



The Future of Phytochemistry
PSE Young Scientists Meeting – 2026



Leicester – United Kingdom, June 22-24, 2026



ABSTRACT BOOK



Welcome address

On behalf of De Montfort University and the Phytochemical Society of Europe, it is my great pleasure to welcome you to the **Young Scientists Meeting 2026** in Leicester, UK. The meeting takes place in the University's Conference Centre, The Venue@DMU – 20 Western Boulevard, Leicester LE2 7BU.

The conference will bring together approximately selected PhD students and early-career postdoctoral researchers from across Europe and beyond and provide ample opportunity to present and discuss their research with peers, explore topics across diverse scientific fields, attend key-note lectures by leading phytochemists, join workshops, including scientific and soft-skill focused themes, and network in a social, friendly and supportive setting.

Delegates are expected from Austria, Belgium, Czech Republic, France, Germany, India, Italy, Poland, Portugal, Spain, United Kingdom and United States of America.

Set in the historical city Leicester, in the heart of rural England, the meeting provides ample opportunity to meet and greet scientists with whom you'll share an interest. A welcome reception and conference dinner are integral parts of the conference, and the University campus and adjoining Castle Park offer plenty of spaces within a few minutes' walk where you can have fruitful discussions and make friends for life.

On a personal note: The very first PSE Young Scientists Meetings in the 1990s in the medieval abbey Rolduc in the Netherlands have left a lasting impression on me. I found that the scientists that I looked up to then were approachable and enthusiastic people. Further, I found that my peers faced the same issues and challenges that I struggled with. Presenting your discoveries and sharing your thoughts is a key part of scientific development.

This is the second PSE Young Scientists Meeting that is organised in Leicester; I am very grateful for the support that I have received from the Phytochemical Society and from my University. I hope you will have a fruitful and enjoyable few days as our guest, and I look forward to meeting you all, this year and for many years to come.

Randolph Arroo



Committees

Local Organizing Committee

Chair of the conference

Prof. Randolph R.J. Arroo

Vice-chair of the conference

Dr Avninder S. Bhambra

Local Organizing Committee Members

Dr Federico Brucoli

Sandra Henry

Prof. Mingzhong Li

Dr Ketan C. Ruparelia

Prof. Sadia Sarwar

Dr Tiziana Sgamma

Dr Annie E. Taylor

Scientific Committee

Prof. Randolph Arroo - De Montfort University, Leicester, UK

Prof. Ing. Lucie Cahlíková - Univerzita Karlova Hradec Králové, Czech Republic

Dr Stefanos Kikionis - National and Kapodistrian University of Athens, Greece

Prof. Maria José Umbelino Ferreira - Universidade de Lisboa, Lisbon, Portugal

Prof. Antonio Fiorentino - Università degli Studi della Campania “Luigi Vanvitelli”, Caserta, Italy

Dr Simon Vlad Luca - Université d'Orléans, France

Prof. Francisco Macías - Universidad de Cádiz, Spain

Prof. Anca Miron - Universitatea de Medicină și Farmacie “Grigore T. Popa”, Iași, Romania

Prof. Simone Moser - Universität Innsbruck, Austria

Prof Lutfun Nahar - John Moores University, Liverpool, UK

Dr Simon Remy - Université de Reims Champagne Ardenne, France

Prof. Céline Rivièrè - Université de Lille, France

Dr Francisco Javier Rodríguez Mejías - Universidad de Cádiz, Spain

Prof. Krystyna Skalicka-Woźniak - Uniwersytet Medyczny w Lublinie, Lublin, Poland

Dr Evelyn Wolfram - Zürich University of Applied Sciences, Wädenswil, Switzerland

Day 1 – Monday, 22 June 2026

Registration		
9:30 – 10:00		
Opening of the Conference		
10:00 – 10:30	Words of welcome by Maria José Umbelino Ferreira (President of the PSE), Mike Kagioglou (Deputy Vice -Chancellor), Nicoleta Moiso (Director Research Institute), and Ahmed Aboo (Head of School)	
Session 1 – Chairs: Maria José Umbelino Ferreira & Randolph Arroo		
10:30 – 11:00	KL-1: Franz Bucar	Analysis of flavonoids – still a challenge?
11:00 – 11:30	KL-2: Francisco Macías	From By-products to Bioactives: The Case of <i>Cynara cardunculus</i>
11:30 – 12:00	Coffee break	
Session 2 - Chairs Krystyna Skalicka-Woźniak & Tiziana Sgamma		
12:00 – 12:30	KL-3: Francesco Epifano	Biomimetic and Chemical Single Electron Transfer Oxidations of Natural Products
12:30 – 12:50	SL-1: Gemma Cooper	Unleashing the Aromatic Arsenal: Exploring the Antiviral Potential of Volatile Compounds from <i>Nigella sativa</i> against Coronaviruses
12:50 – 13:10	SL-2: Lord Cudjoe	From Leaf to Lung: Development of Nebulizable Phytochemicals for Treatment of Pneumococcal Infection
13:10 – 14:00	Lunch Break	

