



**XV International Symposium
on Inorganic Biochemistry**

New Arrivals on Stage

10 - 13 September 2025

Wrocław, Poland

ISIB XV PROGRAMME

Wednesday, 10th September

Main Building of the University of Wrocław, 1 University Square

15:00-17:00

Registration

Session I Chair – **GUMIENNA-KONTECKA Elżbieta**

17:00 – 17:30

Opening Ceremony

Aula Leopoldina, Main Building of the University of Wrocław

17:30 – 18:10 **PL1** My Bioinorganic Secrets

KOZŁOWSKI Henryk, *University of Opole, Opole, Poland*

18:10 – 18:50 **PL2** Metal-Organic non-Trivial Structures: Synthesis and Applications

TRABOLSI Ali, *New York University Abu Dhabi, Abu Dhabi, United Arab Emirates*

19:00

Welcome Reception

Oratorium Marianum, Main Building of the University of Wrocław

Thursday, 11th September

Main Library of the University of Wrocław, 12 Joliot-Curie Street

Session II Chair – **ROWIŃSKA-ŻYREK Magdalena**

9:00-9:40 **PL 3** Metal Ions in Infectious Diseases: Bridging Pharmacy and Chemistry in the Fight Against Infectious Diseases

CARVER Peg, *University of Michigan, Ann Arbor, USA*

9:40-10:00 **IL 1** Metal Ions in Microbial Survival and Viral Entry: Coordination Chemistry, Mechanisms, and Therapeutic Opportunities

PEANA Massimiliano, *University of Sassari, Sassari, Italy*

10:00-10:20 **IL 2** Ferritins: Nanocages for Iron Storage/Detoxification

LE BRUN Nick, *University of East Anglia, Norwich, United Kingdom*

10:20-10:40 **IL 3** Superoxide Dismutases as Model Systems for Studying the Evolution of Metal Preference of Metalloenzymes

WALDRON Kevin, *Polish Academy of Sciences, Warsaw, Poland*

10:40-11:00 **IL 4** Chemical Speciation Studies in, and of, Biological Fluids: Critical Aspects in the Evaluation of Chelants Performances

MILEA Demetrio, *University of Messina, Messina, Italy*

11:00-11:30

Coffee break

Session III Chair – **VALENSIN Daniela**

11:30-11:50 **IL 5** Hemocyanin and Other Snail Stories

PALACIOS Oscar, *Autonomous University of Barcelona, Cerdanyola del Valles, Spain*

11:50-12:10 **IL 6** NMR Spectroscopy and Complex Formation - What Can We Observe

NOWAKOWSKI Michał, *University of Warsaw, Warsaw, Poland*

12:10-12:25 **OC 1** NMR Studies of Multidomain Snail Metallothioneins: Metalation and Metal Selectivity

