



CURRICULUM VITAE

A. BUTIR-BUTIR PERIBADI (*Personal Details*)

Nama Penuh (<i>Full Name</i>)	Raja Noor Zaliha Raja Abd Rahman		Gelaran (<i>Title</i>): <i>Professor</i>
No. MyKad / No. Pasport (<i>Mykad No. / Passport No.</i>)	Warganegara (<i>Citizenship</i>)	Bangsa (<i>Race</i>)	Jantina (<i>Gender</i>)
560618095028	Malaysia	Malay	Female
Jawatan (<i>Designation</i>)	Professor	Tarikh Lahir (<i>Date of Birth</i>)	18hb June 1956

Alamat Semasa (<i>Current Address</i>)	Jabatan/Fakulti (<i>Department/Faculty</i>)	E-mel dan URL (<i>E-mail Address and URL</i>)
Jabatan Microbiology, Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia Tel: 0389471416/6713	Jabatan Microbiology, Faculty of Biotechnology and Biomolecular Sciences Tel: 0389471416/6713 Fax: 0389467590	E-mail: rnzaliha@ upm.edu.my URL: http://biotech.upm.edu.my H/P: 0192760708

B. KELAYAKAN AKADEMIK (*Academic Qualification*)

Nama Sijil / Kelayakan (<i>Certificate / Qualification obtained</i>)	Nama Sekolah Institusi (<i>Name of School / Institution</i>)	Tahun (<i>Year obtained</i>)	Bidang pengkhususan (<i>Area of Specialization</i>)
Bachelor of Science (Hons)	Universiti Sains Malaysia	1989	Microbiology
Master of Science	Universiti Pertanian Malaysia	1994	Microbiology
Doctor of Engineering	Kyoto University, Kyoto, Japan	1998	Molecular Biology

C. KEMAHIRAN BAHASA (*Language Proficiency*)

Bahasa / <i>Language</i>	Lemah <i>Poor (1)</i>	Sederhana <i>Moderate (2)</i>	Baik <i>Good (3)</i>	Amat Baik <i>Very good (4)</i>	Cemerlang <i>Excellent (5)</i>
English				/	
Bahasa Melayu					/
Chinese					
Lain-lain (<i>other</i>):					

D. PENGALAMAN SAINTIFIK DAN PENGKhususan

(*Scientific experience and Specialisation*)

Organization	Position	Start Date	End Date	Expertise
Osaka University	Visiting Researcher	27/11/06	26/12/06	X-ray crystallography
Osaka University	JSPS Fellow	28/2/03	4/4/03	Protein Crystallization

E. PEKERJAAN (Employment)				
Majikan / Employer	Jawatan / Designation	Jabatan / Department	Tarikh lantikan / Start Date	Tarikh tamat / Date Ended
Universiti Pertanian Malaysia	Tutor	Department of Biochemistry & Microbiology Faculty of Science and Environmental Studies	1994	1998
Universiti Putra Malaysia	Lecturer	Department of Biochemistry & Microbiology Faculty of Science and Environmental Studies	1998	2001
Universiti Putra Malaysia	Associate Professor	Department of Biochemistry & Microbiology Faculty of Science and Environmental Studies	2001	2006
Universiti Putra Malaysia	Professor	Department of Microbiology, Faculty of Biotechnology and Biomolecular Sciences	2007	date

