



59th ESBOC Conference & Summer School The Chemical Biology of Enzymes and Beyond 27-29th May 2026



Programme

Wednesday 27th May 2026

14:00 Welcome & Introduction		
Session 1 – Chair: Olalla Vazquez		
14:15 – 14:45	André Nadler	<i>Lipid Cell Biology - from basic research to disease</i>
14:45 – 15:00	ECR speaker: Christian Schnepel	<i>Harnessing non-canonical enzyme functions for versatile acyl transfer biocatalysis</i>
15:00 – 15:30	Emmanuelle Thinon	<i>A Chemical Proteomics Method to Quantify Cysteine S-Acylation</i>
15:30 Tea / Coffee		
Session 2 – Chair: Ben Schumann		
16:00 – 16:30	Poster teasers	
16:30 – 16:45	ECR speaker: Dóra Kern	<i>Bioorthogonally activated protein labelling</i>
16:45 – 17:00	ECR speaker: Katelyn Cook	<i>Lipid-protein interactions position membrane organizing complexes</i>
17:00 – 18:00	Plenary: Jeremy Baskin	<i>Membrane Editing and Proximity Proteomics Reveals Regulators of Lipid Homeostasis</i>
18:15 Dinner		
20:00 Poster session		

Thursday 28th May 2026

08:00 Breakfast		
Session 3 – Chair: Emmanuelle Thinon		
09:00 – 09:30	Akane Kawamura	<i>The Expanding Biochemistry of JmjC Demethylases</i>
09:30 – 09:45	ECR speaker: Tetiana Ryzhkova	<i>Exploring unprecedented unnatural amino acids to combat bacterial infections</i>
09:45 – 10:00	Thermo Fisher Scientific: Michal Nadler-Holly	<i>TMT reagents for high-throughput quantitative proteomics on Orbitrap platforms.</i>
10:00 – 10:15	ECR speaker: Lawrence Collins	<i>Efficient optimisation of efficient protein labelling</i>
10:15 – 10:45	Craig Markin	<i>Advancing accessible high-throughput enzymology for biocatalysis</i>
10:45 Tea / Coffee		
Session 4 – Chair: Bárbara Sousa		
11:15 – 11:45	Sascha Hoogendoorn	<i>Probing Ciliary Signaling</i>
11:45 – 12:00	ECR speaker: Julia Thorn-Seshold	<i>Recording of Cellular Redox Activity Reveals Functional Heterogeneity</i>
12:00 – 12:30	EMBO Young Investigator Lecture: Tomáš Pluskal	<i>Decoding the chemical universe of plants</i>
12:30 – 13:00	Sam Dalton (Isomorphic Labs)	<i>Chemical Biology at Isomorphic Labs</i>
Group photo		
13:00 Lunch		
14:00 AFTERNOON FREE		
Session 5 – Chair: Concepción Gonzalez Bello		
16:00 – 16:30	Jesús Jimenez-Barbero	<i>Breaking the limits in understanding glycan recognition by NMR</i>
16:30 – 16:45	ECR speaker: Sandhya Sridhar	<i>A Chemical Biology Strategy to Uncover the Cancer Relevance of GalNAc Transferase 4</i>
16:45 – 17:00	ECR speaker: Erianna Alvarado-Melendez	<i>Molecular tools to detect, inhibit, and visualize vaginal pathogen-derived sialidases that enhance HIV-1 infection</i>
17:00 – 17:30	Valentin Wittmann	<i>Chemical Tools for Glycobiology</i>
17:30 Tea / Coffee		
Session 6 – Chair: Boris Vauzeilles		
18:00 – 18:30	Poster teasers	9-16
18:30 – 18:45	ECR speaker: Freya Hoddle	<i>A UDP-sugar analogue biosynthetic pathway for intracellular imaging applications</i>
18:45 – 19:15	Michael Webb	<i>tbd</i>
19:15 Dinner		
21:00 Poster session		