ZERBE Olivier, *University of Zurich, Zurich, Switzerland*



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12:25-12:40	OC 2 Clavanin C Analogue Complexes with Cu ²⁺ and Zn ²⁺ : A Strategy Against MRSA GAWŁOWSKI Jakub , <i>University of Wrocław, Wrocław, Poland</i>
12:40-12:55	OC 3 Microplusin: a Strong Copper-chelating and Effective Antimicrobial, Natural Peptide LEVERARO Silvia , <i>University of Ferrara, Ferrara, Italy</i>
13:00-14:30	Lunch
Session IV	Chair – RODZIEWICZ-MOTOWIDŁO Sylwia
14:30-15:10	PL 4 Siderophores, Transporters, and Survival: The Iron Playbook of <i>P. aeruginosa</i> SCHALK Isabelle , <i>University of Strasbourg, Illkirch, France</i>
15:10-15:40	KL 1 Fungal Siderophore Uptake and Its Translational Potential HAAS Hubertus , <i>Medical University Innsbruck, Innsbruck, Austria</i>
15:40-16:10	KL 2 Siderophores as Scaffold for Molecular Imaging applications DECRISTOFORO Clemens , <i>Medical University Innsbruck, Innsbruck, Austria</i>
16:10-16:30	IL 7 Radiolabelled Siderophores for Imaging Bacterial Infections PETRIK Milos , <i>Palacky University, Olomouc, Czech Republic</i>
16:30-16:45	OC 4 Targeting Bacterial Metalloproteinases: Peptide-Based Strategies for Inhibiting Virulence Factors ZAWADA Martyna , <i>University of Wrocław, Wrocław, Poland</i>
16:45-17:15	Coffee break
Session V	Chair– JANCSÓ Attila
17:15-17:30	OC 5 MCT1- Targeting Copper Complex in Nuclear Medicine: a Preliminary Investigation for Theranostic Applications MARI Matteo , <i>University of Modena and Reggio Emilia, Modena, Italy</i>
17:30-17:50	IL 8 Gaining Insight into Mn(II) and Fe(II) Binding: From Model Systems to Transporter Fragments OSTROWSKA Małgorzata , <i>University of Wrocław, Wrocław, Poland</i>
17:50-18:10	IL 9 Antibiotic Resistance – a Novel Approach Using Peptidomimetics Inspired by Human Salivary Peptides WĄTŁY Joanna , <i>University of Wrocław, Wrocław, Poland</i>
18:10-18:30	IL 10 Metalloenzyme Engineering with Non-canonical Amino Acid Incorporation DELIZ LIANG Alexandria , <i>University of Zurich, Zurich, Switzerland</i>
18:30-18:50	IL 11 Designing Artificial Proteins and Metalloproteins using the Spy Construct TEGONI Matteo , <i>University of Parma, Parma, Italy</i>



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Friday, 12th September

Main Library of the University of Wrocław, 12 Joliot-Curie Street

Session VI Chair – PEANA Massimiliano	
9:00-9:40	PL 5 Is Gold the New Platinum in Medicinal Chemistry? CASINI Angela , <i>Technical University of Munich, Munich, Germany</i>
9:40-10:00	IL 12 PACT4EYE: Innovative Photoactivated Ruthenium Chemotherapy to Treat Eye Cancer BONNET Sylvestre , <i>Leiden University, Leiden, Netherlands</i>
10:00-10:20	IL 13 Metalloporphyrinoids for Phototheranostics: From Molecular Design to Targeted Imaging and Therapy in Advanced Biological Models DĄBROWSKI Janusz , <i>Jagiellonian University in Krakow, Krakow, Poland</i>
10:20-10:40	IL 14 Engineered Hemoproteins for Selective C–N and C–O Bond Formation via Abiological Mechanisms FASAN Rudi , <i>University of Texas at Dallas, Richardson, USA</i>
10:40-11:00	IL 15 Chemical Biology for the Detection of Pathogens and Reactive Oxygen Species VAUZEILLES Boris , <i>Paris-Saclay University, Gif-sur-Yvette, France</i>
11:00-11:30	Coffee break
Session VII Chair – BARBA-BEHRENS Norah	
11:30-12:00	KL 3 Re Compounds as Coordinate Covalent Inhibitors Enzymatic Activity COHEN Seth , <i>University of California San Diego, La Jolla, USA</i>
12:00-12:15	OC 6 Targeting the Zinc Active Sites of MMP-1 and MMP-14: Binding Characteristics of Novel Peptide Inhibitors POTOK Paulina , <i>University of Wrocław, Wrocław, Poland</i>
12:15-12:30	OC 7 Commercial Bisphosphonate Drugs for Targeting Pt(II)-complexes to Bone Tumors and Metastases BARBANENTE Alessandra , <i>University of Bari Aldo Moro, Bari, Italy</i>
12:30-13:00	KL 4 Metalloproteins in the Immune Response and Medicine EBRAHIMI Kourosh , <i>King's College London, London, United Kingdom</i>
13:00-14:30	Lunch
Session VIII Chair – POTOCKI Sławomir	
14:30-14:50	IL 16 Real-Time Electrochemical and Spectroscopic Mapping of Amyloid-like Peptide Fibrillization RODZIEWICZ-MOTOWIDŁO Sylwia , <i>University of Gdańsk, Gdansk, Poland</i>
14:50-15:05	OC 8 Diversity of A β Isoforms: Toward Novel Biomarkers for Diagnosis of Alzheimer's Disease WEZYNFELD Nina , <i>Warsaw University of Technology, Warsaw, Poland</i>
15:05-15:20	OC 9 Metalloporphyrinoids in Neurodegeneration: NMR-Based Interaction and Protective Effects on SH-SY5Y Cells KOLA Arian , <i>University of Siena, Siena, Italy</i>
15:20-15:35	OC 10 Development of Mn(II)-Based MRI Probes with Improved Physicochemical Properties for Liver Targeting TIRCSÓ Gyula , <i>University of Debrecen, Debrecen, Hungary</i>



