

List of potential research projects at INBIOSIS (non-exhaustive) - candidate can contact respective supervisor for further discussion

No.	Supervisor	Level of Study	Research Title
1	Ahmad Bazli Ramzi	Msc	Characterization of plastic-degrading bacteria using transcriptomic approach
2	Ahmad Bazli Ramzi	PhD	Engineering of artificial bacterial consortium for bio-based plastic monomer production
3	Ahmad Bazli Ramzi	PhD	Genome engineering of cyanobacteria for improving extracellular production of plastic-degrading enzyme
4	Ahmed Mediani	PhD	Anti-diabetic effect and molecular mechanism studies on obese diabetic rats treated by nanoparticles loaded with Momordica charantia polyphenolic-rich extract using NMR- and MS-based metabolomics
5	Ahmed Mediani	PhD	Deciphering antiinflammatory effect and molecular mechanism of Neptunia oleracea extracts loaded in nanoparticles using NMR- and MS-based metabolomics
6	Emelda Rosseleena Rohani	PhD	Development of biofortified Taro cultivars (<i>Colocasia esculenta</i>) with increased overexpression of γ -tocopherol methyltransferase (γ -TMT) for vitamin E biosynthesis
7	Emelda Rosseleena Rohani	PhD	Plant tissue culture as an alternative source for production of industrially important bioactive compounds
8	Goh Hoe Han	MSc	<i>In silico</i> characterization of seretome from the <i>Nepenthes</i> pitcher fluids for bioprospecting
9	Goh Hoe Han	MSc	Effects of recovered carbon black and fabricated carbon dot on rice growth
10	Goh Hoe Han	PhD	Functional analysis of neprosin homolog family in <i>Arabidopsis thaliana</i>
11	Goh Hoe Han	PhD	Microbiome study on the effects of recovered carbon black and fabricated carbon dot applications in soil for sustainable agriculture
12	Hamidun Bunawan	Msc	Secondary Metabolite Clusters Analysis of the Probiotic <i>Lactobacillus</i> isolated from Stingless Bee's Honey
13	Hamidun Bunawan	Msc	Risk and Potential Assesment of Pathogen Bacteria Invasion Through Ballast Water
14	Hamidun Bunawan	Msc	Molecular Epidemiology of Rice Tungro Viruses For Understanding the Molecular Diversity And Evolution
16	Hamidun Bunawan	PhD	Biosynthesis Pathway Analysis of Neurotoxin Domoic Acid in <i>Nitzschia navis-varingica</i> via New Generation Sequencing
17	Hamidun Bunawan	PhD	<i>Bougainvillea spectabilis</i> chlorotic vein binding virus (BsCVBV): Detection and Construction of Synthetic Virus
18	Hamidun Bunawan	PhD	Analysis of Anthocyanin Biosynthesis Pathway in <i>Cosmos caudatus</i> kunth. and <i>Sauvagesia androgynus</i> L. through Multiomics Approach
19	Hamidun Bunawan	PhD	Genome study of <i>Xanthomonas oryzae</i> pv. <i>Oryzicola</i> and anatomical comparison within sensitive paddy varieties towards bacterial leaf streak
21	Hamizah Shahirah Hamezah	MSc	Elucidating the metabolomic profiles of <i>Moringa oleifera</i> leaf extracts at different growth stages and its anti-antioxidant and anti-cholinesterase properties
22	Hamizah Shahirah Hamezah	PhD	Elucidating the metabolomic profiles of polyphenol-rich extracts of <i>Moringa oleifera</i> leaves and its effects on histopathological properties in neuroinflammatory-induced rats model
23	Kamalrul Azlan Azizan	Msc	Optimization extraction of <i>Wedelia trilobata</i> essential oil using response surface methodology (RSM)
24	Kamalrul Azlan Azizan	PhD	Preparation and characterization of blended <i>Wedelia trilobata</i> /cloves/rosemary essential oil nanoemulsions
26	Low Chen Fei	MSc	<i>In silico</i> selection of marine natural products for the identification of potential antiviral compounds against grouper nervous necrosis virus
27	Low Chen Fei	MSc	Selection and characterization of tilapia lake virus (TiLV)-derived immunogenic peptide through reverse vaccinology approach
