



Email:
kokgan@um.edu.my

Te1: +603-79675162 (Off), +603-79674508 (lab)
Fax: +603-79674509, h/p: 016-2868066

Address:

ISB (Genetics & Molecular Biology), Faculty of Science, University of Malaya,
50603 Kuala Lumpur, Malaysia.

Name/Title:

Dr Kok Gan Chan

Age: 39

Current affiliation:

1. Senior lecturer at the Institute of Biological Sciences (Genetics & Molecular Biology), Faculty of Science, University of Malaya, 50603 Kuala Lumpur.

Current research interests:

- Bacterial cell-to-cell communication (quorum sensing)
- Inhibition of bacterial cell-to-cell communication (quorum quenching)
- Legal issues concerning genetic engineering, bioethics, biosafety and intellectual property laws
- Microbial whole genome sequencing and integrative genome analysis, metagenome

Education	
Year	Qualifications
2006	PhD (Nottingham, Mal)
2002 (Obtained double Master degrees simultaneously)	<ol style="list-style-type: none"> 1. M.Sc – Master of Science (Mal) –Microbiology 2. LL.M (Merit) – Master of Laws (Staffordshire) (International Business law with Merit, specialise in Biotech Patent)
1996-1997 (Obtained double Bachelor degrees simultaneously)	<ol style="list-style-type: none"> 1. B.Sc (Hons) – Bachelor of Science (Mal) 2. LL.B (Hons) – Bachelor of Laws (Wolverhampton)

Scholarships	
PhD	(1) Commonwealth Split-site PhD Scholarship (2004-2005), Commonwealth Commission, London. (2) PhD PASCA Scholarship (2002-2006), University of Malaya
M.Sc	PASCA Scholarship (1999-2002) , University of Malaya
B.Sc	JPA Scholarship (1996-1997), Public Service Department, Malaysia
International Awards / research grants	
Toray Research Grant	Malaysia Toray Science Foundation (Japan) (2007-2009)
French Government Fellowship	French Embassy of Malaysia (France) (2008-2010)
Japan Society for the Promotion of Science (JSPS)	JSPS Young Scientist and Malaysia sole representative to international seminar: “ <i>Asia-Pacific Networks-promoting excellence in research</i> ” Nature Publishing Group. (2007) (Tokyo, Japan)
UK Prime Minister’s Initiative 2 (PMI2)	UK Prime Minister Office (2008-2010)
International Union of Biochemistry and Molecular Biology (IUBMB)	IUBMB Young Scientist Program 2009 Award winner (Shanghai, 2009).
Bio Asia 2009	Travel Fellowship to National Taiwan Ocean University (2009)
International/National Expert Committee	<i>Ad Hoc Technical Expert Group (AHTEG)</i> on Risk Assessment and Risk Management, Expert Advisor, 2009-2010, Convention on Biological Diversity, United Nations Environment Programme. Dr Chan Kok Gan is the only Malaysian scientist selected for <i>AHTEG</i> . Advisory Committee Member, Advisor on Biosafety Act 2007 (Malaysia). 2008-present. Ministry of Natural Resources and Environment.
Research Grants	

Vot F Grant (Total of 15)	Sponsored Research Unit, University of Malaya (2000-2003, 2007-2008, 2008-2010)
Research University Grant (total of 3)	University of Malaya (2007-2012)

