

BIOMOLECULAR HORIZONS 2024: DISCOVER CREATE INNOVATE

22-26 SEPTEMBER 2024 Melbourne Convention and Exhibition Centre AUSTRALIA



26th Congress of the International
Union of Biochemistry and
Molecular Biology



17th Congress of the Federation
of Asian & Oceanian Biochemists
& Molecular Biologists

ComBio 22nd ComBio
2024 MELBOURNE Conference

PROGRAM AT A GLANCE

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PROGRAM AT A GLANCE

SUNDAY 22 September 2024

| | |
|-----------|--|
| 0900-1600 | Pre Congress Workshop - Career Development Forum - Room 203 & 204 |
| 1300-1500 | Pre Congress Workshop - Publishing high quality Higher Education Pedagogical Research to enhance your professional visibility (off site) |
| 1400-1900 | Registration - Plenary Foyer |
| 1700-1830 | Grimwade Medal Public Lecture & Reception |
| Room: | Plenary Hall 2 |
| | Welcome to Country |
| | Grimwade Opening Remarks and Presentation |
| 1830-1915 | Refreshments - Plenary Foyer |



PROGRAM AT A GLANCE

MONDAY 23 September 2024 – Education Day & Indigenous Perspectives in Biomolecular Science Day

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|----------------|--|--|---|---|--|--|---|--|---|
| 0730-1900 | Registration – Plenary Foyer | | | | | | | | |
| 0900-0935 | Congress Welcome & Opening | | | | | | | | |
| Room | Plenary Hall 2 | | | | | | | | |
| 0935-1020 | Plenary 1 - Artificial Intelligence | | | | | | | | |
| Room | Plenary Hall 2 | | | | | | | | |
| Speaker | Sergey Ovchinnikov – Massachusetts Institute of Technology USA | | | | | | | | |
| 1020-1030 | Session change over | | | | | | | | |
| 1030-1120 | Concurrent Session 1 - Keynotes | | | | | | | | |
| Room | Plenary Hall 2 | Room 210 | Room 211 | Room 212 | Room 213 | Room 219 | | | |
| Stream | KS1 - Bioinformatics, Computational Biology & Omics | KS2 - Molecular Basis of Disease | KS3 - Indigenous Perspectives in Genomics | KS4 - Microbial World | KS5 - Education | KS6 - Biotechnology and Synthetic Biology | | | |
| 1120-1150 | Morning Tea, Poster Viewing & Exhibition – Exhibition Hall | | | | | | | | |
| 1150-1240 | Concurrent session 2 - Keynotes | | | | | | | | |
| Room | Plenary Hall 2 | Room 210 | Room 211 | Room 212 | Room 213 | Room 219 | | | |
| Stream | KS7 - Biochemical Society Award Talk | KS8 - Molecular Physiology | KS9 - Indigenous Perspectives | KS10 - Structural Biology and Biophysics | KS11 - Education | KS12 - Genomics, Gene Regulation and Epigenetics | | | |
| 1240-1400 | Lunch, Lightning Talks, Poster Viewing & Exhibition – Exhibition Hall | | | | | | | | |
| 1250-1320 | Lightning Talks -Theatrette | | | | | | | | |
| 1300-1400 | Poster Presentation Session | | | | | | | | |
| 1400-1520 | Concurrent Session 3 - Symposia & Keynote | | | | | | | | |
| Room | Plenary Hall 2 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 219 | Room 220 |
| Stream | SYM1 - Cell Signalling and Metabolism | SYM2 - Bioinformatics, Computational Biology and 'Omics | KS13 - Indigenous Perspectives | SYM3 - Structural Biology and Biophysics | SYM4 - Genomics, Gene Regulation and Epigenetics | SYM5 - Education | SYM6 - Cell, Developmental and Stem Cell Biology | SYM7 - Molecular Physiology | SYM8 - Biotechnology and Synthetic Biology |
| Symposia title | Signalling of metabolic regulation | Proteomics | Cancer and immunology | Membrane biophysics and protein structure | Transcriptional mechanisms | Education Award talks | Autophagy & cell death in organismal homeostasis | Molecular physiology of muscle | Synthetic antimicrobials |
| 1520-1550 | Afternoon Tea, Poster Viewing & Exhibition – Exhibition Hall | | | | | | | | |
| 1550-1710 | Concurrent session 4 - Symposia | | | | | | | | |
| Room | Plenary Hall 2 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 219 | Room 220 |
| Stream | SYM9 - Structural Biology and Biophysics | SYM10 - Bioinformatics, Computational Biology and 'Omics | SYM11 - Indigenous Perspectives | SYM12 - Molecular Basis of Disease | SYM13 - Microbial World | SYM14 - Education | SYM15 - Genomics, Gene Regulation and Epigenetics | SYM16 - Molecular Physiology | SYM17 - Biotechnology and Synthetic Biology |
| Symposia title | Machine learning in protein structure prediction | Metabolomics | Ethics and applications of molecular biology in Indigenous contexts | Aging and cancer | Molecular microbiology | Education Short Talks | Non-coding genome | Neuro-physiology - a focus on new techniques | Nanomaterials for biomedicine and biotechnologies |
| 1710-1720 | Session change over | | | | | | | | |
| 1720-1805 | Plenary 2 - Indigenous Perspectives in Biomolecular Science | | | | | | | | |
| Room | Plenary Hall 2 | | | | | | | | |
| Speaker | Misty Jenkins - Walter & Eliza Hall Institute Australia | | | | | | | | |
| | Closing remarks on Indigenous Perspectives in Biomolecular Science Day | | | | | | | | |
| 1810-2000 | Welcome Reception – Exhibition Hall | | | | | | | | |

