Miina Yanagihara

Current position:	Postdoctoral fellow
Affiliation:	Chemical Water Quality and Health Team, KWR Water Research Institute, The Netherlands Molecular Ecology and Health Lab., Center for Marine Environmental Studies (CMES), Ehime University, Japan
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Citizenship:	Japan
Language:	English (Proficient), Japanese (Native), Dutch (Elementary)

EDUCATION

Ph.D. (Engineering), Department of Urban Engineering, The University of Tokyo, 2016-2019
MS (Engineering), Department of Urban Engineering, The University of Tokyo, 2014-2016
BS (Engineering), Department of Urban Engineering, The University of Tokyo, 2010-2014

RESEARCH INTERESTS

Ecotoxicology, Environmental science, Ecological risk assessment, in silico toxicology

SKILLS

- Data analysis with R and Python (multivariate analysis such as principal component analysis, cluster analysis, partial least squares regression, random forest, etc.)
- Toxicity assessment (in vitro/vivo/silico toxicity tests and data analysis)
- Chemical/metabolomic analysis for water/biological samples using mass spectrometry

PEOFESSIONAL POSITIONS

April 2021 - present

JSPS Postdoctoral Research Fellow (PD/CPD), Molecular Ecology and Health (MEcoH) Lab., Center for Marine Environmental Studies (CMES), Ehime University, Japan

April 2021 - present

JSPS Postdoctoral Research Fellow (PD/CPD), Chemical Water Quality and Health Team, KWR Water Research Institute, The Netherlands

June 2020 - March 2021

Guest Researcher, Molecular Ecology and Health (MEcoH) Lab., Center for Marine Environmental Studies (CMES), Ehime University, Japan

April 2019 - March 2020

Project Assistant Professor, Department of Urban Engineering, School of Engineering, The University of Tokyo

April 2016 – March 2019

Graduate research assistant, Department of Urban Engineering, School of Engineering, The University of Tokyo

August 2014 – September 2014

Internship, Division of Water Environment Technology Architecture and Civil Engineering, Chalmers University of Technology

PUBLICATIONS

Peer-reviewed journal paper

1. M Yanagihara, K Hiki, Y Iwasaki: Can chemical toxicity in saltwater be predicted from toxicity in freshwater? A comprehensive evaluation using species sensitivity distributions, Environmental Toxicology and Chemistry, 41: 2021-2027, 2022.
2. M Yanagihara, F Nakajima, T Tobino: Development and application of a metabolomic tool to assess exposure of an estuarine amphipod to pollutants in the environment, Science of the Total Environment, 752, 141988, 2021.
3. T Atmaja, M Yanagihara, K Fukushi: Geospatial valuation of urban farming in improving cities resilience: a case of Malang City, Indonesia, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, XLIII-B5-2020, 107–113, 2020.
4. M Yanagihara, F Nakajima, T Tobino: Effect of control sediment composition on the metabolomic responses of *Grandidierella japonica* during toxicity testing using copper at an acutely toxic level, Journal of Water and Environment Technology, 17 (6), 386-394, 2019.
5. M Yanagihara, F Nakajima, T Tobino: Metabolomic responses of an estuarine benthic amphipod to heavy metals at urban-runoff concentrations, Water Science and Technology, 78 (11), 2349-2354, 2018.
6. M Yanagihara, F Nakajima, T Tobino: Predicting effects of copper on reproduction of the estuarine amphipod *Grandidierella japonica* using metabolic profiles, Journal of Japan Society of Civil Engineers, Ser. G (Environmental Research), Vol.73, pp.III_535-III_541, 2017.

CONFERENCE PRESENTATIONS

International Conferences (* Presenter)

