Bibligraphy

Dr. Mohd Ridzuan Bin Mohd Abd Razak

(BSc (Hons)(UKM), M.Sc (UKM), Ph.D (UCL))

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43000 Kajang, Selangor

Position Research officer Q48

Appointment date 5.5.2004

Confirmation date 5.5.2005

Date of appointment to Q41

scheme

5.5.2004

Date of appointment to Q44

scheme

16.12.2009

Date of appointment to Q48

scheme

12.05.2015

Employer Institute for Medical Research,

Ministry of Health, Malaysia.

Office address Bioassay Unit,

Herbal Medicine Research Center,

Institute for Medical Research,

Jalan Pahang, 50588 Kuala Lumpur. Malaysia

Academic qualifications

<u>No.</u>	Level of qualifications	<u>Areas</u>	<u>Institutions</u>	<u>Years</u>
1.	Doctor of Philosophy (PhD)	Structural and Molecular Biology	University College London, London, United Kingdom	22/09/2008 to 28/08/2012
2.	Master of Sciences (MSc)	Biochemistry	Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia	16/05/2001 to 15/06/2005

3.	Bachelor of Sciences with	Biochemistry	Universiti	17/05/1998
	Honours (BSc)		Kebangsaan	to
	, ,		Malaysia, Bangi,	07/07/2001
			Selangor, Malaysia	

Thesis publications:

- 1. **Mohd Abd Razak, MRB** (2012) Investigating GAP45 localisation and phosphorylation during *Plasmodium falciparum* schizont development. Doctoral thesis, UCL (University College London).
- 2. **Mohd Ridzuan Bin Mohd Abd Razak.** Pemfosfatan-nyahfosfatan tirosin pada ekstrak membran eritrosit daripada mencit terinfeksi *Plasmodium berghei*. Tesis S Sn. Universiti Kebangsaan Malaysia 2005.
- 3. **Mohd Ridzuan Bin Mohd Abd Razak.** Kesan infeksi *Plasmodium berghei* ke atas protein berfosfotirosin membran eritrosit mencit. Tesis Sm Sn (Tahun Kepujian). Universiti Kebangsaan Malaysia 2001.

Awards and achivements				
No.	<u>Awards</u>	<u>Years</u>		
1.	Best Poster Presenter at the 5 th Biotechnology Symposium: Biotechnology for Sustainable Development to Meet Global Challenges (15-16 November 2017 Kota Kinabalu, Sabah, Malaysia)	2017		
2.	Anugerah Perkhidmatan Cemerlang Kementerian Kesihatan Malaysia	2014		
3.	Anugerah Perkhidmatan Cemerlang Kementerian Kesihatan Malaysia	2008		
4.	Best Poster Award (2 nd Prize Poster Presentation) at the 6 th International Traditional and Complementary Medicine Conference and 3 rd International Congress on Traditional Medicine & Materia Medica (17-20 July 2007 Kuala Lumpur, Malaysia).	2007		

Research and development				
<u>No.</u>	Project titles	<u>Grants</u>	<u>Years</u>	
1.	Therapeutic window of Freeze-dried Carica papaya leaves juice in Dengue Virus Infected AG129 Mice	Biomedical, IMR (RM 388,773.00) NMRR-17-2653- 39095	2018-2019	
2.	Identification and Determination of Onset of Antimalaria Drug Resistance Gene Mutation from Blood Samples of Humans Infected with Plasmodium spp. and Previously Treated with Antimalaria Combination Therapy (ACTs) (Co- investigator).	NIH, MOH (RM 385,420.00) NMRR-17-757- 35548	2017-2019	
3.	Oral pharmacokinetic evaluation of freeze-dried Carica papaya leaves juice formulation in rats (Co-investigator)	NIH, MOH (RM 198,000.00) NMRR-17-756- 35404	2017-2018	
4.	Cell permeability and bioavailability evaluation of citropten and its anti-inflammatory properties in a rat model of inflammation (Co-investigator)	NIH, MOH (RM 460,000.00) NMRR-17-507- 35387	2017-2018	

