



HIROSHIMA UNIVERSITY



JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE  
日本学術振興会



HiHA  
Hiroshima research center for Healthy Aging

日本学術振興会・研究拠点形成事業 B

“健康長寿・熱帯由来感染症治療に資する天然物の高度利用に向けた国際研究拠点の構築”

共催：広島大学健康長寿拠点

# 1st core to core International Biosymposium 2024



Theme: “Bioactive Natural Products from  
Tropical Bioresources; Discovery and  
Development for Future Human Health Care”

November 25–27, 2024

401N, AdSM Building, Higashi-  
Hiroshima Campus, Hiroshima  
University, Hiroshima, Japan



Join Event Zoom Meeting

Meeting ID: 874 7409 1939  
Passcode: 638502

統合生命科学研究科プログラム共同セミナー認定科目  
(オンサイト参加者のみ対応)





**Theme: “Bioactive Natural Products from tropical Bioresources; Discovery and Development for Future Human Health Care”**

401N, AdSM Building Hiroshima University

November 25-27, 2024 (9:00-17:30)

**PROGRAMME**

Date	Time	Activity	Speaker
November 25, 2024	9:30 - 9:40	<b>Opening Remarks</b>	
	9:40 - 10:00	Overview of genome mining and natural product discovery from Actinomycetes in tropical bioresources, and a concept of JSPS Core-to-Core Program	Kenji Arakawa Hiroshima University, Japan
	10:00 - 10:20	Development of biofertilizer for enhanced nitrogen use efficiency to mitigate greenhouse gases from tropical agricultural sector	Oslan Jumadi Makassar State University, Indonesia
	10:20 - 10:40	Exploring microbial bioactive potential in Cebu's mangrove and coral reefs	Jonie Yee University of San Carlos, Philippines
	10:40 - 11:00	<b>COFFEE BREAK</b>	
	11:00 - 11:20	Green extraction of bioactive compounds from medicinal plants	Hoai Thi Nguyen Hue University of Medicine and Pharmacy, Vietnam
	11:20 - 11:40	Creation of new biocatalysts from natural products biosynthetic enzymes and discovery of new bioactive natural compounds	Hiroyuki Morita University of Toyama, Japan
	11:40 - 12:00	Diversity and utilization of tropical actinobacteria resources for sustainable biotechnology	Alimuddin Ali Makassar State University, Indonesia
	12:00 - 13:40	<b>LUNCH TIME</b>	
	13:40 - 14:00	Combination of bacteriophage and <i>Elephantopus scaber</i> extract against <i>Xanthomonas oryzae</i> pv. <i>oryzae</i> on rice	Hardian Susilo Addy Jember University, Indonesia
	14:00 - 14:20	Mangrove microbial marvels: Can bioprospecting Philippine coastal ecosystems lead to novel therapeutics?	Kim Hazel Arafles University of Santo Tomas, Philippines
	14:20 - 14:40	A plug and play approach to connect genes to molecules	Kazuya Yamanaka Kansai University, Japan



1st core to core  
**International  
Biosymposium**  
2024



**Theme: “Bioactive Natural Products from tropical Bioresources; Discovery and Development for Future Human Health Care”**

401N, AdSM Building Hiroshima University

November 25-27, 2024 (9:00 AM-5:30 PM)

