



ILS3 Third International
Legume Society
2019 Conference
21-24 May Poznań, Poland

Third International Legume Society Conference ILS3 2019

Legumes for human and planet health

PROGRAMME





Programme overview

ILS3, 21-25 May 2019

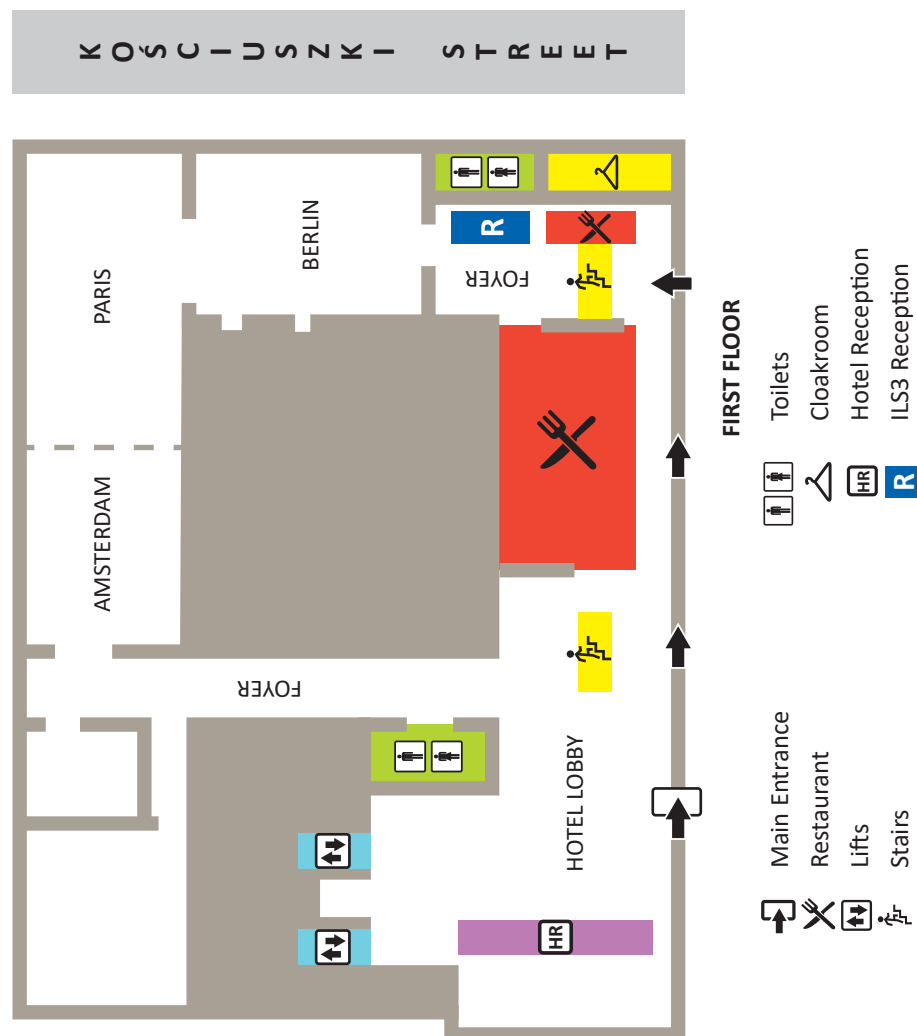
Time schedule	Tuesday, 21 May 2019	Wednesday, 22 May 2019	Thursday, 23 May 2019	Friday, 24 May 2019	Saturday, 25 May 2019	Time schedule
8.00-8.30						8.00-8.30
8.30-9.00				Registration		8.30-9.00
9.00-9.30			Registration			9.00-9.30
9.30-10.00		Session 2 Room: Berlin	Session 5 Room: Berlin	Session 7 Room: Berlin		9.30-10.00
10.00-10.30						10.00-10.30
10.30-11.00						10.30-11.00
11.00-11.30			Coffee break	Coffee break		11.00-11.30
11.30-12.00						11.30-12.00
12.00-12.30		Session 3 Room: Berlin	Session 6 Room: Berlin	Session 8 Room: Berlin	Excursion Poznań start: conference venue	12.00-12.30
12.30-13.00						12.30-13.00
13.00-13.30						13.00-13.30
13.30-14.00						13.30-14.00
14.00-14.30						14.00-14.30
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18.00-18.30						18.00-18.30
18.30-19.00						18.30-19.00
19.00-19.30						19.00-19.30
19.30-20.00						19.30-20.00
20.00-20.30						20.00-20.30
20.30-21.00						20.30-21.00
21.00-21.30						21.00-21.30
21.30-22.00						21.30-22.00

SESSIONS:

Session 1	Legume Biodiversity and Genetic Resource Exploitation
Session 2	Advances in Legume Genetics, Genomics and other –omics
Session 3	New Strategies and Tools for Legume Breeding
Session 4	Legume Contribution to Sustainable Agriculture
Session 5	Legumes for Human and Animal Nutrition and Health
Session 6	Legume Biochemistry and Systems Biology
Session 7	Legume Physiology, Plant Development, and Symbiosis
Session 8	Biotic and Abiotic Stresses in Legumes



Programme overview



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ILS3 Organizers, patronage and partners

ORGANIZERS:



International
Legume Society



Institute of Plant
Genetics, Polish
Academy of Sciences



Poznań Science
and Technology Park

Poznań Science
and Technology Park

PATRONS:



Ministry of Science
and Higher Education
Republic of Poland

Ministry of Science
and Higher Education



Mayor of Poznań



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of Sciences

SPONSORS:



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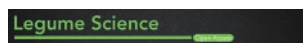
MEDIA PARTNERS:



Journal of Applied
Genetics



Biotechnologia.pl



Legume Science



Jedzenie.info.pl



ILS3 Committees

ILS3 Scientific Committee

Scientific Coordinator ILS3 - Kevin McPhee

Adrian Charlton
Alfonso Clemente
Bernadette Julier
Cezary Mądrzak
Diego Rubiales
Eric Von Wettberg
Frederick Stoddard
Laurent Gentzbittel
Maria Carlotta Vaz Patto
Matthew Nelson
Paolo Annicchiarico
Pedro Fevereiro
Ping Wan
Ram Nair
Richard Thompson
Shiv Kumar
Wojciech Świącicki
Tom Warkentin

ILS3 Organizing Committee

Bogdan Wolko (Chairman)
Barbara Naganowska
Jorge Paiva
Anna Stachowiak-Szrejbrowska
Karolina Susek
Michał Książkiewicz
Magdalena Kroc
Magdalena Gawłowska
Sandra Rychel
Wojciech Bielski



Welcome note by the Chairman of the Organizing Committee



Dear Participants,

It is my pleasure to welcome you to the Third International Legume Society (ILS3) conference for the first time held in Poznań, Poland.

This is a cyclical conference organized under the auspices of the International Legume Society. The first one was organized in Novi Sad, Serbia in 2013 and the second one took place in Troia, Portugal in 2016.

We are happy to host the ILS3 conference in Poznań – an academic city with strong research groups working on legume biology, biochemistry, physiology, genetic resources and genomics, resistance to stresses, breeding, agriculture and legume nutrition in human and animals diet. This is a great opportunity to gather, in a friendly atmosphere, scientists and experts in the field of legumes coming from all over the world.

We expect that the ILS3 conference will serve as an important venue for inspiring new ideas, presenting cutting-edge research results and encouraging international and inter-sectoral collaboration in the area of legume research.

The meeting will cover such topics as legume quality and nutrition, farming systems/ agronomy, abiotic and biotic stress responses, legume genetics and genomics, new selection methods for plant breeding.

We do really hope that the combination of a vibrant city, exciting oral and poster presentations together with outstanding scientists and experienced practitioners will lead to advances in legume research and allow to establish and strengthen scientific and personal contacts.

I wish to express my gratitude to all the people who have actively contributed to the preparation of the ILS3 conference and to all of you for attending it.

I look forward to welcoming you to an inspiring, fruitful and enjoyable ILS3 conference!

Enjoy the meeting and your stay in Poznań!

Prof. Bogdan Wolko
Chairman of the Organizing Committee, Director of the Institute of Plant Genetics PAS

May 21, 2019

Welcome note by the President of the Legume Society



Hello members of the International Legume Society.

It is great to have this opportunity to meet together again and share our interest in legumes. Legumes continue to play an important role in agricultural systems worldwide. The diversity represented within the Leguminosae family is exemplified by the diversity of applications this group of species is a part of. Forage and grain legumes alike are central to many cropping systems and both groups continue to be faced with production challenges and have increasing demands on their quality characteristics as they are being used in numerous and creative ways. This is particularly true for the grain legumes as their use as ingredients in an increasing number of processed products continues to expand.

As we gather together this week in Poznan we will have ample opportunities to share research findings with those who share our passion for the crops we work on. Science continues to advance and the opportunities to make new breakthroughs and discoveries continue to expand. Venues such as this provide a fertile environment for not only sharing recent discoveries, but to also renew old friendships and establish new collaborations. I along with the ILS Scientific Committee wish you all the best at this meeting and in the research that will follow.

Prof. Kevin McPhee, President of the Legume Society



Welcome note by the President of the Board of Adam Mickiewicz University Foundation



Dear Delegates,

I am happy to welcome you at The Third International Legume Society Conference ILS3 2019 in Poznań! Straight after choosing us as the organiser of this prestigious event, we started to look for ways to make this event special. We have put in maximum effort to ensure that you find the participation in the ILS3 Conference as well as a productive and interesting experience.

Adam Mickiewicz University Foundation together with its key department Poznan Science and Technology Park initiated a number of activities in the field of science and economic cooperation and development of new technologies. Moreover, the Park is an experienced and reliable partner with sufficient resources and strong background in organizing conferences. Our Professional Congress Organizer (PCO) specializes in organization of conferences and seminars, meetings and conventions. For over a year we were concentrated to coordinate The Third International Legume Society Conference ILS3 2019 conference preparation as effective as possible.

I have no doubt that the Conference will offer all the Participants a big chance to share the knowledge with experts and industry leaders. I hope you'll also find Poznań as an attractive location for its natural, historical and cultural amenities.

Wishing you a productive and enjoyable time in hospitable Poznań!

Prof. Jacek Guliński

President of the Board of Adam Mickiewicz University Foundation

Director of Poznan Science and Technology Park

General information



Venue

Novotel & Ibis Poznan Centrum hotel
plac Andersa 1, 61-898 Poznań

Date

21–24 May 2019

Conference language

The official conference language is English.

Registration

The registration desk will be open:

Tuesday	13.00–21.00
Wednesday	08.00–19.00
Thursday	08.00–20.00
Friday	08.00–16.00

Name badge

Participants, accompanying persons and exhibitors are kindly requested to wear their name badge during all conference events. Admittance to the scientific sessions, exhibition and social events will be refused if the required badge cannot be presented. Lost badges will be replaced at the Registration Desk upon presentation of a proof of registration and an identity card.

