

ISFMS 2025 Abridged Program

	26 August 2025 Tuesday	27 August 2025 Wednesday	28 August 2025 Thursday	29 August 2025 Friday
Morning	The venue opens at 9:00 every day.	Registration & Welcome Coffee (8:30-9:30)	Registration (8:30-9:15)	Registration (8:30-9:15)
		Opening Ceremony	Session 1	Session 4
		Session 2	Coffee Break & Poster Session	Coffee Break
		Lunch Break	Session 1	Session 4
		Session 2	Lunch Break	Lunch Break
Afternoon	Registration (15:00-18:00)	Coffee Break & Poster Session	Session 1	Session 4
		Session 5	Coffee Break & Poster Session	Coffee Break
			Session 3	Session 6
				Award Ceremony & Closing Remarks
	/	Finger Food Party	/	/

ISFMS 2025 Detailed Program

The 5th International Symposium on Frontiers in Molecular Science (ISFMS 2025)		
Wednesday, 27 Aug 2025 Main Venue (Rekisaikan)		
8:30-9:30	Registration & Welcome Coffee	
9:30-9:40	Event chair Yoshinori Marunaka	Opening Ceremony
Session 2: Chaired by Prof. Dr. Maria Hrmova		
9:40-10:10	Maria Hrmova	X-ray crystallography, united with computational modelling reveals the catalytic mechanism in a hydrolytic enzyme
	Keynote Speaker	
10:10-10:40	Leila Lo Leggio	LsAA9A Lytic Polysaccharide Monooxygenase: from initial structures to advanced crystallography of a model copper enzyme
	Keynote Speaker	
10:40-11:00	Masahiro Nakajima	Finding of phylogenetically, functionally, structurally, and mechanistically new glycoside hydrolase family enzymes acting on β-1,2-glucans
	Invited Speaker	
11:00-11:20	Laura Masgrau	Computational studies on carbohydrate-active enzymes
	Invited Speaker	
11:20-11:35	Zhiqi Cong	Engineering hydrogen peroxide tunnel for generating non-natural P450 peroxygenases
	Oral Presenter	
11:35-11:50	Piyanut Pinyou	Bi-Enzymatic Biocatalytic System of β-Glucosidase (TxGH116)/Glucose Oxidase for a Cellobiose/H ₂ O ₂ Biofuel Cell
	Oral Presenter	
11:50-12:05	Anastasia A. Pometun	Structure-functional main features of the enzymes, expressed by lactobacilli in response to Klebsiella
	Oral Presenter	
12:05-13:30	Lunch Break	

13:30-14:15	Harry Brumer	The human gut microbiota-plant cell wall nexus: Enzyme discovery and applications
	Plenary Speaker	
Session 2: Chaired by Prof. Dr. Maria Hrmova		
14:15-14:35	Antoni Planas	Chitin deacetylases for the production of sequence-defined chitosan oligosaccharides. Understanding and Engineering specificity
	Invited Speaker	
Session 5: Chaired by Dr. Masayuki Takahashi		
14:35-15:05	Masayuki Takahashi	Drug design for the solution to drug resistance
	Keynote Speaker	
15:05-16:00	Coffee Break & Poster Session	
Session 5: Chaired by Dr. Masayuki Takahashi		
16:00-16:30	Alessio Nocentini	Multitarget Drug Design for Complex Diseases: Focus on Carbonic Anhydrase Modulators
	Keynote Speaker	
16:30-16:50	Assaf Friedler	Intrinsically disordered proteins as drug targets
	Invited Speaker	
16:50-17:05	Daniil R. Bazanov	Targeting p53-MDM2/MDMX Interaction: Advances in Nutlin Development and Therapeutic Applications
	Oral Presenter	
17:05-17:20	Alisa Sokolovskaya	Simulated microgravity induced changes to drug response, increasing heat shock proteins expression but not apoptosis markers in megakaryoblastic cell line
	Oral Presenter	
17:20-17:35	Mingxin Su	IL-15 Blocks Autophagic Flux in Pancreatic Stellate Cells to Enhance Alanine Secretion and Sustain Pancreatic Cancer Gemcitabine Resistance
	Oral Presenter	
17:35-17:50	Qi Tan	Discovery Of Moracin D As A Novel Interleukin-1β Inhibitor To Alleviate Acute Lung Injury
	Oral Presenter	

