

CURRICULUM VITAE

Dr. JOZEF I. NISSIMOV

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General research interests:

Microbial ecology and diversity, phytoplankton physiology, primary production, biological oceanography, virology, molecular evolution, host-parasite interactions, genetic expression, genome analysis and comparison, biogeography, phylogenetics and distribution of microbes in space and time, microbes in extreme environments, evolutionary ecology of marine organisms, coral health and disease, and ocean acidification.

Employment:

October 2013- current Postdoc research associate at the Institute of Marine and Coastal Sciences, Rutgers University, USA (with Dr Kay Bidle).

March 2013 – June 2013: University of Oxford, Department of Plant Sciences, UK. Project: “CO₂ irrigation of commercially valuable algae and crops in desert conditions” (with Prof Liam Dolan and Tim Kruger).

Education:

2009 - 2013 “Ecological and functional biodiversity in a marine algal-virus system” - Plymouth Marine Laboratory & University of Nottingham, UK. Advisors: Dr Michael J. Allen, Dr Susan A. Kimmance & Prof Johnathan A. Napier.

2008 - 2009 MSc Marine Biology (awarded a Distinction) - University of Plymouth & Marine Biological Association of the United Kingdom. Advisors: Dr Susan A. Kimmance, Dr Colin B. Munn & Dr Michael J. Allen.

2005 - 2008 BSc (Hons) Marine Biology (awarded a First Class degree) - University of Plymouth. Research project advisors: Dr Colin B. Munn (University of Plymouth) & Prof Eugene Rosenberg (Tel Aviv University).

1996 - 1999 A-Levels: Biology, Chemistry, and English.

Competitive funding awards and successful grant applications:

2011 Natural Environmental Research Council (NERC) NBAF competitive award for the sequencing and annotation of four new algal viruses: **\$ 4061**.

2011 Travel and accommodation grant to attend and speak at the Aquatic Virus Workshop 6 (AVW6) in the Netherlands, provided by the Broad Institute in the US: **\$ 1000**.

2010 Travel and accommodation grant from the Society for General Microbiology (SGM) to attend their annual spring conference in Edinburgh, UK: **\$ 630**.

2010 Travel grant from the International Society for Microbial Ecology (ISME) to attend and present at the ISME13 conference in Seattle, US: **\$ 650**.

2010 Travel grant from the Challenger Society for Marine Science to attend and present at the ISME13 conference in Seattle, US: **\$ 400**.

2010 Travel grant from the SGM society to attend and present at the ISME13 in Seattle, US: **\$ 800**.

2010 Collaborative Gearing Scheme pilot study with the British Antarctic Survey (BAS) (CGS-66): a two-month pilot study in Antarctica was fully subsidised by BAS.

Teaching and outreach:

2008 - 2012 University of Plymouth, School of Marine Science and Engineering, Graduate program in Marine Biology: Introduction into microbiological practice in the laboratory (demonstrations to first and second year undergraduate students in laboratory practical classes).

2011 Annual Lecture series at the University of Edinburgh, UK.

2011 Nissimov J. "With James Cook on the Atlantic Meridian" *Objects* 9 (27): 10-14 (article in a Bulgarian popular science magazine).

2010 Nissimov J. "Moments from the country of the midnight sun" *Objects* 11(17): 54-59 (article in a Bulgarian popular science magazine).

Professional memberships:

2007 - 2009 Marine Biological Association of the United Kingdom

2009 - 2011 Challenger Society for Marine Sciences

2009 - present Society for General Microbiology (SGM)

2010 - present International Society for Microbial Ecology (ISME)

2012 - present Association for the Sciences of Limnology and Oceanography (ASLO)

Skills:

Laboratory- DNA extraction from both field samples and live cultures, PCR, qPCR, DGGE, microarrays, clone libraries, primer design, scanning electron microscopy, light microscopy, algal and bacterial culturing, chemostat operation, bacterial antibiotic assays, plaque assays, flow cytometry, virus isolation, concentration, and preparation for electron microscopy etc.

Field- VALEPORT Current Metre, CTD-ISA 6600, rosette sampling, integrated depth samplers, zodiac operation and trouble-shooting.

Bioinformatics and software: WinMDI 2.9, ODV, BLAST, EMBI, IMG/ER, GOS, Artemis, ACT, DNA plotter, BioEdit, TreeView, DNA dotplot, MEGA4, SEQUIN, MAUVE, Pregap4, JalView, Image9, Spotfinder, Jmol, Strap, Swiss PDB viewer 4.1.0 etc.

Scientific cruise and fieldwork experience:

2011 (January-February): Collaborative project with the British Antarctic Survey (BAS) at Rothera research station, Adelaide Island, Antarctica (water filtration for virus and host DNA isolation).

2010 (October-November): Atlantic Meridional Transect 20 (AMT 20). A 46-day research cruise from Southampton (UK) to Punta Arenas (Chile) onboard the NERC ship RRS James Cook. Duties included water collection from CTD rosette bottles, filtration for virus and host DNA extraction, preservation of live samples in fixatives for flow cytometry, and the isolation of new algal viruses.

2010 (May-July): European Project on Ocean Acidification (EPOCA): Arctic Campaign. Mesocosm experiment in the Fjord near Ny-Alesund Research Station, Svalbard, conducted in collaboration with scientists from more than 30 countries. Duties included experimental setup, and sample filtration, biomass capture and eventually the isolation of bacterial and archaeal DNA and RNA for metagenomics.