1. M. Yanagihara*, K. Hiki, Y. Iwasaki: Which distribution to choose for deriving a species sensitivity distribution?, SETAC Europe 33rd Annual Meeting (Dublin, May 2023) [Poster, peer-reviewed]
2. A. Reus, R. Hoondert*, M. Yanagihara, C. Houtman, R. van der Oost, M. Dingemans: Evaluation of combined use of in silico tools and bioassays for hazard assessment of emerging chemicals and transformation products in drinking water, XVIth International Congress of Toxicology (ICT 2022) (Maastricht, September 2022) [Poster, peer-reviewed]
3. M. Yanagihara*, K. Hiki, Y. Iwasaki: Predicting saltwater toxicity from freshwater toxicity using species sensitivity distributions, SETAC Europe 32nd Annual Meeting (Copenhagen, May 2022) [Poster, peer-reviewed]
4. M Yanagihara*: Utilization of bioassay for protecting benthic organisms in the water environment, Usable Science Resulting in Impact Series II by Ehime University - De La Salle University International Collaborative Research Laboratory (Webinar, 2021.11) [Oral, Invited talk]
5. M Yanagihara*: A metabolomic tool for assessing toxic effects of urban runoff on aquatic ecosystems, The 1st Symposium of JSPS Core to Core Program “Center of Excellence in Health Risk Assessment for Adaptation to Climate Change” (Manila, 2019.11) [Oral, Invited talk]
6. M Yanagihara*, F Nakajima, T Tobino: Assessment of exposure of chemicals in road dust to an estuarine amphipod by metabolomics, The 19th IWA International Conference on Diffuse Pollution and Eutrophication (Jeju, 2019.10) [Oral, peer-reviewed]
7. F Miura*, T Watanabe, K Watanabe, M Nishiyama, E Ito, M Yanagihara, K Fukushi: Effect of personal hygiene on norovirus transmission within and among households. The 20th International Symposium on Health-Related Water Microbiology, International Water Association, Health-Related Water Microbiology (Vienna, September 2019) [Poster, peer-reviewed]
8. N Yamaguchi*, T Tobino, M Yanagihara, F Nakajima: Relationship of fine particles characterized by flow cytometry with filterability of activated sludge in membrane bioreactors, Water and Environment Technology Conference 2019 Programs and Abstracts, p.110 (Osaka, 2019.7) *The WET Excellent Presentation Award* [Oral and poster, peer-reviewed]
9. M Yanagihara*, F Nakajima, T Tobino: Metabolomic responses of estuarine benthic amphipod to heavy metals in urban runoff relevant concentrations, IWA World Water Congress 2018 (Tokyo, 2018.9) [Oral, peer-reviewed]
10. M Yanagihara*, F Nakajima, T Tobino: Exploration of metabolomic biomarkers in estuarine benthic amphipod for assessing heavy metal exposure in the receiving water environment, the 14th IWA/IAHR International Conference on Urban Drainage 2017 (Prague, 2017.9) [Oral, peer-reviewed]

11. M Yanagihara*, F Nakajima, T Tobino: Effect of copper on metabolomes of estuarine amphipod *Grandidierella japonica*, Water and Environment Technology Conference 2015 Programs and Abstracts, p.27 (Tokyo, 2015.8) *The WET Excellent Presentation Award* [Oral and poster, peer-reviewed]
12. M Yanagihara*, O Modin: Effect of inoculum on microbial electrolysis cell efficiency, Seminar organized by Alliance for global sustainability exchange program, Chalmers University of Technology, Sweden. (Gothenburg, 2014.9) [Oral]

Domestic Conferences (* Presenter)