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15:35-15:50	OC 11 Structural Insights into Metal Ion Coordination by Aryloxazoline and Arylthiazoline Siderophores and Their Analogues SZCZERBA Klaudia , University of Wrocław, Wrocław, Poland
16:00-17:00	Flash presentations
17:00-18:30	Coffee break & Poster Session
Saturday, 13th September Main Library of the University of Wrocław, 12 Joliot-Curie Street	
Session IX	Chair – REMELLI Maurizio
9:20-10:00	PL 6 The Fascinating Bioinorganic Chemistry of Transmembrane Transition Metal Transporters MELONI Gabriele , University of Messina, Messina, Italy
10:00-10:20	IL 17 Structural Insights and Redox Kinetics of Ancestral Cytochrome P450 Reductase in Nanodiscs STOKOWA-SOŁTYS Kamila , University of Wrocław, Wrocław, Poland
10:20-10:40	IL 18 Metalloproteome Remodeling in Calprotectin-stressed <i>Acinetobacter Baumannii</i> using Chemoproteomics GIEDROC David , Indiana University, Bloomington, USA
10:40-11:00	IL 19 Selective Recognition of As(III) and Sb(III) by AfArsR, a Transcriptional Metalloid Regulatory Protein JANCSÓ Attila , University of Szeged, Szeged, Hungary
11:00-11:30	Coffee break
Session X	Chair – CASINI Angela
11:30-12:00	KL 5 Reactivity and Biological Activity Driven by the Versatility of the Nitro and Sulfone Groups in Imidazole Coordination Compounds BARBA-BEHRENS Norah , National Autonomous University of Mexico, Mexico City, Mexico
12:00-12:15	OC 12 Antioxidant Mimetic Activity of 1H-Pyrazole Metal Complexes Modulated by Polyamine Chain Length in [1 + 1] Condensation Azamacrocycles BONASTRE-SABATER Irene , University of Valencia, Valencia, Spain
12:15-12:30	OC 13 Biologically Active Tinidazole-derived Metal Complexes: From Design to Elucidation of the Mechanism of Action CASTRO-RAMIREZ Rodrigo , National Autonomous University of Mexico, Mexico City, Mexico
12:30-12:45	OC 14 Copper(II) Complexes of Pyridine-carboxamide Based Histidine Conjugates LIHI Norbert , University of Debrecen, Debrecen, Hungary
12:45-13:00	OC 15 Polyamine Cryptand Complexes for Targeting Non-canonical DNA G-quadruplexes MULET-RIVERO Laura , University of Valencia, Valencia, Spain
13:00-14:30	Lunch



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Session XI Chair – MILEA Demetrio	
14:30-14:45	OC 16 Hemopeptides Conjugates as Versatile Ligands for the Selective Binding of G-Quadruplexes GOLUB Eyal , Bar-Ilan University, Ramat-Gan, Israel
14:45-15:00	OC 17 Influence of Amino Acid Sequence in Calmodulin Binding Site on Plutonium FAUX Emilien , French Alternative Energies and Atomic Energy Commission, Bagnols-sur-Cèze, France
15:00-15:15	OC 18 Histidine Mutations Drive Changes in Mn(II), Fe(II), and Zn(II) Binding to Calprotectin Fragments PAWLIK Karolina , University of Wrocław, Wrocław, Poland
15:15-15:35	IL 20 Understanding Bacterial Metal-binding Proteins to Disrupt Ion Homeostasis and Antimicrobial Resistance HECEL Aleksandra , University of Wrocław, Wrocław, Poland
15:35-16:00	Awards & Conference Closing
20:00	Gala Dinner Main Library of the University of Wrocław, 12 Joliot-Curie Street