28	Low Chen Fei	PhD	Characterization of tilapia lake virus (TiLV)-derived immunogenic peptide and its potential in immune activation in tilapia
29	Low Chen Fei	PhD	Selection and characterization of <i>Streptococcus</i> sp-derived immunogenic peptides as potential subunit vaccine against streptococcosis in aquaculture
30	Maizom Hassan	PhD	Development of insecticide with novel mode of action for cocoa insect pest, <i>Conopomorpha cramerella</i> management
31	Maizom Hassan	MSc	Identification of responsive genes in the cocoa pod borer in early response to farnesyl derivative compounds through comparative proteomics analysis
32	Maizom Hassan	PhD	Development of novel and effective bio-pesticides against red palm weevil (RPW) <i>Rhynchophorus ferrugineus</i> (Olivier)
33	Murni Nazira Sarian	MSc	Insilico, invitro and antimicrobial study of polyphenol-enriched cocoa bean extract on wound healing
34	Murni Nazira Sarian	MSc	Chitosan nanoparticles loaded with polyphenol-rich extract of the leaves of <i>Anacardium occidentale</i> on wound healing
35	Ng Chyan Leong	PhD	Functional characterization of sub-class Cas2 enzyme of <i>Burkholderia pseudomallei</i>
36	Ng Chyan Leong	PhD	Structural and Functional studies of <i>Burkholderia pseudomallei</i> hypothetical protein
37	Ng Chyan Leong	PhD	Structural and functional studies of monoterpenoid indole alkaloid biosynthesis enzymes of <i>Mitragyna speciosa</i>
38	Nisha A/P Thopla Govender	PhD	Functional analysis of RNA-binding proteins in <i>Ganoderma boninense</i> phytopathogen
39	Nisha A/P Thopla Govender	PhD	Molecular dynamics simulation of nanoparticles in adverse soil systems
40	Nor Azlan Nor Muhammad	MSc	Identification of potential microbes for <i>Metisa plana</i> control via <i>in silico</i> approaches
41	Nor Azlan Nor Muhammad	MSc	Annotation of <i>Metisa plana</i> hypothetical proteins via structural bioinformatics approaches
42	Nor Azlan Nor Muhammad	PhD	Elucidating insecticide resistance pathways in <i>Metisa plana</i> through integrative bioinformatics of multi-omics data
43	Nor Azlan Nor Muhammad	PhD	Identification of insecticide targets for Cocoa pod borer through high throughput virtual screening approach
44	Nurkhaldia Kamal	PhD	Investigation of Metagenomics and Metabolomic Profiles of Tempe Fermentation Products during In Vitro Fermentation by Human Fecal Microbiota
45	Nurkhaldia Kamal	PhD	Investigation of Metagenomics and Metabolomic Profiles of Carbon Quantum Dot Fermentation Products during In Vitro Fermentation by Human Fecal Microbiota
46	Sarahani Harun	MSc	Network pharmacology analysis of selected malay herbs for the discovery of anti-cancer agents
48	Sarahani Harun	MSc	Genome-wide analysis of glucosinolate biosynthesis genes in plants
49	Sarahani Harun	PhD	Elucidating key regulatory genes controlling essential vitamin production in rice using network biology
50	Syarul Nataqain Baharum	PhD	Evaluation of oleic acid enhanced fish feed as potential immunostimulant on gut-microbiota and proteome of vibrio-resistant grouper
51	Syarul Nataqain Baharum	PhD	Elucidating the immuno-metabolic flux network of vibrio-infected fish response to oleic acid feed formulation
52	Wan Mohd Aizat	PhD	Natural deep eutectic solvents ultrasound-assisted extraction improves polyphenol yield and anti-obesity activity of <i>Garcinia mangostana</i> L. extracts
53	Wan Mohd Aizat	PhD	Investigation of <i>Garcinia mangostana</i> , <i>Gynura procumbens</i> and <i>Kelulut</i> honey formulated supplement towards rat metabolic health using systems biology approach
54	Wan Mohd Aizat	Msc	Formulation, stability and sensory analysis of <i>Garcinia mangostana</i> , <i>Gynura procumbens</i> and <i>Kelulut</i> honey mixtures towards registered health supplement