

Curriculum Vitae

Personal Details

Surname : van de Water
First Names : Johannes Antonius Jeronimus Maria
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Education

- 2010 - 2014 : **PhD programme in Marine Biology**
James Cook University, Townsville, Australia
Australian Institute of Marine Science, Townsville, Australia
- *Thesis:* Corals under stress - a study of the coral innate immune system (graduation: 17 March 2015)
- 2005 - 2007 : **Master of Science Programme “Biomolecular Sciences” (*cum laude*)**
Utrecht University, Utrecht, The Netherlands
- *Thesis:* Selection and characterization of domain II-specific llama V_HH antibody fragments
 - *Thesis:* Secretion of TRAIL and anti-EGFR nanobody by neural stem cells for glioma therapy
- 2002 - 2005 : **Bachelor of Science Programme “Biological Sciences” (*cum laude*)**
Utrecht University, Utrecht, The Netherlands
- *Thesis:* Regulation of ErbB Receptor Signalling – What is wrong in cancer?

Professional training / qualifications

- 2014 : Genomics workshop (by QFAB and BPA/CSIRO)
Metagenomics, Genome assembly, Transcriptomics
James Cook University, 8 - 11 December 2014
- 2013 : Ecological Genomics workshop (by Dr. Mikhail Matz)
Australian Institute of Marine Science, 13 - 15 November 2013
- 2012 : Quarantine Approved Premises (QAP) Accredited Person
Australian Quarantine and Inspection Service (AQIS)
- 2008 : Certified FELASA category C Researcher
Course “Laboratory Animal Sciences”
Utrecht University, Utrecht, The Netherlands

Employment - Research Experience

- 2010 - 2014 : PhD Candidate
- College of Marine & Environmental Sciences, James Cook University (research advisor: Professor Bette Willis and Dr. Bill Leggat)
 - Australian Institute of Marine Science (research advisors: Dr. Madeleine van Oppen and Dr. David Bourne)
- Scientific Projects:
- Assessment of immune parameters as indicators for coral health
 - Effect of offshore tourism reef platforms on coral health
 - Nature of the coral - *Symbiodinium* symbiosis
 - The coral immune response following physical damage
 - The coral holobiont response to pathogens under heat stress
- 2013 : Visiting Scholar
- Laboratory of Dr. Mikhail Matz, Section of Integrative Biology, University of Texas at Austin
 - Acquire skills to construct cDNA libraries for RNA Seq and *de novo* transcriptome sequencing
- 2008 - 2010 : Pre-doctoral Research Fellow
- Center for Translational Nuclear Medicine and Molecular Imaging, Massachusetts General Hospital, Harvard Medical School (research advisor: Dr. Khalid A. Shah)
 - Department of Cellular Architecture and Dynamics, Department Biology, Science Faculty, Utrecht University (research advisors: Dr. Rob C. Roovers and Dr. Paul M.P. van Bergen en Henegouwen)
- Scientific Projects:
- Therapeutic stem cells secreting imageable and cytotoxic anti-EGFR nanobodies for glioma therapy
 - Screening for the efficacy of small molecule tyrosine kinase inhibitors for glioma therapy
 - Inhibition of anti-apoptotic growth factor and mitochondrial pathways using lentiviral-delivered shRNA for glioma therapy
 - Development of an inducible protein expression system for therapeutic stem cells
- 2007 : Master of Science Candidate
- Center for Molecular Imaging Research, Massachusetts General Hospital, Harvard Medical School (research advisor: Dr. Khalid A. Shah)
- Scientific Projects:
- Secretion of TRAIL and anti-EGFR nanobody by human neural stem cells for glioma therapy
 - Inhibition of anti-apoptotic growth factor and mitochondrial pathways using lentiviral-delivered shRNA for glioma therapy

- 2005 - 2006 : Master of Science Candidate
- Department of Cellular Architecture and Dynamics, Department Biology, Science Faculty, Utrecht University (research advisors: Dr. Rob C. Roovers and Dr. Paul M.P. van Bergen en Henegouwen)
- Scientific Projects:
- Selection and characterisation of anti-EGFR domain II-specific llama V_HH antibodies

Skills

Language	:	Dutch (excellent) French (intermediate)	English (excellent) German (intermediate)
Software	:	Text editing: Reference software: Presentation: Statistics: Image processing:	Microsoft Word EndNote, Zotero Microsoft Powerpoint, Prezi PRIMER 6, PERMANOVA, SPSS, S-Plus, PAST, R, STATISTICA, geNorm, Microsoft Excel Adobe Photoshop, Adobe Illustrator, Image J
Bioinformatics:		CLC Genomics Workbench, Galaxy, DAVID, MEGAN, QIIME, Command line (Unix, Perl, R)	
Laboratory	:	Physiology Transcriptomics: Metagenomics : Genetics : Proteomics : Imaging : Other :	Pulse amplitude modulation fluorometry Symbiodinium density determination Protein content measurements Fluorescent protein expression Coral growth rates RNA isolation Targeted gene expression analysis (qPCR, GeXP) Full transcriptome analysis (RNA Seq) <i>De novo</i> transcriptome 16S rRNA amplicon sequencing DNA isolation ITS1/2 genotyping Denaturation Gradient Gel Electrophoresis Recombinant DNA techniques Phenoloxidase enzyme assays (Co-)immunoprecipitation SDS-PolyAcrylamide Gel Electrophoresis Western blotting Enzyme-linked Immunosorbent Assay Caspase / Apoptosis assays Light and fluorescence microscopy Confocal laser scanning microscopy Fluorescence <i>in situ</i> hybridisation (FISH) <i>In vivo</i> bioluminescence imaging Fluorescence intravital microscopy Histological techniques Immuno-histochemistry / Immuno-cytochemistry Phage display Retrovirus production

