

## **RESEARCH**

### **Postgraduate Studies: 2015 – 2016**

<b>NO</b>	<b>NAME</b>	<b>RESEARCH TITLE</b>	<b>STATUS</b>
1	Adrienne Leong Suk Wai	Transcriptome sequencing of the toxic harmful algal species, <i>Pyrodinium bahamense</i> var. <i>compressum</i>	January 2014 – current (Ongoing)
2	Salley Venda Law	Characterization of bacterial communities associated with toxic and non-toxic dinoflagellates: <i>Pyrodinium bahamense</i> var. <i>compressum</i>	January 2014 – current (Ongoing)
3	Ghafur Rahim Mustakim	Determination of PSP toxicity from <i>Pyrodinium bahamense</i> var. <i>compressum</i> using different methods of analysis	September 2014 – current (Ongoing)

### **Postgraduate Studies: Past Students**

<b>NO</b>	<b>NAME</b>	<b>RESEARCH TITLE</b>	<b>STATUS</b>
1	Weliyadi Anwar	Effect of nutrient dynamic on cell density of <i>Cochlodinium polykrikoides</i> at Sepanggar and Likas bay, Kota Kinabalu	2007 – 2013 (Graduated)
2	Kalnisha Devi	Mapping of Expressed Sequence Tags (ESTs) from a dinoflagellate library against <i>Cochlodinium polykrikoides</i>	2010 – 2011 (Graduated)
3	Aimimuliani Adam	Effects of salinity, temperature and pH on HABs species in Kota Kinabalu coastal waters	2006 – 2010 (Graduated)
4	Joanna W. Doinsing	The effects of temperature, salinity and irradiance on the growth of <i>Cochlodinium polykrikoides</i>	2006 – 2010 (Graduated)
5	Grace Joy Chin Wei Lie	Molecular characterization and identification of ribosomal DNA sequences of a HAB species, <i>Pyrodinium bahamense</i> var. <i>compressum</i>	2005 – 2008 (Graduated)

### **Undergraduate Studies: 2015 – 2016**

<b>NO</b>	<b>NAME</b>	<b>RESEARCH TITLE</b>	<b>STATUS</b>
1	Muhammad Faisal	Effect of resorts and hotels on harmful algae	2015 – 2016

	bin Roup	bloom in Kota Kinabalu	(Ongoing)
2	Fong Jeslyn	The effect of seawater intrusion on phytoplankton of Kota Kinabalu Wetlands (KKW)	2015 – 2016 (Ongoing)

### Undergraduate Studies: Past Students

NO	NAME	RESEARCH TITLE	STATUS
1	Nor Farahin binti Mohd Karis	The spread of blooms following <i>Cochlodinium polykrikoides</i> events in relation to inorganic nutrients (NO <sub>3</sub> -N & PO <sub>4</sub> -P) concentrations in coastal waters of Sabah.	2014 –2015 (Graduated)
2	Farah Adlina binti Bahrin	Characterization of bacterial communities associated with toxic and non-toxic dinoflagellate, <i>Pyrodinium bahamense</i> var. <i>compressum</i>	2014 –2015 (Graduated)
3	Syairah Nabila binti Suhaimi	Characterization of bacterial communities associated with toxic and non-toxic dinoflagellates, <i>Cochlodinium polykrikoides</i>	2014 –2015 (Graduated)
4	Noor Amira bt Radin	Metagenomic analysis of coastal phytoplankton diversity including Harmful Algae Bloom (HAB) species in Sepanggar Bay	2013 – 2014 (Graduated)
5	Mohd Fathullah bin Ruslan	The effects of greenwater phytoplankton on the density, reproduction rate and growth of rotifer, <i>Brachionus</i> sp.	2012 – 2013 (Graduated)
6	Sabariah binti Zakaria	The role of nitrate-N and phosphate-P in triggering <i>P. bahamense</i> var. <i>compressum</i> in Sepanggar Bay, Sabah	2012 – 2013 (Graduated)
7	Tuan Mohamad Hakimi bin Tuan Ibrahim	The role of zooplankton grazing in controlling HABS: A laboratory study	2012 – 2013 (Graduated)
8	Mohd Samsul Rohizad bin Madin	Population interactions between harmful algal species in Sepanggar Bay, Kota Kinabalu	2011 – 2012 (Graduated)
9	Mohamad Tarmizi bin Mahamud	Vertical distribution of harmful algal bloom species in Sepanggar bay	2011 – 2012 (Graduated)
10	Iszuddin Idris	Population interactions between harmful algal species in controlled conditions	2011 – 2012 (Graduated)

