis in plants and iron biofortification. It will be a great event where we will have international faculty like Prof. Petra Bauer together with Prof. Sanjib Kumar Panda, sharing their expertise on understanding abiotic stress biology, and biotechnological approaches for Fe biofortification utilizing functional genomics. The lectures will be highly beneficial to the young researchers and students of Assam University and others.

Course Details

Date	Module	Topic	Time
26 July, 2016	Lecture 1 Tutorial 1	Concepts of Abiotic Stress in Plants Research in Plant Biology-I	10:30-11:30 2:30-3:30
27 July, 2016	Lecture 2 Tutorial 2	Abiotic Stress Adaptation in Plants Research in Plant Biology-II	10:30-11:30 2:30-3:30
28 July,2016	Lecture 3 Tutorial 3	Plant Functional Genomics Model Plant Genomes and further	10:30-11:30 2:30-3:30
29 July, 2016	Lecture 4 Tutorial 4	Fe transport, translocation and storage Learnings from Plant System biology	10:30-11:30 2:30-3:30
30 July, 2016	Lecture 5 Examination	Biotechnology of Fe homeostasis in Plants	10:30-11:30 12:00-1:00

The programme is concerned to:

- Students of U.G, P.G and Ph.D levels and postdoctoral fellows from reputed academic and technical institutions
- Faculty members working in the area of Plant biology, Plant Biotechnology, Plant Molecular Biology

Registration Fees

Participants from abroad : US $500

Industry/ Research organizations: Rs. 20,000

Academic Institutions: Rs. 500

The above fees include all instructional materials, computer use for tutorials and assignments, internet facility. The participants will be provided with single bedded accommodation on payment basis.

How to Apply

Registration form duly filled-in and forwarded by the Head of the Department/Supervisor should be sent to **gian.auspmbl@gmail.com** before July,5th, 2016.

Total number of participants to this course is fifty. The confirmation to the selected candidates will be intimated by July 12th ,2016

The Faculty

Prof. (Dr.) Petra Bauer is Head of the Institute of Botany, University of Dusseldorf, Germany. She had her post-doctoral research in University of California, Berkeley. She worked in IPK, Gaterslaben in the Emmy Noether Programme of DFG and in University of Saarland before joining Heinrich heine Dusseldorf, Germany. Her research interest lies in molecular genetics, physiology & Functional Genomics. Prof. Bauer's research group has shown significant development in our understanding of Fe homeostasis and the gene regulatory networks in model and crop plants. Her group is a member of CEPLAS, Germany and has published numerous papers in Internationally reputed journals. She is currently the Editor-in-Chief of Plant Molecular Biology Reporter (Springer) journal.

Prof. (Dr.) Sanjib Kumar Panda is the faculty in Department of Life Science and Bioinformatics, Assam University, Silchar. Prof. Sanjib Kumar Panda works in the area of Plant Molecular biology & Functional genomics to understand the mechanisms of stress signal transduction and to develop stress tolerant crop plants. He uses structural and functional Genomics approaches along with transgenic technology to decipher stress responses in crop and model plant systems. Prof. Panda's group is supported with various National and International funding agencies like DBT, UXCEL, DST, JSPS, Tea Board, CSIR, UGC etc. He has published numerous papers in reputed International journals .He is also editorial board members of various International Plant biology Journals.

Course Coordinator

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