Publications/Professional Activities

1. **Kok-Gan Chan**, Steve Atkinson, Kalai Mathee, Choon-Kook Sam, Siri Ram Chhabra, Miguel Camara, Chong-Lek Koh, and Paul Williams. 2011. Characterization of *N*-Acylhomoserine Lactone-Degrading Bacteria Associated with the *Zingiber officinale* (ginger) rhizosphere: Co-existence of Quorum Quenching and Quorum Sensing in *Acinetobacter* and *Burkholderia*. *BMC Microbiology*. 11:51 doi:10.1186/1471-2180-11-51
2. Yee Meng Chong, Wai Fong Yin, Chia Yong Ho, Mohamad Rais Mustafa, A. Hamid A. Hadi, Khalijah Awang, Putri Narrima, Chong-Lek Koh, David R. Appleton, and **Kok-Gan Chan**. Malabaricone C from *Myristica cinnamomea* Exhibits Anti Quorum Sensing Activity. *Journal of Natural Products*. 2011, 74 (10), 2261–2264. DOI: 10.1021/np100872k
3. Yue-Jun Fu, Na An, **Kok-Gan Chan**, Yan-Bo Wu, Shu-Hua Zheng, Ai-Hua Liang. 2011. A model of BmK CT in inhibiting glioma cell migration via matrix metalloproteinase-2 from experimental and molecular dynamics simulation study. *Biotechnology Letters*. 33 (7) 1309-1317. 2011 DOI: DOI 10.1007/s10529-011-0587-7
4. Cheng-Siang Wong, Wai-Fong Yin, Yeun-Mun Choo, Choon- Kook Sam, Chong-Lek Koh and **Kok-Gan Chan**. Coexistence of quorum quenching and quorum sensing in tropical marine *Pseudomonas aeruginosa* strain MW3A. *World Journal of Microbiology and Biotechnology (ISI/SCOPUS Cited Publication)*. DOI: 10.1007/s11274-011-0836-x
5. Cheng-Siang Wong, Wai-Fong Yin, Choon-Kook Sam, Chong- Lek Koh, **Kok-Gan Chan**. Characterisation of Malaysian wetland quorum quenching *Pseudomonas aeruginosa* strain 2SW8 and its 2-heptyl-3-hydroxy-4-quinolone production. *New Microbiologica. (ISI/SCOPUS Cited Publication)*
6. Norzulaani Khalid, Rofina Yasmin Othman and **Kok-Gan Chan**. “Malaysia Biosafety Act 2007 and Cartagena Protocol: The Final Saga?”. 2010. (Submitted for publication in SSCI & SCOPUS-indexed journal).
7. Kathiravan Purmal, Shenyang Chin, John Pinto, Wai-Fong Yin, and **Kok-Gan Chan**. “Microbial Contamination of Orthodontic Buccal Tubes from Manufacturers”. 2010. *International Journal of Molecular Sciences. (ISI & SCOPUS-indexed publication)*. 2010, 11(9), 3349–3356. DOI:10.3390/ijms11093349

8. **Kok-Gan Chan**, Savuthri D. Puthucheary, Xin-Yue Chan, Wai-Fong Yin, Cheng-Siang Wong, Kek-Heng Chua. "Quorum Sensing in *Aeromonas* Species Isolated from Patients in Malaysia". 2010. *Current Microbiology*. DOI 10.1007/s00284-010-9689-z (ISI & SCOPUS-indexed publication)
9. **Kok-Gan Chan**, Cheng-Siang Wong, Wai-Fong Yin, Choon-Kook Sam and Chong-Lek Koh. "Rapid degradation of *N*-3-oxo-acylhomoserine lactones by a *Bacillus cereus* Isolate from Malaysian Rainforest Soil". 2010. *Antonie van Leeuwenhoek*. 98: 299-305. DOI 10.1007/s10482-010-9438-0 (ISI & SCOPUS-indexed publication)
10. **Kok-Gan Chan**, Cheng-Siang Wong, Zi-Bin Low Joel, Wai-Fong Yin, Choon-Kook Sam and Chong-Lek Koh. "Degradation of *N*-acylhomoserine Lactone by *Enterobacter* sp. sw39 Isolated from Sewage". 2010. *Asia Pac. J. Mol. Biol. Biotech.* (Accepted for publication) (SCOPUS-indexed publication)
11. Kathiravan Purmal, Shenyang Chin, Xin-Yue Chan, Chong-Lek Koh, Choon-Kook Sam, Wai-Fong Yin, and **Kok-Gan Chan**. "*N*-acylhomoserine Lactones Production By Human Oral Bacteria". 2010. *Acta Odontologica Scandinavica*. 2010. (Submitted for publication) (ISI & SCOPUS-indexed publication)
12. **Kok-Gan Chan**, Wai-Fong Yin, Choon-Kook Sam, Chong-Lek Koh. "A novel medium for the isolation of *N*-acylhomoserine lactone-degrading bacteria" *Journal of Industrial Microbiology and Biotechnology*. 2009. 36: 247. DOI: 10.1007/s10295-008-0491-x (ISI & SCOPUS-indexed publication)
13. **Kok-Gan Chan**. "Exochelin Production in *Mycobacterium neoaurum*" *International Journal of Molecular Sciences* 2009, 10, 345-353; DOI:10.3390/ijms10010345 (ISI & SCOPUS-indexed publication)
14. **Kok-Gan Chan**, Siew-Zhen Tiew and Ching-Ching Ng "Rapid Isolation Method of Soil Bacilli and Screening of Their Quorum Quenching Activity". *Asia Pacific Journal of Molecular Biology and Biotechnology*. 2007. 15(3): 153-156 (SCOPUS-indexed publication)