**PROGRAMME**

Date	Time	Activity	Speaker
November 25, 2024	14:40 - 15:00	Investigation of the pharmacological properties and phytochemical profile of <i>Ochna integerrima</i> (Lour.) Merr.	Hien Minh Nguyen Ton Duc Thang University, Vietnam
	15:00 - 15:20	Piperine, a tropical bioactive compound from peppers, and its derivatives attenuate inflammation by blocking NF-κB signalling: Molecular investigation and pharmaceutical formulation	Muhammad Aswad Hasanuddin University, Indonesia
	15:20 - 15:40	COFFEE BREAK	
	15:40 - 16:00	Discovery of novel antimalarial drugs utilizing actinomycetes culture libraries -Collaboration between Nagasaki and Hiroshima University-	Shusaku Mizukami Nagasaki University, Japan
	16:00 - 16:20	Exploration of rhizosphere fungi and Actinomycetes from the medicinal plant <i>Peperomia pellucida</i> L. in the karst area of Bantimurung, South Sulawesi, as producers of antibiotic compounds	Herlina Rante Hasanuddin University, Indonesia
	16:20 - 16:40	Intracellular protein delivery with microbial polycationic isopeptides	Yoshimitsu Hamano Fukui Prefectural University, Japan
	16:40 - 17:00	Endophytic fungal research at the University of Santo Tomas as sources of biologically active natural products	Mario Tan University of Santo Tomas, Philippines
	17:00 - 17:30	Peptide epimerase for biosynthesis of microbial natural products	Tohru Dairi Hokkaido University, Japan
	18:00 - 19:30	GROUP PHOTO BANQUET	



1st core to core  
**International  
Biosymposium**  
2024



**Theme: “Bioactive Natural Products from tropical Bioresources; Discovery and Development for Future Human Health Care”**

401N, AdSM Building Hiroshima University

November 25-27, 2024 (9:00 AM-5:30 PM)

**PROGRAMME**

Date	Time	Activity	Speaker
November 26, 2024	9:00 - 9:20	Biosynthetic study on streptothricin-related compounds	Chitose Maruyama Fukui Prefectural University, Japan
	9:20 - 9:40	Plants-derived neobavaisoflavone inhibits thernonuclease production and biofilm formation by <i>Staphylococcus aureus</i>	Andi Rofian Sultan Hasanuddin University, Indonesia
	9:40 - 10:00	Metabolomics approach for the authentication of <i>Panax vietnamensis</i> varieties	Huy Truong Nguyen Ton Duc Thang University, Vietnam
	10:00 - 10:20	Environmental microbial biotechnology for sustainable humanity	Ryuichi Hirota Hiroshima University, Japan
	10:20 - 10:40	Harnessing herbal bioactive compounds to prevent age-related disorders	Seiji Kawamoto Hiroshima University, Japan
	10:40 - 11:00	<b>COFFEE BREAK</b>	
	11:00 - 11:20	Fermenting marine red seaweed <i>Halymenia</i> for poultry health	Paul John Geraldino University of San Carlos, Philippines
	11:20 - 11:40	Aptamer based antimicrobial as potential treatment for mutltidrug resistant microorganism	Yunialthy Dwia Pertiwi Hasanuddin University, Indonesia
	11:40 - 12:10	Awakening cryptic biosynthetic gene clusters in marine-derived <i>Streptomyces</i> via heterologous expression and promoter refactoring	Eung-Soo Kim Inha University, Korea
	12:10 - 13:30	<b>LUNCH TIME</b>	
		<b>Young Researchers / Student Section</b>	
	13:30 - 13:40	Unlocking nature's secrets: Actinobacteria from Philippine mangroves	Carmela Vannette Vicera University of Santo Tomas, Philippines
	13:40 - 13:50	Discovery of a novel methionine biosynthetic route in <i>Streptomyces</i>	Fumihito Hasebe Fukui Prefectural University, Japan
	13:50 - 14:00	Mechanisms of lifespan extension and stress resistance by methionine metabolism	Koji Masumura Hiroshima University, Japan



1st core to core  
**International  
Biosymposium**  
2024



**Theme: “Bioactive Natural Products from tropical Bioresources; Discovery and Development for Future Human Health Care”**

401N, AdSM Building Hiroshima University

November 25-27, 2024 (9:00 AM-5:30 PM)