F. ANUGERAH DAN HADIAH (Honours and Awards)				
Name of awards	Title	Award Authority	Award Type	Year
<i>Academic Awards (Academic Awards)</i>				
JSPS Fellowship	Japan Society for the Promotion of Science		International	1994-1998
Silver Medal	Innova		International	2010
Bronze Medal	Malaysia Technology Expo (MTE)		National	2010
Gold Medal	International Invention, Innovation and Technology Exhibition (ITEX)		National	2010
Silver Medal	PECIPTA		International	2009
Gold and Silver Medals	Design, Research and Innovation Exhibition (PRPI) UPM		University	2009
Gold and Silver Medasl	Brussels Innova 2008		International	2008
Gold and Silver Medals	Malaysian Technology Expo 2008 (MTE 2008)		National	2008
Gold Medal	International Invention, Innovation and Technology Exhibition (ITEX)		National	2008
Gold and Silver Medals	Design, Research and Innovation Exhibition, PRPI UPM 2008		National	2008
Gold Medal	Industrial Design & Technology Exhibition (ITEX) 2007		National	2007
Gold and Silver Medals	PECIPTA 2007		National	2007
Gold, Silver and Bronze Medals	Design, Research and Innovation Exhibition, PRPI UPM 2007		University	2007
Bronze Medal	Biotechnology Asia 2006. 3 rd International Biotechnology Trade Exhibition, Conference, and Awards		International	2006
Gold Medal	Malaysian Technology Expo(MTE)		National	2006
Gold, Silver, and Bronze Medals	Design, Research and Innovation Exhibition, PRPI UPM 2007,		University	2007
Bronze Medal	Biotechnology Asia 2006. 3 rd International Biotechnology Trade Exhibition, Conference and Awards		Internatinal	2007
Gold , Silver, and Bronze Medals	Design, Research and Inovation Exhibition Award 2006		University	2006
Gold Medal and Silver Medal	33 rd International Exhibition of Inventions new techniques and product. Geneva		International	2005
Bronze Medal	ITEX 2005		International	2005
Gold and Bronze Medals	IPTA 2005		National	2005
Silver Medal	Institute of Bioscience Design, Research and Inovation Exhibition Award 2005		University	2005
Silver and Bronze Medals	Faculty of Science Design, Research and Inovation Exhibition Award 2005		University	2005
Gold and Silver Medals	F, Design, Research and Inovation Exhibition Award 2005		University	2005
Silver and Bronze Medals	Expo Science & Technology Award at Putra World Trade Centre 2004		National	2004
Gold Award and RAM RAIS AWARD 2004	International Invention Innovation Industrial Design & Technology Exhibition ITEX 2004		National	2004

Silver Award and Bronze Award	Exhibition of Research and Invention IBS	University	2004
Silver Award and Bronze Award	Expo Science & Technology Award at Putra World Trade Centre	National	2003
Best Poster Award	14 th National Biotechnology Seminar, DNA: 50 years and Beyond	National	2003
Gold Award, Silver Award and Bronze Award	UPM Exhibition and Research and Design Award 2003	University	2003
Gold Award	Expo Science & Technology Award	National	2002
Gold Award, Silver Award, and Bronze Award	UPM Exhibition and Research and Design Award 2002	University	2002
<i>Non-Academic Awards</i>			
Darjah Setia Mahkota Perlis (S.M.P)	Perlis State	State Award	2015
Darjah Seri Sirajuddin Perlis (S.S.P.)	Perlis State	State Award	2010
Johan Mangku Negara (J.M.N.)	Federal	Federal Award	2009
Darjah Ahli Mahkota Perlis (A.M.P.),	Perlis State	State Award	2003
<i>Awards of Merit</i>			
Top Research Scientist Malaysia	Academy of Sciences Malaysia	National	2013
Knight Degree of The International Order of Merit Of Inventors	International Federation Invention Association (IFIA)	International	2009
The Ronpaku Medal Award	Japan Society for the Promotion of Science	International	1998
National Intellectual Property Award 2008 (First Prize Winner Individual Category)	Malaysia Intellectual Property Corporation (MyIPO) and the Ministry of Local Entrepreneurship and Consumer Affairs (KPDNHEP).	National	2008
Saintis Cemerlang 2005	Kementerian Pendidikan Tinggi	National	2005
Vice Chancellor Fellowship Award (Excellence in Research)	UPM	University	2009
Excellent Service Awards	UPM	University	2000, 2005, 2009
Patent Award	Institute Bioscience (IBS)	Institute	2010

G. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan tahun diterbitkan) (List of publications – author (s), title, journal, volume, page and year published)