Certificates of participation

Certificates of participation will be issued upon request (at the Conference registration desk).

WLAN and internet area

A wireless network will be available throughout the whole building and will be free of charge. The access code will be announced on-site.

Catering

Free lunches and soft drinks will be offered to all participants during lunchtime in the hotel restaurant. Tea and coffee will be provided free of charge in the morning and in the afternoon during Coffee breaks.



General information

Poster presentation

The poster exhibition will be presented in the "Paris" hall. For a listing of the exhibitors please refer to the corresponding section in this programme.

Public transport

From the Poznań Ławica Airport to the Poznań Main Railway Station:

Bus line no. 159

Get on the "Port Lotniczy Ławica" bus stop,
get off at the "Poznań Główny" bus stop

From the Poznań Main Railway Station to the Novotel Poznań Centrum:

The Poznań Main Railway Station is located about one kilometre (10-minute walk) from the conference venue.

Taxi numbers in Poznań:

Taxi Poznań +48 61 8 222 222

Hallo Taxi +48 61 8 216 216

PST +48 61 8 519 519

Radio Taxi +48 61 8 515 515

Taxi Express +48 61 8 480 480

Uber

Uber service is available in Poznań.

Currency

The currency in Poland is Polish zloty, which is approximately 0,25 euro.

General ILS Assembly

General ILS Assembly will take place on Thursday, 23 May 2019 from 16:15 to 17:45 in the "Berlin" hall.



Information for presenters

Submitting your presentations/Technical information

Please note: Each presentation must be delivered to the lecture room at least 30 minutes before the beginning of the session. Please use an USB flash drive, CD or DVD disc which must not be protected with software.

Please prepare your presentation as PDF, MS Office Power-Point 2010/2007 for Windows or key for Macintosh DVD in 16:9 aspect ratio.

A presentation notebook with a PDF reader and MS Office Power-Point 2010/2007 will be provided. The use of personal notebooks is possible upon agreement. However, it may interrupt the smooth execution of the presentation programme in the lecture hall. Please provide an adapter for VGA if necessary.

A notebook and laser pointer are available at the speaker podium in the lecture rooms. A technical supervisor can assist you.

Certain encodings for video and audio files could lead to problems.

Speaking time

Speaking time is specified in the program. Please prepare your presentation for the allotted amount of time. Session chairs are obliged to interrupt you, in case that you should exceed your time limit.

Best Poster Award

At the Third International Legume Society Conference (ILS3) 3 awards will be given for the best poster presentations of young researchers. All participants presenting posters and registered as „Students and Phd students” will be eligible to receive the award.

Best Presentation Award

The "Third International Legume Society Conference ILS3, Best Presentation Award" honors the most inspiring submission presented by a highly professional speaker of the conference. The author who gives the best presentation will win a prize of € 300 sponsored by the International Journal of Molecular Sciences.

The winner will be selected by the conference Scientific Committee. The presentation receiving the highest score from the committee and the Conference Chair will be awarded the prize.



Welcome reception

Date: Tuesday 21, May 2019
Venue: the "Berlin" hall foyer
Start: 18:45

Admission to the event is free of charge, but requires prior registration. Free catering to all participants will be served. Conference packages and materials about Poznań city will be provided. It is a time for meeting with other delegates.

Wine & cheese with Legume Science

Date: Wednesday, 22 May 2019
Venue: the "Paris" hall
Start: 18:00

A reception to celebrate the launch of Wiley's new journal, Legume Science, which broad scientific scope covers all aspects of legume research. There will be an opportunity to meet with the publisher and Editor-in-Chief, Richard Thompson, to learn more about this exciting new journal. Refreshments and hors d'oeuvres will be served.

The Fourth International Legume Football Cup

Date: Wednesday, 22 May 2019
Venue: POSIR - os. Piastowskie 106a
Start: 20:30

One of the attractions for the ILS3 Conference participants is the traditional Football Cup. Please remember, that the idea behind every ILFC is to enjoy ourselves and have fun.

The Fourth International Legume Football (ILFC) Cup will take place on Wednesday, 22 May 2019.

The bus will pick up the ILFC participants from the conference venue around 19:30 (we will confirm the exact time during the conference) and transport them to the stadium directly.

The stadium facilities include changing rooms, showers and toilets. Benches and tables will be available to the supporters.

After the match, the bus will take the participants back to the conference venue (around 10:30 pm).

In addition we are going to organize the barbecue party during the competition free for all participants. There will be vegetarian and non vegetarian dishes as well as hot and cold drinks.



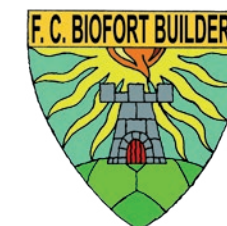
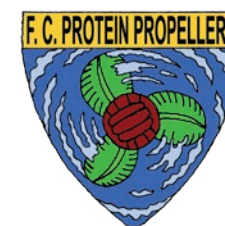
The cup competition matches will be played in the following format: each match will last 20 min (2x 10 min, 3 min break), the teams will have 5 players playing in the field, the other players serving as substitutions as required during the match. There will be 2 semi-finals, then both losing teams will play against each other in 3rd place match, while the winning teams will play in the Cup Final. The pitch is artificial grass, so we recommend the turf type football boots. We will provide team football vest for each player.

During the match, we will select the top scorer.

During the conference it will be possible to sign up for one of the teams.

Below we present a list of players of individual teams.

Starch Shuttles	Oil Orbiters	Protein Propellers	Biofort Builders
Davide Martins	Antonín Vaculík	Alfonso Clemente	Kevin McPhee
Federico Ribalta	Georg Carlsson	Richard Thompson	Rachid Mentag
Toby Newman	Wojciech Glinkowski	Jose C. Jimenez-Lopez	Pedro Fevereiro
Tom Warkentin	Hana Macková	Milena Kulasek	Noureddine El haddad
Robert Kempster	Weidong Chen	Peter Smith	Branko Cupina
Lars Kamphuis	Jinguo Hu	Gaëtan Louarn	Jake Tracy





Gala dinner

Date: Thursday, 23 May 2019

Venue: the "Paris" hall

Start: 20:00

This is the official reception with the menu specially prepared by the chef of the Novotel Poznan restaurant. This event costs 50 EUR.

During the gala dinner the participants will have the opportunity to see an impressive performance by the "Łany" folk dance ensemble. The group of 20 dancers dressed in traditional costumes will present over a dozen regional folk dances accompanied by folk music.

The rest of the evening will be spent in a quiet jazz atmosphere thanks to the trio led by Jacek Sz waj. The band will perform covers of evergreens and classical music standards.

Home Barista workshops

Date: Friday, 24 May 2019

Venue: Wise Cafe of Novotel & Ibis Poznan Centrum hotel (Hotel lobby)

Start: 18:00

The workshop will present the history of discovering coffee, its origin and the transition from the fruit of a coffee tree to the roasted beans found in our coffee mill. The event is organized by the Novotel and the participation costs 10 EUR or 40 PLN (cash only).



Trip 1 – Poznań (optional), Saturday, 25 May 2019

🕒 Duration: around 4h



Poznań is the 5th biggest city in Poland and the capital of the Greater Poland province. Its history spans more than 1,000 years. We will take you to the famous Stary Browar (Old Brewery), which has been transformed into a shopping center and a gallery of contemporary art. The next stop will be the Old Town with its Old Market Square. In the very centre of the Square you will find the most iconic building in Poznań – the

original 16th century Renaissance Town Hall. Every day, at noon, crowds of tourists gather, to see the most famous clock mechanism in Poland - the Poznań goats. Another point of the program is a real jewelry of Roman Baroque architecture, the former Jesuit church of St. Stanisław the Bishop, adjacent palaces and the Royal Castle topping the Przemysław Hill. We will end the tour of the Old Town with a local specialty, the croissant of St. Marcin and walk to the oldest part of Poznań - Ostrów Tumski. In the 10th century, the island was a religious and political center of early Poland. It is here, in the oldest cathedral in Poland, that the first Christian prince Mieszko I was buried along with his son Bolesław, the first crowned king of Poland.

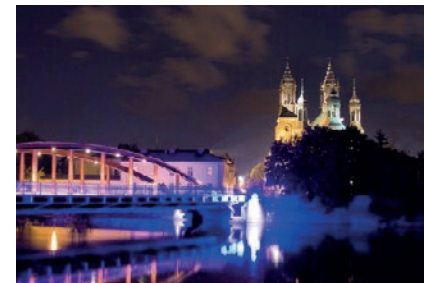
09:30 we will gather in the lobby at Novotel Poznań Centrum

09:30 - 10:15 Stary Browar (Old Brewery) and walk to the Old Town

10:15 - 12:00 Sightseeing the Old Town with the 12 o'clock display of the clock mechanical billy goats

12:00 - 13:00 Walk to the Cathedral Island and exploring cathedral vaults

13:00 Lunch at Galeria Tum ska





Trip 2 – Kórnik (optional), Saturday, 25 May 2019

🕒 Duration: around 6h

The castle in Kórnik is the main tourist attraction in the town of Kórnik. It is a historic residence of the Górki and Działyński families, which was constructed in the 14th century. The current form of the castle dates from the mid-nineteenth century. Inside, the richly decorated wooden floors, doors and ceilings make a huge impression. On the ground floor there are old residential rooms, including the castle owner's apartments, the lady's room, the living room and dining room, as well as a hunting lodge with an ethnographic collection brought by Władysław Zamoyski from a trip to Australia, New Zealand and the Pacific Islands. On the first floor there is a large museum hall with many unique exhibits, including furniture of various styles and eras, paintings by Polish and European masters, sculptures, numismatic collections, and handicrafts made of porcelain and silver and the Kórnik Library. The most magnificent interior of the residence is the Mauritanian Room displaying national souvenirs. At night – as the legend says – in the park and castle chambers walks through Teofila from Działyńskich Szkołdrska-Potulicka called "White Lady".



The Kórnik Arboretum is the oldest and one of the richest tree plant collections in the country. The over 30-hectare garden contains about 3,000 species of trees, shrubs and vines. In the Arboretum Collection there are several hundred years old specimens of indigenous trees, mainly limes, beeches, oaks, as well as well-established over a hundred years old specimens of exotic wood magnolias, Greek firs or marsh cypresses. These are also collections of birches, apple trees and cherries as well as decorative shrubs: lilacs, forsythia, spiraea, rhododendrons and azaleas. The most impressive specimens include: swamp cypress - a tree with protruding air roots, native to swampy southern states in the USA, or a willow growing pear-like fruits.