1. M Yanagihara*, Kyoshiro Hiki, Yuichi Iwasaki: Can chemical toxicity in saltwater be predicted from freshwater toxicity data? An evaluation using species sensitivity distributions, The 55th Annual Conference of Japan Society on Water Environment (Kyoto; Online, 2021.3) [Peer-reviewed, in Japanese]
2. Y Inazumi*, F Nakajima, T Tobino, M Yanagihara: An investigation on ecotoxicity-based prioritization of sediment contaminants, The 54th Annual Conference of Japan Society on Water Environment (Iwate, 2020.3) [Peer-reviewed, in Japanese]
3. F Miura*, M Yanagihara, K Fukushi: Forecasting acute gastroenteritis cases using time series of norovirus concentration in sewage, The 54th Annual Conference of Japan Society on Water Environment (Iwate, 2020.3) [Peer-reviewed, in Japanese]
4. M Yanagihara*, F Nakajima, T Tobino: Assessment of ecotoxicity by metabolomic analysis using a high-resolution mass spectrometer: application and challenge, Annual Conference of Society of Environmental Science, Japan (Nagoya, 2019.9) [Oral, peer-reviewed, in Japanese]
5. M Yanagihara*, F Nakajima, T Tobino: Development of a tool to assess exposure to contaminants by analyzing metabolomic responses of an estuarine benthic organism with a high-resolution mass spectrometer, The 22nd Symposium of Japan Society on Water Environment (Hokkaido, 2019.9) [Oral, peer-reviewed, in Japanese]
6. M Yanagihara*, F Nakajima, T Tobino: Exposure Biomarkers for Toxicants in Sediment by Analyzing Metabolomes of Estuarine Amphipod, The 53rd Annual Conference of Japan Society on Water Environment (Yamanashi, 2019.3) [Oral, peer-reviewed, in Japanese]
7. M Yanagihara*, F Nakajima, T Tobino: Metabolomic characterization of *Grandidierella japonica* exposed to heavy metals and organic pollutants, The 24th Annual Meeting of The Japanese Society of Environmental Toxicology (Gifu, 2018.9) *Poster Award* [Poster, in Japanese]
8. M Yanagihara*, F Nakajima, T Tobino: Effect of reference sediment composition in toxicity test on metabolomic responses of *Grandidierella japonica*, The 52nd Annual Conference of Japan Society on Water Environment (Hokkaido, 2018.3) [Oral, peer-reviewed, in Japanese]
9. M Yanagihara*, F Nakajima, T Tobino: Predicting effects of copper on reproduction of the estuarine amphipod *Grandidierella japonica* using metabolic profiles, The 54th Forum of Japan Society of Civil Engineers (Gifu, 2017.11) [Oral, peer-reviewed, in English]
10. M Yanagihara*, F Nakajima, T Tobino: Metabolomic characterization of estuarine amphipod exposed to heavy metals using high resolution mass spectrometer, The 51st Annual Conference of Japan Society on Water Environment (Kumamoto, 2017.3) [Oral, peer-reviewed, in Japanese]
11. M Yanagihara*, F Nakajima, T Tobino: Predicting chronic effects of copper on amphipod by metabolomics, The 22nd Annual Meeting of The Japanese Society of Environmental Toxicology (Ehime, 2016.9) [Poster, in Japanese]
12. M Yanagihara*, F Nakajima, T Tobino: Assessment of chronic effect on *Grandidierella japonica* and metabolomic analysis by high resolution mass spectrometer, The 50th Annual Conference of Japan Society on Water Environment (Tokushima, 2016.3) [Oral, peer-reviewed, in Japanese]

AWARDS

Conference Awards

- The WET Excellent Presentation Award, Water and Environment Technology Conference 2019
- Poster Award, The 24th Annual Meeting of The Japanese Society of Environmental Toxicology
- The WET Excellent Presentation Award, Water and Environment Technology Conference 2015

Others

- Department Award, Department of Urban Engineering, School of Engineering, the University of Tokyo (March 2019)

- Department Award, Department of Urban Engineering, Faculty of Engineering, the University of Tokyo (March 2014)

GRANTS/SCHOLARSHIPS

1) JSPS Grant-in-Aid Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)) (Grant Number: 22KK0060, October 2022 – March 2025) [co-PI]
2) Grant-in-Aid for JSPS Research Fellow (CPD), Japan Society for the Promotion of Science (JSPS) (19.5 million JPY, Grant Number: 21J00885, April 2021 – March 2026) [PI]
3) Grant-in-Aid for Young Scientists, Japan Society for the Promotion of Science (April 2020 - March 2022) [PI] *Declined due to change of employment conditions
4) Research Grant, Kurita Water and Environment Foundation (980,000 JPY, October 2019 - September 2020) [PI]

TEACHING AND MENTORING EXPERIENCE

Lectures as Project Assistant Professor (April 2019 – March 2020)

Department of Urban Engineering, School of Engineering, The University of Tokyo

- Laboratory classes: Lectures on the analysis of nitrate, phosphorus, trihalomethane for 20 undergraduates
- Supervision of five graduate students and two undergraduate students

Master's Program in Environmental Engineering, Vietnam Japan University, Hanoi, Vietnam

- Lectures on chemical reaction engineering

Teaching Assistant (June 2016 – November 2017)

Department of Urban Engineering, School of Engineering, The University of Tokyo

- Assistance of experiments to analyze heavy metals with ICP-MS, polycyclic aromatic hydrocarbons with GC-MS
- Maintenance of bioreactors to teach wastewater treatment