PROGRAM AT A GLANCE

TUESDAY 24 September 2024 – RNA Technology Day

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|----------------|--|--|--|---|---|--|---|---|---|
| 0730-0815 | BioNTech Industry Breakfast (advance booking required) Room 217 | | | | | | | | |
| 0730-1800 | Registration – Plenary Foyer | | | | | | | | |
| 0830-0915 | Plenary 3 - RNA Technology | | | | | | | | |
| Room | Plenary Hall 3 | | | | | | | | |
| Speaker | Norbert Pardi - University of Pennsylvania USA | | | | | | | | |
| 0915-1000 | Plenary 4 - The Future of RNA Technology | | | | | | | | |
| Room | Plenary Hall 3 | | | | | | | | |
| Panel | Amanda Caples, <i>Victoria's Lead Scientist, Australia</i> , Catherine Mills, <i>Monash Bioethics Institute, Australia</i> , Steve Rockman, <i>CSL/Seqiris, Australia</i> , Claire Borg, <i>Moderna, Australia</i> | | | | | | | | |
| 1000-1030 | Morning Tea, Poster Viewing & Exhibition – Exhibition Hall | | | | | | | | |
| 1030-1135 | Concurrent session 5 - Keynotes | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 219 | | | |
| Stream | KS14 - RNA Technology Day | KS15 - Molecular Physiology Short Talks | KS16 - Cell Signalling and Metabolism | KS17 - Structural Biology and Biophysics | KS18 - Genomics, Gene Regulation and Epigenetics | KS19 - Cell, Developmental and Stem Cell Biology | | | |
| 1135-1145 | Session change over | | | | | | | | |
| 1145-1250 | Concurrent session 6 - Keynotes | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 219 | | | |
| Stream | KS20 - RNA Technology Day | KS21 - Precision Medicine | KS22 - Cell, Developmental and Stem Cell Biology | KS23 - Molecular Basis of Disease | KS24 - Molecular Physiology | KS25 - G.N. Ramachandran Lecture | | | |
| 1250-1430 | Lunch, Lightning Talks, Poster Viewing & Exhibition – Exhibition Hall | | | | | | | | |
| 1300-1330 | Lightning Talks – Theatre | | | | | | | | |
| 1315-1415 | Lunchtime Technical Workshops | | | | | | | | |
| Room | Room 210 | | Room 211 | | | Room 212 | | | |
| 1315-1415 | Workshop 1 – Protein structure prediction | | Workshop 2 – Synchrotron science | | | Workshop 3 – The future of publishing | | | |
| 1430-1550 | Concurrent session 7 - Symposia | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 219 | Room 220 |
| Stream | SYM18 - RNA Technology Day | SYM19 - Cell Signalling and Metabolism | SYM20 - Molecular Basis of Disease | SYM21 - Structural Biology and Biophysics | SYM22 - Genomics, Gene Regulation and Epigenetics | SYM23 - Bioinformatics, Computational Biology and 'Omics | SYM24 - Microbial World | SYM25 - Biotechnology and Synthetic Biology | SYM26 - Cell, Developmental and Stem Cell Biology |
| Symposia title | RNA biology | Metabolism in health and disease | Vaccines | Structure-guided drug design | Developmental gene regulation and enhancers | Single cell 'omics | Intra dynamics of microbes and their host | Engineered living materials | Cell & developmental biology in disease |
| 1550-1620 | Afternoon Tea, Poster Viewing & Exhibition – Exhibition Hall | | | | | | | | |
| 1620-1750 | Concurrent session 8 - Symposia | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 219 | Room 220 |
| Stream | SYM27 - RNA Technology Day | SYM28 - Bioinformatics, Computational Biology and 'Omics | SYM29 - Molecular Basis of Disease | SYM30 - Structural Biology and Biophysics | SYM31 - Genomics, Gene Regulation and Epigenetics | SYM32 - Molecular Physiology | SYM33 - Cell Signalling and Metabolism | SYM34 - Microbial World | SYM35 - Cell, Developmental and Stem Cell Biology |
| Symposia title | mRNA applications and challenges | Systems biology | Metabolic disease | Single molecule biophysics | Chromatin & epigenetics | Cardiac physiology | Kinase based signal transduction | One health: challenges and solutions | Non-mammalian models of development |
| 1750-1755 | Session change over | | | | | | | | |
| 1754-1840 | Plenary 5 - Nobel Awardee Special | | | | | | | | |
| Room | Plenary Room 3 | | | | | | | | |
| Speaker | Richard Roberts - New England Biolab USA | | | | | | | | |
| 1845 | IUBMB General Assembly- Room 218 | | | | | | | | |