<i>Journal</i>	<p>Current H index: 32, Citation: 3248 Publication total: 226 Recent publications: 2012 -2016</p> <ol style="list-style-type: none"> 1. Wahhida Latip, Raja Noor Zaliha Raja Abd Rahman, Adam Leow Thean Chor , Fairalniza Mohd Shariff , Mohd Shukuri Mohamad Ali (2016) Expression and characterization of thermotolerant lipase with broad pH profiles isolated from an Antarctic Pseudomonas sp strain AMS3. PeerJ 4:e2420; DOI 10.7717/peerj.2420 2. Norhayati Yaacoba, Mohd Shukuri Mohamad Ali , Abu Bakar Salleha, Raja Noor Zaliha Raja Abdul Rahmana, Adam Thean Chor Leowa, Toluene promotes lid 2 interfacial activation of cold active solvent tolerant lipase from Pseudomonas fluorescens strain AMS8, Journal of Molecular Graphics and Modelling 68 (2016) 224–235 3. Garba L, Mohamad Ali MS, Oslan SN, Rahman RNZRA (2016) Molecular Cloning and Functional Expression of a $\Delta 9$- Fatty Acid Desaturase from an Antarctic Pseudomonas sp. A3. PLoS ONE 11(8): e0160681. doi:10.1371/journal.pone.0160681 4. Garba L, Mohamad Ali MS, Oslan SN, Rahman RNZRA (2016) Heterologous Expression of PA8FAD9 and Functional Characterization of a D9-Fatty Acid Desaturase from a Cold-Tolerant Pseudomonas sp. A8. Mol Biotechnol DOI 10.1007/s12033-016-9971-9 5. Roswanira Abdul Wahaba, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman, Abu Bakar Sallehd, Mohd Basyaruddin Abdul Rahmanb, Thean Chor Leow (2016) Facile modulation of enantioselectivity of thermophilic Geobacillus zalihae lipase by regulating hydrophobicity of its Q114 oxyanion. Enzyme and Microbial Technology. 93 :174–181 6. Malihe Masomian, Raja Noor Zaliha Raja Abd Rahman*, Abu Bakar Salleh &, Mahiran Basri. (2016)
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- Analysis of Comparative Sequence and Genomic Data to Verify Phylogenetic Relationship and Explore a New Subfamily of Bacterial Lipases. PLOS ONE 11 (3) e0149851
7. Lawal Garba, Raja Noor Zaliha Raja Abd Rahman*, Mohd Shukuri Mohamad Ali, Wahhida Latif, Siti Nurbaya Oslan. (2016) Unsaturated fatty acids in Antarctic Bacteria, Research Journal of Microbiology. 11: 146-152..
 8. Shakiba, M.H., Ali, M.S.M., Rahman, R.N.Z.R.A., Salleh, A.B., Leow, T.C. (2016) Cloning, expression and characterization of a novel cold-adapted GDSL family esterase from Photobacterium sp. strain J15. Extremophile Volume 20, Issue 1, 1 January 2016, Pages 45-55
 9. Gol Mohammad Dorrazehi, Laila Noh, Mohd Shukuri Mohamad Ali, Raja Noor Zaliha Raja Abd Rahman, Abu Bakar Salleh, Normi Mohd Yahaya and Thean Chor Leow, (2016). TROUBLESHOOTING THE HETEROLOGOUS EXPRESSION OF RIBOFLAVIN SYNTHASE FROM PHOTOBACTERIUM SP. J15. European Journal of Biomedical and Pharmaceutical Sciences. ISSN 2349-8870 Volume: 3 Issue: 4 699-705 Year: 2016
 10. Tan Jen-Kit, Then Sue-Mian, Mazlan Musalmah, Rahman Raja Noor Zaliha Raja Abdul, Jamal Rahman, Ngah Wan Zurinah Wan, Gamma-tocotrienol acts as a BH3 mimetic to induce apoptosis in neuroblastoma SH-SY5Y cells, The Journal of Nutritional Biochemistry (2016), doi: 10.1016/j.jnutbio.2015.12.019- doi: 10.1016/j.jnutbio.2015.12.019- 2016, 31:28-37
 11. Abdul Wahab, R., Basri, M., Raja Abdul Rahman, R.N.Z., Abdul Rahman, M.B., Leow, T.C. (2015) Development of a catalytically stable and efficient lipase through an increase in hydrophobicity of the oxyanion residue. Journal of Molecular Catalysis B: Enzymatic. 122: 282-288
 12. Moohamad Ropaning Sulong, Thean Chor Leow, Raja Noor Zaliha Raja Abd Rahman, Mahiran Basri & Abu Bakar Salleh (2015). Enhancing Thermostability of Maltogenic Amylase from Geobacillus sp. SK70 by Single Amino Acid Substitution. International Journal of New Technologies in Science and Engineering Vol. 2, Issue 3, Sep 2015, ISSN 2349 page 20-40