### RESEARCH FUNDING

NO	PROJECT TITLE	AMOUNT	DURATION
1	Transcriptome sequencing of the toxic harmful algal species, <i>Pyrodinium bahamense</i> var.	RM 150,000	2013 – 2015 (On-going)

	<i>compressum</i>		
2	Characterization of bacterial communities associated with toxic and non-toxic dinoflagellates: <i>Pyrodinium bahamense</i> var. <i>compressum</i> and <i>Cochlodinium polykrikoides</i>	RM 102,000	2013 – 2015 (On-going)
3	Comparative genomics of <i>Cochlodinium</i> and other marine dinoflagellates as inferred from genome sequence analysis	RM 30,000	2010 – 2011 (Completed)
4	Temporal and spatial distribution of marine sand-dwelling dinoflagellates from Dinawan Island, Sabah	RM 10,000	2010 (Completed)
5	Phylogenetic relationships between <i>Prorocentrum</i> and <i>Dinophysis</i> , two potential diarrhetic shellfish poison (DSP) producing dinoflagellates based on ultrastructure and mitochondrial b	RM 80,000	2007 – 2009 (Completed)
6	Harmful algal bloom dynamics under controlled environment condition	RM 249,494	2006 – 2008 (Completed)
7	Study of the factors regulating the bloom mechanisms of harmful algal bloom species in Sabah	RM 228,992	2006 – 2008 (Completed)
8	Development of a biosensor for the detection of saxitoxin in <i>Pyrodinium bahamense</i> var. <i>compressum</i> , a harmful alga	RM 202,695	2006 – 2008 (Completed)

## PUBLICATIONS

JOURNAL ARTICLES	
1	Chin G. J. W. L., Teoh P. L., Kumar S. V. and Anton A. 2013. Ribosomal DNA analysis of marine microbes associated with toxin-producing <i>Pyrodinium bahamense</i> var. <i>compressum</i> , a harmful algal bloom species. <i>Pertanika Journal of Tropical Agriculture Science</i> . 36 (2):179 – 188
2	Palani-Velu, K. D., Chin G. J. W. L., Rodrigues, K. F. and Anton. A. 2013. Optimization of total RNA isolation from <i>Cochlodinium polykrikoides</i> . <i>Journal of Applied Phycology</i> . 25 (1): 59 – 64
3	Pfeilsticker, K., M. Dorf, B. Sturges, D. Oram, A. Engel, M. Rex, A. Bracher, M.