Friday 29th May 2026

08:00 Breakfast		
Session 7 – Chair: Julia Thorn-Seshold		
09:00 – 9:30	Nadja Simeth-Crespi	<i>Engineering Opto-Chemical Tools – Towards Complex Function in Biological Environment</i>
9:30 – 9:45	ECR Speaker: Kairel Edwards	<i>MilM from mildiomycin biosynthesis is an oxygen-, pyridoxal phosphate-dependent arginine hydroxylase</i>
9:45 – 10:00	ECR speaker: Pankaj Gaur	<i>Environment-sensitive and red-light activatable cage for biological application</i>
10:00 – 10:15	ECR speaker: Sarah Phillips	<i>Enzyme Cleavable Linkers for use in Antibody-Polymer-Drug Conjugates with High Drug Loadings</i>
10:15 Tea / Coffee		
10:45 – 11:15	Jeannine Hess	<i>Rational Design of Metal Complexes as Chemical Tools for Biological Applications</i>
11:15 – 11:45	Dorothea Fiedler	<i>Unusual phosphorylation modes: Protein pyrophosphorylation and oligophosphorylation</i>
12:00 Lunch		

Poster Teaser Programme

Teaser	Title
27 th @	
Joseph Newman	Structural and biochemical characterisation of a GCN5-related N-acetyltransferase required for fungal siderophore tailoring
Dávid Maliňák	Design, Synthesis, and In Vitro Evaluation of Novel Trimedoxime Derivatives as Reactivators of Organophosphate-Inhibited Cholinesterases
Friederike Marte	Collision Induced Dissociation Mass Spectrometry of Imidazolium-tagged Glycopeptides
Teresa Weckwerth	Developing Molecular Tools to Uncover the Interplay of GalNAc-Transferases in Glycoprotein Maturation
Adrianna Zygumt	Lipid-Dependent Modulation of 14F7 Antibody Binding to Neu5Gc GM3
Hans-Ulrich Balcke	Enabling Orthogonal Proteoglycan Analysis through Optimization of a Xylosyltransferase Bump-and-Hole System
Lea Marie Schlöffel	Bridging Fragment Screening and Drug Design for Improved Inhibitor Efficacy
Bárbara Sousa	Decoding O-Mannosylation: Substrate Specificity and Structural Mechanisms of O-mannose-specific glycotransferases

28th @

Milan Weitzel	Organelle-targeted photocaged probes for manipulating subcellular Ca ²⁺ concentrations
Ganka Bineva-Todd	Synthesis of sugar nucleotide analogues and their application in glycobiology
Theresa Käubler	Studies on the metabolism of dietary 3-deoxyglucosone in the intestinal epithelium
Saskia Pieters	Iterative bump-and-hole engineering of N-acetylglucosaminyltransferase I
Sara Rademacherova	Design, Synthesis and In Vitro Evaluation of C5-Substituted Pralidoxime Analogues as Potential Reactivators of Organophosphate-Inhibited Cholinesterases
Sophie Zeiler	Metabolization of Methionine Sulfoxide Diastereoisomers by <i>Saccharomyces cerevisiae</i>
Hannah Ryan	Exploring Structural Changes in Salmonella O-Antigen Capsule
Jon I. Quintana	Fluorinated sialylated probes as a fast tool to determine the specificity of Influenza A virus strains

ESBOC History

The Gregynog Natural Products Symposia were initiated by Professor Cedric Hassall in 1967 and have been held annually. Their object is to promote communication between research workers who study the chemistry of the products and processes of life. The [titles and Chairs](#) of each of the previous Symposia are listed online.

With the increasing participation of scientists from mainland Europe, the Symposium was renamed the European Symposium on Bio-organic Chemistry (ESBOC) in 1971, and the European Symposium on Biological and Organic Chemistry in 2010. For the duration of the symposium's existence, invited participants have been drawn from academic, industrial and institutional research laboratories. The generous support of the pharmaceutical industry has made it possible to include several speakers from overseas.

The Symposium has ordinarily been held in a large country house, [Gregynog](#), donated by the late Miss Margaret Davies to the University of Wales. [Gregynog](#) stands in 750 acres of attractive gardens and wooded parkland some 8 km north of Newtown, Powys, in Mid-Wales. In 2023, a decision was made to alternate the ESBOC venue between Gregynog Hall and a location in mainland Europe, further strengthening the conference's integration with the broader European chemical biology community.