09:30 Meetup at Hotel Novotel in the lobby
09:30 - 10:30 Bus trip to Kórnik
10:30 - 11:30 Sightseeing the Kórnik Castle
11:30 - 12:30 Sightseeing the Kórnik arboretum + free time
13:00 - 13:45 Boat cruise
13:45 - 15:00 Lunch at „Tawerna pod Żaglami”
15:00 Trip back to Poznań



UMR Agroecology, INRA, Dijon, France



Although Dr. Christophe Salon was first trained in research with a specialisation in Biochemistry, Molecular and Cellular Biology, (Bordeaux University), he is specialised in plant ecophysiology. Dr Salon was Research Director of multiple INRA structures. He is in charge of operational management, budgeting, business and scientific strategies, staff training and development, human resources management.

Since 2012, Dr. Salon is Deputy Research Director of the largest Research Unit of INRA (UMR “Agroecology”, approx. 400 researchers and technicians) in which he manages i) the GEAPSI Research Group and the ii) the High Throughput Phenotyping facility Plant Phenotyping Platform for Plant and Microorganism Interaction (4PMI).



Palacký University, Olomouc, Czech Republic

Studied at Charles University and Prague's Agricultural University, graduating on plant biotechnology and molecular biology, conducting postdoctoral stays at ETH, Zurich and University of Freiburg, Germany. Worked for 8 years at Agritec Plant Research, Ltd. CZ with focus on plant genetic resources diversity, particularly of pea germplasm. Holding university position at Palacký University Olomouc, CZ since 2011. Published 63 peer reviewed papers, several book chapters with H index of 19.

He is interested in genetic diversity and phylogeny of Fabaeae tribe species and particularly in *Pisum* genus biogeography. The knowledge obtained by study of wild types and pea species is used to understand spatial diversity pattern in relationship to the geography and environment as well as to establish molecularly characterized introgression lines, useful both for basic research as well as in breeding.



*International Crops Research Institute for the Semi-Arid Tropics,
Hyderabad, India*

Professor Rajeev K Varshney, JC Bose National Fellow is a Research Program Director, Genetic Gains & Director, Center of Excellence in Genomics and Systems Biology at ICRISAT. In his dual appointment earlier, he served CGIAR Generation Challenge Program as Theme Leader for six years. Before joining ICRISAT in 2005, he worked at IPK-Gatersleben, Germany for five years. 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 in developing countries. Among different noted contributions, he has genome sequences of 9 crops including pigeonpea, chickpea, peanut and pearl millet and several molecular breeding products in chickpea, peanut and pigeonpea to his credit.

Rajeev is an elected fellow of all four science academies of India as well as several foreign science academies including German National Science Academy, The World Academy of Science, American Association for Advancement of Science, Crop Science Society of America, and American Society of Agronomy. He is recipient of the Shanti Swarup Bhatnagar Award from Government of India amongst many prestigious awards. He has been recognized as highly cited researcher by Thomson Reuters (Clarivate Analytics) for last 5 years in row and one of 10 most influential Indian scientists by Times of India, a leading Indian daily newspaper.



Keynote speaker • Judith Burstin



*Agroécologie, AgroSup, INRA, Univ. Bourgogne Fr.-Comté,
Dijon, France*

Dr Judith BURSTIN is Director of research at INRA UMR1347 Dijon-France. With an initial background in agronomy, quantitative genetics and breeding, she has acquired competencies in genomics and post-genomics methodologies. Her research focuses on pea and aims at deciphering the control of seed yield and quality in the context of low-input farming systems and climate change. A major scope of her research is the molecular understanding of plant adaptation. She leads a group of 30 people.

She authored or co-authored more than 50 papers in peer-reviewed international journals. She has been coordinating several large projects such as the International Pea Genome Sequencing Consortium and the multi-disciplinary Investment for the Future project PEAMUST. She contributes in national and international organizations dealing with grain legumes and has been part of the organizing committee of major conferences on legumes.



Keynote speaker • Wojciech Świącicki



Institute of Plant Genetics PAS, Poland

Legumes geneticist and breeder. Employed in the Posnan Plant Breeders Ltd. (1972-1991) and the Institute of Plant Genetics, Polish Academy of Sciences, Poznań (2004-2011 – Director of the Institute).

Over 20 pea and lupin cultivars bred and 29 pea genes selected, described and localized. Co-author of consecutive, updated consensus *Pisum* maps. New *Lupinus* species, *L. anatolicus* and *L. xhispanicoluteus* described. Creator and manager of the Polish *Pisum* collection and the World Database of *Lupinus* collections. Author of 189 research papers.

V-ce president of the AEP (2001-2004), member of the CC of the *Pisum* Genetics Association (since 1984), member of the CC of the LS, corresponding member of the Polish Academy of Sciences (since 2007).



University of Milan, Italy

Alessio Scarafoni is Associated Professor of Biochemistry at the University of Milano. He graduated MSc in Food Sciences and he got the PhD in Biochemistry. He is expert in protein purification and characterization.

His major scientific interests are in the field of structural/functional characterization of proteins, in particular seed storage proteins and enzyme inhibitors. Research themes include the study of molecular and cellular aspects of deposition and mobilization of seed proteins, the in vivo and in vitro study of the biological action and properties of food-derived molecules, and the implementation of molecular methods applied to the analysis of food matrices.



John Innes Centre Norwich, United Kingdom

Prof. Claire Domoney is Head of the Department of Metabolic Biology at the John Innes Centre, Norwich, UK. She has extensive experience of research on seed quality in pea, focussing mainly on understanding the genetic basis for protein accumulation and its relevance to nutrition. More recently, her work has extended to understanding the implications of variation in starch composition on human health. She uses a combination of metabolomic and genetic approaches to reveal links between pathways in developing grain legume seeds, generating germplasm which provide novel insights to legume seed traits.

By linking fundamental knowledge of metabolic processes to genes and QTL, her research provides tools, advanced knowledge and novel germplasm to breeding and end-use industries. Major partnerships are crucial to her work, including leadership of the Defra-funded Pulse Crop Genetic Improvement Network (PCGIN), and participation in EU and LINK consortia projects, all involving wide-ranging collaborations with breeders and additional industries.



Keynote speaker • Jeremy Murray



John Innes Centre/Shanghai Institute of Plant Physiology and Ecology, United Kingdom/China

Jeremy first began working on legumes during his PhD at the University of Guelph in Canada. He then carried out post docs at plant research institutes in Canada (SCPFRC, ON) and USA (Noble Foundation, OK) where he made discoveries using model legume systems which provided the first genetic evidence for the requirement of cytokinin in nodulation, and discovered VAPYRIN, a gene required for infection by both rhizobia and arbuscular mycorrhiza, which showed that the commonalities between the symbioses were not limited to signalling.

He then took up a David Phillips Fellowship at the John Innes Centre (Norwich, UK) where his work included analysis of the rhizobial 'infectome' which revealed that root hair infection was associated with the activation of genes involved in the cell cycle and early auxin responses, and the discovery of a novel 'infectosome' complex required for polar growth of the infection thread.

In January 2018 he re-established his lab at the Shanghai Institute for Plant Physiology and Ecology (SIPPE) in Shanghai, China, where his focus is on the mechanisms of endosymbiotic infection of legumes by rhizobia.



Keynote speaker • Rosalind Bueckert



University of Saskatchewan, Saskatoon, Canada

Rosalind Bueckert is a crop physiologist in western Canada, working in teaching and research at the University of Saskatchewan since 2000. She obtained a BSc (Honours) in Agricultural Botany from Reading University, UK, followed by MSc, PhD and post-doctoral research in cotton and soybean physiology (Agronomy) at the University of Arkansas, USA. Her major research focus is abiotic stress physiology –yield response and crop adaptation to temperature and water, and nitrogen. She initially focused on lentil and faba nitrogen acquisition and legume yield formation but the last decade has been an excursion into pea reproductive response to heat stress.

Current projects include soybean physiology in northern latitudes, predicting pea heat response through leaf and pollen surface lipids, and lately, phenomics and canola nitrogen use efficiency. Her legume research is targeted at landscape, field, whole plant and organ levels, in collaboration with pulse breeding programs and more basic biology - reproductive and molecular specialists. The presentation at IL3 will bring together findings in lentil and pea yield formation, with a sortie into pea ovules, embryos and pods to highlight traits to improve cultivar yield in stress.



Programme overview • Speakers

Tuesday, 21 May 2019		Wednesday, 22 May 2019	
13:00 - 21:00	Registration	08:00 - 09:00	Registration
15:00 - 15:30	Welcome and opening	09:00 - 11:00	Session 2
15:30 - 16:15	Plenary speaker Christophe Salon (France)	Moderator: Clarice Coyne (USA)	
16:15 - 16:45	Coffee break	Keynote speaker: Rajeev K. Varshney (India)	
16:45 - 18:45	Session 1	Mohan B. Singh (Australia)	
	Moderator: Diego Rubiales (Spain)	Karolina Susek (Poland)	
	Keynote speaker: Petr Smýkal (Czech Republic)	Ping Wan (China)	
	Lars Kamphuis (Australia)	Abhimanyu Sarkar (United Kingdom)	
	Valentina Caracuta (France)	José Parreira (Portugal)	
	Jens Berger (Australia)	Simon Michelmores (Australia)	
	Roberto Papa (Italy)	11:00 - 11:30	Coffee break
	Michael Abberton (Nigeria)	11:30 - 13:30	Session 3
	Bianca Büttner (Germany)	Moderator: Maria Carlota Vaz Patto (Portugal)	
18:45 - 21:00	Welcome Reception	Keynote speaker: Judith Burstin (France)	
		Paolo Annicchiarico (Italy)	
		Garry Rosewarne (Australia)	
		Gaëtan Louarn (France)	
		Judith Lichtenzweig (Australia)	
		Piotr Plewiński (Poland)	
		Frédéric Muel (France)	
		13:30 - 14:45	Lunch
		14:45 - 16:45	Session 4
		Moderator: Branko Cupina (Serbia)	
		Keynote speaker: Wojciech Świącicki (Poland)	
		Pietro Iannetta (Scotland, United Kingdom)	
		Werner Vogt-Kaute (Germany)	
		Branko Cupina (Serbia)	
		Sara Laranjeira (Portugal)	
		Long Li (China)	
		Nadja Rinke (Germany)	
		16:45 - 17:15	Coffee break
		17:15 - 18:00	Poster viewing
		18:00 - 19:00	Wine & Cheese - Legume Science
		20:30 - 22:00	Fotball Cup + barbecue