Plenary Speaker/Oral Presentation:

1. *Biosafety Act 2007: Act on Biosafety*. National Science Officer Conference, 03 Apr 2010 to 05 Apr 2010, USM Medical School (National)

2. *Patent for Biomedical Research*. Research Enrichment Seminar. 05 Oct 2009, USM Medical School (National)

Poster/Invited Oral Presentation:

1. Asia Regional Workshop on the Cartagena Protocol On Biosafety. 7-8 Sept 2010. Vietnam Environment Administration, Hanoi, Vietnam, (International)
2. Quorum Sensing And Quorum Quenching Abilities Of Some Antarctic Bacteria, The 4th Malaysian International Seminar on Antarctica, 01 Apr 2009 to 04 Apr 2009, University of Malaya, Malaysian Antarctic Research Program and Academy of Sciences Malaysia, (International)
3. Discovery of novel quorum quenching bacteria that disrupt quorum sensing molecules, 21st IUBMB and 12th FAOBMB International Congress on Biochemistry and Molecular Biology, 02 Aug 2009 to 07 Aug 2009, International Union of Biochemistry and Molecular Biology, Chinese Academy of Sciences, Federation of Asia and Oceanic Biochemistry and Molecular Biology, (International)
4. Functional Optical Imaging, Functional Optical Imaging, 02 Jul 2009 to 03 Jul 2009, Institute of Biophysics, Imaging and Optical Science (IBIOS), University of Nottingham, UK., (International)
5. Degradation of *N*-Acyl-Homoserine Lactone Quorum-Sensing Molecule by Bacteria Isolated from Soy Sauce Brine Fermentation., Second International Conference and Workshops on Basic and Applied Sciences and Regional Annual Fundamental Science Seminar 2009 (ICORAFSS 2009), 02 Jun 2009 to 04 Jun 2009, UTM, (International)
6. Biodiversity and Ecology of Blackwater Fish Communities in Peninsular Malaysia, Second International Conference and Workshops on Basic and Applied Sciences and Regional Annual Fundamental Science Seminar 2009 (ICORAFSS 2009), 02 Jun 2009 to 04 Jun 2009, UTM, (International)
7. Enzymatic Degradation of Quorum Sensing Signal Molecules by *Bacillus* sp. Enriched from Malaysian Rain-Forest Soil using Novel Selection KG Medium, Second International Conference and Workshops on Basic and Applied Sciences and Regional Annual Fundamental Science Seminar 2009 (ICORAFSS 2009), 03 Jun 2009 to 04 Jun 2009, Universiti Teknologi Malaysia
8. PMI Sustainable Research Networks Workshop, PMI Sustainable Research Networks Workshop, 03 Mar 2009 to 05 Mar 2009, British Council
9. Genetic Modification Advisory Committee (GMAC) Workshop, Genetic Modification Advisory Committee (GMAC) Workshop, 04 Nov 2009 to 06 Nov 2009, Kementerian Sumber Asli dan Alam Sekitar, (National)
10. Biosafety Act 2007, Research Enrichment Seminar, 05 Oct 2009 to 05 Oct 2009, USM Medical School, (National)
11. Patent for biomedical research, Research Enrichment Seminar, 05 Oct 2009 to 05 Oct 2009, USM Medical School, (National)
12. Asia-Pacific Networks-promoting excellence in research, Nature Publishing Group: Asia-Pacific Networks-promoting excellence in research, 06 Jun 2006 to 06 Jun 2006, Nature Publishing Group, (International)