Day 1 – Monday, 22 June 2026

Session 3 – Chairs: Simon Vlad Luca & Federico Brucoli)		
14:00 – 14:30	KL-4: Satyajit Sarker	<i>Daucus carota</i> subsp. maximus (Desf.) Ball: A Syrian medicinal plant with cancer chemopreventive potential
14:30 – 14:50	SL-3: Gamel Abdelfattah	Evaluation of Egyptian Figs for Cancer Chemopreventive Potential
14:50 – 15:10	SL-4: Kenneth Ritchie	Heads or tails? - The role of phytochemicals in the delicate balance between cancer prevention and cancer drug resistance
15:10 – 15:30	SL-5: Emran Habibi	Antimicrobial Evaluation of Hydroalcoholic Extracts of <i>Crocus caspius</i> Against Oral Microorganisms
15:30 – 16:00	Coffee break	
Session 4 – Chairs: Miroslav Strnad, Aleksandra Zielińska		
16:00 – 16:30	KL-5: Didem Söhretoğlu	Natural Products as a Continuing Source of Anticancer Agents: From Discovery to Mechanistic Insights
16:30 – 16:50	SL-6: Sadia Sarwar	Prospective Phytoestrogens evident from suppression of gynaecological cancers
16:50 – 17:10	SL-7: Giorgio Zanoni	Investigation on <i>Primula veris</i> L. saponin composition
17:10 – 18:00	Poster session	
18:00 – 19:30	Welcome drinks and reception in Trinity Chapel (The Newarke, Leicester LE2 7BY)	

Day 2 – Tuesday, 23 June 2026

Workshop 1		
10:00 – 10:30	W1: Evelyn Wolfram	Building a Scientific Consensus on Herbal Medicine
10:30 – 11:00	Coffee break	
Session 5 - Chairs: Antonio Fiorentino & Franz Bucar		
11:00 – 11:30	KL-6: Céline Rivière	Targeting coronaviruses with bioactive natural products: a focus on key compounds
11:30 – 12:00	KL-7: Simon Vlad Luca	Centrifugal partition chromatography and cannabinoids: A success story?
12:00 – 12:20	SL-8: Justine Daumas	Rapid Discrimination of Coffea Species by Leaf Using DART-MS and Chemometrics
12:20 – 12:40	SL-9: Robert Murnane	Resveratrol analogues as potent CYP1-inhibitors
12:40 – 13:00	Fluid Science Ltd	
13:00 – 14:00	Lunch break	

Day 2 – Tuesday, 23 June 2026

Session 6 - Chairs: Didem Söhretoğlu & MonicaScognamiglio		
14:00-14:30	KL-8: Eleftheria Stavridou	The phytochemical quality of UK horticultural crops: does agronomy matter?
14:30-15:00	KL-9: Krystyna Skalicka-Woźniak	Advanced Analytical and Isolation Strategies in Natural Product Discovery: Anti-Migraine Potential of <i>Petasites hybridus</i>
15:00 - 15:20	SL-10: Shivangani	Unveiling the Drug Potentiation Capabilities of Plant Secondary Metabolites Targeting Multi-Drug-Resistant Candida Species
15:20 - 15:40	SL-11: Lemnaro	Integrating Plant secondary metabolite Profiling, Chemometrics, and Machine Learning to Identify α-Glucosidase Inhibitors
15:40 - 16:00	SL-12: Daniela Rosa	Development of a Cynara cardunculus leaves extract rich in sesquiterpene lactones nanoemulsion for sustainable weed control
16:00 – 16:30	Coffee break	
Session 7 - Chairs: Satyajit Sarker & Francesco Epifano		
16:30 – 17:00	KL-10: Tiziana Sgamma	From DNA Barcoding to Food Safety: Integrating Molecular and Phytochemical Approaches for Product Authentication
17:00 – 17:20	SL-13: Weronika Kozłowska	Sapogenin profiling of Agrostemma githago under osmotic stress: An artifact-minimizing analytical approach
17:20 – 17:40	SL-14: Sylwester Ślusarczyk	When Apollo lands on a leaf: metabolomic responses of host plants to feeding by <i>Parnassius apollo</i> caterpillars
17:40 – 18:00	SL-15: Jennifer Pienaar	Potential of <i>Moringa oleifera</i> extracts for the treatment of acute myeloid leukemia (AML)
Poster session		
18:00 – 19:00		
CONFERENCE DINNER		
19:00 – 23:00		

