

Participating Institutions



CEPLAS

Cluster of Excellence on Plant Sciences

Contact

CEPLAS Graduate School
Cologne Biocenter
University of Cologne
Zùlpicher Straße 47b
D-50674 Köln

Phone +49 (0)221 470-4877
Email gradschool@ceplas.eu

www.ceplas.eu

CEPLAS GRADUATE SCHOOL Doctorate Transcript

CEPLAS – Cluster of Excellence on Plant Sciences – is a joint initiative of Heinrich Heine University (HHU) Düsseldorf, University of Cologne, Max Planck Institute for Plant Breeding Research and Forschungszentrum Jülich. CEPLAS is funded by the German Research Foundation (DFG) in the context of the German Excellence Initiative (EXC 1028). The research programme focuses on the investigation of the molecular mechanisms and genetic architecture of agriculturally-relevant plant traits that strongly influence yield. CEPLAS strives to decode these mechanisms and lay the foundation for future, more productive crops. The Cluster bundles the internationally renowned expertise of experimental and theoretical scientists. The four research areas of CEPLAS are: [A] Annual and perennial life histories, [B] C4 photosynthesis, [C] Plant-microbe interactions and [D] Metabolic interactions.

The CEPLAS Graduate School offers a 3-year structured, international Ph.D. programme with excellent research possibilities for young scientists. The programme is jointly organised by all four participating institutions allowing for highly collaborative and interdisciplinary projects and active exchange amongst scientists. The CEPLAS Graduate School aims to qualify doctoral researchers for scientific independence and critical thinking. The Ph.D. programme is complemented by a comprehensive training programme in scientific and transferable skills preparing doctoral researchers for future careers in industry or academia.

The CEPLAS training programme is organised in collaboration with the umbrella Graduate Schools of the participating universities. The Interdisciplinary Graduate and Research Academy Düsseldorf (iGRAD), set up by the Faculty of Mathematics and Natural Sciences at Heinrich Heine University Düsseldorf and The Graduate School for Biological Sciences (GSfBS), an international, broadly based graduate school in the biological sciences located at University of Cologne. Both institutions significantly support the CEPLAS Graduate School training programme thus enhancing the quality and diversity of the Ph.D. programme.



Interdisciplinary Graduate and Research Academy Düsseldorf (iGRAD)
Heinrich Heine University Düsseldorf
Email igrad@hhu.de www.igrad.eu



Graduate School for Biological Sciences (GSfBS)
University of Cologne
Email isabell.witt@uni-koeln.de www.gs-biosciences.uni-koeln.de

Dr. Priyanka Mishra

Title of doctoral research project

Control of adventitious root formation in the alpine perennial *Arabis alpina*

Participation from 10/2014 to 02/2019

Research Area A – Annual and perennial life histories

Botanical Institute, Cologne Biocenter, University of Cologne, Max Planck Institute for Plant Breeding Research

Thesis Advisory Committee (TAC)

Jun. Prof. Dr. Maria Albani, Cologne Biocenter, University of Cologne (Main Supervisor)

Prof. Dr. Rüdiger Simon, Developmental Genetics, Heinrich Heine University Düsseldorf (Second Supervisor)



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Achievements during the CEPLAS Graduate School membership

Publications

Vayssières A, **Mishra P**, Roggen A, Neumann U, Ljung K, Albani MC (2020) Vernalization shapes shoot architecture and ensures the maintenance of dormant buds in the perennial *Arabis alpina*. *New Phytologist*, doi:10.1111/nph.16470.

Mishra P, Roggen A, Ljung K, Albani MC (2020) Natural variation in adventitious rooting in the alpine perennial *Arabis alpina*, *Plants*, 9(2), 184, doi:10.3390/plants9020184.