 13. Ariff, A.B., Nelofer, R., Rahman, R.N.Z.R.A., Basri, M. (2015). Organik çözücü toleranslı ve ısıya dayanıklı rekombinan E. coli lipaz üretiminin kinetiği ve grup fermentasyonu modellemesi | [Kinetics and modelling of batch fermentation for the production of organic solvent tolerant and thermostable lipase by recombinant E. coli]. Turkish Journal of Biochemistry. 40 (4):298-309
 14. Siti Nurbaya Oslan^{1,2}, Abu Bakar Salleh^{1,2,6*}, Raja Noor Zaliha Raja Abd Rahman^{1,3,6}, Thean Chor Leow^{1,4,6}, Hafizah Sukamat² and Mahiran Basri^{1,5,6} (2015) A newly isolated yeast as an expression host for recombinant lipase Cellular and Molecular Biology Letters, Volume 20 (2015) pp 279-293
 15. Raja Noor Zaliha Raja Abd Rahman, Malihe Masomian, Adam Thean Chor Leow, Mohd Shukuri Mohamad Ali (2015) Influence of protein solution in nucleation and optimized formulation for the growth of ARM lipase crystal. Journal of Crystal Growth 426 (2015) 234–242
 16. RAJA Noor Zaliha Raja Abd Rahman ^{1*}, Mohd. Shukuri Mohamad Ali ¹, Shigeru Sugiyama ^{2,3}, Adam Thean Chor Leow ¹, Tsuyoshi Inoue ², Mahiran Basri ¹, Abu Bakar Salleh ¹ and Hiroyoshi Matsumura² (2015) A Comparative Analysis of Microgravity and Earth Grown Thermostable T1 Lipase Crystals Using HDPCG Apparatus. Protein & Peptide Letters. Volume 22, Number 2, February 2015, pp. 173-179(7)
 17. Sivasangkary Gandhi,¹ Abu Bakar Salleh,^{1,2} Raja Noor Zaliha Raja Abd Rahman,³Thean Chor Leow,⁴ and Siti Nurbaya Oslan (2015) Expression and Characterization of Geobacillus stearothermophilus SR74 Recombinant α -Amylase in Pichia pastoris. BioMed Research International Volume 2015 (2015), Article ID 529059, 9 pages
 18. Raja Noor Zaliha Raja Abd. Rahman, Norsyuhada Alias, Adam Thean Chor Leow, Mohd. Shukuri Mohamad Ali, Asilah Ahmad Tajudin and Abu Bakar Salleh (2015), Antilipase and Antioxidant Activity of Phyllanthus niruri Methanolic Extract. Australian Journal of Basic and Applied Sciences, 9 (7) April 2015, Pages: 133-136
 19. Jonathan Maingwa, Mohd Shukuri Mohamad Ali, Abu Bakar Salleh, Raja Noor Zaliha Raja Abd Rahman, Fairolniza Mohd Shariff and Thean Chor Leow (2014) Adaptational properties and applications of cold-active lipases from psychrophilic bacteria. Extremophiles : life under extreme conditions. March 2015, Volume 19, Issue 2, pp 235-247
 20. Roswanira Abdul Wahab, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman, Abu Bakar Salleh, Mohd Basyaruddin Abdul Rahman and Thean Chor Leow (2014). Enzymatic production of a solvent-free menthyl butyrate via response surface methodology catalyzed by a novel thermophilic lipase from *Geobacillus zalihae*. Biotechnology and Biotechnology Equipment, 12/2014; 28(6):1065-1072.
 21. Chee Fah Wong¹, Raja Noor Zaliha Raja Abd. Rahman*, Mahiran Basri², Abu Bakar Salleh³, 3 (2014) Structural Assessment of Elastase Strain K in Homogeneous Non-Aqueous System. International Journal of Biological Engineering 2014, 4(1): 1-3 DOI: 10.5923/j.ijbe.20140401.01
 22. Mohd Adilin Yaacob, Wan Atiqah Najiah Wan Hasan, Mohd Shukuri Mohamad Ali, Raja Noor Zaliha Raja Abdul Rahman, Abu Bakar Salleh, Mahiran Basri and Thean Chor Leow (2014) Characterisation and molecular dynamic simulations of J15 asparaginase from Photobacterium sp. strain J15. Acta Biochimica Polonica, 61(4):745-52. Epub 2014 Oct 22.
 23. Mohd Basyaruddin Abdul Rahman, Ahmad Hanif Jaafar, Mahiran Basri, Raja Noor Zaliha Raja Abdul Rahman and Abu Bakar Salleh (2014). Biomolecular Design and Receptor-Ligand Interaction of a Potential Industrial Biocatalyst: A Thermostable Thermolysin-Phosphoethanolamine-Ca²⁺ Protein Complex. Journal of Advanced Catalysis Science and Technology. 1, , 1-5