Programme overview • Speakers

Thursday, 23 May 2019		Friday, 24 May 2019	
08:00 - 09:00	Registration	08:00 - 09:00	Registration
09:00 - 11:00	Session 5	09:00 - 11:00	Session 7
	Moderator: Ning Wang (Canada)	Moderator: Alfonso Clemente (Spain)	
Keynote speaker: Alessio Scarafoni (Italy)		Keynote speaker: Jeremy Murray (United Kingdom & China)	
	Carmine Summo (Italy)	Benjamin Péret (France)	
	Thomas Warkentin (Canada)	Celine Mens (Australia)	
	Magdalena Zielińska-Dawidziak (Poland)	Joanna Banasiak (Poland)	
	Stephanie Witten (Germany)	Ana Duque (Portugal)	
	Jose C. Jimenez-Lopez (Spain)	Doris Puzoaa (Ghana)	
	Georg Carlsson (Sweden)	Prem Bhalla (Australia)	
11:00 - 11:30	Coffee break	11:00 - 11:30	Coffee break
11:30 - 13:30	Session 6	11:30 - 13:30	Session 8
	Moderator: Tom Warkentin (Canada)	Moderator: Weidong Chen (USA)	
Keynote speaker: Claire Domoney (United Kingdom)		Keynote speaker: Rosalind Bueckert (Canada)	
	Alfonso Clemente (Spain)	Noureddine El haddad (Morocco)	
	Richard Thompson (France)	Mégane Couchoud (France)	
	Federico Ribalta (Australia)	Ramakrishnan Madhavan Nair (India)	
	Jarosław Czubiński (Poland)	Diego Rubiales (Spain)	
	Magdalena Kroc (Poland)	Weidong Chen (USA)	
	Aneta Tomczak (Poland)	Michelle Hubbard (Canada)	
13:30 - 14:45	Lunch	13:30 - 14:45	Lunch
14:45 - 15:45	Poster viewing	14:45 - 15:45	Poster awards. Closing address
15:45 - 16:15	Coffee break	16:00 - 17:00	Home Barista Workshop
16:15 - 17:45	Legume Society General Assembly		
20:00 - 22:00	Gala Dinner		



Scientific programme • Tuesday, 21 May 2019

13:00 – 21:00	Registration, poster mounting
15:00 – 15:30	Welcome addresses and opening plenary session
15:30 – 16:15	Plenary speaker: Christophe Salon (UMR Agroecology, INRA, Dijon, France) <i>Challenges and opportunities for innovative research on legume nutrition and stress adaptation: an ecophysiological's and phenotyping point of view</i>
16:15 – 16:45	Coffee break
16:45 – 18:45	<u>Session 1. Legume Biodiversity and Genetic Resource Exploitation</u> Moderator: Diego Rubiales (Institute for Sustainable Agriculture CSIC, Córdoba, Spain)
16:45 – 17:15	Keynote speaker: Petr Smýkal (University Olomouc, Czech Republic) <i>Golden age of genebanks: using genetic diversity in the genomic era</i>
17:15 – 18:45	Session talks
17:15 – 17:30	<i>Development of genomic resources for narrow-leafed lupin</i> Lars Kamphuis (CSIRO Agriculture & Food, Perth, Australia)
17:30 – 17:45	<i>The origin and distribution of faba bean (Vicia faba) - new insight from the past</i> Valentina Caracuta (ISEM, Université de Montpellier, France)
17:45 – 18:00	<i>Walking on the wild side: widening the genetic & adaptive diversity of domestic chickpea</i> Jens Berger (CSIRO Agriculture and Food, Wembley, Australia)
18:00 – 18:15	<i>The strange case of beans: Phaseolus domestication and convergent evolution</i> Roberto Papa (Università Politecnica delle Marche, Ancona, Italy)



Scientific programme • Tuesday, 21 May 2019

18:15 – 18:30	<i>Development of orphan legumes for sub-Saharan Africa</i> Michael Abberton (International Institute of Tropical Agriculture, Ibadan, Nigeria)
18:30 – 18:45	<i>Soybean breeding for early maturity groups</i> Bianca Büttner (Bavarian State Research Centre for Agriculture, Freising, Germany)
18:45 – 21:00	Welcome Reception



Scientific programme • Wednesday, 22 May 2019

08:00 – 09:00	Registration
09:00 – 11:00	<u>Session 2. Advances in Legume Genetics, Genomics and other –omics</u> Moderator: Clarice Coyne (USDA, Plant Germplasm Introduction and Testing Research, Pullman, USA)
09:00 – 09:30	Keynote speaker: Rajeev K. Varshney (International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, India) <i>Translational genomics for accelerating genetic gains in legumes</i>
09:30 – 11:00	Session talks
09:30 – 09:45	<i>Long Non-coding RNA landscape of soybean and identification of lncRNAs potentially associated with agronomic traits</i> Mohan B. Singh (University of Melbourne, Australia)
09:45 – 10:00	<i>Lupin evolutionary stories through chromosome and transcriptome analyses</i> Karolina Susek (Institute of Plant Genetics, Polish Academy of Sciences, Poznań, Poland)
10:00 – 10:15	<i>Genetic analysis and gene identification of seed coat color integrating GWAS and mapping population in adzuki bean</i> Ping Wan (Beijing University of Agriculture, Beijing, China)
10:15 – 10:30	<i>Using genomic resources in grasspea (Lathyrus sativus) and pea (Pisum sativum) for comparative trait discovery</i> Abhimanyu Sarkar (John Innes Centre, Norwich, United Kingdom)
10:30 – 10:45	<i>Seed development in Phaseolus vulgaris L.: post-transcriptional regulation mediated by miRNAs</i> José Parreira (ITQB, Universidade Nova de Lisboa, Oeiras, Portugal)
10:45 – 11:00	<i>Developing molecular markers for herbicide tolerance traits for the Australian pulse industry</i> Simon Michelmores (South Australian Research and Development Institute, Adelaide, Australia)



Scientific programme • Wednesday, 22 May 2019

11:00 – 11:30	Coffee break
11:30 – 13:30	<u>Session 3. New Strategies and Tools for Legume Breeding</u> Moderator: Maria Carlota Vaz Patto (ITQB NOVA, Universidade Nova de Lisboa, Oeiras, Portugal)
11:30 – 12:00	Keynote speaker: Judith Burstin (Agroécologie, AgroSup, INRA, Univ. Bourgogne Fr.-Comté, Dijon, France) <i>The pea genome and beyond</i>
11:45 – 13:30	Session talks
12:00 – 12:15	<i>Using molecular marker diversity to infer morphophysiological and adaptive diversity of germplasm accessions: an alfalfa case study</i> Paolo Annicchiarico (Council for Agricultural Research and Economics CREA, Lodi, Italy)
12:15 – 12:30	<i>Application of genomic selection in Australian Pulse Breeding Programs</i> Garry Rosewarne (Department of Jobs, Precincts and Regions, Melbourne, Australia)
12:30 – 12:45	<i>Individual-based modelling as a tool to identify combinations of traits promoting overyielding in grass-legume mixtures</i> Gaëtan Louarn (INRA Lusignan, France)
12:45 – 13:00	<i>A rapid gene-introgression platform to transfer Cicer wild alleles to cultivars (or a geneticist's paradise for legume evolution and adaptation studies)</i> Judith Lichtenzweig (University of Western Australia, Crawley, Australia)
13:00 – 13:15	<i>Genes underlying early flowering trait in white lupin (Lupinus albus L.) and yellow lupin (Lupinus luteus L.)</i> Piotr Plewiński (Institute of Plant Genetics, Polish Academy of Sciences, Poznań, Poland)



Scientific programme • Wednesday, 22 May 2019

13:15 – 13:30	<i>Grain legume plant breeding in the EU</i> Frédéric Muel (Terres Inovia, Paris, France)
13:30 – 14:45	Lunch
14:45 – 16:45	<u>Session 4. Legume Contribution to Sustainable Agriculture</u> Moderator: Branko Cupina (University of Novi Sad, Serbia)
14:45 – 15:15	Keynote speaker: Wojciech Świącicki (Institute of Plant Genetics PAS, Poznań, Poland) <i>Diversification of feed protein sources for the food security – facts and myths</i>
15:15 – 16:45	Session talks
15:15 – 15:30	<i>Paradox and puzzle: legume-based agri-food and -feed systems in Europe</i> Pietro Iannetta (Ecological Sciences, The James Hutton Institute, Dundee, United Kingdom)
15:30 – 15:45	<i>Strategies for production of organic winter peas in Germany and Austria</i> Werner Vogt-Kaute (Naturland Fachberatung, Wartmannsroth, Germany)
15:45 – 16:00	<i>Legume cover crops for soil conservation</i> Branko Cupina (University of Novi Sad, Serbia)
16:00 – 16:15	<i>Improved grain yield of chickpea (<i>Cicer arietinum</i> L.) inoculated with arbuscular mycorrhizal fungi and plant growth promoting bacteria in a field trial under different water regimes</i> Sara Laranjeira (University of Trás-os-Montes e Alto Douro, Vila Real, Portugal)
16:15 – 16:30	<i>Benefits of legumes/non-legumes intercropping: Improved symbiotic N₂ fixation, nutrient use efficiency and soil fertility</i> Long Li (China Agricultural University, Beijing, China)



Scientific programme • Wednesday, 22 May 2019

16:30 – 16:45	<i>Intercropping of grain legumes with spring oat (<i>Avena sativa</i> L.) increases weed control and total yields in organic farming</i> Nadja Rinke (Thünen Institute of Organic Farming, Westerau, Germany)
16:45 – 17:15	Coffee break
17:15 – 18:00	Poster viewing
18:00 – 19:00	Wine & Cheese with Legume Science
20:00	Meeting at the sport stadium
20:30	Fourth International Legume Football Cup



Scientific programme • Thursday, 23 May 2019

08:00 – 9:00	Registration
09:00 – 11:00	<u>Session 5. Legumes for Human and Animal Nutrition and Health</u> Moderator: Ning Wang (Canadian Grain Commission)
09:00 – 09:30	Keynote speaker: Alessio Scarafoni (University of Milan, Italy) <i>Legumes in nutrition: understanding and applying scientific data today</i>
09:30 – 11:00	Session talks
09:30 – 09:45	<i>Chemical, nutritional and functional characterization of Apulian Black Chickpeas</i> Carmine Summo (University of Bari Aldo Moro, Bari, Italy)
09:45 – 10:00	<i>Pea biofortification update</i> Thomas Warkentin (University of Saskatchewan, Saskatoon, Canada)
10:00 – 10:15	<i>New varieties of <i>Lupinus angustifolius</i> as a source of interesting nutrients for human</i> Magdalena Zielińska-Dawidziak (Poznań University of Life Sciences, Poznań, Poland)
10:15 – 10:30	<i>Faba beans (<i>Vicia faba</i> L.) and field peas (<i>Pisum sativum</i> L.) as feedstuffs for broiler chicken: Precaecal protein and amino acid digestibility</i> Stephanie Witten (Thünen, Institute of Organic Farming, Westerau, Germany)
10:30 – 10:45	<i>Health benefits and potential uses of narrow-leaved lupin (<i>Lupinus angustifolius</i>) seed beta-conglutin proteins in functional food</i> Jose C. Jimenez-Lopez (Spanish National Research Council CSIC, Granada, Spain)
10:45 – 11:00	<i>A scenario for more legumes and less meat in the Swedish diet: possibilities and challenges related to increased domestic grain legume cultivation</i> Georg Carlsson (Swedish University of Agricultural Sciences, Alnarp, Sweden)