Conferences, symposia, retreats, summer schools

Arabis Symposium 2018, Max Planck Institute for Plant Breeding Research, Cologne, Germany, Feb 5-7, 2018 – Poster Presentation: ‘Control of adventitious root formation in the perennial *Arabis alpina*’

8th International Symposium on Root Development: Adventitious, lateral and primary roots - development, growth and adaptation to the environment, Umeå, Sweden, May 29 June 1, 2017 – Poster presentation: ‘Auxin spray reveals spatial pattern of adventitious rooting in the perennial *Arabis alpina*’

XXth Symposium Plant Biology, University of Cologne, Germany, Sept 27, 2016 – Poster presentation: ‘Regulation of clonal growth through adventitious rooting in the perennial *Arabis alpina*’

Botanical Institute Research Colloquium 2015, University of Cologne, Germany, Sept 24, 2015 – Talk: ‘Clonal growth through adventitious root formation in the perennial *Arabis alpina*’

International PhD School in Plant Development, 05/2016, Valencia, Spain

9th PhD School on “Environmental Regulation of Plant Development”, 10/2016, Retzbach, Germany. Biocenter Minisymposium (XXIst - 04/2017; XXIIInd - 10/2017; XXIIIrd - 04/2018; XXIVth - 10/2018), University of Cologne, Germany

MPIPZ PhD Retreat – Hennef 03/2017 (Talk), Hennef 03/2016 (Poster), Hachen 03/2015 (Talk).

UniKöln LabSeminar - Weekly Seminar series at University of Cologne. 10/2018 (Talk), 04/2017 (Talk), 05/2016 (Talk).

MPIPZ Departmental Seminar – Weekly Seminar series at Department of Plant Breeding and Genetics, Max Planck Institute for Plant Breeding Research, Cologne. 02/ 2019 (Talk), 10/2018 (Talk), 03/ 2018 (Talk), 06/ 2017 (Talk), 07/2016 (Talk).

CEPLAS symposia, retreats and seminars

CEPLAS Symposium - Cologne, 10/2017 (poster); Düsseldorf, 05/2016 (poster); Cologne, 05/2015 (attendance)

CEPLAS Young Researchers Retreat (annual progress presentation) - Cologne, 10/2017 (poster); Wuppertal, 10/2016 (poster); Bad Honnef, 10/2015 (talk); Bad Honnef, 09/2014 (attendance)

CEPLAS Friday - monthly seminar series of the Cluster

CEPLAS Young Researchers Seminar - monthly progress presentations organised by doctoral and postdoctoral researchers

CEPLAS Research Area Meeting - meetings of Research Area A twice a year

CEPLAS Graduate School Curriculum: Scientific training programme

‘Linux & PERL’, 2 days in 02/2017. Trainer: Ganga Jeena, University of Cologne

‘Analysis of primary metabolites by GC-MS’, 5 days in 04-05/2016. Trainer: Dr. Tabea Mettler Altmann, HHU Düsseldorf

‘Advanced methods for fluorescence imaging’, 3 days in 06-07/2015. Trainer team: Prof. Dr. Rüdiger Simon, Dr. Yvonne Stahl, HHU Düsseldorf; Dr. Stefanie Weidtkamp-Peters, Center for Advanced Imaging (CAi), HHU Düsseldorf

‘Good Scientific Practice for doctoral researchers and postdocs’, 1 day in 03/2015. Trainer: Dr. Christian Dumpitak, iGRAD, HHU Düsseldorf

‘Biostatistics’, 3 days in 01/2015. Trainer: Prof. Dr. Gerald Schönknecht, Oklahoma State University, CEPLAS guest scientist and DAAD guest lecturer

CEPLAS Graduate School Curriculum: Career training programme

‘Intensive course on how to write an excellent scientific paper’, 5 days in 07/2018, HHU Düsseldorf, Trainer: Richard Twyman, Twyman Research Research Management

‘Self- and Time Management’, 2 days in 11/ 2016, Max Planck Institute for Plant Breeding Research, Cologne, Trainer: Sabine Lerch, soft skill for science

‘Optimizing Writing Strategies to Get Research Published in English’, 2 days in 02/2016, iGRAD Düsseldorf, Trainer: Professor Monique Dorang, PhD, Trainer for Scientific Writing and Publishing

‘Straight Out! Training for voice, speech and body language’, 2 days in 10/2015, Center for Molecular Medicine Cologne, University of Cologne, Trainer: Katharina Padleschat, Raus mit der Sprache!, Training für Stimme, Sprechen und Körpersprache