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25. Siti Salwa Abd Gani, Mahiran Basri, Anuar Kassim, Raja Noor Zaliha Raja Abd Rahman, Abu Bakar Salleh, and Zahariah Ismail (2014). Characterization of encapsulated titanium dioxide using engkabang fat esters for cosmeceutical purposes. *IJPCBS* 2014,4(3)725-737
26. Joo Shun Tan, Sahar Abbasiliasi, Yu Kiat Lin, Mohd Shamzi Mohamed, Mohammad Rizal Kapri, Saeid Kadkhodaei, Yew Joon Tam, Raja Noor Zaliha Raja Abd. Rahman, Arbakariya B. Ariff. (2014) Primary Recovery of Thermostable Lipase 42 Derived From Recombinant *Escherichia coli* BL21 in Aqueous Two-Phase Flotation. *Separation and Purification Technology*. 133 (2014) 328–334
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31. Nor Hafizah Ahmad Kamarudin, Raja Noor Zaliha Raja Abd. Rahman, Mohd Shukuri Mohamad Ali, Thean Chor Leow, Mahiran Basri, and Abu Bakar Salleh (2014) Unscrambling the effect of C-terminal tail deletion on the stability of a cold-adapted, organic solvent stable lipase from *Staphylococcus epidermidis* AT2", *Molecular Biotechnology*. In press
32. Rezaee M, Basri M, Rahman RNZRA, Salleh AB, Chaibakhsh N, Abedi Karjiban R. (2014) Formulation development and optimization of palm kernel oil esters-based nanoemulsions containing sodium diclofenac. *International Journal of Nanomedicine* January 2014 Volume 2014:9(1) Pages 539 - 548
33. Sayangku Nor Ariati Mohamad Aris, Adam Leow Thean Chor, Mohd Shukuri Mohamad Ali, Mahiran Basri, Abu Bakar Salleh, and *Raja Noor Zaliha Raja Abd. Rahman, "Crystallographic Analysis of Ground and Space Thermostable T1 Lipase Crystal Obtained via Counter Diffusion Method Approach," *BioMed Research International*, vol. 2014, Article ID 904381, 8 pages, 2014. doi:10.1155/2014/904381
34. A multivariate modeling for analysis of factors controlling the particle size and viscosity in palm kernel oil esters-based nanoemulsions (2014). Rezaee, M., Basri, M., Raja Abdul Rahman, R.N.Z., Salleh, A.B., Chaibakhsh, N., Fard Masoumi, H.R.. *Industrial Crops and Products*, 52 :506-511
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36. Ali MS1, Yun CC, Chor AL, Rahman RN, Basri M, Salleh AB (2013) Purification and characterisation of an F16L mutant of a thermostable lipase. *Protein J.* 2012 Mar;31(3):229-37
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41. Nursyamsyila Mat Hadzir, Mahiran Basri, Mohd Basyaruddin Abdul Rahman, Abu Bakar Salleh, Raja Noor Zaliha Raja Abdul Rahman, Hamidon Basri (2013)Phase Behaviour and Formation of Fatty Acid Esters Nanoemulsions Containing Piroxicam. *AAPS PharmSciTech*, Volume 14, pp 456-463
42. Mohd Shukuri Mohamad Ali, Menega Ganasen, Raja Noor Zaliha Raja Abd. Rahman, Abu Bakar Salleh and Mahiran Basri (2013) Cold-adapted RTX Lipase from Antarctic *Pseudomonas* sp. Strain A8:Isolation, Molecular Modeling and Heterologous Expression (2013), *Protein J* Volume 32, Issue 4, pp 317-325
43. Chew-Hee Ng, Wai-San Wang, Kok-Vei Chong, Foo-Win Yip, Kian-Eang Neo , Hong-Boon Lee, Swee-Lan San, Raja Noor Zaliha Raja abd. Rahman, and Weng-Kee Leong (2013) Ternary copper(II)-polypyridyl enantiomers: Aldol condensation, characterization, DNA-binding recognition, BSA-binding