5.	Identification of the protein targets involved in citropten antiviral activity against dengue virus	NIH, MOH (RM 180,000.00) NMRR-12-1467- 13153	2017-2018
6.	Effect of fresh <i>C. papaya</i> leaf juice and freezedried C. papaya leaf juice in activating early response of dendritic cells and immature T-cells in thymus and spleen of dengue virus infected AG129 mice. (PI)	NIH, MOH (RM 511,920.00) NMRR-16-959- 30977	2016-2018
7.	The Effect of <i>Carica papaya</i> Leave Juice (Fresh Juice and Freeze-Dried Preparations) on the Vascular Permeability Level of Dengue Virus Infected AG129 Mice. (PI)	NIH, MOH (RM 887,000.00) NMRR-16-681- 30564	2016-2018
8.	Gene Expression & Immunomodulatory Studies On Samples From Dengue Virus Infected Mice Treated With Carica Papaya Leaf Juice (CPLJ) and Carica Papaya Leaf Juice (CPLJ) Freeze Dried Preparation (Co-investigator)	NIH, MOH (RM 230,000.00) NMRR-15-2188- 27661	2015-2017
9.	Efficacy Study Of <i>Carica papaya</i> Leaves Juice, Freeze-dried and Its Compounds to Dengue Virus Using Dengue Mouse Model AG129 (Pilot Study) (PI)	NIH, MOH (RM 193,200.00) NMRR-15-901- 26416	2015-2016
10.	Carica Papaya L.: Isolation and Characterization of Active Compounds from Leaves Extract for invivo and Gene Expression Study (Coinvestigator)	NIH,MOH (RM 350,000.00) NMRR-14-569- 21235	2014-2016
11.	Artemisinin resistant marker: The prevalence of C580Y mutation on K13-propeller protein of Plasmodium falciparum (PI)	DAP&E, SEAMEO- TROPMED (RM 5,000.00)	2014
12.	Projek "Genetic Diversity of <i>P. falciparum</i> and <i>P. vivax</i> in Sabah" (PI).	NIH, MOH (RM 308,000.00) NMRR-13-591- 15802	2013-2015
13.	In vitro antiplasmodial activity of selected Malaysian medicinal plant extracts (Coinvestigator).	DAP&E, SEAMEO- TROPMED (RM 5,000.00)	2013
14.	Anti malaria drug discovery: In vitro and In vivo Efficacy Evaluation For Chemotherapeutic and Prophylaxis On Selected Compounds or Extracts. (Co-investigator)	NIH, MOH (RM 250,400.00) NMRR-13-424- 16108	2013-2014
15.	Study of merozoite surface protein-1, merozoite surface protein-2 and glutamate rich protein polymorphic genes on <i>Plasmodium falciparum</i> isolates from Kota Marudu, Sabah (PI).	DAP&E, SEAMEO- TROPMED (RM 5,000.00)	2013
16.	Investigating Glideosome Associated Protein 45 Phosphorylation by Calcium Dependent Protein Kinase 1 During Plasmodium falciparum Schizont Development.	MOSTI, Medical Research Council (MRC UK) National Institute for Medical Research	2008-2012 (PhD)

17.	Malaria Study in Sabah (CO-PI)	NIH, MOH (RM 615,000.00) NMRR-08-701- 1856	2007-2009
18.	Goniothalamine: Effect on Erythrocyte Hemolysis and Parasite Invasion and Growth (Co-investigator).	DAP&E, SEAMEO- TROPMED (RM 5,000.00)	2007
19.	Study of Malaria Parasite Metabolism (phosphatidylcholine), and Its Possible Use As Drug Target (PI).	NIH, MOH (RM 170,000.00) NMRR-08-296- 1451	2007-2009
20.	Combination study of <i>Eurycoma longifolia</i> Standardized Extracts TA164 with chloroquine towards rodent malaria (PI).	DAP&E, SEAMEO- TROPMED (RM 5,000.00)	2006
21.	Plasmodium falciparum Malaysian Clone: Genotyping Using Restriction Fragment Length Polymorphism-PCR (PI).	NIH, MOH (76,000.00) NMRR-08-201- 1356	2006-2008
22.	Antimalarial Properties of Goniothalamin in Combination With Chloroquine Against Plasmodium yoelii and Plasmodium berghei Growth in Mice (PI).	DAP&E, SEAMEO- TROPMED (RM 5000.00)	2005
23.	Effect of <i>Eurycoma longifolia</i> standardized extract on the gluthathione (GSH) level of malarial infected erythrocyte: the role of redox metabolism in affecting the <i>Plasmodium</i> growth (PI).	IMR, MOH (RM 5,000.00)	2005-2006
24.	Cellular Cloning and genetic characterization of Malaria Parasite Present in a Naturally Occurring Mixed Population of <i>Plasmodium falciparum</i> (PI).	NIH, MOH (RM 9,900.00)	2005-2006

