CURRICULUM VITAE

Dr. Putthapoom Lumjiaktase

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Education

Postdoctoral fellowships (Molecular Microbiology) 2006-2011
University of Zurich Switzerland

Ph.D.(Clinical Pathology), Mahidol University, 2006
Department of Clinical Immunology and Microscopy
Faculty of Medicine Ramathibodi Hospital
Mahidol University, Bangkok, Thailand

M.Sc. (Clinical Pathology), Mahidol University, 2002
Department of Clinical Immunology and Microscopy
Faculty of Medicine Ramathibodi Hospital
Mahidol University, Bangkok, Thailand

B.Sc. (Medical Technology), Mahidol University, 1999
Department of Microbiology and Immunology
Faculty of Medical Technology
Mahidol University, Bangkok, Thailand
B.Sc.Senior project: ELISA for the detection of anti LPS-I, II to Burkholderia pseudomalleifrom healthy persons in non-endemic area.

Awards

2003-2006: The Royal Golden Jubilee Ph.D. Program, from Thailand Research Fund

Main Research interests

- Microbial communication Research (all fields' e.g. medical science, ecology, immunology, biotechnology and industry).
- Biofilm development: to understanding the genetics, biochemistry and physiology of bacteria in natural, medical and industrial environments.
- Medical microbial pathogen: to studies mechanism of pathogens and responding of human in molecular and cellular immunology.

Training

The University of Nottingham – Nottingham, UK
Development of the experimental work of my Ph.D. thesis, working on the molecular biology of microorganisms techniques and quorum sensing.
June 2004 – June 2005.

Technical Skills

I have been involved in diverse topics as Immunology, Clinical pathology, Molecular microbiology, and ecology.

Particularly, I have gained experience in the following topics:

- Construction and identification of mutagenesis of many genes in Burkholderia and Pseudomonas
- Development of Biofilm Structure in the flow-chamber by CLSM (Confocal laser scanning microscopy)
- Introduction of plasmids in microbial biofilm communities by on-line monitoring of plasmid or gene transfer techniques.
- Techniques of fluorescent tagging of bacterial strain
- Study techniques of biosurfactant of microbial production (e.g. drop-collapsing, surface tension assay)
- Working experience with several molecular biology techniques
- Diagnosis testing of diseases in the field of immunology, microbiology and hematology
- Screening and identification of genes, operons, and regulatory regions in prokaryotes and good knowledge skill for bioinformatics.

Scientific Presentation

- **Oral presentation**

  Detection of long chain autoinducer of bacteria quorum sensing by Chromobacterium violaceum cross-streaking method.
  Lumjiaktase P. and Kunakorn M.
  The conference Ramathibodi Beyond 2000, Thailand. 2 May 2000.

  The construction of self-transferable GFP-based AHL biosensors for on-line monitoring in flow-cell chamber biofilm.
  Lumjiaktase P. and Eberl L.
  The COMIX meeting: Theoretical Microbial Ecology Workshop, Vienna, Austria. February 2008.

- **Poster contribution to meetings**

  Identification of a quorum sensing genes and an autoinducer molecules in Burkholdeia pseudomallei.
  Lumjiaktase P., Tungpradabkul S. and Kunakorn M.
  The RGJ-Ph.D. Congress IV, Thailand 25-27 April 2003.

  Regulation of dpsA gene and N-acyl L-homoserine lactone production by BpsR in Burkholderia pseudomallei.
  Lumjiaktase P., Loprasert S., Tungpradabkul S., Kunakorn M.
  The 2nd ASM Conference on Cell-Cell Communication in Bacteria Buff, Alberta, Canada on 23-27 July 2004

  Interspecies quinolone signalling: 2-hydroxy-4-heptylquinolone (HHQ) production in Burkholderia pseudomallei.
  Diggle SP, **Lumjiaktase P**, Williams P, Cámara, M.
  Pseudomonas 2005, Marseille, France. 27-31 August 2005

  Quorum sensing controls oxidative stress response and regulates DpsA in Burkholderia pseudomallei.
  Lumjiaktase P., Diggle SP., Loprasert S., Tungpradabkul S., Kunakorn M.
  The TRF Senior Research Scholar, Thailand on 13-15 October 2005

  Engineering of self-tranmissible biosensor plasmids for the detection of N-acyl homoserine-producing bacteria in lake sediment
  Lumjiaktase P., Aguilar C., Battin T., Riedel K, Eberl L.
  Swiss society for microbiology, ETH Zurich, Switzerland, 24-25 June 2010.

PUBLICATIONS

1. Schwager S, Lumjiaktase P, Stöckli M, Weisskopf L, Eberl L.The genetic basis of cadmium resistance of Burkholderia cenocepacia.Environ Microbiol Rep. 2012 Oct;4(5):562-8. doi: 10.1111/j.1758-2229.2012.00372.x. Epub 2012 Aug 19.
2. Juhas M, Stark M, von Mering C, **Lumjiaktase P**, Crook DW, Valvano MA, Eberl L.High confidence prediction of essential genes in burkholderia cenocepacia.PLoS One. 2012;7(6):e40064. Epub 2012 Jun 29.
3. **Stephen P. Diggle*and Putthapoom Lumjiaktase*,** Francesca Dipilato, Mongkol Kunakorn, Miguel Cåmara and Paul Williams. (2006) Functional Genetic Analysis Reveals a 2-Alkyl-4-Quinolone Signaling System in the human pathogen Burkholderia pseudomallei and related bacteria. Chem. Biol. 13(7):701-710. * Both authors contributed equally to this work.
4. **Putthapoom Lumjiaktase**, Stephen P. Diggle, Suvit Loprasert, Sumalee Tungpradabkul, Mavis Daykin, Miguel Cåmara, Paul Williams and Mongkol Kunakorn. (2006) Quorum sensing regulates dpsA and the oxidative stress response in Burkholderia pseudomallei. Microbiology 152:3651-3659.
5. **Putthapoom Lumjiaktase**, Claudio Aguilar, Tom Battin, Kathrin Riedel, and Leo Eberl. (2010) Construction of self-transmissible green fluorescent protein-based biosensor plasmids and their use for identification of N-acyl homoserine-producing bacteria in lake sediments. Appl. Envir. Microbiol., September 15, 2010; 76(18): 6119-6127.
6. **Putthapoom Lumjiaktase**, Gerardo Carcamo, and Leo Eberl. (2011)... Now on process writing.....