Scientific programme • Thursday, 23 May 2019

11:00 – 11:30	Coffee break
11:30 – 13:30	<u>Session 6. Legume Biochemistry and Systems Biology</u> Moderator: Tom Warkentin (University of Saskatchewan, Saskatoon, Canada)
11:30 – 12:00	Keynote speaker: Claire Domoney (John Innes Centre, Norwich, United Kingdom) <i>Improving nutritional and health-associated traits in <i>Pisum sativum</i> (pea)</i>
12:00 – 13:30	Session talks
12:00 – 12:15	<i>The anti-proliferative properties of TI1, a major Bowman-Birk isoinhibitor from pea (<i>Pisum sativum</i> L.) seeds, on HT29 colon cancer cells are associated with both trypsin- and chymotrypsin-like protease inhibition</i> Alfonso Clemente (Estacion Experimental del Zaidin (CSIC), Granada, Spain)
12:15 – 12:30	<i>Characterization of the biosynthesis of saponins during seed development in peas (<i>Pisum sativum</i>)</i> Richard Thompson (Agroécologie, AgroSup, INRA, Univ. Bourgogne Fr.-Comté, Dijon, France)
12:30 – 12:45	<i>Expression patterns of key hormones related to pea (<i>Pisum sativum</i> L.) embryo physiological maturity shift in response to accelerated growth conditions</i> Federico Ribalta (University of Western Australia, Perth, Australia)
12:45 – 13:00	<i>Interactions between lupin seed proteins and native flavonoids</i> Jarosław Czubiński (Poznań University of Life Sciences, Poznań, Poland)
13:00 – 13:15	<i>Alkaloid biosynthesis in lupins</i> Magdalena Kroc (Institute of Plant Genetics, Polish Academy of Sciences, Poznań, Poland)



Scientific programme • Thursday, 23 May 2019

13:15 – 13:30	<i>The influence of soya bean ingredients in dairy cattle fodder on milk immunoreactivity</i> Aneta Tomczak (Poznań University of Life Sciences, Poland)
13:30 – 14:45	Lunch
14:45 – 15:45	Poster viewing
15:45 – 16:15	Coffee break
16:15 – 17:45	Legume Society General Assembly
20:00	Gala Dinner



Scientific programme • Friday, 24 May 2019

08:00 – 9:00	Registration
09:00 – 11:00	Session 7. Legume Physiology, Plant Development, and Symbiosis Moderator: Alfonso Clemente (Estacion Experimental del Zaidin CSIC, Granada, Spain)
09:00 – 09:30	Keynote speaker: Jeremy Murray (John Innes Centre, Norwich, UK; CEPAMS, Shanghai Institute of Plant Physiology and Ecology, China) <i>The infectosome: a novel protein complex required for polar growth of rhizobial infection threads</i>
09:30 – 11:00	Session talks
09:30 – 09:45	<i>Unravelling cluster root development in white lupin</i> Benjamin Péret (Univ. de Montpellier, CNRS, INRA, SupAgro, Montpellier, France)
09:45 – 10:00	<i>Local and systemic effect of cytokinins on soybean nodulation and regulation of their isopentenyl transferase (IPT) biosynthesis genes following rhizobia inoculation</i> Celine Mens (University of Queensland, Brisbane, Australia)
10:00 – 10:15	<i>Characterization of the full-size ABCG transporter from Medicago truncatula that influences strigolactones secretion and arbuscular mycorrhiza formation</i> Joanna Banasiak (Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznań, Poland)
10:15 – 10:30	<i>MicroRNAs expression profiles during Medicago truncatula somatic embryogenesis: embryogenic vs. non-embryogenic lines</i> Ana Duque (ITQB Universidade Nova de Lisboa, Oeiras, Portugal)
10:30 – 10:45	<i>Characterization of elite groundnut lines for fresh seed dormancy and storage quality</i> Doris Puozaa (CSIR-SARI, Nyankpala, Ghana)



Scientific programme • Friday, 24 May 2019

10:45 – 11:00	<i>Genomic and molecular analysis of soybean clock genes shows a novel role in male reproductive development and seed set</i> Prem Bhalla (University of Melbourne, Australia)
11:00 – 11:30	Coffee break
11:30 – 13:30	<u>Session 8. Biotic and Abiotic Stresses in Legumes</u> Moderator: Weidong Chen (USDA ARS Washington State University, Pullman, USA)
11:30 – 12:00	Keynote speaker: Rosalind Bueckert (University of Saskatchewan, Saskatoon, Canada) <i>Battle of the stresses: seeking more pods and seeds</i>
12:00 – 13:30	Session talks
12:00 – 12:15	<i>Genotypic variation in Lentil (<i>Lens culinaris</i> Medikus) for transpiration response to vapor pressure deficit</i> Noureddine El haddad (ICARDA/University Mohammed V, Rabat, Morocco)
12:15 – 12:30	<i>How does pea (<i>Pisum sativum</i>) recover from water deficit?</i> Mégane Couchoud (INRA UMR Agroécologie, Dijon, France)
12:30 – 12:45	<i>Progress in improving black gram (<i>Vigna mungo</i> (L.) Hepper) against biotic stresses</i> Ramakrishnan Madhavan Nair (World Vegetable Center, South Asia, Hyderabad, India)
12:45 – 13:00	<i>Identification of QTLs controlling resistance to rust, aphid and weevil in wild peas by DArTseq SNP-based technology</i> Diego Rubiales (Institute for Sustainable Agriculture, CSIC, Córdoba, Spain)
13:00 – 13:15	<i>Sclerotinia sclerotiorum secretes an effector protein specifically interacts with and negates the inhibitory effect of plant polygalacturonase-inhibiting protein (PGIP)</i> Weidong Chen (USDA ARS Washington State University, Pullman, USA)



Scientific programme • Friday, 24 May 2019

13:15 – 13:30	<i>Biotic and abiotic stress in chickpea-flax intercropping</i> Michelle Hubbard (Swift Current Research and Development Centre, Swift Current, Canada)
13:30 – 14:45	Lunch
14:45 – 15:45	Poster and Presentation Awards. Closing address
16:00	Coffee workshop



Poster session 1. Legume Biodiversity and Genetic Resource Exploitation

P 1.1

Patterns of genetic diversity in a world collection of white lupin

P. Annicchiarico N. Nazzicari, B. Ferrari

P 1.2

*Phytochemical variability studies of cowpea accessions (*Vigna unguiculata* (L.) Walp) from four agroecological zones and one unknown source in Ghana*

I. K. Asante, H. K. Mensah, R. A. K. Nortey, P. A. D. Zoryeku

P 1.3

Pod phenotypic variation in a set of snap beans collected in Europe

J. J. Ferreira, A. Campa, V. Geffroy, L. Rocchetti, E. Bitocchi, R. Papa

P 1.4

*Phosphorus use efficiency in the recombinant [accacia×normal leaf] lines of the field pea (*Pisum sativum* L.) mapping population*

M. Gawłowska, A. Górny, D. Ratajczak, A. Niewiadomska, W. Święcicki, K. Beczek

P 1.5

Evaluation of Cowpea Genotypes using Selected Mineral Elements and Protein Content in Grain

A. S. Gerrano, W. S. Jansen van Rensburg, M. Bairu, S. L. Venter

P 1.6

Selection from Desi type chickpea landraces collected in west of Iran to introduce high yielding new varieties

H. Kanouni, D. Sadeghzadeh Ahari, A. Saeid, M. K. Abbasi, A. Rostami, K. Setoudeh Maram, A. Hesami

P 1.7

*Diversity of the composition of cyclitols and their galactosides in seeds of the genus *Lathyrus* (Leguminosae)*

L. B. Lahuta, W. Rybiński



P 1.8

*Spearlike Bean Dreaming - The hundredth millennial of *Vigna lanceolata*, an Australian Aboriginal uncultivated legume crop*

A. Mikić

P 1.9

GWAS in the USDA kabuli chickpea mini-core set for protein, fat and fiber

D. Mugabe, C. Frieszell, P. Zheng, R. J. McGee, D. Main, G. Ganjyal, C. Coyne,

P 1.10

*Broadening soybeans variability by interspecies *Glycine max* × *Glycine soja* hybridization*

J. Nawracała, D. Kurasiak-Popowska

P 1.11

Exploiting wild germplasm to expand the genetic diversity and enhance the adaptive potential of domesticated chickpea

T. E. Newman, C. Grime, F. Kamphuis, R. A. Syme, Y. Khentry, R. Lee, L. G. Kamphuis

P 1.12

*Genotyping by sequencing of cultivated lentil (*Lens culinaris*) highlights population structure in the Mediterranean gene pool shaped by geographic patterns and anthropic selection*

S. Pavan, N. Bardaro, V. Fanelli, G. Mangini, F. Taranto, D. Catalano, C. Montemurro, C. De Giovanni, C. Lotti, L. Ricciardi

P 1.13

Gene Pool White Lupine - basis for new variety development in Bavaria

C. Riedel, S. Gellan, B. Büttner, G. Schwertfirm, G. Schweizer, J. Eder

P 1.14

Phenotyping a pea collection for resistance to fungal diseases as a first step for Genome Wide Association

N. Risipail, S. Osuna-Caballero, W. Z. Osman, A. Castro-León, E. Barilli, D. Rubiales

P 1.15

*Variability in resistance to mechanical loads and chemical composition of seeds for selected accessions of chickpea (*Cicer arietinum* L.)*

W. Rybiński, M. Bańda, J. Bocianowski, E. Starzycka-Korbas, M. Starzycki, K. Nowosad



P 1.16

*Characterization of six Portuguese landraces of common bean (*Phaseolus vulgaris* L.)*

E. R. Santos, T. Lino-Neto, V. Carnide, G. Marques

P 1.17

The role of the biopolymer coating of soybean seeds for yield improvement

M. Skórka, R. Monich, A. Taranenko, L. Koba, E. Kopania, J. Wietecha,
M. Wiśniewska-Wrona, W. Jarecki

P 1.18

Sustainable stewardship of the landrace diversity in Legumes

I. S. Tokatlidis, A. Kargiotidou, D. N. Vlachostergios

P 1.19

Peas – a genetic resource for sustainable protein production in the Arctic?