Consultation and supervisory development

No.	Name of students	<u>Projects</u>	Qualifications
1.	Mrs. Zhana Zh. Shapiyena (Kazakhstan)	Eurycoma longifolia standardized extracts: Effect on the erythrocyte invasion pathways.	Diploma in Applied Parasitology & Entomology, 2004
2.	Miss Ruenruetai Udomsom (Thailand)	Drug interaction: Interaction of Goniothalamine with Artemisinin and chloroquine against <i>P. berghei</i> and <i>P. yoelii</i> in ICR mice and to <i>P. falciparum in vitro</i> .	Diploma in Applied Parasitology & Entomology, 2005

3.	Mr. Adama Sow (Burkina Faso)	Combination study of <i>Eurycoma longifolia</i> Standardized Extracts TA164 with chloroquine towards rodent malaria.	Diploma in Applied Parasitology & Entomology, 2006
4.	Ms. Jo-Anne C.B (Philipines)	Goniothalamine: Effect on Erythrocyte Hemolysis and Parasite Invasion and Growth.	Diploma in Applied Parasitology & Entomology, 2007
5.	Ms. Zvifadzo Matsena (Nigeria)	In vitro antiplasmodial activity of selected Malaysian medicinal plant extracts.	Diploma in Applied Parasitology & Entomology, 2013
6.	Mr. Abass Abdul Karim (Ghana)	Study of merozoite surface protein-1, merozoite surface protein-2 and glutamate rich protein polymorphic genes on <i>Plasmodium falciparum</i> isolates from Kota Marudu, Sabah.	Diploma in Applied Parasitology & Entomology, 2013
7.	Mr. Gregario (Timor Leste)	Artemisinin resistant marker: The prevalence of C580Y mutation on K13-propeller protein of <i>Plasmodium falciparum</i>	Diploma in Applied Parasitology & Entomology, 2014

Lecturer for Diploma in Applied Parasitology:

- 1. "Biochemistry of Malaria Parasite"
- 2. "Malaria Parasite Invasion"
- 3. "Malaria Drug Resistance"
- 4. "DNA and RNA Extraction, Quantitative and Qualitative"
- 5. Antimalarial drug resistance and sensitivity testing
- 6. Gene expression
- 7. Introduction to molecular cloning

Fasilitator for lab technical development:

- 1. Training for molecular biology techniques:
 - (a) DNA recombinant technology,
 - (b) DNA and protein extraction processes,
 - (c) Protein purification,
 - (d) DNA and protein electrophoresis,
 - (e) Western blottin technique,
 - (f) Bacterial gene expression technique,
 - (g) Malaria parasite DNA transfection technique,
 - (h) Polymerase chain reaction (PCR) technique,
 - (i) DNA sequencing,
 - (j) Real-time PCR technique.
- 2. Basic technique for malarial parasite culture.

- 3. Training in malarial parasite infection in mouse model (P. berghei & P. yoelii).
- 4. Antimalarial and dengue anti-viral screening in vitro and in vivo.
- 5. Malaria parasite morphology microscopy technique and fluorescent imaging.
- 6. Training in dengue viral infection in mouse model.

