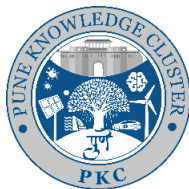


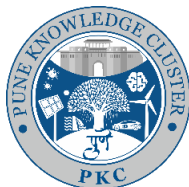
Pune Knowledge Cluster (PKC) Presents

Course on “Plant Breeding Today – New Skills & New Technology”

Organized By	Pune Knowledge Cluster (PKC)
Date	Start Date: 14 th June 2021 End Date: 25 th June 2021
Location	The course will be conducted on an online platform
Course Duration	10 online sessions
Course Description	The genomics revolution, which started in the 1990s, and included structural, functional and comparative genomics, greatly improved our understanding of the genetic makeup of organisms from gene to genome level. Over the last twenty years, whole-genome sequences of several crop species have become available, which has led to the rapid evolution of genomics technologies and the associated bioinformatics tools. Hence, to provide information about some of these new technologies and their application in the real-time development of novel varieties, the Pune Knowledge Cluster formulated a course on “Plant Breeding Today – New techniques, new skills.”
For whom	Research scholars Post-docs fellows Young Faculty members & Scientists (from Botany/ Biochemistry/ Agriculture/ Biotechnology) from various Indian Universities/Colleges, Research Institutes and Agriculture industry
Potential Gains	The aim of this course is to expose young researchers to the forefront areas in molecular plant breeding, that might help them to contribute to the field of translational genomics in the future. This course will also help participants to imbibe new ideas and research experiences about various aspects of molecular plant breeding. This course offers an excellent opportunity to students to attend the sessions by the experts from agricultural universities, research institutes and private companies

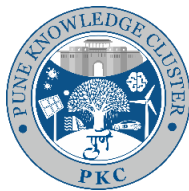


Trainers	<p>Dr. N K Singh ICAR - National Institute of Plant Biotechnology, New Delhi</p> <p>Dr. Bharat Char Maharashtra Hybrid Seeds Company Pvt. Ltd., Dawalwadi, Maharashtra</p> <p>Dr. M. Raveendran Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu</p> <p>Dr. Rajeev Varshney International Crop Research Centre for the Semi-arid Tropics, Hyderabad, Telangana</p> <p>Dr. Ashish Srivastava Bhabha Atomic Research Centre, Mumbai, Maharashtra</p> <p>Dr. Raman Sundaram ICAR - Indian Institute of Rice Research, Hyderabad, Telangana</p> <p>Dr. Narendra Kadoo CSIR - National Chemical Laboratory, Pune, Maharashtra</p> <p>Dr Mahesh Chatterjee BenchBio Pvt. Ltd., Vapi Gujarat</p> <p>Dr. Prashant Pyati Ajeet Seeds Pvt. Ltd., Chitegaon, Maharashtra</p> <p>Dr. Guntant Patil Texas Tech University, Lubbock, USA</p>
Number of Seats	The course is open to all.
Registration Fees	There is no registration fees
Course coordinators	Prof. Sujata Bhargava from the department of Botany, Savitribai Phule Pune University Prof. Vidya Gupta, The retired scientist from CSIR-NCL, Pune



Schedule for the course 'Plant Breeding Today - New Techniques, New Skills'

Day & Date	Topic	Speaker
Monday 14 th June 2021	Genetic diversity and its exploitation in breeding	Dr. N K Singh ICAR - National Institute of Plant Biotechnology New Delhi
Tuesday 15 th June 2021	Molecular approaches to crop improvement	Dr. Bharat Char Maharashtra Hybrid Seeds Company Pvt. Ltd. Dawalwadi, Maharashtra
Wednesday 16 th June 2021	Accelerating development of stress tolerant rice through genomics-assisted breeding	Dr. M. Raveendran Tamil Nadu Agricultural University Coimbatore, Tamil Nadu
Thursday 17 th June 2021	Genome-wide technologies for crop improvement	Dr. Rajeev Varshney International Crop Research Centre for the Semi-arid Tropics, Hyderabad, Telangana
Friday 18 th June 2021	Genome-wide association studies for soybean improvement	Dr. Ashish Srivastava Bhabha Atomic Research Centre Mumbai, Maharashtra
Monday 21 st June 2021	Development of climate change resilient lines of the elite, fine-grain type, rice variety Samba Mahsuri through molecular breeding	Dr. Raman Sundaram ICAR - Indian Institute of Rice Research Hyderabad, Telangana
Tuesday 22 nd June 2021	Use of functional markers in precision plant breeding	Dr. Narendra Kadoo CSIR - National Chemical Laboratory, Pune, Maharashtra
Wednesday 23 rd June 2021	TILLING, a non-GM method to improve crops, an Industrial perspective	Dr Mahesh Chatterjee BenchBio Pvt. Ltd., Vapi Gujarat
Thursday, 24 th June 2021	Addressing hidden hunger: Modern plant breeding approaches in food fortification	Dr. Prashant Pyati Ajeet Seeds Pvt. Ltd., Chitegaon, Maharashtra
Friday 25 th June 2021	Gene editing and integrated approaches to discover novel traits in soybean improvement	Dr. Guntant Patil Texas Tech University, Lubbock, USA



About the speakers



Dr. Nagendra Kumar Singh is an Indian agricultural scientist. He is a National Professor (Dr. B.P.Pal Chair) under ICAR at National Research Centre for Plant Biotechnology, Indian Agricultural Research Institute, New Delhi. He is known for his research in the area of plant genomics and biotechnology, particularly for his contribution in the decoding of rice, tomato and pigeonpea genomes and understanding of wheat seed storage proteins and their effect on wheat quality. He has also made significant advances in comparative analysis of rice and wheat genomes and mapping of genes for salt tolerance and basmati quality traits in rice.