I. M. Vågen, U. Carlson-Nilsson, K. Aloisi, S. K. Rasmussen, G. Poulsen, M. W. Leino,
P. Pärssinen, A. Rajala, A. Palmé

P 1.20

Mycological profile of national soybean seeds varieties

Z. Wiśniewska, M. Kasprowicz-Potocka, A. Zaworska-Zakrzewska, S. Kaczmarek,
M. Hejdysz, A. Rutkowski

P 1.21

Potential of chickpea genotypes on yield and yield components under Mediterranean condition of Turkey

D. Yücel, D. Mart, M. Türkeri

P 1.22

Leaf epidermal micromorphology related to digestibility of forage plants

L. Zorić, D. Karanović, J. Luković



Poster session 2. Advances in Legume Genetics, Genomics and other –omics

P 2.1

Comparative characteristics of Old World lupin chromosome variation by combining BACs with novel oligo-based approach

W. Bielski, K. Susek, B. Naganowska

P 2.2

Validation of QTL associated to pod and seed size in common bean using two nested RIL populations of common bean

A. Campa, E. Murube, Q. Song, P. McClean, J. J. Ferreira

P 2.3

Genome-wide association studies of mineral content in common bean landraces

K. Carović-Stanko, J. Gunjača, B. Lazarević, M. Vidak, M. Petek, Z. Liber, Z. Šatović

P 2.4

*Probing transcriptomes of divergent legumes via merging multiple, independent assemblies: *Cassia sturtii*, *Chamaecrista mimosoides* and *Senna obtusifolia**

K. Czyż, G. Koczyk, M. Kroc, K. Czepiel

P 2.5

RNA-seq and RT-qPCR analysis reveal the involvement of precursor and mature miR169 in flower development and abscission in yellow lupine

P. Glazinska, M. Kulasek, W. Glinkowski, N. Klajn, W. Wojciechowski

P 2.6

*Genetic variability study and kasp marker mapping analysis revealed a new haplotype determining pale hilum Hc in *Vicia faba**

K. Khamassi, F. Ben Jeddi

P 2.7

*Metabolite profiling of pea (*Pisum sativum* L.) seeds during accelerated ageing revealed accumulation of sugar alcohols and sugar acids*

L. Lahuta, M. Ciak, J. Szablińska



P 2.8

*Effect of sucrose and asparagine on transcriptome of embryo axes of white lupin (*Lupinus albus* L.) and Andean lupin (*Lupinus mutabilis* Sweet)*

K. Nuc, S. Stefaniak, Ł. Wolko, M. Pietrowska-Borek, S. Borek

P 2.9

Genome-wide association study for seed quality traits in chickpea

A. Orsak, A. Deokar, B. Tar'an

P 2.10

*Characterization of microsatellites revealed by transcriptome sequencing of *Trifolium resupinatum**

J. Paiva, A. Barradas, P. Fevereiro

P 2.11

Genetic variability and heritability for yield and yield components in chickpea

D. Yücel, M. Türkeri, D. Mart, N. Angin, C. Yücel



Poster session 3. New Strategies and Tools for Legume Breeding

P 3.1

Opportunities and strategies for integration of molecular markers into an applied pulse crop breeding program

N. Bandillo, T. Stefaniak, H. Worral

P 3.2

Soybean light use efficiency upon sufficient soil moisture

A. B. Budak, G. I. Skurtu, O. A. Kharchuk

P 3.3

*Possibilities of plant breeding to powdery mildew resistance - case study "Peas" – *Erysiphe pisi**

R. Dostálová, A. Vaculík

P 3.4

*The variability of the chlorophyll fluorescence parameters, the chlorophyll content, the leaf water potential and their relationship with seed yield of narrow-leaved lupin (*Lupinus angustifolius* L.)*

B. Góryniewicz, W. Świącicki

P 3.5

Performance of Breeding methods applied to faba bean for enhancing sustainable yield production

K. Gharzddin, N. Ali Jamal Dine, L. Abou Khater, B. Khoury, S. Christmann, F. Maalouf

P 3.6

*Future faba bean for food and feed – A research and breeding initiative on faba bean (*Vicia faba*) in Sweden*

Å. Grimberg, A. Chawade, A. S. Carlsson, A. Ceplitis, H. Johnsson, Å. Ståhl, P. Hofvander

P 3.7

Gibberellic acid enhances crossing success rate in lentil

O. Idrissi



P 3.8

Single seed descent under extended photoperiod as a simple, rapid and efficient breeding method for accelerated genetic gain in lentil

O. Idrissi, A. Sahri, S. Udupa, S. Kumar

P 3.9

Identification of SNPs associated with agronomic traits in lentil using bulk segregant analysis in advanced backcrossed mapping population

J. Kumar, D. S. Gupta, C. Gangwar, S. Kashyap

P 3.10

State and outlook for white lupin breeding in Russia

M. I. Lukashevitch, M. V. Zakharova

P 3.11

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J. D. Tracy, K. McPhee



Participant list

A

Abberton Michael
Genetic Resources Centre, Intern. Inst. of
Tropical Agriculture, Ibadan, Nigeria
m.abberton@cgiar.org

Abou Khater Lynn
Intern. Center for Agricultural Res. in the
Dry Areas ICARDA, Terbol, Lebanon
l.abou-khater@cgiar.org

Adhikari Kedar
University of Sydney, Narrabri, Australia
kn.adhikari@gmail.com

Agrawal Shiv Kumar
Intern. Center for Agricultural Res. in the
Dry Areas ICARDA, Rabat, Morocco
SK.Agrawal@cgiar.org

Alloudane Rajae
Abdelmalek Essaâdi University, Tétouan,
Morocco
barrijal@yahoo.fr

Annicchiarico Paolo
Research Centre for Animal Production
& Aquaculture, Lodi, Italy
paolo.annicchiarico@crea.gov.it

Araújo Susana
ITQB Universidade Nova de Lisboa;
University of Pavia, Oeiras; Pavia,
Portugal; Italy
saraujo@itqb.unl.pt

Arribas Claudia
Instituto Nacional de Investigación
y Tecnología Agraria, Madrid, Spain
arribas.claudia@inia.es

Asante Isaac
University of Ghana, Legon, Ghana
asanteisaack57@gmail.com

Aulrich Karen
J. H. von Thünen-Institute, Institute of
Organic Farming, Westerau, Germany
karen.aulrich@thuenen.de

B

Banasiak Joanna
Institute of Bioorganic Chemistry, Polish
Academy of Sciences, Poznań, Poland
joaban@ibch.poznan.pl

Bandillo Nonoy
North Dakota State University, Fargo,
USA
nonoy.bandillo@ndsu.edu

Berger Jens
CSIRO Agriculture & Food, Wembley,
Australia
jens.berger@csiro.au

Bhalla Prem
University of Melbourne, Melbourne,
Australia
premlb@unimelb.edu.au

Biała Wanda
Institute of Bioorganic Chemistry, Polish
Academy of Sciences, Poznań, Poland
wbiala@ibch.poznan.pl

Bielski Wojciech
Institute of Plant Genetics, Polish
Academy of Sciences, Poznań, Poland
wbie@igr.poznan.pl

Bing Dengjin
Agriculture & Agri-Food Canada, Ottawa,
Canada
dengjin.bing@canada.ca

Boeglin Laure
USC LEVA, INRA, Ecole Supérieure
d'Agricultures, Angers, France
l.boeglin@groupe-esa.com

Böhm Herwart
J. H. von Thünen-Institute, Institute of
Organic Farming, Westerau, Germany
herwart.boehm@thuenen.de

Bojang Oumuratou
Oumuratu Enterprises, Banjulinding,
Gambia
boumuratou@hotmail.com

Bolarinwa Kehinde
University of Lagos, Lagos, Nigeria
bolarinwakehinde85@gmail.com

Borek Sławomir
Adam Mickiewicz University, Poznań,
Poland
borek@amu.edu.pl

Boros Lech
Institute of Plant Breeding
& Acclimatization, Radzików, Poland
l.boros@ihar.edu.pl

Budac Alexandr
Donau Soja GmbH, Chisinau, Republic of
Moldova
sashabudak54@mail.ru

Bueckert Rosalind
University of Saskatchewan, Saskatoon,
Canada
rosalind.bueckert@usask.ca

Burstin Judith
Agroécologie, AgroSup Dijon, INRA, Univ.
Bourgogne Fr.-Comté, Dijon, France
judith.burstin@inra.fr

Büttner Bianca
Bavarian State Research Centre for
Agriculture, Freising, Germany
bianca.buettner@lfl.bayern.de

C

Campa Ana
Agri-Food Research & Development
Regional Service, Villaviciosa, Spain
acampa@serida.org

Cao Longkui
Heilongjiang Bayi Agricultural University,
Daqing, China
zlxwwh@126.com



Participant list



Participant list

Caracuta Valentina
Université de Montpellier, Montpellier,
France
v.caracuta@gmail.com

Carlsson Georg
Swedish University of Agricultural
Sciences, Alnarp, Sweden
georg.carlsson@slu.se

Carović-Stanko Klaudija
Univ. of Zagreb; Cent. of Excell. for
Biodiv. & Mol. Plant Breed., Zagreb,
Croatia
kcarovic@agr.hr

Chen Weidong
USDA ARS Washington State University,
Pullman, USA
weidong.chen@ars.usda.gov

Chen Chengci
Montana State University, Sidney, USA
cchen@montana.edu

Cherière Timothée
INRA, ESA, Univ. Bretagne Loire, Angers,
France
t.cheriere@groupe-esa.com

Choukri Hasnae
Mohammed V University, Rabat, Morocco
hasnae.choukri0@gmail.com

Clemente Alfonso
Estac. Exp. del Zaidín, Consejo Sup. de
Investig. Científicas, Granada, Spain
ajo343@usask.ca

Cnops Gerda
Flanders Research Institute for
Agricultural Fisheries & Food,
Caritasstraat, Belgium
gerda.cnops@ilvo.vlaanderen.be

Corre-Hellou Guénaëlle
USC LEVA, INRA, ESA, Univ. Bretagne
Loire, Angers, France
g.hellou@groupe-esa.com

Couchoud Mégane
INRA UMR Agroécologie, Dijon, France
megane.couchoud@inra.fr

Coyne Clarice
Washington State University, Pullman,
USA
clarice.coyne@ars.usda.gov

Cupina Branko
University of Novi Sad, Novi Sad, Serbia
cupinab@polj.uns.ac.rs

Czepiel Katarzyna
Institute of Plant Genetics, Polish
Academy of Sciences, Poznań, Poland
kcze@igr.poznan.pl

Czubacka Anna
Institute of Soil Science & Plant
Cultivation - State Res. Inst., Puławy,
Poland
annacz@iung.pulawy.pl

Czubiński Jarosław
Poznań University of Life Sciences,
Poznań, Poland
jarczu@up.poznan.pl

Czyż Katarzyna
Institute of Plant Genetics, Polish
Academy of Science, Poznań, Poland
kwyr@igr.poznan.pl