Symposia in previous years	Chairmen
1967 Chemistry and Biosynthesis of Antibiotics	CH Hassall
1968 Biologically Active Nitrogen Heterocycles	CH Hassall
1969 Chemistry and Biosynthesis of Terpenes and Steroids	T Walker
1970 Peptides and Related Compounds	GW Kenner
1971 Metal Complexes in Biological Systems	K Heusler
1972 Chemistry of Enzyme-mediated Processes	AR Battersby
1973 Microbiological Chemistry	WB Whalley
1974 Biological Systems and their Models	D Arigoni
1975 Biosynthesis and Biotransformation	Sir John Cornforth
1976 Tenth Annual Meeting	AH Jackson
1977 Chemistry of Communication and Defence Mechanisms	A Brossi
1978 Microbial Cell Walls and Membranes	Sir James Baddiley
1979 Stereospecificity in Chemistry and Biochemistry	I Crombie
1980 Conformational Studies of Bioactive Compounds	J Mathieu
1981 Pigments of Life	AW Johnson
1982 Bi-organic Chemistry of Plants	P Doyle
1983 Key enzymes: Targets for Drug Action	HCS Wood
1984 Molecular Recognition	P Potier
1985 Nucleosides and Nucleotides in Nature	RF Newton
1986 Dioxygen in Chemistry and Biology	JE Baldwin
1987 Chemistry and Biochemistry of Amino Acids	DHG Crout
1988 Chemistry and Biochemistry of Carbohydrates	A Vasella
1989 Non-Covalent Interactions in Biology	DH Williams
1990 Biosynthetic Enzymes and their Inhibition	DA Evans
1991 Molecular Interactions for Biological Regulation	CH Hassall
1992 Molecular Studies Related to Cell Proliferation	BT Golding
1993 Chemistry and Mechanisms of Cellular Signalling	R Baker
1994 Radical Chemistry in Biological Processes	A Marquet
1995 Molecular Aspects of Infection and Immunity	BW Bycroft
1996 Chemistry and the Origin of Life	D Arigoni

1997 Transition State in Biological Chemistry	GM Blackburn
1998 Plant Biochemistry and Biotechnology	A Bacher
1999 Biological Approaches to Synthesis	J Staunton
2000 Chemistry and Chemical Biology of Oligonucleotides	B Kräutler
2001 Structure and Function of Membrane Embedded Proteins	J L Castro
2002 Chemical Biology of Cell Signalling and Localization	H Waldmann
2003 The Evolution of Catalysis	A Plückthun & D Hilvert
2004 Protein-Protein and Protein-peptide Interactions	JA Robinson
2005 Role and Control of Metals, Ions and Water in Biology	K Müller
2006 Natural Products and their Cellular Targets	P Leadlay
2007 Chemical Biology meets Drug Discovery	D Rees & J Kihlberg
2008 Motor Proteins – New Therapeutic Targets	P Shoolingin-Jordan
2009 Vitamins and Cofactors	T McDonald
2010 Highlights in Biological and Organic Chemistry	R Allemann & H Hailes
2011 The Chemistry and Function of Nucleic Acids	S Balasubramanian
2012 Chemistry and Biology of Antibiotics	T Bugg
2013 Chemical Probes for Cellular Processes	K Johnsson
2014 Biological Applications of Supramolecular Chemistry	JL Mascareñas
2015 Design and Engineering of Novel Biocatalysts	N Turner
2016 A Celebration of Biological and Organic Chemistry	C Abell
2017 Chemical Synthetic Biology: Self-assembly, Encapsulation & Delivery	D Woolfson
2018 Life and Death of Nucleic Acids	T Carell
2019 Chemistry and Biology of Glycoconjugates	S Flitsch
2021 New Frontiers in Chemistry & Biology	S O'Connor
2022 The Chemical Biology of Molecules & Materials	R Field
2023 Chemical Biology in Europe	B Vauzeilles
2024 ESBOC at Biarritz France	H C Hailes
2025 ESBOC at Gregynog	O Vázquez
2026 The Chemical Biology of Enzymes and Beyond	B Schumann

Want to be part of the ESBOC community? Contact us!

We're looking for enthusiastic, energetic and well-organised members to help lead ESBOC into its next chapter. As one of the longest-running chemical biology conferences, ESBOC is built on the spirit of *“old meets new for breakthroughs”*—bringing together established leaders and emerging voices in the field. If you're passionate about supporting the community and scientific exchange, we'd love to have you on board. Interested? Please do get in touch!

Sponsors