17:50-18:05	Wally Ibatuan Tapas	In Silico Analysis of Antibacterial Phenylphenalonones from Musa textilis (Abaca) Pseudostem: A Molecular Docking Approach
	Oral Presenter	
18:30-20:00	Finger Food Party	

5th International Symposium on Frontiers in Molecular Science (ISFMS 2025)		
Thursday, 28 Aug 2025 Main Venue (Rekisaikan)		
8:30-9:15	Registration	
Session 1: Chaired by Prof. Dr. Antonello Merlino		
9:15-9:45	Antonello Merlino	Protein metalation by vanadium-based drugs
	Keynote Speaker	
9:45-10:15	Luigi Vitagliano	Unravelling structure-function relationships in KCTD proteins
	Keynote Speaker	
10:15-10:30	Faisal Koua	Sub-ångström resolution structure of an iron-sulfur protein resolved using serial femtosecond crystallography
	Oral Presenter	
10:30-10:45	Ayub Hareed	Generalised Protein Backmapping with Deep Learning (CNNs): From Coarse-Grained to Atomistic
	Oral Presenter	
10:45-11:00	Xiakun Chu	Transcription factor clustering shapes chromatin dynamics to regulate enhancer-promoter interactions
	Oral Presenter	
11:00-11:30	Coffee Break & Poster Session	
11:30-12:00	Victor Muñoz	Lessons about Protein Folding, Binding, and Intrinsic Disorder from the Study of Archetypal Protein Folds
	Keynote Speaker	
12:00-12:15	Giarita Ferraro	Metallodrugs Encapsulation Within Ferritin Nanocages
	Oral Presenter	
12:15-12:30	Julien Hugo Mignon	Influence of environmental changes on the conformational and amyloidogenic landscapes of an IDP: a combined biophysical and molecular dynamics investigation
	Oral Presenter	
12:30-13:30	Lunch Break	

13:30-14:15	Hideki Sakai	Novel Insights into Intracellular P-Type ATPase Functions in Disease
	Plenary Speaker	
Session 1: Chaired by Prof. Dr. Antonello Merlino		
14:15-14:35	Edward L. D’Antonio	Discovery of Antitrypanosomal Gossypol Derivatives Targeting the Glucose Kinases: Insights from Biochemical, Molecular Docking, and In Vitro Biological Methods
	Invited Speaker	
14:35-14:55	Jean-Didier Maréchal	Multiscale molecular modeling of metalation processes in proteins: from recognition to catalysis
	Invited Speaker	
14:55-15:10	Florian Kongoli	Flogen new sustainability framework and the role of molecular sciences and drug
	Oral Presenter	
15:10-15:25	Davis Joseph	The Unified Theory of Neurodegeneration Pathogenesis Based on Axon Deamidation
	Oral Presenter	
15:25-16:00	Coffee Break & Poster Session	
Session 3: Chaired by Prof. Dr. Billy K.C. Chow and Prof. Dr. Sharon Y. C. Ruan		
16:00-16:30	Tsukasa Okiyoneda	Protein quality control mechanisms of CFTR as therapeutic targets for cystic fibrosis.
	Keynote Speaker	
16:30-17:00	Sharon Y. C. Ruan	Novel roles of epithelial ion channels in endocrine functions
	Keynote Speaker	
17:00-17:15	Yair Ben-Chaim	Voltage dependence of G protein coupled receptors
	Oral Presenter	
17:15-17:30	Yuka Kamada	Functional analysis of HECT-type E3 ligase HERC3 in ER-associated degradation of CFTR mutants
	Oral Presenter	
17:30-17:45	Hoi Leong Xavier Wong	MT1-MMP: new therapeutic target of metabolic disorder
	Oral Presenter	

5th International Symposium on Frontiers in Molecular Science (ISFMS 2025)

Friday, 29 Aug 2025 | Main Venue (Rekisaikan)

8:30-9:15

Registration

Session 4: Chaired by Prof. Dr. Atsushi Shiozaki and Prof. Dr. Yoshinori Marunaka

9:15-9:45

Atsushi Shiozaki

Keynote Speaker

Ion Channel Profiling and Therapeutic Targeting in Cancer Stem Cells of Digestive Malignancies

9:45-10:15

Masahiro Ohsawa

Keynote Speaker

Application of Kampo medicines for the palliation of cancer cachexia.