13. Isolation of soil and fresh water bacteria exhibiting quorum sensing activity and characterisation of their *N*-acylhomoserine lactone molecules, 14th National Biotechnology Seminar, 11 Dec 2003 to 13 Dec 2003, USM, (National)
14. Risk Assessment Workshops on Transgenic Crops Plants, Risk Assessment Workshops on Transgenic Crops Plants, 11 Mar 2009 to 13 Mar 2009, NRE, UNDP, GEF, UM, CEBAR
15. Balancing Rights Between Users and Owners, The Future of Intellectual Property in ASEAN, 13 Jan 2009 to 14 Jan 2009, University of Malaya & ASEAN University Network, (University)
16. Molecular Enhancement of the Biosynthesis of Bacterial Medium-Chain-Length Polyhydroxyalkanoates (PHA), 13th Biological Sciences Graduate Congress, 15 Dec 2008 to 17 Dec 2008, National University of Singapore, (International)
17. Meeting the Challenges, Seminar on Bioethics, 15 Mar 2007 to 16 Mar 2007, Centre for Civilisation Dialogue, Faculty of Medicine, CEBAR, (National)
18. Quorum Quenching: Enzymatic Disruption of Quorum Sensing Signalling Molecules by Novel Rainforest Soil Bacteria, 30th Symposium Malaysian Society For Microbiology, 16 Aug 2008 to 19 Aug 2008, Malaysian Society For Microbiology, (National)
19. Degradation of *N*-acyl-homoserine lactone quorum-sensing molecules by yeast, 30th Symposium Malaysian Society For Microbiology, 16 Aug 2008 to 19 Aug 2008, Malaysia Society for Microbiology, (National)
20. Molecular studies on quorum quenching system in soil bacteria, MTSF Grant Research Symposium, 16 Dec 2009 to 16 Dec 2009, Malaysia Toray Science Foundation, (National)
21. Isolation and Molecular Characterization of Quorum Quenching Soil Bacteria In Riquewih, 18th Scientific Meeting of Malaysian Society for Molecular Biology and Biotechnology (MSMBB) and the 20th Anniversary Celebration of MSMBB, 18 Aug 2009 to 20 Aug 2009, The Malaysian Society for Molecular Biology and Biotechnology (MSMBB) and The Biotechnology and Bioproduct Cluster of Universiti Malaya, (National)
22. Take the words out of my mouth: Gram negative bacterial communication on our tongues, 18th Scientific Meeting of Malaysian Society for Molecular Biology and Biotechnology (MSMBB) and the 20th Anniversary Celebration of MSMBB, 18 Aug 2009 to 20 Aug 2009, The Malaysian Society for Molecular Biology and Biotechnology (MSMBB) and The Biotechnology and Bioproduct Cluster of Universiti Malaya, (National)
23. Capacity Building Workshop and NPI Interim Report, CAS-IP National Partners Initiative, 18 Feb 2008 to 22 Feb 2008, MARDI, (International)
24. Discovery of Novel Quorum Quenching Bacteria from Various Habitats in Malaysia, UK-Malaysia Symposium on Current Strategies in Antimicrobial Therapies 2009, 18 Mar 2009 to 19 Mar 2009, University of Malaya, British High Commission Malaysia, (International)
25. Metagenomics: Mining Novel Genes., 24th World Congress of Pathology and laboratory Medicine. 20 Aug 2007 to 24 Aug 0007, World Association of Societies of Pathology and Laboratory Medicine. College of Pathologists, Academy of Medicine of Malaysia., (International)
26. Making International Research Partnerships Work: I have a dream, too, Fifth