- and anticancer property, Dalton Trans., 2013, 42: 10233–10243
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 56. Rahman, M.Z.A., Salleh, A.B., Rahman, R.N.Z.R.A., Rahman, M.B.A., Basri, M., Leow, T.C. Unlocking the mystery behind the activation phenomenon of T1 lipase: A molecular dynamics simulations approach (2012) Protein Science, 21 (8), pp. 1210-1221.
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<i>Books/Monographs</i>	<p>1. Abu Bakar Salleh, Raja Noor Zaliha R. Abd. Rahman, and Mahiran Basri, (2006) <i>New Lipases and Proteases</i>, Nova Science Publisher, Inc. New York, ISBN: 1-60021-068</p> <p>2. Raja Noor Zaliha Raja Abd. Rahman, Abu Bakar Salleh, and Mahiran Basri, (2013) <i>Molecular and Structural Biology of New Lipases and Proteases</i>, Nova Science Publisher, Inc. New York, ISBN: 978-1-62618-838-9</p>
<i>Chapter in book</i>	<ol style="list-style-type: none"> Adam Thean Chor Leow , Raja Noor Zaliha Raja Abd Rahman*, Suriana Sabri, Fairalniza Mohd Shariff, Noor Hidayah Shahidan, Abu Bakar Salleh, Mahiran Basri (2013). Heterologous expression of industrially important thermostable lipases. In Raja Noor Zaliha R. Abd. Rahman, Abu Bakar Salleh, and Mahiran Basri, (2013) Molecular and Structural Biology of New Lipases and Proteases, Nova Science Publisher, Inc. New York, ISBN: 978-1-62618-838-9, pp. 1-30 Syarul Nataqain Baharum, Raja Noor Zaliha Raja Abd Rahman*, Mohamad Ropaning Sulong, Nor Hafizah Ahmad Kamarudin, Mahiran Basri, Abu Bakar Salleh (2013). Molecular expression of novel organic solvent tolerant lipases. In Raja Noor Zaliha R. Abd. Rahman, Abu Bakar Salleh, and Mahiran Basri, (2013). Molecular and Structural Biology of New Lipases and Proteases, Nova Science Publisher, Inc. New York, ISBN: 978-1-62618-838-9, pp. 31-50 Chee Fah Wong, Raja Noor Zaliha Raja Abd. Rahman*, Amaliawati Ahmad Latiffi, Abu Bakar Salleh & Mahiran Basri (2013). Molecular expression of novel thermostable F1 protease. In Raja Noor Zaliha R. Abd. Rahman, Abu Bakar Salleh and Mahiran Basri, (2013). Molecular and Structural Biology of New Lipases and Proteases, Nova Science Publisher, Inc. New York, ISBN: 978-1-62618-838-9, pp. 51-68 Chee Fah Wong, Raja Noor Zaliha Raja Abd. Rahman*, Abu Bakar Salleh & Mahiran Basri (2013). Characterization of recombinant organic solvent tolerant proteases. In Raja Noor Zaliha R. Abd. Rahman, Abu Bakar Salleh and Mahiran Basri, (2013) Molecular and Structural Biology of New Lipases and Proteases, Nova Science Publisher, Inc. New York, ISBN: 978-1-62618-838-9 Mohd Shukuri Mohammad Ali, Raja Noor Zaliha Raja Abd. Rahman* Norsyuhada Alias, Abu Bakar Salleh & Mahiran Basri (2013). Molecular studies of cold active lipase and protease. In Raja Noor Zaliha R. Abd. Rahman, Abu Bakar Salleh, and Mahiran Basri, (2013) Molecular and Structural Biology of