‘Presenting Science’ - How to own the stage on (international) conferences, 2 days in 08/2015, iGRAD Düsseldorf, Trainer team: Dr.Christian Dumpitak, iGRAD, Knut Hannemann M.A. and Trainer for University Teaching

‘Scientific Image Processing/Illustrator’, 2 days in Mar 2015, Max Planck Institute for Plant Breeding Research, Cologne, Trainer: Dr. Dennis Fink, Co-Founder/CEO, mediomix GmbH

Further career development activities

CEPLAS Career Day

Attendance at the ‘CEPLAS Women in Plant Sciences Day 2017’, 1 day in 07/2017. Trainers: Mind Elevators, Amsterdam, NL; Dr. Sabine Küsters, Institute for International Communication, Düsseldorf; Julie Stearns, Impulsplus, Cologne

CEPLAS Excursions to industry

Phytowelt Green Technologies, Nettetal, Germany, 09/2016

KeyGene, Wageningen; and Nunhems, Nunhem/Haelen, Netherlands, 09/2015

Teaching

Supervision of Mr. Adrian Roggen (Masters’ student, University of Cologne), 6 months in 2018, Max Planck Institute for Plant Breeding Research, Cologne, Germany

‘Plant Genetics’ 1 day practical course for Master students in Botany, University of Cologne – WS 2017/2018, WS 2016/2017, SS 2016, WS 2015/2016, SS 2015

Participated in DAAD-RISE program. Supervised Mr. Justin Durant (Bachelor’s student, University of South Carolina) - 3 months in 2017, Max Planck Institute for Plant Breeding Research, Cologne, Germany

Supervision of Mr. Daniel Schaefer (Master student, University of Cologne), 6-week module organised at the University of Cologne, 2016

Responsibilities and other accomplishments

Organizer of ‘Cologne Excellent Women in Science – 2017’, Oct 5-6, 2017, University of Cologne, Germany

Helper at Fascination of Plant Science Day – ‘Plants have super-forces’, May 18, 2017, HHU Düsseldorf, Germany

Düsseldorf, February 12, 2020

Prof. Dr. Ute Höcker
Speaker CEPLAS Graduate School

Prof. Dr. Andreas P. M. Weber
Cluster Speaker

Die

Mathematisch-Naturwissenschaftliche Fakultät

verleiht

Frau

Priyanka Mishra

(Master of Science in Life Sciences)

geboren am 22.12.1991 in Cuttack (Indien)

die im ordnungsgemäßen Promotionsverfahren die Dissertation

„Control of adventitious root formation in the alpine perennial *Arabis alpina*“

eingereicht hat

den akademischen Grad

Doktorin der Naturwissenschaften (Dr. rer. nat.)

mit der Gesamtnote

„magna cum laude“

Köln, den 15.02.2019



Der Dekan

Universitätsprofessor Dr. G. Schwarz



Bescheid

über die Doktorprüfung an der
Mathematisch-Naturwissenschaftlichen Fakultät
der Universität zu Köln

Frau

Priyanka Mishra

(Master of Science in Life Sciences)

geboren am 22.12.1991 in Cuttack (Indien)

wird hiermit bestätigt, dass sie am 15.02.2019

die mündliche Prüfung mit dem Prädikat **sehr gut (1,3)**

bestanden und dass ihre Dissertation das Prädikat **sehr gut (1,4)**

erhalten hat.

Prüfungsfach: **Botanik**

Prüfungskommission: Prof.in Dr. M. Albani (1. Gutachter/in)
Prof. Dr. S. Kopriva (2. Gutachter/in)
Prof. Dr. M. Bonkowski (Prüfungsvorsitzende/r)
Dr. A. Vayssières (Beisitzer/in)

Thema der Dissertation: **„Control of adventitious root formation in the alpine perennial *Arabis alpina*“**

Gesamtnote: **magna cum laude**

Diese Bescheinigung berechtigt noch nicht zur Führung des Dokortitels.

Köln, den 15.02.2019



Universitätsprofessor Dr. G. Schwarz
Dekan