

TENGGU HAZIYAMIN BIN TENGGU ABDUL HAMID



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المؤهل العلمي

- PhD in Enzyme Technology
- Master of Science (Food & Agriculture Biotechnology)
- Bachelor of Science (Biochemistry)

مسؤوليات التدريس

COMMERCIALISATION AND CURRENT ISSUES IN BIOTECHNOLOGY	2016/2017 2017/2018 2018/2019 2019/2020 2020/2021
ENZYMOLOGY	2008/2009 2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015 2016/2017 2017/2018 2018/2019 2019/2020 2020/2021
FINAL YEAR PROJECT	2020/2021
FINAL YEAR PROJECT II	2020/2021
INTRODUCTION TO BIOINFORMATICS	2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015
MOLECULAR AND CELL BIOLOGY	2003/2004
MOLECULAR BIOLOGY	2002/2003 2003/2004
MOLECULAR CELL BIOLOGY	2002/2003 2003/2004
PHARMACEUTICAL BIOTECHNOLOGY & BIOPHARMACEUTICAL	2013/2014
PRINCIPLES OF BIOCHEMISTRY	2017/2018 2018/2019 2019/2020 2020/2021
PRINCIPLES OF CELL AND TISSUE CULTURE	2003/2004
PROJECT SEMINAR	2009/2010 2010/2011
PROTEIN BIOTECHNOLOGY	2003/2004 2008/2009 2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015 2016/2017 2017/2018 2018/2019 2019/2020 2020/2021
RESEARCH METHODOLOGY	2019/2020

In Progress

- 2019 - Present** Investigation on production of biosurfactants and their effect on the molecular interactions of polycyclic aromatic hydrocarbons with ring hydroxylating dioxygenase during biodegradation
- 2019 - Present** Assessment on suitable hydrocolloids for probiotic encapsulation enhancing its viability and stability
- 2017 - Present** Computational investigation on the interaction of β -Glucosidase with the cell wall component of pathogenic fungus, *Macrophomina phaseolina*
- 2017 - Present** Characterizing phytoremediation capacity of *Jatropha curcas* and arbuscular mycorrhizal fungi for remediating bauxite mining sites
- 2015 - Present** The Mechanistic Role of Active Site Residues in Non-Stereospecific Haloacid Dehalogenase E (Dehe) Using Computational Approach
- 2015 - Present** Routine versus clinically indicated replacement of peripheral intravascular catheter: Factors determining incidence of phlebitis
- 2004 - Present** Functional Food and Nutraceuticals Research Unit (FFNRU)

Completed

- 2017 - 2020** Computational investigation on the interaction of β -Glucosidase with the cell wall component of pathogenic fungus, *Macrophomina phaseolina*
- 2015 - 2016** An Assessment on Microbial Contamination in Drinking Water Wells Exposed to Different Degrees of Submergence during Flood
- 2015 - 2019** The Mechanistic Role of Active Site Residues in Non-Stereospecific Haloacid Dehalogenase E (Dehe) Using Computational Approach
- 2015 - 2019** Routine versus clinically indicated replacement of peripheral intravascular catheter: Factors determining incidence of phlebitis
- 2014 - 2018** Identification of 3CP-Degrading Bacteria from Marine Sponge and its β -dehalogenase Gene
- 2013 - 2017** The Separation of Plasmid DNA Technologies Using the Normal and Tangential Flow Filtration - The Development Process to Purify DNA for DNA Vaccination
- 2013 - 2016** Proteomic Analysis of Rice Storage Proteins in Relation to Nutrient Quality
- 2012 - 2016** Optimisation and Purification Studies of Bioactive Peptides or Bacteriocin-like Protein isolated from Lactic Acid Bacteria Isolated from Non-Broiler Chicken (*Gallus-gallus*)
- 2012 - 2015** The characterization and studies on anti-neoplastic properties of purified bacteriocin from lactic acid bacteria isolated from non broiler chicken
- 2010 - 2011** Extraction and Characterization of Chitin and Chitosan Contents from Local Squid(s) and Tilapia Fish Scales

- 2010 - 2013** Sigma subunit-Dependent adaptation of physiology and metabolic functions in burkholderia for effective bioremediation process
- 2010 - 2013** Investigation Of MRSA Occurrence In Hospital Tengku Ampuan Afzan And Iium Kuantan
- 2009 - 2012** Isolation of lactic acid bacteria(LAB)producing inhibitory proteins from local poultry and fermented food