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Proceedings	335 (International: 133, National: 202)
Intellectual Property	Patent Granted: 17 (Malaysian Patents: 5, Overseas Patents: 12) Patent Filing : 54 (Malaysian Patents: 31, Overseas Patents: 23)
TradeMarks	4

H. PROJEK PENYELIDIKAN TERDAHULU (Past Research Project)

Project No.	Project Title	Role	Year	Source of fund	Status
09-02-04-0122	Molecular cloning, sequencing and expression of of organic tolerant lipase gene from locally isolated <i>Bacillus</i> sp.	Project leader	2000-2001	MOSTI	Completed
09-02-04-0336-EA001	Enhancement of enzymatic activity and thermostability of lipase	Project leader	2001-2003	MOSTI	Completed
09-02-05-006-BTK/ER/34	Structure and function of extremophilic proteins.	Project leader	2003-2005	MOSTI	Completed
09-02-04-0763-EA001	Expression and characterization of organic solvent tolerant lipase from <i>Bacillus sphaericus</i> 205y	Project leader	2006-2007	MOSTI	Completed
07-01-04-SS001	Crystallization of industrially important enzymes/protein in space	Project leader	2006-2008	MOSTI	Completed
07-05-MGI-GMB002	Development of selected industrial enzymes/proteins from psychrophiles	Project leader	2007-2010	MOSTI	Completed
07-05-MG1-GMB001	Molecular Expression of chalcone synthase in Prokaryotic System	Sub-Project Leader	2007-2010	MOSTI	Completed
01-01-07-009FR	Understanding the behaviour of lipase S5 enzyme in the presence of organic solvents and water	Project leader	2007-2009	MOHE	Completed
02-01-04-SF0212	Molecular cloning and expression of an organic solvent tolerant lipase gene from locally isolated <i>Staphylococcus</i> sp	Project leader	2006-2008	MOSTI	Completed
SPECIAL CRDF-MTDC	Production of New Novel Thermostable lipase for industrial application-	Project leader	2008-2012	MTDC	Completed
09-05-MGI-GMB001	Space Crystallization of Industrial Enzymes onboard The Japanese Experimental Module (JEM)	Project leader	2009-2011	MOSTI	Completed
02-01-04-SF1024	Molecular engineering of an organic solvent tolerant lipase from <i>Staphylococcus epidermidis</i> AT2	Project leader	2009-2011	MOSTI	Completed
01-01-04-SS007	Space Crystallization of Industrially Important Proteins onboard The Japanese Experimental Module (JEM)	Project leader	2011-2014	MOSTI	Completed
02-01-04-SF1316	Detergent for Machine-Wash (DMW) Containing Locally Produced Thermostable Enzymes	Project leader	2012-2014	MOSTI	Completed
ERGS/1-2012/5527079	Discovering lipase inhibitor compounds from Malaysian plants for obesity treatment	Project leader	2012-2015	KPT	Completed
International Collaborative Research/Institute of Protein Research	The effect of microgravity on structure conformation of industrially important proteins.	Project leader	2013	Osaka University	Completed
International Collaborative Research/Institute of Protein Research	Comparative structural analysis of industrially important protein crystals grown conventionally to the crystals grown in space	Project leader	2012	Osaka University	Completed
International	Comparative structural analysis of	Project	2011	Osaka	Completed

Collaborative Research/Institute of Protein Research	industrially important protein crystals grown conventionally to the crystals grown in space 2	leader		University	
FRGS/1/2014/SG05 /UPM/01/1	Structural Investigation towards deciphering the structure, function and molecular mechanism of thermostable DNA polymerase isolated from <i>Geobacillus</i> sp. SK72	Project leader	2014-2017	KPT	Ongoing
PRGS/1/2014/SG05 /UPM/01/3	Development and enhancement of Eco-Friendly automatic Dishwashing detergent (ADD) containing enzymes for domestic and industrial use	Project leader	2014-2017	KPT	Ongoing

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<i>Researcher ID</i>		Raja Noor Zaliha Raja Abd. Rahman
<i>Others</i>		

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<i>Facebook</i>	
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<i>Academia</i>	/
<i>Google Scholar</i>	/
<i>Blog</i>	
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<i>Others</i>	