Mammalian (stem) cell culture
 Genetic modification of mammalian (stem) cells
 Production/isolation of recombinant proteins
 Flow cytometry
 Cell viability assays
 Laboratory animal handling – surgery

Field : Excellent organisational skills for fieldtrips (1 day – 2 months)
 Expedition leader of short and long term fieldtrips (1 day – 2 months)
 SCUBA diving (Rescue Diver – Australian Qualifications Framework)
 First Aid (Senior First Aid, CPR and O₂ provider)
 Vessel operation (Australian Recreational Marine Driver Licence)
 Coral and bacterial sampling techniques
 Manipulative field and aquarium experiments
 Coral spawning and larval rearing techniques

Employment - Teaching Experience

2014 : Teaching Assistant. Course: “Current Issues in Coral Reef Ecology”. (MB5350), James Cook University.

2014 : Guest lecturer. Course: “Life History and Evolution of Reef Corals” (MB3210 / MB3219 / MB5400), James Cook University.

2012-2014 : Teaching Assistant. Course: “Life History and Evolution of Reef Corals” (MB3210 / MB3219 / MB5400), James Cook University. Assisting undergraduate and graduate students during practicals.

2012-2013 : Primary supervisor of MSc student Maryam Chaib De Mares, University of Groningen. MSc thesis title: “Synergy between *Vibrio coralliilyticus* and elevated seawater temperature inhibits the melanisation cascade in *Montipora aequituberculata*”

2006 : Teaching Assistant. Course: “Signal Transduction”, Utrecht University. Supervision over 12 undergraduate students Biomedical Sciences: design of experiments, preparations for practical work, assisting with practical work and grading.

2004 : Teaching Assistant. Course: “Applied Biostatistics I”, Utrecht University. Assisting undergraduate students Biological Sciences understand statistical analyses and use the statistical analysis package SPSS.

Professional Memberships

- Australian Coral Reef Society (ACRS) (2011 - 2015)
- International Society for Reef Studies (ISRS) (2011 - 2015)
- Australian Marine Sciences Association (AMSA) (2011 - 2015)
- Association for the Sciences of Limnology and Oceanography (ASLO) (2013 - 2015)

Reviewer for scientific journals

- PLoS ONE (4 manuscripts)
- BMC Genomics (1 manuscript)
- Molecular Ecology (1 manuscript)

Awards & Honours

- Best Presentation Award - 8th International Conference on Coelenterate Biology (2013)
- James Cook University - Publication Grant (2014) A\$ 2.000,-
- AIMS@JCU - Science Communication International Travel Award (2014) A\$ 1.500,-
- ARC CoE for Coral Reef Studies - Symposium Travel Award (2014) A\$ 950,-
- Ocean Sciences Meeting 2014 - Student Travel Award (2014) US\$ 750,-
- 8th International Conference on Coelenterate Biology - Student Award (2013) US\$ 165,-
- Australian Coral Reef Society - Conference Travel Award (2013) A\$ 380,-
- Australian Coral Reef Society - Student Research Award (2013) A\$ 2.000,-
- Great Barrier Reef Marine Park Authority - Science for Management (2012) A\$ 1.000,-
- Australian Coral Reef Society - Fellowship to attend ICRS 2012 (2012) A\$ 635,-
- ARC CoE for Coral Reef Studies - Symposium Travel Award (2011) A\$ 960,-
- James Cook University - Graduate Research Scheme Grant (2011) A\$ 3.150,-
- Australian Coral Reef Society - Conference Travel Award (2011) A\$ 280,-
- James Cook University - Research Tuition Scholarship (2010 - 2014) A\$ 120.000,-
- James Cook University - Postgraduate Research Scholarship (2010 - 2013) A\$ 82.500,-
- Utrecht University - Trajectum grant (2007) € 260,-
- Dutch Cancer Society - Student Grant (2007) € 2.300,-
- Brain Foundation of the Netherlands - Subsidy (2007) € 1.000,-
- Dr. Saal van Zwanenberg Foundation - Fellowship (2007) € 5.000,-
- Utrecht University - Biomolecular Sciences Prestige Scholarship (2007) € 2.000,-