Scientific publications

- Nor Azman, N.S., Hossan, M.S., Nissapatorn, V., Uthaipibull, C., Prommana, P., Jin, K.T., Mohammed, R., Mahboob, T., Raju, C.S., Jindal, H.M., Hazra, B., **Mohd Abd Razak, M.R.**, Prajapati, V.K., Pandey, R.K., Aminudin, N., Shaari, K., Ismail, N.H., Butler, M.S., Zarubaev, V.V., WiartC, C., Anti-infective activities of 11 plants species used in traditional medicine in Malaysia, Experimental Parasitology (2018), doi: https://doi.org/10.1016/j.exppara.2018.09.020.
- Nur Rahimah Fitrah Mohd Sofyan, Fariza Juliana Nordin, Mohd Ridzuan Mohd Abd Razak, Syahrina Nur 'Ain Abdul Halim, Nur Adila Fatin Mohd Khir, Amirrudin Muhammad, Nor Fadilah Rajab, and Rozie Sarip. New Silver Complexes with Mixed Thiazolidine and Phosphine Ligands as Highly Potent Antimalarial and Anticancer Agents. 2018. Journal of Chemistry. Article ID 8395374, 10 pages. DOI: 10.1155/2018/8395374.
- Judith L. Green, Richard J. Wall, Juha Vahokoski, Noor A. Yusuf, Mohd A. Mohd Ridzuan, Rebecca R. Stanway, Jessica Stock, Ellen Knuepfer, Declan Brady, Stephen R. Martin, Steven A. Howell, Isa P. Pires, Robert W. Moon, Justin E. Molloy, Inari Kursula, Rita Tewari and Anthony A. Holder. 2017. Compositional and expression analyses of the glideosome during the Plasmodium life cycle reveal an additional myosin light chain required for maximum motility. Journal of Biological Chemistry. http://www.jbc.org/cgi/doi/10.1074/jbc.M117.802769.
- 4. Norahmad, NA, Mohd Abd Razak MR, Abdullah NR, Sastu UR, Imwong M, Muniandy PK, Saat MNF, Muhammad A, Jelip J, Tikuson M, Yusif N, Rundi C, Mudin RN and Mohamed AFS. 2016. Prevalence of Plasmodium falciparum Molecular Markers of Antimalarial Drug Resistance in a Residual Malaria Focus Area in Sabah, Malaysia. PLoS ONE 11 (10):e0165515.
- Mohd Abd Razak MR, Sastu UR, Norahmad NA, Abdul-Karim A, Muhammad A, Muniandy PK, et al. Genetic Diversity of Plasmodium falciparum Populations in Malaria Declining Areas of Sabah, East Malaysia. PloS one. 2016;11(3):e0152415. Epub 2016/03/31. doi: 10.1371/journal.pone.0152415. PubMed PMID: 27023787; PubMed Central PMCID: PMC4811561.
- Mohd Abd Razak, M.R., Afzan, A., Ali, R., Jalaludin, N. F. A., Wasiman, M. I., Shiekh Zahari, S. H., Abdullah, N. R., and Ismail, Z. 2014. Effect of Selected Local Medicinal Plants On the Asexual Blood Stage of Chloroquine Resistant Plasmodium falciparum. BMC Complementary and Alternative Medicine 14: 492.
- 7. **Mohd Ridzuan Mohd Abd Razak**, Noor Rain Abdullah, Rohaya Chomel, Rosilawati Muhamad and Zakiah Ismail. 2014. Effect of Choline Kinase Inhibitor Hexadecyltrimethylammonium Bromide On *Plasmodium falciparum* Gene Expression. Southeast Asian Journal for Tropical Medicine and Public Health 45(2): 259-266.
- 8. Holder, A.A., **Ridzuan, M.A.M**. and Green, J.L. 2012. Calcium Dependent Protein Kinase 1 and Calcium Fluxes in the Malaria Parasite. *Microbes and Infection* 14: 825-830.