- QS Asia Pacific Professional Leaders in Education, 24 Nov 2009 to 26 Nov 2009, QS Asia Quacquarelli Symonds, (International)
27. The 2nd Regional Conference in the framework of the Bio-Asia Scheme, The 2nd Regional Conference in the framework of the Bio-Asia Scheme, 25 Nov 2009 to 28 Dec 2009, French Institute in Taipei and the French Regional Delegation for Cooperation in South-East Asia, (International)
28. Assessment Of Quorum Sensing And Quorum Quenching In Some Antarctic Bacteria, Xth SCAR International Biology Symposium: Antarctic Biology in the 21st Century --Advances in and beyond IPY, 26 Jul 2009 to 31 Jul 2009, ICSU/SCAR and WMO, (International)
29. NRE/UNDP/GEF Capacity Building Project for Implementation of Malaysia National Biosafety Framework & Forum Akta Biokeselamatan Malaysia 2007, Majlis Perlancaran Projek, 31 Jan 2008 to 31 Jan 2008, Kementerian Sumber Asli dan Alam Sekitar, Malaysia, (National)

Biodata summary

Dr Chan obtained double degrees in Microbiology and laws simultaneously in 1996/97 (B.Sc (Hons) & LL.B (Hons)). His B.Sc (Hons) was sponsored by JPA Scholarship. In 2002, again, he obtained his double master degrees in Microbiology and Laws (M.Sc (Hons) & LL.M (Merit)) simultaneously. His M.Sc was sponsored by Postgraduate Scholarship from University of Malaya. In his LLM studies, Dr Chan specialised on intellectual property law, particularly biotech patent. Dr Chan obtained his Chartered Biologist membership in 2003.

In 2004, Dr Chan was awarded Commonwealth Split-site PhD Scholarship to do his PhD on bacterial cell-to-cell communication (quorum sensing) in the University of Nottingham. His PhD work was under the co-supervision Prof Koh and Prof Sam (both from UM) and Prof Paul Williams (Nottingham University), who is the world-class pioneer on quorum sensing.

Dr Chan has been appointed as a lecturer at the Institute of Biological Sciences (UM) in 2007, soon he was promoted to senior lecturer in 2007 till now. In June 2007, i.e. 5-month after his lectureship, Dr Chan has been selected and sponsored by JSPS (Japan Society for the Promotion of Science) as the only *JSPS Young Scientist* representing Malaysia to attend an international conference in Tokyo to create research network In Asia-Pacific rim. This conference was organised by the prestigious journal *Nature* publisher, *The Nature Publishing Group*. At the same time in 2007, he has published an international, peer-reviewed paper on quorum quenching, followed by another international paper on the design of novel quorum quenching bacteria selection medium in 2008. Early of 2009, Dr Chan has published

another paper on iron transport in mycobacterium. All of his papers are published in international peer-reviewed, ISI-listed journals.

In 2007, Dr Chan has been invited to be a speaker in an international congress jointly organised by College of Pathologists, Academy of Medicine of Malaysia and World Association of Societies of Pathology and Laboratory Medicine where he talked on the topic: “*Metagenomics: Mining Novel Genes*”.

In 2008, Dr Chan was invited to deliver a lecture in a national conference on the topic called “*Quorum Quenching: Enzymatic Disruption of Quorum Sensing Signalling Molecules by Novel Rainforest Soil Bacteria*”.

In 2008, Dr Chan has been awarded three international funding viz. MTSF (Toray, Japan), UK Prime Minister’s Initiative 2 (2008-2010, for his research in UK), and French Government Fellowship (*Boursier du gouvernement français*, 2008-2009) for his research in Paris. Currently, Dr Chan and his dynamic research team is investigating bacterial quorum sensing and quorum quenching in various environmental bacteria.

Dr Chan is also active in administration where he has acted as organising committee for one international conference on Biosafety in Malaysia (2006) and two national conferences on Biosafety and Biotech Patenting (2006-2008). He also serves as advisory panel on Biosafety Act 2007 in Malaysia (2008) for the Ministry of Natural Resources and Environment. Currently (2011-2012), Dr Chan is the Committee member for the Institutional Biosafety Committee (IBC) at the University of Malaya where IBC is the statutory committee required for each organisation involving in genetic modification research.

Recently in 2009 till now, Dr Chan’s expertise has been duly recognised by the secretariat of Convention on Biological Diversity and has been selected as the *only academician* from Malaysia to participate as Ad Hoc Technical Expert Group (AHTEG) on Risk Assessment and Risk Management, where the first international meeting was held in Montreal (Canada). His role as AHTEG is to develop roadmap and guiding documents for member states (including Malaysia) of Convention on Biological Diversity which are obliged to follow.