PROGRAM AT A GLANCE

WEDNESDAY 25 September 2024 – Gene Editing Day

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|----------------|--|--|----------------------------|--|---|---|--|---|---|
| 0730-1800 | Registration – Plenary Foyer | | | | | | | | |
| 0830-0915 | Plenary 6 - Gene Editing | | | | | | | | |
| Room | Plenary Hall 3 | | | | | | | | |
| Speaker | Caixia Gao - Chinese Academy of Sciences China | | | | | | | | |
| 0915-0925 | Session change over | | | | | | | | |
| 0925-1030 | Concurrent session 9 – Keynotes, Symposium and SIGs | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 219 | | |
| Stream | KS26 - Cell Signalling and Metabolism | KS27 - Biotechnology and Synthetic Biology | KS28 - Gene Editing Day | SYM36 - Protein homeostasis and metabolism in human health and disease | KS29 - Bioinformatics, Computational Biology and 'Omics | ASBMB Special Interest Groups | KS30 - Chairs Selection DNA Restriction and Gene Editing | | |
| 1030-1100 | Morning Tea, Poster Viewing & Exhibition – Exhibition Hall | | | | | | | | |
| 1100-1210 | Concurrent session 10 – Keynote & Symposia | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 219 | Room 220 |
| Stream | KS31 - Gene Editing Day | SYM37 - Bioinformatics, Computational Biology and 'Omics | SYM38 - Microbial World | SYM39 - Cell, Developmental and Stem Cell Biology | SYM40 - Genomics, Gene Regulation and Epigenetic | SYM41 - Cell Signalling and Metabolism | SYM42 - Molecular Physiology | SYM43 - Biotechnology and Synthetic Biology | SYM44 - Molecular Basis of Disease |
| Symposia title | Gene Editing Day | Molecular dynamics simulation of biomolecules | Environmental microbiology | Stem cells and organoids | Nuclear organisation | Chemical biology in metabolism and signalling | Vascular biology | Self-assembly for synthetic biology | Immunology and disease |
| 1210-1330 | Lunch, Lightning Talks , Poster Viewing &Exhibition - Exhibition Hall | | | | | | | | |
| 1220-1250 | Lightning Talks - Theatre | | | | | | | | |
| 1230-1330 | Poster Presentations | | | | | | | | |
| 1330-1450 | Concurrent session 11 – Symposia | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 219 | Room 220 |
| Stream | SYM45 - Gene Editing Day | SYM46 - Molecular Basis of Disease | SYM47 - Microbial World | SYM48 - Cell, Developmental and Stem Cell Biology | SYM49 - Gene Editing Day | SYM50 - Structural Biology and Biophysics | SYM51 - Biotechnology and Synthetic Biology | SYM52 - Cell Signalling and Metabolism | SYM53 - Molecular Physiology |
| Symposia title | Biology of CRISPR | Neurological disease | Antimicrobial resistance | Imaging in cell and developmental biology | CRISPR engineering | Advances in microscopy | Protein design | Protein degradation | Developmental physiology: Heating it up with advanced imaging in pregnancy and impacts on offspring |
| 1450-1520 | Afternoon Tea & Exhibition – Exhibition Hall | | | | | | | | |
| 1520- | Society Award Presentations | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 218 | Room 219 | | |
| Session | OUTREACH EVENT FOR STUDENTS | ASB Award Presentations | AuPS Lecture | ASBMB Award Presentations | ANZSCDB Award Presentations | NZSBMB Award Presentations | ASM Presentation | | |
| | | 1615-1715 – ASB AGM | | 1650-1750 - ASBMB AGM | 1650-1750 - ANZSCDB AGM | | | | |
| | IUBMB Trainee Session | | | | | | | | |
| Room | Room 217 | | | | | | | | |
| 1700-1830 | Introducing the IUBMB Trainee Initiative: supporting the next generation of scientists | | | | | | | | |
| 1830-2300 | Congress Networking Event – SEA LIFE Aquarium (advance booking required) | | | | | | | | |

