

CURRICULUM VITAE AND LIST OF PUBLICATIONS

Personal Details

Name: Asher Wishkerman

Date and place of birth: 03/09/1973, Hadera, Israel

Address and telephone number at work: Faculty of Marine Sciences, Ruppin
Academic Center, Mikhmoret 40297

Address and telephone number at home: Shmuel Hanagid 2/21, Pardess-Hanna 37100,
Tel: 058-6746103

Education

B.Sc. - 1996-1999 - B.Sc. - Ben-Gurion University of the Negev, Life Sciences.

M.Sc. - 1999-2002 - M.Sc. - Ben-Gurion University of the Negev, Environmental Engineering.
Prof. Shoshana Arad, Prof. Shimona Geresh
Thesis title: "Biosorption of metal ions by red microalgae"

Ph.D. - 2003-2006 - University of Heidelberg/Germany - Environmental Geochemistry
Prof. Dr. Heinz Friedrich Schöler, Dr. Harald Biester
Thesis title: "Bromine and iodine in plant-soil systems"

Employment History

12/2013 - Senior lecturer in The Faculty of Marine Sciences, Ruppin Academic Center, Mikhmoret, Israel

Asher Wishkerman

2/2011 - 2/2013 Researcher (Marie Curie Fellowship), IRTA-Sant Carles de la Rapita,
Catalonia, Spain

3/2007 - 2/2011 Post-Doctoral Fellow/Max Planck Institute for Chemistry, Mainz,
Germany

9/2002-2/2003 Research assistance/Institute of Cellular and Molecular Botany,
University of Bonn, Bonn, Germany

1999-2001 Science teacher for gifted school children/Ben-Gurion University of the
Negev, Beer-Sheva, Israel

Educational activities

Courses taught

Microbial processes in soils, graduate level, University of Heidelberg,
Germany

Marine Botany, Faculty of Marine Sciences, Ruppin Academic
Center, Israel

Marine Microbiology, Faculty of Marine Sciences, Ruppin Academic
Center, Israel

Molecular mechanisms of plant tolerance, Faculty of Marine
Sciences, Ruppin Academic Center, Israel

Bioinformatics, Faculty of Marine Sciences, Ruppin Academic
Center, Israel

Introduction to microbiology, Faculty of Marine Sciences, Ruppin
Academic Center, Israel

Bioinformatics approaches in marine sciences, Faculty of Marine
Sciences, Ruppin Academic Center, Israel

Asher Wishkerman

Molecular mechanisms of marine plants, Faculty of Marine Sciences,
Ruppin Academic Center, Israel

Algal biotechnology, Faculty of Marine Sciences, Ruppin Academic
Center, Israel

Awards, Citations, Honors, Fellowships

2011-2013 - Marie Curie Fellowship (MC-IEF)

2006 - Ph.D. Magna cum laude

2003-2006 - DFG (German Research Foundation) project, GRK 273:
Fluid- Rock interaction program - Ph.D. scholarship

1999-2001 - Sacta-Rashi Foundation - M.Sc. scholarship

Scientific Publications

1. Wishkerman A., Petri M., Haag-Kerwer A., Biester H., Bromine mass balance during annual ryegrass (*Lolium multiflorum*) decomposition. Report Series in Aerosol Science, 79, 117-118, 2006.
2. Wishkerman A., Gebhardt S., McRoberts C. W., Hamilton J. T. G., Williams J., Keppler F., Abiotic methyl bromide formation from vegetation and its strong dependence on temperature, Environmental Science & Technology, 42(18), 6837–6842, 2008. DOI: [10.1021/es800411j](https://doi.org/10.1021/es800411j).
3. Yassaa N., Wishkerman A., Keppler F., Williams J., Fast determination of methyl chloride and methyl bromide emissions from dried plant matter and soil samples using HS-SPME and GC-MS: method and first results, Environmental Chemistry, 6(4), 311-318, 2009.
4. Derendorp L., Holzinger R., Wishkerman A., Keppler F., Röckmann T., VOC emissions from dry leaf litter and their dependence on temperature, Biogeosciences Discuss., 7:823-854, 2010.