List of publications:

Nissimov J.I., Jones M., Napier J.A, Munn C.B, Kimmance S.A, Allen M.J. (2013) 'Functional inferences of environmental coccolithovirus biodiversity' *ViroSin*, 28 (5): 291-302.

Sperling M., Piontek J., Gerdt G., Wichels A., Schunck H., Roy A.-S, La Roche J., Gilbert J., **Nissimov J.I.**, Bittner L., Romac S., Riebesell U., Engel A. (2013) 'Effect of elevated CO₂ on the dynamics of particle-attached and free-living bacterioplankton communities in an Arctic fjord' *Biogeosciences*, 10: 181-191.

Roy, A.-S., Gibbons, S. M., Schunck, H., Owens, S., Caporaso, J. G., Sperling, M., **Nissimov, J. I.**, Romac, S., Bittner, L., Riebesell, U., LaRoche, J., and Gilbert, J. A. (2013) 'Ocean acidification shows negligible impacts on high-latitude bacterial community structure in coastal pelagic mesocosms', *Biogeosciences*, 10: 555-566.

Michael J. Allen, Karen Tait, Martin Mühling, Karen Weynberg, Claire Bradley, Urmi Trivedi, Karim Gharbi, **Jozef Nissimov**, Konstantinos Mavromatis, Chantel N. Jensen, Gideon Grogan, & Sohail T. Ali (2012) 'Genome Sequence of *Stenotrophomonas maltophilia* PML168, Which Displays Baeyer-Villiger Monooxygenase Activity' *Journal of Bacteriology*, 194 (17): 4753-4754.

Nissimov J.I., Worthy C.A., Rooks P., Napier J.A., Kimmance S.A., Henn M.R., Ogata H. & Allen M.J. (2012) 'Draft genome sequence of the coccolithovirus EhV-202' *Journal of Virology*, 86 (4): 2380-2381.

Nissimov J.I., Worthy C.A., Rooks P., Napier J.A., Kimmance S.A., Henn M.R., Ogata H. & Allen M.J. (2012) 'Draft genome sequence of four coccolithoviruses: EhV- 88, EhV- 201, EhV-207 and EhV-208, *Journal of Virology*, 86 (5): 2896-2897.

Nissimov J.I., Worthy C.A., Rooks P., Napier J.A., Kimmance S.A., Henn M.R., Ogata H. & Allen M.J. (2011) 'Draft genome sequence of the coccolithovirus EhV-84' *Standards in Genomic Sciences*, 5: 1-11

Nissimov J.I., Worthy C.A., Rooks P., Napier J.A., Kimmance S.A., Henn M.R., Ogata H. & Allen M.J. (2011) 'Draft Genome Sequence of the Coccolithovirus *Emiliana huxleyi* Virus 203' *Journal of Virology*, 85 (24): 13468–13469.

Nissimov J., Rosenberg E. & Munn C.B. (2009) 'Antimicrobial properties of resident coral mucus bacteria of *Oculina patagonica*' *FEMS Microbiology Letters*, 292: 210–215.

In prep:

Nissimov J.I., Worthy C.A., Rooks P., Napier J.A., Kimmance S.A. & Allen M.J. 'Coccolithoviruses: genomic thieves and metabolic thugs' in preparation for *Marine Genomics*.

Nissimov J.I., Napier J.A., Kimmance S.A. & Allen M.J. 'Infection dynamics of coccolithoviruses: the virus fight-club' in preparation for *Environmental Microbiology*.

Nissimov J.I., Worthy C.A., Rooks P., Napier J.A., Kimmance S.A., & Allen M.J. 'Draft genome sequence of four new coccolithoviruses: EhV-18, EhV- 146, EhV-156 and EhV-164, in preparation for *Journal of Virology*.

Oral and poster presentations:

2013 Association for the Sciences of Limnology and Oceanography (ASLO), New Orleans. Oral presentation: "Protein fold differences in the coccolithovirus-encoded serine palmitoyltransferase and its possible implications for the demise of *Emiliana huxleyi*."

2011 University of Nottingham, annual postgraduate symposium. Poster presentation: “The genetic diversity of Coccolithoviruses and their biogeography”.

2011 British Antarctic Survey, 10th Antarctic Funding Initiative Workshop. Oral presentation: “The genetic diversity of Coccolithoviruses and their biogeography”.

2011 Aquatic Virus Workshop 6, Netherlands. Oral presentation - “Coccolithovirus genomes: same, same but different”.

2010 SGM spring conference in Edinburgh, UK. Poster presentation: “Host-virus dynamics within the *Emiliana huxleyi* system: the effects of host fitness, phosphate availability and virus strain variability”.

2010 International Symposium on Microbial Ecology 13, Seattle. Oral presentation: “Ecological and functional biodiversity in a marine algal virus system”.

Conference organisation:

2011 4th Plymouth Marine Science and Education Fund Conference, UK (organising committee member)

Other professional courses:

2012 EU-US Training in Marine Bioinformatics (Bremen, Germany).

2011 Mesocosms in Aquatic Ecology: use, problems and potentials (MESOAQUA PhD course, Kiel, Germany)

2009 Introduction to Bioinformatics (Edinburgh University, UK)

2009 Environment Yes (Bio-entrepreneur course and competition, Oxford, UK)

Languages:

English (fluent)

Bulgarian (mother tongue)

Hebrew (as fluent as mother tongue)

Russian (elementary)