المنشورات

Article

- 2020** [Kepentingan memahami struktur protein dalam memerangi dan mengawal sesuatu wabak..](#) Majalah Sains
- 2020** [Kolumnis: Politik populis ancaman tangani COVID-19.](#) Berita Harian pp.10
- 2020** [Pigmented pseudoalteromonas sp. isolated from marine sponge with anti-microbial activities against selected human pathogens.](#) European Journal of Biology and Biotechnology , 1 (5) pp.1-5
- 2020** [Lactococcus lactis strains from intestinal organ of black tips shark Carcharhinus limbatus producing nisin-like bacteriocin active against Shrimp and fish pathogens \(vibrio parahaemolyticus and vibrio alginolyticus\).](#) Journal of Microbiology, Biotechnology & Food Science , 10 (3)
- 2020** [Keharmonian kerajaan, saintis bendung COVID-19.](#) Berita Harian pp.10
- 2020** [Lactic Acid Bacterium with antimicrobial properties from selected Malay traditional fermented foods.](#) International Journal of Life Sciences and Biotechnology , 4 (1-2) pp.13-24
- 2020** [Peranan proses pelipatan protein terhadap penyakit prion.](#) Majalah Sains
- 2020** [Isolation of thermophilic esterase or lipase producing bacteria from hot springs at the East coast of Peninsular Malaysia.](#) Journal of Tropical Life Sciences pp.1-15
- 2019** [The mechanistic role of active site residues in non-stereo haloacid dehalogenase E\(DehE\).](#) Journal of Molecular Graphics and Modelling , 90 pp.219-225
- 2018** [Effect of 2014 massive flood on well water qualities: a case study on Kelantan River basin, Malaysia.](#) Journal of Water and Land Development , 2018 (38) pp.127-136
- 2017** [In silico binding interactions of dehalogenase \(Dehe\) with various haloalkanoic acids.](#) Galeri Warisan Sains , 1 (1) pp.4-6
- 2017** [The role of DSPF, the type III secretion chaperone of DspA/E of Erwinia amylovora, in pathogenicity in host and non-host plants.](#) The Journal of Animal & Plant Sciences , 27 (1) pp.309-315
- 2017** [Lactic acid bacteria with antimicrobial properties isolated from the intestines Of Japanese Quail \(Coturnix coturnix Japonica\).](#) Galleri Warisan Sains , 1 (1) pp.10-12

- 2017** [Investigation on plasmid DNA separation under vacuum suction using cellulose generated and polyethersulfone ultra filters.](#) Journal of Applied Pharmaceutical Science , 7 (7) pp.46-50
- 2017** [Expression of the dspA/E gene of Erwinia amylovora in non-host plant Arabidopsis thaliana.](#) Biotechnology and Biotechnological Equipment , 31 (1) pp.85-90
- 2017** [Lactococcus lactis strain A5 producing nisin-like bacteriocin active against gram positive and negative bacteria.](#) Tropical Life Science Reserach , 28 (2) pp.107-118
- 2016** [New lipase producing Betaproteobacteria strains of Caldimonas sp. and Tepidimonas sp. isolated from a Malaysian hot springs.](#) Malayan Nature Journal , 68 (Part 1 & 2) pp.83-90
- 2015** [Isolation of moderately halophilic lipase producing bacteria from sponges in Pahang coastal water, Malaysia.](#) Jurnal Teknologi , 77 (25) pp.57-61
- 2015** [Anti-proliferative activities of purified bacteriocin from enterococcus mundtii strain C4L10 isolated from the caecum of Malaysian non-broiler chicken on cancer cell lines.](#) International Journal of Pharmacy and Pharmaceutical Sciences , 7 (2) pp.334-337
- 2015** [Detection and characterization of enterocin encoding genes in enterococcus mundtii strain C4L10 from the cecum of non-broiler chicken.](#) International Journal of Pharmacy and Pharmaceutical Sciences , 7 (4) pp.131-136
- 2015** [New lipase producing \$\beta\$ -proteobacteria strains caldimonas sp. and tepidimonas sp. isolated from a Malaysian hot springs.](#) Sains Malaysiana , 44 (5) pp.701-706
- 2015** [An S188V mutation alters substrate specificity of non-stereospecific \$\alpha\$ -haloalkanoic acid dehalogenase E \(DehE\).](#) PLoS ONE , 10 (3) pp.1-21
- 2015** [Isolation and identification of 3-chloropropionic acid degrading bacterium from marine sponge.](#) Jurnal Teknologi (Sciences & Engineering) , 77 (25) pp.71-75
- 2014** [Anti-proliferative bacteriocins active against MRSA from coagulase negative Ent. mundtii strain C4L10 isolated from non-broiler chicken.](#) Journal of Probiotics & Health , 2 (2) pp.53
- 2014** [Molecular characterization of monochloroacetate-degrading arthrobacter sp. Strain d2 isolated from Universiti Teknologi Malaysia agricultural area.](#) Bioremediation Journal , 18 (1) pp.12-19
- 2013** [Identification of functional residues essential for dehalogenation by the non-stereospecific \$\alpha\$ -haloalkanoic acid dehalogenase from Rhizobium sp. RC1 .](#) Journal of Basic Microbiology , 53 pp.1-7
- 2013** [Lactic acid bacteria: bacteriocin producer: a mini review.](#) IOSR Journal of Pharmacy , 3 (4) pp.2319-4219
- 2013** [Identification of functional residues essential for dehalogenation by the non-stereospecific \$\alpha\$ -haloalkanoic acid dehalogenase from Rhizobium sp. RC1.](#) Journal of Basic Microbiology , 53 pp.1-7
- 2013** [Isolation of coagulase negative Enterococccous sp. strains from non-broiler chicken producing bacteriocin active against Staphylococcus aureus.](#) Journal of Agrobiolgy , 30 (1) pp.33-42