5. Wishkerman A., Greiner S., Ghyczy M., Boros M., Rausch T., Lenhart K., Keppler F.. Enhanced formation of methane in plant cell cultures by inhibition of cytochrome c oxidase, *Plant, Cell & Environment*, 34, 3:457–464, 2011.
6. Derendorp L., Holzinger R., Wishkerman A., Keppler F., Röckmann T., Methyl chloride and C₂-C₅ hydrocarbon emissions from dry leaf litter and their dependence on temperature, *Atmospheric Environment*, 45(18), 3112-3119, 2011.
7. Derendorp L., Wishkerman A., Keppler F., McRoberts C., Holzinger R., Rockmann T., Methyl chloride emissions from halophyte leaf litter:dependence on temperature and chloride content, *Chemosphere*,87(5), 483–489, 2012.
8. Wishkerman A., Estevez A., Mimendia A., Ibanez C., Trobajo R., Influence of chlorine ion concentrations and different media for *Rhodomonas salina* growth and lipid characterization, *Journal of Phycology*, 48(SI:1), S20-S21,2012.
9. Boglino A., Wishkerman A., Darias M.J., Andree K.B., Estévez A., Gisbert E., High dietary arachidonic acid levels affect the process of eye migration and head shape in pseudoalbino Senegalese sole *Solea senegalensis* larvae. *Journal of Fish Biology*, 83(5), 1302–1320, 2013.
10. Boglino A., Wishkerman A., Darias M.J., Andree K.B., Estévez A., Gisbert E., High dietary levels of arachidonic acid not only affects the normal pigmentation patterns in post-metamorphic Senegalese sole larvae, but also disrupts the process of eye migration in pseudo-albino fish. *Communications in agricultural and applied biological sciences*, 78(4), 43-44, 2013.
11. Horst A., Andersson P., Thornton B.F., Holmstrand H., Wishkerman A., Keppler F., Gustafsson O., Stable bromine isotope composition of methyl bromide released from plant matter. *Geochimica et Cosmochimica Acta*. 125, 186–195, 2014.

12. Boglino A., Wishkerman A., Darias M.J., de la Iglesia P., Estévez A., Andree K.B., Gisbert E., The effects of dietary arachidonic acid on Senegalese sole morphogenesis: a synthesis of recent findings, *Aquaculture*, 432, 443-452, 2014.
13. Boglino A., Wishkerman A., Darias M.J., Andree K.B., Gisbert E., Estévez A., Senegalese sole (*Solea senegalensis*) metamorphic larvae are more sensitive to pseudo-albinism induced by high dietary ARA levels than post metamorphic larvae, *Aquaculture*, 433, 276–287, 2014.
14. Wishkerman A., Boglino A., Darias M.J., Andree K.B., Estévez A., Gisbert E., Image analysis-based classification of pigmentation patterns in fish: A case study of pseudo-albinism in Senegalese sole, *Aquaculture*, 464, 303-308, 2016.
15. Wishkerman A., Wishkerman E., Application note: A novel low-cost open-source LED system for microalgae cultivation, *Computers and Electronics in Agriculture*, 132, 56-62, 2017.
16. Wishkerman A., Arad (Malis) S., Production of silver nanoparticles by the diatom *Phaeodactylum tricornutum*, *Proc. SPIE Nanotechnology VIII*, 102480W, 2017.
17. Wishkerman A., Hamilton B. P., DiaCurv: value based curvature analysis application in diatom taxonomy, *Diatom research* 32 (3), 351-358, 2017.
18. Wishkerman A., Hamilton B. P., Shape outline extraction software (DiaOutline) for elliptic Fourier analysis application in morphometric studies, *Applications in Plant Sciences* 6: 12, e01204, 2018.
19. Shechner M., Guenther A., Rhew R., Wishkerman A., Li Q., Blake D., Lerner G., Tas E., Emission of volatile halogenated organic compounds over various Dead Sea landscapes, *Atmospheric Chemistry and Physics* 19 (11), 7667-7690, 2019

20. Mihalić K.C., Galović I., Wetzel C.E., Ector L., Ilijanić N., Miko S., Wishkerman A., Hamilton P.B., Levkov Z., *Envekadea vranaensis* sp. nov. a new diatom species (Bacillariophyta) from the lacustrine Holocene sediments of Lake Vrana, Croatia, *Nova Hedwigia*, 110 (1-2), 2020.
21. Asfur M., Price C., Silverman J., Wishkerman A., 2020. "Why is lightning more intense over the oceans?" *Journal of Atmospheric and Solar-Terrestrial Physics* 202, 2020

Lectures and Presentations at Meetings and Invited Seminars not Followed by Published Proceedings

Poster presentations:

1. Wishkerman A., Geresh S., Arad S., Biosorption of toxic metal ions by red microalgae, In: Conference "2000 The Era of Biotechnology", Bear-Sheva, Israel, October 24-27, 2000.
2. Wishkerman A., Geresh S., Arad S., Biosorption of toxic metal ions by red microalgae, In: Conference "CARESS 2001", Rehovot, Israel, June 14, 2001.
3. Wishkerman A., Gebhardt S., McRoberts C., Hamilton J., Williams J., Keppler F., Abiotic methyl bromide formation from vegetation at ambient temperatures, In: Conference "EGU General Assembly 2008", Vienna, Austria, April 18, 2008.
4. Derendorp L., Holzinger R., Wishkerman A., Keppler F., Röckmann T., Emissions of volatile organic compounds from dry leaf litter and their dependence on temperature, In: Conference "EGU General Assembly 2010", Vienna, Austria, May 6, 2010.