- 9. **Ridzuan, M.A.M.**, Moon, R.W., Knuepfer, E., Black, S. and Holder, A.A. 2012. Subcellular Location, Phosphorylation and Assembly into the Motor Complex of GAP45 during Plasmodium falciparum Schizont Development. *PLoS ONE* 7:e33845.
- 10. **Mohd Ridzuan, M.A.R.**, Sow, A., Noor Rain, A. and Zakiah, I. 2007. *Eurycoma longifolia* Extract-artemisinin Combination: Parasitemia Suppression of *Plasmodium yoelii-*infected Mice. *Tropical Biomedicine* 24: 111-118.
- 11. Noor Rain, A., Khozirah, S., **Mohd Ridzuan, M.A.R.**, Ong, B.K., Rohaya, C., Rosilawati, M., Hamdino, I., Badrul Amini and Zakiah, I. 2007. Antiplasmodial Properties of Some Malaysian Medicinal Plants. *Tropical Biomedicine* 24: 29-35.
- 12. **Mohd Ridzuan M.A.R.**, Ruenruetai, U., Noor Rain, A, Khozirah, S. and Zakiah, I. 2006. Antimalarial Properties of Goniothalamin in Combination with Chloroquine Against *Plasmodium yoelii* and *Plasmodium berghei* Growth in Mice. *Tropical Biomedicine* 23: 140-146.
- 13. **Mohd Ridzuan M.A.R.**, Noor Rain, A., Zhari, I. and Zakiah, I. 2005. Effect of *Eurycoma longifolia* Extract On The Glutathione Level in *Plasmodium falciparum* Infected Erythrocytes *in vitro*. *Tropical Biomedicine* 22: 155-163.
- 14. Hasidah MS, **Mohd Ridzuan MAR**, Mohammad Nazrul Fahmi AR, Halimah AS, & Rohani AK. 2002. *Plasmodium berghei* infection and tyrosine kinase signaling: The effect of refined red palm olein intake. *Malaysian Journal of Biochemistry and Molecular Biology* 7: 65-70.

Seminar and poster presentations

- Mohd Ridzuan Mohd Abd Razak, Nor Azrina Norahmad, Nur Hana Md Jelas, Amirrudin Muhammad, Umi Rubiah Sastu, Nor Azlan Mohmad Misnan, Murizal Zainol, Mohd Isa Wasiman, Hussin Muhammad, Ravindran Thayan, Ami Fazlin Syed Mohamed. Effect of Carica papaya Leaf Juice Treatment on the Expression Profile of Genes Related to Endothelial Biology in the Liver of AG129 Mice Infected with Dengue Virus. Presented at The International Conference on Natural Products 2018, 19-21 March 2018, Batu Ferringhi, Penang, Malaysia.
- Mohd Ridzuan Mohd Abd Razak. Malaria Experimental Genetic. Presented at CME/CPD presentation session. 23 November 2017. Dewan Ungku Omar, Institute for Medical Research, Kuala Lumpur.
- 3. Mohd Ridzuan Mohd Abd Razak, Nor Azrina Norahmad, Nur Hana Md Jelas, Amirrudin Muhammad, Tiffiny Ho Chau Dee, Bazilah Jusoh, Ravindran Thayan, Mohd Isa Wasiman, Murizal Zainol, Ami Fazlin Syed Mohamed. The Effect of Freeze-dried Carica papaya Leaves Juice On Viremia Level and Cytokine Production in Dengue Mouse Model. Presented at the 5th Biotechnology Symposium: Biotechnology for Sustainable Development to Meet Global Challenges. 15-16 November 2017 Kota Kinabalu, Sabah, Malaysia.
- Mohd Ridzuan Mohd Abd Razak. Preclinical Study Roadmap: Efficacy evaluation. Presented at National Pharmaceutical Regulatory Agency. 12 May 2017. Petaling Jaya, Selangor.
- Mohd Ridzuan Mohd Abd Razak and Murizal Zainol. Efficacy, preclinical and clinical study roadmap: ADME, pharmacokinetics and pharmacodynamics. Presented at NIH Research Week 2016 incorporating the 19th NIH Scientific Seminar: Transforming Health Systems Through Research: Towards Sustainability. Institute for Health Management, Kuala Lumpur. 21-23 November 2016.