- 2013** [Isolation of pigment-producing strain of Staphylococcus kloosii from the respiratory tree of Holothuria \(Mertensiothuria\) leucospilota \(Brandt, 1835\) from Malaysian waters.](#) Tropical Life Sciences Research , 24 (1) pp.85-100
- 2013** [Molecular modelling and functional studies of the non-stereospecific \$\alpha\$ -haloalkanoic acid dehalogenase \(DehE\) from Rhizobium sp. RC1 and its association with 3-chloropropionic acid \(\$\beta\$ -chlorinated aliphatic acid\).](#) Biotechnology & Biotechnological Equipment , 27 (2) pp.3725-3736
- 2013** [Isolation of lactic acid bacteria strain Staphylococcus piscifermentans from Malaysian traditional fermented shrimp cincaluk.](#) International Food Research Journal , 20 (1) pp.125-129
- 2012** [Isolation and screening of lactic acid bacteria, Lactococcus lactis from Clarias gariepinus \(African catfish\) with potential use as probiotic in aquaculture.](#) African Journal of Biotechnology , 11 (29) pp.7494-7499
- 2012** [The isolation and characterization of coagulase-negative Staphylococcus sp. from intestine of a Malaysian rabbit \(Oryctolagus cuniculus\).](#) Borneo Journal of Resource Science and Technology , 2 (1) pp.54-58
- 2012** [Molecular identification and biodegradation of 3-chloropropionic acid \(3CP\) by filamentous fungi-Mucor and Trichoderma species isolated from UTM agricultural land.](#) Malaysian Journal of Microbiology , 9 (1) pp.120-124
- 2011** [Antioxidant properties of soft coral Dendronephthya sp.](#) International Journal of Pharmacology , 7 (2) pp.263-267
- 2011** [A review on non-stereospecific haloalkanoic acid dehalogenases.](#) African Journal of Biotechnology , 10 (48) pp.9725-9736
- 2011** [Purification and properties of a new dehalogenase enzyme from Pseudomonas sp. B6P grow in 3- chloropropionate \(3CP\).](#) African Journal of Biotechnology , 10 (4) pp.610-614
- 2011** [Isolation of lactic acid bacteria from Malaysian non-broiler chicken \(Gallus Gallus\) intestine with potential probiotic for broiler feeding.](#) IIUM Engineering Journal , 12 (4) pp.133-139
- 2010** [Molten Globule-Triggered Inactivation of a thermostable and solvent stable lipase in hydrophilic Solvents.](#) The Protein Journal , 29 (4) pp.290-297
- 2009** [Characterization and solvent stability of strep-tagged purified recombinant lipase from thermostable and solvent tolerant Bacillus sp. strain 42..](#) Annals of Microbiology , 59 (1) pp.111-118
- 2009** [Crystallization of N-terminal Strep-tagged Fusion Lipase from Thermostable Bacillus sp. Strain 42..](#) Acta Crystallography , A65 pp.155
- 2009** [The role of lid in protein-solvent interaction of the simulated solvent stable thermostable lipase from bacillus strain 42 in water-solvent mixtures.](#) Biotechnology & Biotechnological Equipment , 23 (4) pp.1524-1530
- 2008** [Overexpression and characterization of strep-tagged thermostable organic solvent-stable lipase from Bacillus sp. strain 42.](#) Journal of Biotechnology , 136 (S1) pp.335