5. Horst A., Holmstrand H., Andersson P., Andersson A., Carrizo D., Thornton B., Wishkerman A., Keppler F., Gustafsson O., Compound specific bromine isotope analysis of methyl bromide: method development and initial applications toward plant emissions and the Arctic troposphere, In: Conference “EGU General Assembly 2011”, Vienna, Austria, April 5, 2011.
6. Wishkerman A., Estevez A., Ibáñez C., Trobajo R., Lipid characterization of recently isolated *Nitzschia cf lembiformis* and its comparison to other known *Nitzschia* species, In: 9th European Workshop Biotechnology of Microalgae, Nuthetal, Germany, June 4-5, 2012.
7. A. Boglino, Wishkerman A., Darias M.J., Estévez A., Andree K.B., Gisbert E., High dietary levels of arachidonic acid not only affects the normal pigmentation patterns in postmetamorphic Senegalese sole larva, but also disrupts the process of eye migration in pseudoalbino fish, In: 6th Fish & Shellfish Larviculture Symposium, Ghent University, Belgium, September 2-5, 2013.
8. Darias M.J., Wishkerman A., Castro-Ruiz D., Fernández C., Núñez J., García-Dávila C., Duponchelle F., Renno J.F., Gisbert E., Enriching artemia and compound diets affects body shape and skin pigmentation of *Pseudoplatystoma punctifer* larvae, In: 4th RIIA International Conference, Cochabamba, Bolivia, September 30 – October 2, 2014.
9. Wishkerman A., Cohen B., Shahar B., Oren A., Itzhaky E., Arad S., Biosynthesis of silver nanoparticles by *Phaeodactylum tricornutum*, IDS 2016 - 24th International Diatom Symposium, Quebec City, Canada, August 21-26, 2016.

Asher Wishkerman

10. Wishkerman, A., Hamilton P.B. DiaCurv: curvature analysis application in diatom research, IDS 2018 - 25th International Diatom Symposium, Berlin, Germany 25–30 June 2018.

Oral presentations:

1. Iodine and bromine in the terrestrial environment: Aspects in soil and plants, Annual symposium of the fluid-rock interaction group (Graduiertenkolleg 273), University of Heidelberg, Germany, January 20-21, 2005.
2. Distribution and speciation of iodine and bromine in forest soils, The Sixth European Meeting on Environmental Chemistry, Belgrade, Serbia and Montenegro, December 7-10, 2005..
3. Bromine mass balance during annual ryegrass (*Lolium multiflorum*) decomposition, 1st iLEAPS Science Conference 2006, Boulder, Colorado, USA, January 21-26, 2006.
4. Aerobic methane formation from living plants: stress related mechanisms, First workshop on aerobic methane formation in the environment including plants and animals, MPI for Chemistry, Mainz, Germany, February 26-27, 2009.
5. Fast determination of methyl chloride and methyl bromide using HS-SPME and HS-GC-MS, Winter meeting of the DFG Research Unit 763, Oberjoch/Allgäu, Germany, March 30- April 1, 2009.
6. Abiotic methyl chloride and methyl bromide emissions from terrestrial and marine dry plant matter, The 10th European Meeting on Environmental Chemistry, Limoges, France, December 2-5, 2009.
7. Are deltas, estuaries and coastal lagoons an important methyl bromide source?, Deltanet International Conference, impacts of Global Change on Deltas, Estuaries and Coastal Lagoons, Ebro Delta, Catalonia, Spain, June 6-10, 2011.

Asher Wishkerman

8. Influence of chlorine ion concentrations and different media for *Rhodomonas salina* growth and lipid characterization, Phycological Society of America Annual Meeting, Charleston, South Carolina, USA, June 20-23, 2012.
9. Lipid characterization of *Nitzschia lembiformis* and *Rhodomonas salina* grown in different media: a case study, 20th International Symposium on Plant Lipids, Seville, Spain, July 8-13, 2012.
10. Production of silver nanoparticles by the diatom *Phaeodactylum tricornutum*, SPIE Microtechnologies, Barcelona, Spain, May 8-10, 2017.
11. Diatoms, a system for green synthesis of nanoparticles, Silicon, Silica and their Isotopes, Blanes, Spain, June 13-15, 2017.