D

Domoney Claire
John Innes Centre, Norwich, United
Kingdom
debra.canton-stoker@jic.ac.uk

Dostálová Radmila
Agritec Plant Research, Ltd., Šumperk,
Czech Republic
dostalova@agritec.cz

Du Jidao
Heilongjiang Bayi Agricultural University,
Daqing, China
zlzxwwh@126.com

Duque Ana
ITQB Universidade Nova de Lisboa,
Oeiras, Portugal
sduque@itqb.unl.pt

E

El haddad Nouredine
ICARDA; National Inst. of Agronomic
Res.; Mohammed V Univ., Rabat,
Morocco
nouredinebio@gmail.com

F

Faligowska Agnieszka
Poznań University of Life Sciences,
Poznań, Poland
agnieszka.faligowska@up.poznan.pl

Feng Naijie
Heilongjiang Bayi Agricultural University,
Daqing, China
dqfnj@126.com

Ferawati Ferawati
Linnaeus University, Kalmar, Sweden
ferawati.ferawati@lnu.se

Ferreira Juan Jose
Agri-Food Research & Development
Regional Service, Villaviciosa, Spain
jjferreira@serida.org

Fevereiro Pedro
ITQB Universidade Nova de Lisboa,
Oeiras, Portugal
psalema@itqb.unl.pt

Fustec Joëlle
INRA Ecole Supérieure d'Agricultures,
Angers, France
j.fustec@groupe-esa.com

G

Gawłowska Magdalena
Institute of Plant Genetics, Polish
Academy of Sciences, Poznań, Poland
mgaw@igr.poznan.pl



Participant list



Participant list

Gerrano Abe
Agricultural Research Council, Pretoria,
South Africa
agerrano@arc.agric.za

Glazińska Paulina
Nicolaus Copernicus University, Toruń,
Poland
paulina.glazinska@umk.pl

Glinkowski Wojciech
Nicolaus Copernicus University, Toruń,
Poland
wglin@doktorant.umk.pl

Greenshields Dave
Saskatchewan Pulse Growers, Saskatoon,
Canada
dgreenshields@saskpulse.com

Griga Miroslav
Agritec Plant Research, s.r.o., Šumperk,
Czech Republic
griga@agritec.cz

Grimberg Åsa
Swedish University of Agricultural
Sciences, Alnarp, Sweden
asa.grimberg@slu.se

Guillamon Eva
Centre for the Food Quality, INIA, Soria,
Spain
guillamon.eva@inia.es

Gulewicz Piotr
Poznan Science & Technology Park,
Adam Mickiewicz Univ. Found., Poznań,
Poland
piotr.gulewicz@ppnt.poznan.pl

H

Hądzlik Danuta
DANKO Hodowla Roślin Sp. z o.o., Poland
danuta.hadzlik@danko.pl

Hofvander Per
Swedish University of Agricultural
Sciences, Alnarp, Sweden
per.hofvander@slu.se

Hu Jinguo
Washington State University, Pullman,
USA
jinguo.hu@ars.usda.gov

Hubbard Michelle
Agriculture & Agri-Food Canada, Swift
Current, Canada
michelle.hubbard@canada.ca

Huňady Igor
Agritec Plant Research s.r.o., Šumperk,
Czech Republic
hunady@agritec.cz

I

Iannetta Pietro
James Hutton Institute, Dundee, United
Kingdom
pete.iannetta@hutton.ac.uk

Idrissi Omar
National Institute for Agronomic
Research of Morocco, Settat, Morocco
o.idrissi@yahoo.fr

J

Jaconis Evy
USA Dry Pea & Lentil Council / American
Pulse Association, Moscow, Idaho, USA
ejaconis@usapulses.org

Jamruszka Tomasz
Institute of Bioorganic Chemistry, Polish
Academy of Sciences, Poznań, Poland
tjamruszka@ibch.poznan.pl

Jarecki Wacław
University of Rzeszów, Rzeszów, Poland
wacław.jarecki@wp.pl

Jasiński Michał
Institute of Bioorganic Chemistry, Polish
Academy of Sciences, Poznań, Poland
jasinski@ibch.poznan.pl

Jimenez-Lopez Jose C.
Spanish National Res. Council; School of
Molec. & Life Sciences, Granada; Bentley,
Spain; Australia
josecarlos.jimenez@eez.csic.es

K

Kadziuliene Zydre
Lithuanian Research Centre for
Agriculture & Forestry, Kėdainiai,
Lithuania
zydre.kadziuliene@lammc.lt

Kalembasa Stanisław Jan
Siedlce University of Natural Sciences
& Humanities, Siedlce, Poland
europrof171@googlemail.com

Kamphuis Lars
CSIRO Agriculture & Food, Floreat,
Australia
lars.kamphuis@csiro.au

Kanouni Homayoun
Kurdistan Agric. & Natural Resources
Res. & Education Center, Sanandaj, Iran
hkanouni@gmail.com

Katańska-Kaczmarek Agnieszka
DANKO Hodowla Roślin Sp. z o.o., Poland
agnieszka.kaczmarek@danko.pl

Keijzer Peter
Louis Bolk Institute, Bunnik, Netherlands
p.keijzer@louisbolk.nl

Kempster Robert
Lancaster University, Carnforth, United
Kingdom
r.kempster@lancaster.ac.uk



Participant list



Participant list

Khamassi Khalil
INRAT, University of Carthage, Tunis,
Tunisia
khkobe@hotmail.com

Kielpinski Mitch, Poznań, Poland
tmkielpin@yahoo.com

Kintl Antonín
Research Institute for Fodder Crops, Ltd.,
Troubsko, Czech Republic
kintl@vupt.cz

Klimek-Kopyra Agnieszka
University of Agriculture, Kraków, Poland
agnieszka.klimek@urk.edu.pl

Kopania Ewa
Institute of Biopolymers & Chemical
Fibres, Łódź, Poland
e.kopania@ibwch.lodz.pl

Korbecka-Glinka Grażyna
Institute of Soil Science & Plant
Cultivation - State Res. Inst., Puławy,
Poland
gkorbecka@iung.pulawy.pl

Koudabio Kimpa Serge Corado
Initiative Developpement - Congo,
Brazzaville, Kongo
sergekimpa@gmail.com

Kroc Magdalena
Institute of Plant Genetics, Polish
Academy of Sciences, Poznań, Poland
mkro@igr.poznan.pl

Książkiewicz Michał
Institute of Plant Genetics, Polish
Academy of Science, Poznań, Poland
mksi@igr.poznan.pl

Kulasek Milena
Nicolaus Copernicus University, Toruń,
Poland
kulasek@doktorant.umk.pl

Kumar Jitendra
ICAR-Indian Institute of Pulses Research,
Kanpur, India
jitendra73@gmail.com

L

Lahuta Lesław
University of Warmia & Mazury in
Olsztyn, Olsztyn, Poland
lahuta@uwm.edu.pl

Lana Marcos
Swedish University of Agricultural
Sciences, Uppsala, Sweden
marcos.lana@slu.se

Laranjeira Sara Silva
CITAB University of Trás-os-Montes
e Alto Douro, Vila Real, Portugal
laranjeirasara@gmail.com

Lazarević Boris
Univ. of Zagreb; Cent. of Excell. for
Biodiv. & Mol. Plant Breed. , Zagreb,
Croatia
blazarevic@agr.hr



Participant list

Li Long
China Agricultural University, Beijing,
China
lilong@cau.edu.cn

Lichtenzveig Judith
University of Western Australia, Perth,
Australia
judith.lichtenzveig@uwa.edu.au

Lingner Annika
University of Goettingen, Göttingen,
Germany
alingne@agr.uni-goettingen.de

Link Wolfgang
Georg-August-Universität Göttingen,
Göttingen, Germany
wlink@gwdg.de

Louarn Gaëtan
INRA, Lusignan, France
gaetan.louarn@inra.fr

Lukashevitch Michael
All-Russian Lupin Scientific Research
Institute, Bryansk, Russia
lupin.albus@mail.ru

M

Maalouf Fouad
Intern. Center for Agricultural Res. in Dry
Areas ICARDA, Terbol, Lebanon
f.maalouf@cgiar.org

Macková Hana
Agritec Plant Research, s.r.o., Šumperk,
Czech Republic
mackova@agritec.cz

Maluk Marta
James Hutton Institute, Dundee, United
Kingdom
marta.maluk@hutton.ac.uk

Marciniak Katarzyna
Nicolaus Copernicus University, Toruń,
Poland
marciniak@umk.pl

Marques Guilhermina
CITAB University of Trás-os-Montes
e Alto Douro, Vila Real, Portugal
gmarques@utad.pt

Martins Davide
ITQB Universidade Nova de Lisboa,
Oeiras, Portugal
dcmartins@itqb.unl.pt

McPhee Kevin
Montana State University, Bozeman, USA
kevin.mcphee@montana.edu

Menegat Alexander
Swedish University of Agricultural
Sciences, Uppsala, Sweden
alexander.menegat@slu.se

Mens Celine
University of Queensland, Brisbane,
Australia
c.mens@uqconnect.edu.au



Participant list

Mentag Rachid
National Institute of Agronomic
Research, Rabat, Morocco
richard.thompson@inra.fr

Micheltmore Simon
South Australian Research
& Development Institute, Adelaide,
Australia
simon.micheltmore@sa.gov.au

Mikich Aleksandar
Novi Sad, Serbia
alfonso.clemente@eez.csic.es

Mortensen Per Skov
Nielsen & Smith A/S, Gedser, Denmark

Muel Frédéric
Terres Inovia, Paris, France
f.muel@terresinovia.fr

Murray Jeremy
Shanghai Institute of Plant Physiology
and Ecology, Shanghai, China
jeremy.murray@jic.ac.uk

N

Naganowska Barbara
Institute of Plant Genetics, Polish
Academy of Science, Poznań, Poland
bnag@igr.poznan.pl

Nair Ramakrishnan M.
World Vegetable Center South Asia,
Hyderabad, India
ramakrishnan.nair@worldveg.org

Narits Lea
Estonian Crop Research Institute, Jõgeva,
Estonia
lea.narits@etki.ee

Nawracała Jerzy
Poznań University of Life Sciences,
Poznań, Poland
jnawrac@up.poznan.pl

Newman Toby
Curtin University, South Perth, Australia
toby.newman@curtin.edu.au

O

Ogunkanmi Adebayo
University of Lagos, Lagos, Nigeria
logunkanmi@unilag.edu.ng

Olszak-Przybyś Hanna
Institute of Soil Science & Plant
Cultivation - State Res. Inst., Puławy,
Poland
holszak@iung.pulawy.pl

Omri Ben Youssef Noura
INRAT, University of Carthage, Tunis,
Tunisia
noura.mori@gmail.com

