GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

CiBreed
Center for Integrated Breeding Research

Cibreed communications team
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Göttingen, April 5, 2022

Dear CiBreed community,

the Center for Integrated Breeding Research (CiBreed) is a scientific center at the University of Göttingen established to bridge the gap between plant and animal breeding.

Today, you receive this CiBreed newsletter because we would like to inform you about the latest developments at the Center for Integrated Breeding Research.

Elections for the executive board of CiBreed

The CiBreed Executive Board Elections took place from March 11 to 15. With Prof. Henner Simianer (group of professors) and Cathy Westhues (group of PhD students), two valued members of the previous board are leaving the University of Göttingen this spring. Prof. Anne-Katrin Mahlein also departed the Executive Board. We would like to thank them for all their commitment and enthusiasm. Congratulations to the new Executive Board Members! The results are listed here:

Group of professors:
Tim Beissinger, Oliver Gailing, Nils Stein, Jens Tetens, deputies: Bertram Brenig, José Martínez, Stefan Scholten, Achim Spiller

Group of scientific staff members:
Thi Ha Giang Vu, deputy: Torsten Pook

Group of PhD students
Mila Tost, deputy: Azadeh Hassanpour

CiBreed staff (personal agreement)
Birgit Zumbach, deputy: Krista Belaed

MoBPS workshop

The first MoBPS workshop was offered by Torsten Pook, Johannes Geibel, and Azadeh Hassanpour on March 24 and 25. In this interactive workshop, participants were provided with foundational knowledge on simulation of multiple breeding cycles, usage of real genotype and phenotype data, selection, phenotyping, and breeding value estimation. During the workshop, there was a feedback and discussion session to allow the participants to discuss their own breeding programs in-depth.

What is MoBPS? MoBPS (Modular Breeding Program Simulator) is a framework to simulate, evaluate and compare breeding programs. It was developed at the University of Göttingen by Torsten Pook and released in 2019. The software is available as a graphical interface version (www.mobps.de) or as R package, which had been downloaded nearly 5,000 times from CRAN, including monthly version updates from github: https://github.com/tpook92/MoBPS.

iPAB advent calendar

Two iPAB students and CiCom members, Johanna Schlüter and Carina Meyenberg, organized this December an interactive advent calendar. All students in iPAB and EMABG study program and affiliates were encouraged to contribute recipes from their home countries. Johanna Schlüter and Carina Meyenberg coordinated these recipes and shared them every day with the people involved. This points out that the students in our study programs not only connect based on their common interests in breeding and genetics, but also take advantage of the opportunities for cultural exchange, despite the conditions in the pandemic.

> "As the current situation of online classes was hindering the usual opportunities to get to know each other better at the beginning of the semester we came up with the idea of a "Recipe advent calendar". In this, we were able to combine a German pre-Christmas tradition with a fun exchange of our favorite dishes from our home countries and share experiences with our fellow students. Just as in a regular advent calendar it was exciting to uncover a new recipe each day and enjoy the conversations these recipes sparked: from similarities around the globe to the presentation of the own attempt on the dish. Seeing so many students participating made a sweet ending to the year 2021" says Johanna Schlüter.

Image by Mila Tost

Image by Mila Tost

Image by Zsa Zsa Boyny

Image by Azadeh Hassanpour

Integrated Plant and Animal Breeding (iPAB) (M.Sc.) is an international, English-language master's program held in English designed to teach the basic theories, methods, procedures and questions of breeding in the agricultural and forest sciences in an interdisciplinary and research-oriented approach.

Seminar series: "The IPK introduces itself"

CiBreed runs several seminar series throughout the years. This winter term 2021/2022, a seminar series was organized in cooperation with Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) "The IPK introduces itself". In this series, several department heads from the IPK introduced their departments, those discoveries and discussed the future of their research programs. The online seminar series has been very successful, with the last webinar attracting more than 100 participants.

The seminar series started with a talk on genetic diversity, conservation and utilization of plant genetic resources by Prof. Andreas Graner, the managing director of IPK. The second talk has been chaired by Prof. Thomas Altmann, head of the molecular genetics department, who talked about the "Investigation of genetic and physiological crop performance determinants using high-throughput plant phenotyping. Our

third speaker was Prof. Nicolaus v. Wirén, head of the department of physiology and cell biology talking about the identification and characterization of genes impacting crop yield potential and stress tolerance. The final session was probably the best-attended session of the seminar series, where Prof. Jochen Reif, head of the breeding research department, discussed the innovative strategies and their great contribution to the final results of the breeding programs to improve hybrid approaches for selfing crops.

Upcoming events

From the 11th until the 14th of April the *CiBreed Week* is going to take place! We are very happy to announce that many divisions are going to offer very interesting tours, and on Thursday we offer a BBQ. We are looking forward to meet in the *CiBreed Week*!

Tour 1: *Monday, April 11, 13:00-15:00*
Campus Institute Data Science (CIDAS) tour at GWDG
by Philipp Wieder and Fabian Sinz

Tour 2: *Tuesday, April 12, 9:00-12:00*
Plant Pathology and Crop Protection Tour
by Andreas von Tiedemann and team

Tour 3: *Wednesday, April 13, 9:00-12:00*
Crop Plant Genetic Tour by Stefan Scholten and team

BBQ: *Thursday, April 14: 11:30-14:30*
Scientific and Social exchange with a barbecue
by the CiBreed Communication Team (CiCom)

Acknowledgments

CiBreed has long recognized the need to prepare its members with more than academic knowledge and skills and collaborates with private enterprises in many different ways. The successful collaboration of CiBreed and industrial partners broadens the experience of our students and faculty, identifies significant, interesting, and relevant problems, and enhances regional economic development. We would like to thank the following organizations that have provided financial support for our educational and research programs:

The CiBreed Communications (CiCom) Team

The CiBreed Communication Team (CiCom) was founded in February 2021 by a group of students, junior and senior researchers from different CiBreed research groups i.e., animal, plant, and forest breeding and genetics. The purpose of the team is to promote research collaborations between CiBreed's multidisciplinary research groups and to inform external audiences about the multidisciplinary research being conducted at CiBreed.

Within CiBreed research groups, we foster interactions and collaborative work by identifying and conveying transversal and diverse research topics and communicating our science.

Social media have become powerful communication and information-sharing platforms around the world. Therefore, social media can help CiBreed reach larger audiences and enhance the visibility of our research, including our scientific publications. We welcome ideas for developing successful communication in the CiBreed! We also invite anyone interested in joining our team and/or knowing more about our work to contact us.

With kind regards,

The CiCom-Team

Selina Klees, PhD student, Breeding Informatics

Azadeh Hassanpour, PhD student, Animal genetics

Mila Tost, PhD student, Plant Breeding Methodology

Damilola Adekale, iPAB student

Johanna Schlüter, iPAB student

Carina Meyenberg, iPAB student

Muhammad Aziz Muslim, iPAB student

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