**PROGRAMME**

Date	Time	Activity	Speaker
November 26, 2024	14:00 - 14:10	Laboratory evolution and characterization of nitrate-resistant phosphite dehydrogenase (PtxD) for enhanced cyanobacterial cultivation	Gamal Nasser Abdel-Hady Hiroshima University, Japan
	14:10 - 14:20	Elongation of cyanobacteria under the presence of predator	Narumi Toda Hiroshima University, Japan
	14:20 - 14:30	Elucidation of microorganisms-derived antibiotics in Hachijojima kusaya gravy by isolating actinomycetes	Sachiko Masaki Tokyo University of Agriculture, Japan
	14:30 - 14:40	Structure-based engineering of Amaryllidaceae O-methyltransferases	Saw Yu Yu Hnin University of Toyama, Japan
	14:40 - 14:45	Structural modification of lankacidin for improvement of their antitumor activity through computational simulation	Mei Okano Hiroshima University, Japan
	14:45 - 14:50	Versatile genome mining of “silent” bioactive secondary metabolites using the butenolide-type signaling molecule	Momoko Akimoto Hiroshima University, Japan
	14:50 - 14:55	Biosynthetic investigation of azoxy-alkene KA57A and hydrazide-alkenes obtained in a mutant of <i>Streptomyces rochei</i> 7434AN4	Kaito Fukumori Hiroshima University, Japan
	14:55 - 15:15	<b>COFFEE BREAK</b>	
	15:15 - 15:20	In silico study of cinnamic acid-derived compounds as antimalarials using QSAR analysis, molecular docking, molecular dynamics simulation, and ADMET prediction	Muh. Arfandy Gunawan Hasanuddin University, Indonesia
	15:20 - 15:25	In silico and in vitro investigations of cinnamic acid and its derivatives in resensitizing multidrug-resistant <i>Acinetobacter baumannii</i> by disrupting biofilm formation	Helpia Hasanuddin University, Indonesia



1st core to core  
**International  
Biosymposium**  
2024





**Theme: “Bioactive Natural Products from tropical Bioresources; Discovery and Development for Future Human Health Care”**

401N, AdSM Building Hiroshima University

November 25-27, 2024 (9:00 AM-5:30 PM)

**PROGRAMME**

Date	Time	Activity	Speaker
November 26, 2024	15:25 - 15:30	Effect of high-pressure extraction on the secondary metabolite profile of paliasa leaves ( <i>Kleinhovia hospita</i> L) and in silico analysis for anti-Plasmodium falciparum activity	Putri Ardinasrayanti Asri Hasanuddin University, Indonesia
	15:30 - 15:35	Phenotypic plasticity of <i>Staphylococcus aureus</i> complicates the efficacy testing of antibiotic in vitro	Gustian Zahran Hasanuddin University, Indonesia
	15:35 - 15:40	Carbapenem resistance in eastern Indonesia: Sink surface contamination and the urgent need for novel antibiotics	Ahmad Rahmat Ramadhan Hasanuddin University, Indonesia
	15:40 - 15:45	Bioassay-guided isolation of quorum sensing inhibitory isolates from <i>Bacillus safensis</i> EPB9	Francis Reuben Paul Padayao University of San Carlos, Philippines
	15:45 - 15:50	Bioactivity of sponge-derived <i>Streptomyces variabilis</i> crude ethyl acetate extract: An infection model using <i>Vibrio parahaemolyticus</i> and <i>Caenorhabditis elegans</i>	Owen Brylle Acosta University of San Carlos, Philippines
	15:50 - 15:55	Anti-adhesive Activity of Biopolymer (Polyhydroxybutyrate) Isolated from Mangrove Sponge-Associated Actinomycetes against <i>Listeria monocytogenes</i>	Rosanna Ramos University of San Carlos, Philippines
	15:55 - 16:00	Quantification of vitamin K2 (Menaquinone-7) compound from fermented <i>Halymenia durvillei</i> (Bory de Saint-Vincent, 1828) by <i>Bacillus subtilis</i> ATCC 6051	Vincent Arroqante University of San Carlos, Philippines
	16:00 - 16:05	Zebrafish ( <i>Danio rerio</i> ) embryo toxicity of selected ethnobotanical grasses from Carmen, Cebu, Philippines	Annalie Bejoc University of San Carlos, Philippines
	16:05 - 16:10	In vitro cytotoxic and apoptotic potential of <i>Streptomyces rochei</i> against HCT116 human colorectal cancer cells	Norman Quilantang University of San Carlos, Philippines
	16:10 - 16:30	<b>COFFEE BREAK</b>	
	16:30 - 16:35	Isolation and characterization of bioactive proteins from mangrove sediment microbes	Joyce Rodriguez University of San Carlos, Philippines
	16:35 - 16:40	Isolation and characterization of thermophilic bacteria <i>Anoxybacillus</i> spp. from Mainit Hot Spring, Malabuyoc, Cebu, Philippines	John Michael Genterolizo University of San Carlos, Philippines