- Mohd Ridzuan, M.A.R., Umi, R.S., Nor Azrina, N., Abass, A-K., Prem, K.M., Jenarun, J., Christina, R., Mallika I., Rose Nani M. and Noor Rain A. Genetic Diversity of *Plasmodium* falciparum Populations in Malaria Declining Areas of Sabah, East Malaysia. Presented at 52nd Annual Scientific Conference of The Malaysian Society of Parasitology and Tropical Medicine, Kuala Lumpur. 2-3 Mac 2016.
- 7. **Mohd Ridzuan Bin Mohd Abd Razak**. Genetic Diversity of *P. falciparum* in Malaria Declining Areas of Sabah. Presented at The Mahidol-Oxford Tropical Medicine Research Unit, Department of Molecular Tropical Medicine and Genetics, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand. 1-30 September 2015.
- 8. Rosnani Ali, Mohd Ridzuan Mohd Abd Razak, Noor Rain Abdullah, Adlin Afzan, Khairul Mirza Mohd, Mohd Isa Wasiman and Ami Fazlin Syed Mohamed. ANTIPLASMODIAL PROPERTIES AND BIOASSAY-GUIDED FRACTIONATION OF DICHLOROMETHANE EXTRACTS FROM BRUCEA JAVANICA ROOTS. Presented at 11th MOH-AMM Scientific Meeting (Incorporating The 18th NIH Scientific and Annual National Ethics Seminar), Institute for Health Management, Bangsar, Kuala Lumpur. 12-14 August 2015.
- 9. Umi Rubiah Sastu, Noor Rain Abdullah, Mohd Ridzuan Mohd Abd Razak, Nor Azrina Norahmad, Muhammad Nor Farhan Saat, Prem Kumar Muniandy, Jenarun Jelip, Moizin Tikuson, Norsalleh Yusof and Hasidah Mohd Sidek. Mutations of Pvdhfr and Pvdhps Genes in Vivax Endemic Malaria Areas In Kota Marudu and Kalabakan, Sabah. Presented at 11th MOH-AMM Scientific Meeting (Incorporating The 18th NIH Scientific and Annual National Ethics Seminar), Institute for Health Management, Bangsar, Kuala Lumpur. 12-14 August 2015.
- 10. Nor Azrina Norahmad, Umi Rubiah Sastu, Prem Kumar Muniandy, Mohd Farhan Saat, Mohd Ridzuan Mohd Abd Razak and Noor Rain Abdullah. Prevalence of Plasmodium falciparum Genetic Polymorphisns in Pfcrt, Pfdhps and Pfdhfr in Kota Marudu, Sabah. Presented at 11th MOH-AMM Scientific Meeting (Incorporating The 18th NIH Scientific and Annual National Ethics Seminar), Institute for Health Management, Bangsar, Kuala Lumpur. 12-14 August 2015.
- 11. **Mohd Ridzuan Bin Mohd Abd Razak.** Malaria: Current Situation in Malaysia. Presented at ASEAN-INDIA Malaria Workshop, National Institute for Malaria Research, New Delhi, India. 10-15 May 2015.
- 12. **Mohd Abd Razak, M.R.**, Abdullah, N.R., Chomel, R., Muhamad, R. and Ismail, Z. The antimalarial activity of choline kinase inhibitors and its indirect effect on Plasmodium falciparum gene expression. Presented at 51st Annual Scientific Conference of The Malaysian Society of Parasitology and Tropical Medicine, Kuala Lumpur. 3-4 Mac 2015.
- 13. **Mohd Ridzuan Bin Mohd Abd Razak.** Investigating GAP45 Phosphorylation During *Plasmodium falciparum* Schizont Development. Presented at National Institute of Health Meeting (NIH-KKM), Kuala Lumpur. 22 October 2012.
- 14. Christine S. Hopp, Christine R. Collins, Judith L. Green, Ridzuan Razak, Anais Merckx, Gordon Lansley, Anthony A. Holder, Michael J. Blackman & David A. Baker. Functional analysis of the *Plasmodium falciparum* cGMP-dependent protein kinase. Presented at EVIMALAR meeting, Heidelberg. Germany. 3-5 Mei 2010.
- 15. **Mohd Ridzuan Mohd Abd Razak**. Investigating Gliding Associated Protein 45 phosphorylation in *P. falciparum* merozoite invasion. Presented at National Institute for Medical Research Divisional Seminar, London, United Kingdom. 27 April 2010.
- 16. **Mohd Ridzuan Mohd Abd Razak**. The Role of Gliding associated protein 45 phosphorylation by Calcium dependent protein kinase 1 in *P. falciparum* merozoite invasion. Presented at National Institute for Medical Research Student's Talk, London, United Kingdom. 11 May 2009.