Orsak Alanna
University of Saskatchewan, Saskatoon,
Canada
ajo343@usask.ca



Participant list

Osorno Juan M.
North Dakota State University, Fargo,
USA
juan.osorno@ndsu.edu

P

Panasiewicz Katarzyna
Poznań University of Life Sciences,
Poznań, Poland
katarzyna.panasiewicz@up.poznan.pl

Pandey Babu
Agriculture Victoria Research, Horsham,
Australia
babu.pandey@ecodev.vic.gov.au

Papa Roberto
Università Politecnica delle Marche,
Ancona, Italy
r.papa@univpm.it

Parreira José
ITQB Universidade Nova de Lisboa,
Oeiras, Portugal
jsalvado@itqb.unl.pt

Pasqualone Antonella
University of Bari Aldo Moro, Bari, Italy
antonella.pasqualone@uniba.it

Pavan Stefano
University of Bari Aldo Moro, Bari, Italy
stefano.pavan@uniba.it

Pedrosa Mercedes M.
Instituto Nacional de Investigación
y Tecnología Agraria, Madrid, Spain
mmartin@inia.es

Péret Benjamin
BPMP, University of Montpellier, CNRS,
INRA, SupAgro, Montpellier, France
benjamin.peret@supagro.fr

Petrović Gordana
Institute of Field & Vegetable Crops, Novi
Sad, Serbia
gordana.petrovic@nsseme.com

Pigna Gaia
Soremartec Italia s.r.l., Alba, Italy
gaia.pigna@ferrero.com

Pillinger William
LIMAGRAIN, King's Lynn, United Kingdom
william.pillinger@limagrain.co.uk

Pinto Paiva Jorge Almiro
Institute of Plant Genetics, Polish
Academy of Science, Poznań, Poland
jpai@igr.poznan.pl

Plewiński Piotr
Institute of Plant Genetics, Polish
Academy of Science, Poznań, Poland
pple@igr.poznan.pl

Polanowska Katarzyna
Poznań University of Life Sciences,
Poznań, Poland
katarzyna.polanowska@up.poznan.pl

Przedniczek Krzysztof
Nicolaus Copernicus University, Toruń,
Poland
k.przed@doktorant.umk.pl



Participant list

Puozaa Doris
CSIR-Savanna Agriculture Research
Institute, Tamale, Ghana
doriskanp@gmail.com

R

Reis Sara
CITAB University of Trás-os-Montes
e Alto Douro, Vila Real, Portugal
saradreis@gmail.com

Ribalta Federico
University of Western Australia, Crawley,
Australia
federico.ribalta@uwa.edu.au

Riedel Christine
Bavarian State Research Center for
Agriculture, Freising, Germany
christine.riedel@lfl.bayern.de

Rinke Nadja
J. H. von Thünen-Institute, Institute of
Organic Farming, Westerau, Germany
nadja.rinke@thuenen.de

Rosewarne Garry
Agriculture Victoria Research, Horsham,
Australia
garry.rosewarne@ecodev.vic.gov.au

Rubiales Diego
Institute for Sustainable Agriculture,
Cordoba, Spain
diego.rubiales@ias.csic.es

Rutkowski Andrzej
Poznań University of Life Sciences,
Poznań, Poland
andrzej.rutkowski@up.poznan.pl

Rybiński Wojciech
Institute of Plant Genetics, Polish
Academy of Sciences, Poznań, Poland
wryb@igr.poznan.pl

Rychel Sandra
Institute of Plant Genetics, Polish
Academy of Sciences, Poznań, Poland
sryc@igr.poznan.pl

S

Salon Christophe
INRA Agroécologie, UMR 1347, Dijon,
France
christophe.salon@inra.fr

Sampaio Ana Margarida
ITQB Universidade Nova de Lisboa,
Oeiras, Portugal
amsampaio@itqb.unl.pt

Santos Carmen
ITQB Universidade Nova de Lisboa,
Oeiras, Portugal
css@itqb.unl.pt

Sarkar Abhimanyu
John Innes Centre, Norwich, United
Kingdom
abhimanyu.sarkar@jic.ac.uk



Participant list

Savvas Dimitrios
Agricultural University of Athens, Athens,
Greece
dsavvas@aau.gr

Scarafoni Alessio
University of Milan, Milan, Italy
alessio.scarafoni@unimi.it

Shemsheyeva Zhazira
Sci. Prod. Cent. for Microb. & Virol.;
Al-Farabi Kazakh Natl. Univ., Almaty,
Kazakhstan
jazi_16-89@mail.ru

Singh Mohan
University of Melbourne, Melbourne,
Australia
mohan@unimelb.edu.au

Sinkovič Lovro
Agricultural Institute of Slovenia,
Ljubljana, Slovenia
lovro.sinkovic@kis.si

Skórka Magdalena
Scientific Research Center for Soya
Development "AgeSoya" Ltd., Huta
Krzeszowska, Poland
sz.linek@agesoya.com

Smith Peter
Agrii, Bourne, United Kingdom
peter.smith@agrii.co.uk

Smykal Petr
Palacký University, Olomouc,
Czech Republic
petr.smykal@upol.cz

Spychała Krystyna
Plant Breed. Smolice Ltd. Co.; IHAR
Group, Dept. Przebędowo, Murowana
Goślina, Poland
krystyna.spychala@gmail.com

Stefaniak Szymon
Adam Mickiewicz University, Poznań,
Poland
szymon.stefaniak@amu.edu.pl

Sujkowska-Rybkowska Marzena
Warsaw University of Life Sciences,
Warszawa, Poland
marzena_sujkowska@sggw.pl

Summo Carmine
University of Bari Aldo Moro, Bari, Italy
carmine.summo@uniba.it

Susek Karolina
Institute of Plant Genetics, Polish
Academy of Sciences, Poznań, Poland
ksus@igr.poznan.pl

Szukała Jerzy
Poznań University of Life Sciences,
Poznań, Poland
katarzyna.panasiewicz@up.poznan.pl

Szymańska Grażyna
Poznań University of Life Sciences,
Poznań, Poland
grazyna.szymanska@up.poznan.pl

Święcicki Wojciech
Institute of Plant Genetics Polish
Academy of Sciences, Poznań, Poland
wswi@igr.poznan.pl



Participant list

T

Thompson Richard
Agroécologie, AgroSup Dijon, INRA, Univ.
Bourgogne Fr.-Comté, Dijon, France
richard.thompson@inra.fr

Tiryaki Iskender
Canakkale Onsekiz Mart University,
Canakkale, Turkey
tiryaki46@yahoo.com

Tixier Aude
INRA - Agroecology Joint Research Unit,
Dijon, France
aude.tixier@inra.fr

Tokatlidis Ioannis
Democritus University of Thrace,
Orestiada, Greece
itokatli@agro.duth.gr

Toleikienė Monika
Lithuanian Research Centre for
Agriculture & Forestry, Kėdainiai,
Lithuania
monika.toleikiene@lammc.lt

Tomczak Aneta
Poznań University of Life Sciences,
Poznań, Poland
aneta.tomczak@up.poznan.pl

Toom Merili
Estonian Crop Research Institute, Jõgeva,
Estonia
merili.toom@etki.ee

Tracy Jake
Montana State University, Bozeman, USA
jacobtracy1@montana.edu

Trněný Oldřich
Agriculture Research, Ltd., Troubsko,
Czech Republic
trneny@vupt.cz

V

Vaculík Antonín
Agritec Plant Research, Ltd., Šumperk,
Czech Republic
vaculik@agritec.cz

Vågen Ingunn M.
Norwegian Institute of Bioeconomy
Research, Grimstad, Norway
ingunn.vaagen@nibio.no

Van den Berg Merlijn
Merlijn Louis Bolk Institute, Bunnik,
Netherlands
m.vandenberg@louisbolk.nl

Varshney Rajeev
Internatl. Crops Research Inst. for the
Semi-Arid Tropics, Hyderabad, India
r.k.varshney@cgiar.org

Vaz Patto Maria C.
ITQB Universidade Nova de Lisboa,
Oeiras, Portugal
cpatto@itqb.unl.pt

Vlachostergios Dimitrios
Industrial and Fodder Crops Inst.,
Hellenic Agricult. Org., Larissa, Greece
vlachostergios@gmail.com

Vogt-Kaute Werner
Öko-BeratungsGesellschaft – Naturland
Fachberatung, Hohekammer, Germany
j.fustec@groupe-esa.com

Vollmann Johann
University of Natural Resources & Life
Sciences, Tulln an der Donau, Austria
johann.vollmann@boku.ac.at

Voor Ivo
Estonian University of Life Sciences,
Tartu, Estonia
ivo.voor@student.emu.ee

Vymyslický Tomas
Agricultural Research, Ltd., Troubsko,
Czech Republic
vymyslicky@vupt.cz

W

Wan Ping Beijing
University of Agriculture, Beijing, China
pingwan3@163.com

Wang Weihao
Heilongjiang Bayi Agricultural University,
Daqing, China
zlzxwwh@126.com

Participant list



Wang Ning
Canadian Grain Commission, Winnipeg,
Canada
ning.wang@grainscanada.gc.ca

Warkentin Tom
University of Saskatchewan, Saskatoon,
Canada
tom.warkentin@usask.ca

Welna Gregor
Norddeutsche Pflanzenzucht Hans-Georg
Lembke KG, Holtsee, Germany
g.welna@npz.de

Wiśniewska Zuzanna
Poznań University of Life Sciences,
Poznań, Poland
zuzanna.wisniewska@up.poznan.pl

Witten Stephanie
J. H. von Thünen-Institute, Institute of
Organic Farming, Westerau, Germany
stephanie.witten@thuenen.de

Wolko Bogdan
Institute of Plant Genetics, Polish
Academy of Science, Poznań, Poland
bwol@igr.poznan.pl

Y

Yongxia Guo
Heilongjiang Bayi Agricultural University,
Daqing, China
gyxia@163.com



Participant list

Yücel Derya
Şırnak University, Şırnak, Turkey
deryayucel01@gmail.com

Z

Zhang Yuxian
Heilongjiang Bayi Agricultural University,
Daqing, China
13836962211@126.com

Zheng Dianfeng
Heilongjiang Bayi Agricultural University,
Daqing, China
zdfffnj@263.net

Zielińska-Dawidziak Magdalena
Poznań University of Life Sciences,
Poznań, Poland
magdalena.zielinska-dawidziak@
up.poznan.pl

Zorić Lana
University of Novi Sad, Novi Sad, Serbia
lana.zoric@dbe.uns.ac.rs

Zuo Yuhu
Heilongjiang Bayi Agricultural University,
Daqing, China
zuoyhu@163.com



Ministry of Science
and Higher Education
Republic of Poland

Konferencja International Legume Society Conference ILS3 2019 - zadanie finansowane ze środków Ministra Nauki i Szkolnictwa Wyższego przeznaczonych na działalność upowszechniającą naukę



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Poznan Science
and Technology Park