PROGRAM AT A GLANCE

THURSDAY 26 September 2024 – Climate Change Day

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|----------------|---|---|--|---|--|--|---|-------------------------|---|
| 0730-1700 | Registration – Plenary Foyer | | | | | | | | |
| 0830-0950 | Concurrent session 12 – Symposia | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 219 | Room 220 |
| Stream | SYM54 - Climate Change Day | SYM55 - Cell Signalling and Metabolism | SYM56 - Genomics, Gene Regulation and Epigenetics | SYM57 - Cell, Developmental and Stem Cell Biology | SYM58 - Molecular Basis of Disease | SYM59 - Molecular Physiology | SYM60 - Structural Biology and Biophysics | SYM61 - Microbial World | SYM62 - Biotechnology and Synthetic Biology |
| Symposia title | Causes and mitigation strategies of greenhouse gas emissions | OMICS in cellular regulation | Computational genomics | Intracellular trafficking and extracellular vesicles | Pathogen resistance and virulence | Spatiotemporal metabolic homeostasis | Spectroscopy and scattering | Emerging pathogens | Biosensors |
| 0950-1020 | Morning Tea – Plenary Foyer | | | | | | | | |
| 1020-1140 | Concurrent session 13 – Keynote & Symposia | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 219 | Room 220 |
| Stream | KS32 - Climate Change Day | SYM63- Bioinformatics, Computational Biology and 'Omics | SYM64 - Genomics, Gene Regulation and Epigenetics | KS33 - FAOBMB Excellence Award & Young Investigators | SYM65 - ASB/ CSCB Joint Session | SYM66 - Molecular Physiology | SYM67 - Biotechnology and Synthetic Biology | SYM68 - Microbial World | SYM69 - Cell Signalling and Metabolism |
| Symposia title | Climate change day | AI/Machine learning in MD simulations | Post-transcriptional gene regulation | FAOBMB award presentations | Fluorescence methods/ DNA damage | Exercise is medicine: Tissue crosstalk | Industrial protein production | Cellular communication | Immuno-metabolism |
| 1140-1150 | Session change over | | | | | | | | |
| 1150-1300 | Concurrent session 14 – Keynote, Symposia & Hot Topics | | | | | | | | |
| Room | Plenary Hall 3 | Room 211 | Room 212 | Room 213 | Room 217 | Room 218 | Room 220 | | |
| Stream | KS34 - Climate Change Day | Hot Topic 1 | SYM70 - Structural Biology and Biophysics | SYM71- Molecular Basis of Disease | SYM72 - Bioinformatics, Computational Biology and 'Omics | Hot Topic 2 | SYM73 - Cell, Developmental and Stem Cell Biology | | |
| Symposia title | Climate Change Day | Protein chemistry | Protein structure, interactions and molecular assemblies | Host-pathogen interactions | New insights from new bioinformatics tools | The microbiome in human health & disease | Spatial biology and tissue heterogeneity in development | | |
| 1300-1415 | Lunch - Foyer | | | | | | | | |
| 1315-1400 | Lunchtime Technical Workshops | | | | | | | | |
| Room | Room 210 | Room 211 | Room 217 | Room 212 | | | | | |
| 1315-1400 | Workshop 4 – Protein cryo EM | Workshop 5 – Digital spatial profiling | Workshop 6 – Protein nomenclature: problems and possible solutions | Workshop 7 – Everything you wanted to know about publishing but were too afraid to ask! – | | | | | |
| 1415-1515 | Concurrent session 15 – Plenary, Symposia and Hot Topics | | | | | | | | |
| Room | Plenary Hall 3 | Room 210 | Room 211 | Room 212 | Room 219 | Room 220 | | | |
| Stream | Plenary 7 FEBS Worldwide Lecture | SYM74 - Molecular Basis of Disease Short Talks | SYM75 - Structural Biology and Biophysics | Hot Topic 3 | SYM76 - Climate Change Day | Hot Topic 4 | | | |
| Symposia title | | | Molecular mechanisms using Cryo-EM and dynamic protein complexes | Single molecule imaging | Effects and adaptations to climate change | Illuminating biology: using light to observe and manipulate the brain and body | | | |
| 1515-1540 | Afternoon Tea – Plenary Foyer | | | | | | | | |
| 1540-1630 | Plenary 8 & IUBMB Jubilee Award Ceremony | | | | | | | | |
| Room | Plenary 3 | | | | | | | | |
| Speaker | Pamela Silver - Harvard University USA | | | | | | | | |
| 1630-1700 | Awards, Prizes, Future Conference Presentations & Closing Remarks | | | | | | | | |

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