- 17. **Mohd Ridzuan, M.A.R.**, Sow, A., Noor Rain, A., Mohd Ilham, A. & Zakiah, I. *Eurycoma longifolia* extract-artemisinin combination: parasitemia suppression of *Plasmodium yoelii*-infected mice. Presented at 6th International Traditional & Complementary Medicine Conference and 3rd International Congress On Traditional Medicine & Materia Medica. 17th 20th July 2007.
- Mohd Ridzuan Mohd Abdul Razak, Noor Rain Abdullah & Zakiah Ismail. Cloning of The Malaysia *Plasmodium falciparum* Isolate and Genetic Characterization By Mutation Specific Polymerase Chain Reaction. Presented at 7th National Congress On Genetics. 5th – 7th May 2007.
- 19. Mohd Ridzuan Bin Mohd Abd Razak & Noor Rain Abdullah. Advanced Research and Development on Tongkat Ali Leading Towards Product Discovery: Pharmacology Study to Analysed and Validate Anti-malaria Properties of Tongkat Ali. Presented at MMBPP workshop – Sub Program Natural Product Discovery. 18-21st February 2006.
- 20. **Mohd Ridzuan MAR**, Zhari I, Noor Rain A, Mohd Jamadil AZ, Hamdino I, Zakiah I. 2004. Effect of *Eurycoma longifolia* Standardized Extract on *Plasmodium falciparum* intraerythrocytic cycle. Presented at 20th Annual Seminar of the Malaysian Natural Products Society. 29-30th November 2004.
- 21. Noor Rain Abdullah, Zakiah Ismail, Zhari Ismail, Mohd Ridzuan Mohd Abdul Razak, Khairuddin Husin, Zul Azahari Ma'amon, Zuriati Zahari, Cheah Yew Hoong, Mohd Jamadil Abdul Aziz & Hamdino Ismail. General Toxicology Studies of Orthosiphon Staminues (Misai Kuching) in Spraque Dawley Rat and Macaca fascicularis. Presented at 20th Annual Seminar of the Malaysian Natural Products Society. 29-30th November 2004.
- 22. Lailatul Jumaiyah Saleh Huddin, Noor Rain Abdullah, Zhari Ismail, Adlin Afzan, Cheah Yew Hoong, Mohd Ridzuan Mohd Abd Razak, Sawibah Y, Mohd. Jamadil Abdul Aziz, Hamdino Ismail & Zakiah Ismail. A Preliminary Investigation of The Hepatoprotective Activity of Standardized Extract of Misai Kuching (*Orthosipon stamineus*) Compounds. Presented at 29th Annual Conference of the Malaysian Society for Biochemistry and Molecular Biology. 28-29th September 2004.
- 23. Hasidah MS, **Mohd Ridzuan MAR**, Rohani AK. 2004. Erythrocyte membrane protein tyrosine phosphatase activity in *Plasmodium berghei* infected mice. Presented at 29th Annual Conference of the Malaysian Society for Biochemistry and Molecular Biology. 28-29th September 2004.
- 24. **Mohd Ridzuan MAR**, Rohani AK, Hasidah MS. 2003. Tyrosine phosphorylation-dephosphorylation in *Plasmodium berghei* infection. Presented at 28th Annual Conference of the Malaysian Society for Biochemistry and Molecular Biology. 12th August 2003.
- 25. **Mohd Ridzuan MAR**, Lau HC, Hasidah MS, Rohani AK. 2002. *Plasmodium berghei* infection at 20% parasitaemia affects hepatic phosphotyrosine-containing proteins. Presented at 27th Annual Conference of the Malaysian Society for Biochemistry and Molecular Biology. 7th October 2002.
- 26. Mohd Ridzuan MAR, Hasidah MS, Halimah AS, Rohani AK. 2001. Plasmodium berghei infection and mice erythrocyte membrane phosphotyrosine-containing proteins. Presented at 26th Annual Conference of the Malaysian Society for Biochemistry and Molecular Biology. 2-3rd October 2001.