	Roozendaal, F. Hendrick, N. Theys, K. Krüger, B. Quack, D. Wallace, S. Fueglistaler, J. Pyle, V. Marecal, V. Catoire, M. Pirre, M. Chipperfield, D. Heard, A. Stohl, S. Eckhardt, B-M. Sinnhuber, A. Rozanov, F. Wittrock, H. Schlager, A. A. Samah, S. M. Phang, Ann Anton, Justin Sentian, Po Teen Lim, Aazani Mujahid, Nur Aleesha Abdullah, Maznorizan, and Nor Aieni Binti Haji Mokhtar. 2013. The SHIVA Western Pacific Campaign in Fall 2011. <i>Malaysian Journal of Science</i> 32 (SCS Sp Issue) : 141-148 (2013)
4	Adam, A., Mohammad-Noor, N., Anton, A., b, Saleh, E., Saad, S. and Muhd Shaleh, S. R. 2011. Temporal and spatial distribution of harmful algal bloom (HAB) species in coastal waters of Kota Kinabalu, Sabah, Malaysia. <i>Harmful Algae</i> . 10(5): 495-502
5	Chin, W. L., Anton, A., Kumar S.V. and Teoh P. L. 2010. Development of species-specific molecular marker for <i>Pyrodinium bahamense</i> var. <i>compressum</i> (Gonyaulacales, Dinophyceae) based on 18S ribosomal DNA sequence. <i>Genetik</i> . 17: 5-8.
6	Anton, A., Teoh, P.L., Mohd-Shaleh, S.R. and Mohammad-Noor, N. 2008. First occurrence of <i>Cochlodinium</i> blooms in Sabah, Malaysia. <i>Harmful Algae</i> . 7(3):331 – 336.
7	Iwataki M., Kawami H., Mizushima K., Mikulski C.M., Doucette G.J., Relox J.R., Anton A., Fukuyo Y. & Matsuoka K. 2008. Phylogenetic relationships in the harmful dinoflagellate <i>Cochlodinium polykrikoides</i> (Gymnodiniales, Dinophyceae) inferred from LSU rDNA sequences. <i>Harmful Algae</i> . 7: 27
8	Mohammad-Noor, N., Moestrup, . and Daugbjerg, N. 2007. Light, electron microscopy and DNA sequences of the dinoflagellate <i>Prorocentrum concavum</i> (syn. <i>P. arabianum</i> ) with special emphasis on the periflagellar area. <i>Phycologia</i> . 46:54 564.
9	Mohammad-Noor, N., Daugbjerg, N., Moestrup, . and Anton, A. 2007. Marine epibenthic dinoflagellates from Malaysia a study of live cultures and preserved samples based on light and scanning electron microscopy. <i>Nordic Journal of Botany</i> . 24:62 690.
10	Mohammad-Noor, N, Anton, A. Mat-Amin N. 2007. Biodiversity of dinoflagellates in the coastal waters off Malacca, Peninsular Malaysia. <i>Borneo Science</i> . 2:113 – 119.

#### PROCEEDINGS

1	Leong, A. S. W., Anton, A. Rodrigues, K. F. and Chin, G. J. W. L. 2015. Optimization of total RNA isolation from the marine dinoflagellate, <i>Pyrodinium bahamense</i> var. <i>compressum</i> from Kota Kinabalu, Sabah. <i>Asian Congress on Biotechnology</i> , 15 – 19 November 2015, Kuala Lumpur.
2	Law, S. V., Rodrigues, K. F., Anton, A., Wong, C. M. V. L. and Chin, G. J. W. L. 2015. Microbial 16S determination of bacteria associated with toxic dinoflagellate, <i>Pyrodinium bahamense</i> var. <i>compressum</i> . <i>Asian Congress on Biotechnology</i> , 15 – 19 November 2015, Kuala Lumpur.
3	Leong, A. S. W., Anton, A. Rodrigues, K. F. and Chin, G. J. W. L. 2015. Growth characteristics of the marine dinoflagellate, <i>Pyrodinium bahamense</i> var. <i>compressum</i> under different levels of salinity. <i>International Conference on Marine Science and Aquaculture</i> , 17 – 19 March 2015, Kota Kinabalu, Sabah.
4	Law, S. V., Rodrigues, K. F., Anton, A., Wong, C. M. V. L. and Chin, G. J. W. L.