1st core to core  
**International  
Biosymposium**  
2024





日本学術振興会・研究拠点形成事業 B

“健康長寿・熱帯由来感染症治療に資する天然物の高度利用に向けた国際研究拠点の構築”

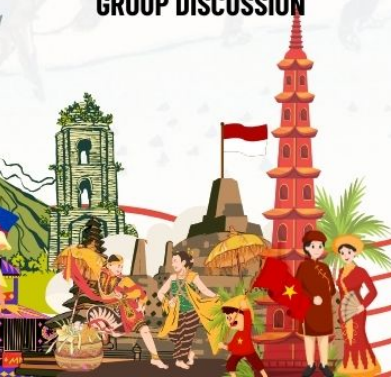
**Theme: “Bioactive Natural Products from tropical Bioresources; Discovery and Development for Future Human Health Care”**

401N, AdSM Building Hiroshima University

November 25-27, 2024 (9:00 AM-5:30 PM)

**PROGRAMME**

Date	Time	Activity	Speaker
November 26, 2024	16:40 - 16:45	Microbiological hazard analysis of the cultivation and production line of small - scale oyster mushroom farm ( <i>Pleurotus ostreatus</i> ) Farm in transcentral highway, Barangay Babag II, Cebu City	Miguelito Ruelan University of San Carlos, Philippines
	16:45 - 16:50	Discovery of novel antimalarial drugs utilizing actinomycetes culture libraries	Mayumi Taniguchi Nagasaki University, Japan
	16:50 - 16:55	Direct cloning and activation of an orphan NRPS gene cluster in <i>Streptomyces lydicamycinicus</i> for the discovery of untapped peptidic natural product	Daichi Kitaura Kansai University, Japan
	16:55 - 17:00	Enhancement of cell membrane permeability of peptides by PIECE method	Kohei Kaneda Fukui Prefectural University, Japan
	17:00 - 17:05	Studies in the lysine biosynthesis during $\epsilon$ -poly-L-lysine production in <i>Streptomyces albulus</i>	Daisuke Shimada Fukui Prefectural University, Japan
	17:05 - 17:10	Isolation and molecular function of the 4-monosubstituted butenolide molecules from Indonesia actinomycetes	Sho Ogaki Hiroshima University, Japan
	17:10 - 17:15	Discovery of lankamycin derivative with a branched-chain sugar from a blocked mutant of lankamycin biosynthesis in <i>Streptomyces rochei</i> 7434AN4	Mingge Zhang Hiroshima University, Japan
	17:15 - 17:20	Extensive screening of secondary metabolites in marine actinomycetes isolated from mangrove and coral reefs in Cebu Philippines	Mary Hannah Rose Padayao Hiroshima University, Japan
	17:20 - 17:25	Seco-macrotetrolides obtained through stereo- and regio-selective hydrolysis of macrotetrolides in the Indonesian <i>Streptomyces</i> strains	Rukman Muslimin Hiroshima University, Japan
	17:25 - 17:30	<b>CLOSING REMARKS</b>	
November 27, 2024	17:30 -	<b>REFRESHMENTS</b>	
		<b>GROUP DISCUSSION</b>	



1st core to core  
**International Biosymposium**  
2024