Institutional contributions

1. Committee member of MTCP-INTROM, IMR Technical Workshop 2018 'Laboratory Identification and Detection of ZIKA Virus From Human and Mosquito Vectors' 18-28

September 2018.

- 2. Quality assurance officer for Non-Clinical Research Facility (NCRF) GLP. Institute for Medical Research, Ministry of Health.
- 3. Committee member of INTROM-MTCP-COMSTECH, IMR INTROM Workshop 2016: MTCP INTROM IMR Workshop On Tropical Medicine: Epidemiology and Diagnosis of Middle East Respiratory Syndrome Coronavirus (MERS-COV) 5-14 Oktober 2016.
- 4. Internal Auditor for MS ISO 9001 Institute for Medical Research, Ministry of Health (2 Oktober 2015-31 Disember 2017).
- 5. Unit Training Officer, Institute for Medical Research(2 Mac 2015-2 Mac 2017)
- 6. Committee member of INTROM-MTCP-COMSTECH, IMR INTROM 2014 IMR Workshop: MTCP INTROM IMR Workshop On Tropical Medicine: Epidemiology and Detection of Dengue Virus In The Vectors and Human 4-18 Ogos 2014.
- 7. Lecturer and Tutor for Diploma in Applied Parasitology and Entomology Program (DAP&E), SEAMEO-TROPMED, Institute for Medical Research, Ministry of Health.
- 8. Coordinator for Advance Technology Centre (ATC), Institute for Medical Research, Ministry of Health.
- 9. Fasilitator for International Workshop IDB-COMSTECH-INTROM-IMR on Hybridoma Technology in Tropical Diseases (27-31 Mac 2006).

Other contributions				
<u>No</u>	<u>Activities</u>	Roles		
1.	Malaysian Society of Parasitology And Tropical Medicine	Member		
2.	Alumni UCL, London, United Kingdom	Member		
3.	Persatuan Penduduk D'Sentral Bandar Seri Putra	Member		
4.	International Journal of Molecular Sciences	'Reviewer' (14 Mac 2013)		
5.	Malaysia Applied Biology Journal	'Reviewer' (8 Oktober 2013)		
6.	Journal of Tropical Biomedicine	'Reviewer' (8 September 2014)		
7.	Journal of Tropical Biomedicine	'Reviewer' (3 Disember 2014)		
8.	Journal of Tropical Biomedicine	'Reviewer' (20 April 2016)		
9.	PLoS One	'Reviewer' (12 November 2016)		
Training				
No.	Courses	Training priods		

1. Short term:

Malaria Experimental Genetic. Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand.

1-30 September 2015 Tajaan: LDP, KKM

2. Long term:

Investigating GAP45 localisation and phosphorylation during *Plasmodium falciparum* schizont development. *National Institute for Medical Research, London, United Kingdom. PhD in Structural and Molecular Biology, University College London, London, United Kingdom.*

22 September 2008 - 21 September 2012 Tajaan: MOSTI

3. Short term:

Effect of drug on the gene regulation and protein expression in malaria infection. *National Institute for Medical Research, London, United Kingdom.*

6 Julai – 5 September 2006 Tajaan: LDP, KKM

References:

1. Dr. Murizal Zainol

Head of Bioassay Unit, Herbal Medicine Research Center, Institute for Medical Research Jalan Pahang, 50588 Kuala Lumpur, Malaysia.

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3. Dato' Dr. Fadzilah Kamaludin Director, Institute for Medical Research.

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