Dr. Bharat Char is a Chief Science Officer at Maharashtra Hybrid Company Pvt. Ltd. Dawalwadi, Maharashtra. Mahyco Private Limited is focused on research and development, production, processing, and marketing of seeds for India's farming fraternity. It is the pioneer of high quality hybrid and open pollinated seeds. Dr Char is responsible for all research and development programme for Maharashtra Hybrid Company Pvt. Ltd.



Dr. Raman Sundaram is the Director of ICAR - Indian Institute of Rice Research Hyderabad, Telangana. Since 1998, he has been working as a rice molecular breeder and biotechnologist, focusing on studies related to biotic stress resistance, hybrid rice applications of biotechnology and product development through transgenic breeding. He is leading scientist and coordinated "All India Coordinated Rice Improvement Programme" across the country.



Dr. M. Raveendran is professor and the head of Plant Biotechnology Division at Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu. He has offered more than 30 courses to UG/PG/Ph.D students. He has developed submergence tolerant rice and was also involved in development and release of fine grain rice variety. He is one of the key members in a team who developed herbicide tolerant rice and paved way for optimizing labour and water saving direct seeded rice cultivation. He has also developed drought/salinity tolerant rice which are under advanced stages of testing. He has also explored native rice genetic diversity and identified a rice genotype possessing nutritive and therapeutic values (diabetic friendly rice).



Dr. Rajeev Varshney is Research Program Director – Accelerated Crop Improvement, at ICRISAT, based in Hyderabad. He is recognized as a leader in genome sequencing, genomics-assisted breeding, translational genomics and capacity building in international agriculture. He has made a pioneering contribution by integrating advanced discoveries in genomics with crop improvement especially in legumes in developing countries. Among different noted contributions, he has genome sequence of 10 crops including pigeonpea, chickpea, groundnut and pearl millet and several molecular breeding products in chickpea and groundnut to his credit



Dr. Ashish Srivastava is the *Scientific Officer* in *Bhabha Atomic Research Centre, Mumbai*. His research is focused on developing strategies for enhancing crop resilience towards different abiotic stresses. He is employing the combination of physiology, molecular biology and biotechnology to understand crops behavior under stress and develop suitable strategy to minimize stress-induced yield losses in different crop plants. He has more than 40 research and review articles and book chapters to his credit.



Dr. Narendra Kadoo is the Senior Principal Scientist and Chair, Biochemical Sciences Division, CSIR-National Chemical Laboratory, Pune. He has more than 20 years of experience in the scientific research. His research focuses on Molecular mechanisms of biotic and abiotic stress tolerance in plants, Fatty acid biosynthesis in plants and microbes, Bioinformatics analysis of gene families, Comparative genomics, DNA barcoding and genetic diversity analysis, DNA markers and QTL analysis.



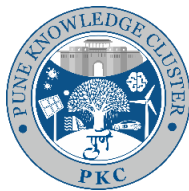
Dr Manash Chatterjee is a plant biotech scientist, entrepreneur and founder director of BenchBio. He founded BenchBio in 2007 with an aim to provide biotechnology solutions to the agricultural sector worldwide to generate varieties with novel traits in various crops using a non-GM method.



Dr. Prashant Pyati is the Principal Scientist at Plant Biotechnology Research Centre, Ajeet Seeds Pvt. Ltd., Aurangabad, India. He has over 13 years of experience in managing research activities, coordinating with the Biotechnology research team and teaching assignments.



Dr. Guntant Patil is the Assistant Professor at the Institute of Genomics for Crop Abiotic Stress Tolerance, Texas Tech University, Lubbock, USA. His research focuses on integrating genomics and genome engineering technologies to create “Targeted Quantitative Variations” in plant genomes to discover the molecular mechanism of various abiotic stress tolerances and disease resistance traits in crops (soybean, cotton and other legumes). He is also teaching undergraduate and graduate courses: Principles of Plant Tissue Culture and Genome-editing



About the organiser:

The Pune Knowledge Cluster (PKC) has been established by the Office of the Principal Scientific Adviser to the Government of India. The aim is to bring together academia, R&D institutions and the industry of Pune and its surrounding areas, to address the challenging problems of the region through innovative means, using scientific knowledge and engaging highly skilled human resources. Furthermore, PKC aims to foster capacity building and promote skills development and entrepreneurship among the students and professionals of the city. All relevant organizations and experts will be partners and consulted to identify sustainable solutions to the problems of the city and improve its liveability and prosperity.

While the PKC is administered by the Inter-University Centre for Astronomy and Astrophysics (IUCAA), it is a project of and for the whole city. In the initial phase, PKC would focus on air, water, health, and sustainable mobility.

For more information, visit: <https://www.pkc.org.in/>