FLASH PRESENTATIONS		
FP1	Can Phosphorylation Modulate the Redox Activity of Copper–Peptide Complexes?	BIERNAT Katarzyna
FP2	Assessing the Antitumor Activity of Dinuclear Platinum–bisphosphonate Agents for Selective Treatment of Bone Metastases by <i>in vitro</i> and <i>ex vivo</i> Models	DI COSOLA Anna Maria
FP3	Dual Amino Acid Substitution in a MUC7-Derived Peptide Enhances Antimicrobial Resistance and Modulates Zn(II)/Cu(II) Binding Stability	KŁOPOTOWSKA Klaudia
FP4	Insights Into the Coordination Chemistry of Bacterial Iron Transporters	ORZEŁ Bartosz
FP5	From Metal Binding to Proteolytic Stability: A Study of GLP-1 RA Their Interaction with Zn(II) and Cu(II)	POTOCZNIAK Gabriela
FP6	Anderson POM Hybrids with Cr and Co: A Platform for Thermoemissive and Electrofunctional Materials	PRĘTKA Dominika
FP7	Insights Into the Formation of Complexes in the Cu(II)/Tyrosine and Cu(II)/Tyrosine/ATP systems	SADOWSKA Patrycja
FP8	Study of the Catalytic Behavior of Copper(II) Complexes with Potential Catechol Oxidase Activity	SIMON Fruzsina
FP9	Peptidomimetics Based on MUC7 Fragment From Human Saliva: Comparison of Coordination, Structure, Stability and Antimicrobial Activity	SZARSZOŃ Klaudia
FP10	Enhancing Antimicrobial Activity of Salivary Proline-rich Peptides via Metal Coordination and D-Amino Acid Substitution	ŚLUSARCZYK Anna



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POSTERS		
P1	Thermodynamic and spectroscopic analysis of peptide-based enzyme mimics containing the ATCUN site	BELOTTI Denise
P2	Topical Application of Iron Chelators to Reduce Inflammation and Promote Chronic Wound Healing	BUDA Weronika
P3	Exploring the Metal Specificity of the Bacterial Mn(II) Transporters	CHARKOT Jakub
P4	Characteristics of Zn ²⁺ and Cu ²⁺ Complexes of the Active Site of M4 Family Metallopeptidase and its Inhibitors	GŁADYSZ Klaudia
P5	Bi(III) Ion Complexes with Siderophores – Towards New Solutions for Combating Microorganisms	JOŃCZYK Wiktoria
P6	Dual Amino Acid Substitution in a MUC7-Derived Peptide Enhances Antimicrobial Resistance and Modulates Zn(II)/Cu(II) Binding Stability	KACHNOWICZ Jan
P7	Lighting Up Infections: Artificial Siderophores for Selective Imaging of infectious Bacteria	KNOLL Adriana
P8	Coordination Properties of a Peptidic Fragment of the Bacterial Metal Ion Transporter IroT	OLEŚNIEWICZ Nina
P9	New Triorganotin(IV) Syringates as Potential Antitumoral Agent: From Chemical Synthesis to Biochemical Effects	PELLERITO Claudia
P10	Dissecting Copper and Zinc Binding Sites in Small Heat Shock Protein Fragments: Toward a Molecular Understanding of sHSP–Metal Interactions	SZEBESCZYK Agnieszka
P11	Metalloproteinases and their peptide inhibitors – thermodynamic characterisation of complexes with Zn(II) ions	WOŹNIAK Wiktoria