Conference or Workshop Item

- 2021 [The isolation of Lactic acid bacteria strains from Black tips shark *Carcharhinus limbatus* producing bacteriocin with potential to be used as probiotic in aquaculture.](#) In: **International Conference By Biotechnology Society Of Nepal (ICBSN-2021)**
- 2019 [Molecular docking analysis of \$\beta\$ -1,4-Glucosidase from *trichoderma harzianum* against mycelial cell wall components of *macrophomina phaseolina*.](#) In: **2nd International Conference on Biosciences and Medical Engineering (ICBME) 2019**
- 2019 [The mechanistic role of active site residues in non-stereo Haloacid Dehalogenase E \(DehE\).](#) In: **2nd International Conference on Biosciences & Medical Engineering 2019**
- 2019 [Jatropha curcas as a potential plant for bauxite phytoremediation.](#) In: **"International Symposium on Bioremediation, Biomaterial, Revegetation, and Conservation 2018, IS BIOREV 2018"**
- 2016 [Assessment on the quality on drinking wells exposed to different degrees of submergence during flood in Kelantan.](#) In: **Persidangan Kajian Bencana Banjir 2014**
- 2015 [Protein profiles and antimicrobial activity of common Sunda Toad, *Duttaphrynus melanostictus paratoid* secretions.](#) In: **3rd International Conference on Biological, Chemical and Environmental Sciences (BCES-2015)**
- 2014 [Anti-proliferative bacteriocin active against MRSA from coagulase negative *Ent. mundtdii* strain C4L10 isolated from non broiler chicken.](#) In: **3rd International Conference & Exhibition on Probiotics, Functional & Baby Foods**
- 2013 [The structural and functional studies of the non-stereospecific \$\alpha\$ -haloacid dehalogenase \(DehE\) from *rhizobium* sp. RC1 .](#) In: **Biomicroworld2013**
- 2013 [Gram-positive bacteria with commercial potentials from the intestines of *Holothuria \(Mertensiothuria\) leucospilota* \(Brandt, 1835\) \(Timun laut\) and *Stichopus horrens* Selenka, 1867 \(Gamat\) from Malaysia.](#) In: **IUM Research, Invention and Innovation Exhibition (IRIIE) 2013**
- 2012 [Lactic acid bacteria with probiotic potential producing antimicrobial proteins against methicilin resistant *Staphylococcus aureus* \(MRSA\) isolated from Malaysian non-broiler chicken.](#) In: **15th International Biotechnology Symposium (IBS) and Exhibition, IBS 2012: Innovative Biotechnology for a Green World and Beyond**
- 2012 [Elucidation of Pigment Biosynthetic Pathways – Towards Integration of Metabolomics, Metabolic Flux Analysis, and Metabolic Engineering.](#) In: **2012 IUM's 1st International Postgraduate Research Conference (IIPRC 2012)**
- 2010 [Isolation and screening of lactic acid bacteria \(LAB\) from non-broiler chicken \(*Gallus gallus*\) for potential probiotic.](#) In: **IUM Research, Innovation & Invention Exhibition (IRIIE 2010)**
- 2010 [Isolation and characterization of lactic acid bacteria from *clarias macrocephalus* \(African Catfish\) for potential probiotic purposes.](#) In: **IUM Research, Innovation & Invention Exhibition (IRIIE 2010)**
- 2008 [Protein-solvent interaction and simulation studies of solvent stable and thermostable lipase from *Bacillus* strain 42 in water-solvent mixtures .](#) In: **Protein Design and Evolution for Biocatalysis**

Book

- 2012 [Future direction biotechnology education in Malaysia.](#) Ministry of Higher Education Malaysia

Book Section

- 2017 [Probiotics and health.](#) In: **Frontiers in science and technology** IIUM Press, International Islamic University Malaysia . ISBN 9789674184469 , pp.3-48
- 2016 [Taxonomical analysis of of beta-haloalcanoic acid-degrading bacteria.](#) In: **Advances in biosciences** Penerbit UTM Press . ISBN 9789835213465 , pp.20-46
- 2011 [Probiotic for sustainability protein source in Malaysia .](#) In: **Biotechnologies towards sustainable development in Malaysia** IIUM Press . ISBN 9789674182007 , pp.126-132
- 2011 [Bacteriocin as safe antimicrobial agent .](#) In: **Biotechnologies towards sustainable development in Malaysia** IIUM Press . ISBN 9789674182007 , pp.133-140
- 2011 [Chitin and chitosan from fresh water fish tilapia \(Oreochromis niloticus\) scale .](#) In: **Biotechnologies towards sustainable development in Malaysia** IIUM Press . ISBN 9789674182007 , pp.223-235
- 2010 [Asid absisik.](#) In: **Ensiklopedia Sains & Teknologi (Biologi)** Dewan Bahasa & Pustaka/UTM . ISBN 9836273379 , pp.24-25
- 2010 [Auksin.](#) In: **Ensiklopedia Sains & Teknologi (Biologi) Jld 11** Dewan Bahasa & Pustaka/UTM . ISBN 9836273379 , pp.24-25
- 2010 [Giberelin.](#) In: **Ensiklopedia Sains & Teknologi (Biologi) Jld 11** Dewan Bahasa & Pustaka/UTM . ISBN 9836273379 , pp.139-140
- 2010 [Immunologi.](#) In: **Ensiklopedia Sains & Teknologi (Biologi) Jld 11** Dewan Bahasa & Pustaka/UTM . ISBN 9836273379 , pp.168-170