Day 3 – Wednesday, 24 June 2026

Workshop 2		
9:00– 10:30	W2: Simon Gibbons	Writing Scientific Papers
10:30 – 11:00	Coffee break	
Session 8 - Chairs: Adam Matkowski & Randolph Arroo		
11:00 - 11:30	KL-11: Mingzhong Li	Multi-component crystal forms of nutraceuticals for bioavailability improvement
11:30-11:50	SL-16: Dennis Carrelo	Scale-Up from HPLC to Flash Chromatography: Isolation and Characterization of Major and Minor Cannabinoids from <i>Cannabis sativa</i> L.
11:50 - 12:10	SL-17: Daniel Jacobi	Do hypocretenolides really occur in <i>Hypochaeris cretensis</i> ?
12:10 - 12:30	SL-18: Amos Fatokun	Innovations from nature: versatile tools for chemical biology and therapeutics development
12:30 - 12:50	SL-19: Kirk Lawson	Phytochemical Analysis of Three North American and Five Caribbean <i>Zanthoxylum</i> Species
12:40 – 13:10	SL-20: Bashar Hamadalla & Joji Komazaki	PCR-Based Detection of Peanut Contamination in Garlic Products
13:00 – 14:00	Lunch break	
Session 9 - (Chairs: Francisco Macías & Lutfun Nahar)		
14:00-14:30	KL-12: Miroslav Strnad	Brassinosteroids Analyses and Biomedical Activities
14:30-15:00	KL-13: Johannes Fladerer	Complementary Nutraceutical Strategies for Metabolic Syndrome: Oleuropein-Standardized Olive Leaf Extract and Potassium
15:00-15:30		Awards
15:30 - 16:00		Closing ceremony

SL-7: Investigation on *Primula veris* L. Saponin composition

Giorgio Zanoni^{1*}, Pavel Solovyev¹, Urska Vrhovsek¹, Eirini Sarrou², Stefan Martens^{1*}.

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Primula veris L., otherwise known as cowslip, is an herbaceous flowering plant belonging to the family Primulaceae, native in almost all Europe and thriving in a variety of habitat, from mediterranean region to northern woodlands. Aerial parts and roots are used in traditional medicine to produce infusions, decoctions and tinctures with secretomotoric, secretolytic and expectorant properties, due to characteristic secondary metabolites such as polyphenols and saponins.

Saponins in *P. veris* roots are present in high concentrations, between 3 and 10 % of dry mass, and despite not knowing the whole mechanism of action, it has been reported that saponins increase bronchial secretion, diluting the mucus and reducing its viscosity. The most abundant saponin in *P. veris* is primula saponin I, whose structure has been correctly determined 50 years ago with the discovery of protoprimulagenin A, the aglycone with a peculiar oxide ring built in the amyrin ring system. Other reported saponins are primulasaponin II, priverosaponin B, priverosaponin B 22-acetate, primacrosaponin.

A recent article demonstrates that the characterization of the saponin from Primulaceae has not yet been completed, as they determined the structure of three more saponins from *P. veris*, namely primulasaponin III, IV, V. In this work we developed the extraction and isolation for four *P. veris* saponin, namely primulasaponin I, primulasaponin II, priverosaponin B 22-acetate, and the newly discovered primulasaponin VI. The structure of the latter was completely elucidated, and the characterization of Primulasaponin VI and Priverosaponin 22B acetate, involving comprehensive LC-HRMS and 2D NMR analysis, has been reported and explained, to lead to an unambiguous interpretation of spectra.

Due to the abundance of *P. veris* saponin, and considering the amphiphilic properties of saponins, Langmuir monolayers assays will be performed on these compounds to evaluate their cell membrane interactions.