Presentations & Conferences

Oral Presentations

1. "Corals under Stress – A Study of the Coral Immune System" – Marine Genomics Seminar Series, Okinawa Institute of Science and Technology, Japan. 13 April 2015
2. "Corals under Stress – A Study of the Coral Immune System" – Biological Sciences Seminars, The University of Hong Kong, Hong Kong. 10 April 2015
3. "The Response of the Coral Holobiont to Pathogenic Bacteria under Elevated Seawater Temperatures" - 8th International Conference on Coelenterate Biology, Eilat, Israel. 1-5 December 2013
4. "The Response of the Coral Holobiont to Pathogenic Bacteria under Elevated Seawater Temperatures" - 2013 AIMS@JCU Seminar Day, Townsville, Australia. 15 October 2013
5. "The Response of the Coral Holobiont to Pathogenic Bacteria under Elevated Seawater Temperatures" - 87th Australian Coral Reef Society Annual Conference, Sydney, Australia. 27-30 August 2013
6. "Invading Pathogens Following Physical Damage Elicit An Immune Response In Corals" - 12th International Coral Reef Symposium, Cairns, Australia. 9-13 July 2012

7. “The Coral Innate Immune Response Following Physical Damage” - 2012 AIMS@JCU Seminar Day, Townsville, Australia. 26 June 2012
8. “The Coral Innate Immune Response Following Physical Damage” - School of Marine & Tropical Biology Conference – Biology in the Tropics 2012, Townsville, Australia. 4-5 June 2012
9. “Invading Pathogens Following Physical Damage Elicit An Immune Response In Corals” - 86th Australian Coral Reef Society Annual Conference, Sunshine Coast, Australia. 26-28 August 2012
10. “Stem Cell-Delivered Immunotherapy for Glioma Therapy: The Potential of anti-EGFR Nanobodies and their Variants” - Institute of Biomembranes Seminar, Utrecht University, The Netherlands. 16 April 2010
11. “Anti-EGFR Nanobody-Secreting Stem Cells in Glioma Therapy” - Chemical Biology Symposium, Utrecht University, The Netherlands. 22 May 2008

Poster presentations

1. “Coral holobiont response to bacteria under elevated seawater temperatures” - Ocean Sciences Meeting, Honolulu, Hawaii, United States of America. 23-28 February 2014

Publications (total impact 42.17)

1. **van de Water JAJM**, Ainsworth TD, Leggat W, Bourne DG, Willis BL, van Oppen MJH. The coral immune response provides protection against microbes during tissue regeneration following physical damage. *Molecular Ecology* 2015 (in print) (Citations 0; IF 5.84)
2. **van de Water JAJM**, Leggat W, van Oppen MJH, Willis BL, Ainsworth TD. Elevated seawater temperatures have a limited impact on the coral immune response following physical damage. *Hydrobiologia*. 2015 Mar 17 (Citations 1; IF 2.21)
3. **van de Water JAJM**, van Oppen MJH, Willis BL. Absence of skeleton deposition in juveniles of the scleractinian coral *Acropora millepora*. *Coral Reefs*. 2012 Dec 1; 31(4): 1111 (Citations 0; IF 3.62)
4. **van de Water JAJM**, Bagci-Onder T, Agarwal AS, Wakimoto H, Roovers RC, Zhu Y, Kasmieh R, Bhere D, van Bergen en Henegouwen PMP, Shah K. Therapeutic stem cells expressing different variants of EGFR-specific nanobodies have anti-tumor effects. *Proceedings of the National Academy of Sciences USA*. 2012 Oct 9; 109(41): 16642-16647 (Citations: 13; IF 9.81)
5. Hingtgen SD, Kasmieh R, **van de Water JAJM**, Weissleder R, Shah K. A novel molecule integrating therapeutic and diagnostic activities reveals multiple aspects of stem cell-based therapy. *Stem Cells*. 2010 Feb 1; 28(4): 832-841 (Citations: 20; IF: 7.70)
6. Kumar AT, Chung E, Raymond SB, **van de Water JAJM**, Shah K, Fukumura D, Jain RK, Bacskai BJ, Boas DA. Feasibility of *in vivo* imaging of fluorescent proteins using lifetime contrast. *Optics Letters*. 2009 Jul 1;34(13):2066-8 (Citations: 21; IF: 3.18)
7. Sasportas LS, Kasmieh R, Wakimoto H, Hingtgen S, **van de Water JAJM**, Mohapatra G, Figueiredo JL, Martuza RL, Weissleder R, Shah K. Assessment of therapeutic efficacy and fate of engineered human mesenchymal stem cells for cancer therapy. *Proceedings of the National Academy of Sciences USA*. 2009 Mar 24;106(12):4822-7 (Citations: 227; IF: 9.81)

ResearcherID: **F-1302-2011**

Non-peer reviewed publications

1. **JAJM van de Water**. Climate change and coral disease - How does the coral holobiont respond to pathogenic bacteria under elevated seawater temperatures? *Australian Coral Reef Society Newsletter* 2014.

Other

- January 2014 - Footage of green turtle hatchlings featured on the Discovery Channel
 - Daily Planet - "Top Ten Animals You Can Fit On Your Finger"
- Hobbies - Tennis, swimming, cycling, hiking, SCUBA diving, travel, photography, reading