	2015. Molecular characterization of intercellular and extracellular bacteria associated with toxic dinoflagellate, <i>Pyrodinium bahamense</i> var. <i>compressum</i> based on small subunit ribosomal RNA gene sequences. International Conference on Marine Science and Aquaculture, 17 – 19 March 2015, Kota Kinabalu, Sabah.
5	Devi K, Chin WL, Rodrigues KF and Anton A. Development of gene specific primers for gene expression studies in <i>Cochlodinium polykrikoides</i> . 8th Annual Seminar on Marine Sciences & Aquaculture, 8 – 10 March 2011, Kota Kinabalu, Sabah.
6	Mohd-Shaleh, S.R., Doinsing, J.W., Anton, A. Mohammad-Noor, N. and Saleh, E. 2008. Optimal growth condition of <i>Pyrodinium bahamense</i> var. <i>compressum</i> and <i>Cochlodinium polykrikoides</i> based on laboratory culture studies: understanding interspecific interaction during HABs. The 13th International Conference on Harmful Algae. Hong Kong: International Society for the Study of Harmful Algae.
7	N. Mohammad-Noor, A. Adam, J. M. Franco Soler, A. Anton & S.R. Muhamad Shaleh. 2008. First record of toxic <i>Gymnodinium catenatum</i> off the west coast of Sabah, Malaysia. The 13th International Conference on Harmful Algae. Hong Kong: International Society for the Study of Harmful Algae.
8	Doinsing, J. W., Sitti Raehanah Muhd. Shaleh, Ann Anton Normawaty Mohammad Noor. 2007. Vertically distribution of harmful algae, <i>Cochlodinium polykrikoides</i> at jetty of Universiti Malaysia Sabah. 9th Symposium of the Malaysian Society of Applied Biology, Bayview Georgetown, Penang. 30th-31st May 2007 53 – 57.
9	Chin, G.J. Teoh, P.L & Anton, A. 2006. Development of the molecular probe for the harmful algae, <i>Pyrodinium bahamense</i> var. <i>compressum</i> . The 12th International Conference on Harmful Algae. Copenhagen, Denmark: International Society for the Study of Harmful Algae.
10	Chin, W. L., Teoh, P. L. and Anton, A. 2006. Amplified 18S Ribosomal DNA Restriction Endonuclease Analysis of <i>Pyrodinium bahamense</i> var. <i>compressum</i> . Proceedings of the 3rd Life Sciences Postgraduate Conference, Penang, Malaysia.
<b>TECHNICAL REPORTS</b>	
1	Ann Anton and Audrey Rose Andrew. 2015. Phytoplankton of Silam Coast Conservation Area (SCCA). Technical Report.
2	Ann Anton, Audrey Rose Andrew and Aimi Najwa Abdul Kadir. 2014. Phytoplankton Distribution and Abundance in Mantanani Islands, Sabah. Research Seminar on Mantanani Island Expedition, 24 June 2014.
3	Grace Joy Chin Wei Lie, Teoh Peik Lin and Ann Anton. 2007. Molecular characterization and identification of ribosomal DNA sequences of a harmful algal bloom (HAB) species, <i>Pyrodinium bahamense</i> var. <i>compressum</i> . Biotechnology Technical Report Volume 1. Penerbit UMS, Kota Kinabalu, Sabah. 21 – 28.
<b>BOOKS</b>	
1	Chin, G.J.W.L., Teoh, P.L. and Anton, A. 2012. Molecular characterization of the toxic <i>Pyrodinium</i> alga. Lambert Academic Publishing, Germany.
2	Ann Anton. 2011. The Versatile Algae : An Organism of the Future. Penerbit UMS. ISBN 978-967-5224-76-8
<b>OTHERS</b>	
1	Normawaty Mohammad Noor. 2008. Ledakan populasi alga bahaya bahagian akhir. Dewan Kosmik. Januari 2008. 38-39.
2	Ann Anton, Normawaty Mohammad Noor Sitti Raehanah Mudh. Shaleh. 2007.

	New red tide species detected off Sepanggar. Daily Express. 21 January 2007.
3	Ann Anton, Normawaty Mohammad Noor Sitti Raehanah Mudh. Shaleh. 2007. UMS scientist find new red tide species. New Sabah Times. 21 January 2007.
4	Sitti Raehanah Mudh. Shaleh Normawaty Mohammad Noor. 2007. Red tides melanda Teluk Gaya, Teluk Likas dan Teluk Sepanggar. Suara Sepanggar. 14.
5	Normawaty Mohammad Noor. 2007. Ledakan populasi alga bahaya bahagian 1. Dewan Kosmik. Disember 2007. 36 - 37.