10:15-10:35

Hiroki Shimizu

Invited Speaker

The potential of ion channels as therapeutic targets in gastrointestinal cancers

10:35-10:50

Sitthinon Siripanthong

Oral Presenter

Using Adhiron technology to develop PAK1-selective inhibitors for targeted cancer treatment

10:50-11:05

Rafaèle Calvo Esposito

Oral Presenter

New insights in the proteolytic contribution of Ananas comosus extract to its in vitro anti-cancer effects against colon cancers

11:05-11:20

Coffee break

Session 4: Chaired by Prof. Dr. Atsushi Shiozaki and Prof. Dr. Yoshinori Marunaka

11:20-11:50

Yoichiro Isohama

Keynote Speaker

Novel functions of aquaporins in cancer and their potential as therapeutic targets

11:50-12:05

Akira Ikari

Oral Presenter

Inhibition of proliferation of colorectal cancer cells by suppression of claudin-14 expression

12:05-12:20

Oskar Kruc

Oral Presenter

Design of potent elongated m-Terphenylpicolinamide derivatives and their interactions with the PD-L1 protein

12:20-12:35	Motoki Watanabe	Identification of ANT2 as a Druggable Target for Endocrine-Resistant ERα-Positive Breast Cancer
	Oral Presenter	
12:35-13:30	Lunch Break	
13:30-14:15	Akiyuki Taruno	Discovery of the channel synapse and its biological functions
	Plenary Speaker	
Session 4: Chaired by Prof. Dr. Atsushi Shiozaki and Prof. Dr. Yoshinori Marunaka		
14:15-14:35	Kento Kurashima	The role of ferroptosis in gastrointestinal cancers and development of novel therapeutics targeting ferroptosis.
	Invited Speaker	
14:35-15:05	Coffee break	
Session 6: Chaired by Prof. Dr. Yusaku Iwasaki and Prof. Dr. Yoshinori Marunaka		
15:05-15:35	Yusaku Iwasaki	Gut-derived glucagon-like peptide-1 induces satiation beneficial for obesity prevention
	Keynote Speaker	
15:35-16:05	Lok-To Sham	Profiling the Genetic Interaction Landscape in Bacteria
	Keynote Speaker	
16:05-16:25	Kazunari Miyamichi	Labeled-Line Circuits of Molecularly-Delineated Sympathetic Neurons for Selective Organ Regulation
	Invited Speaker	
16:25-16:45	Yuta Masuda	Gut hormone cholecystokinin drives oxytocin-dependent thermogenesis in brown adipose tissue via vagal sensory nerve–brain axis.
	Invited Speaker	
16:45-17:00	Ryusuke Yoshida	The roles of chemical synapses in mouse taste bud cells
	Oral Presenter	
17:00-17:15	Takashi Nakahari	

	Oral Presenter	Ryu-Kaku-San, a herbal medicine, enhances ciliary microbeads transport on ciliated human bronchial epithelia via TRPV4 activation: propagation of metachronal wave
17:15-17:30	Sharifah Zamiah Syed Abdul Kadir	Des-aspartate Angiotensin 1 (DAA-1) as a Novel AT1R Modulator: In-Silico and Vascular Functional Insights
	Oral Presenter	
17:30-17:45	Yu-Kuo Chen	Acetylated derivative of nobiletin may alleviate Alzheimer-like cognitive impairment through PI3K/AKT signaling pathway and gut microbiota in mice
	Oral Presenter	
17:45-18:00	Award Ceremony & Chair Closing Remarks	