MARICOR JANE ARLOS

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EDUCATION

2018	Ph.D. Biology, Collaborative Water Program, University of Waterloo, Canada
2013	M.A.Sc., Civil & Environmental Engineering (CEE), University of Waterloo, Canada
2011	B.A.Sc., CEE, Water Resources Option (With Distinction), University of Waterloo, Canada

ACADEMIC POSITION

2020 – Present	Assistant Professor, CEE, University of Alberta. Start of employment: April 1, 2020
2018 – 2020	Postdoctoral Fellow, ETH-Zürich, Switzerland. Fellowship held at the Swiss Federal Institute of Aquatic Science and Technology (Eawag)

CURRENT RESEARCH FUNDING (in CAD)

2021 – 2026	PI – NSERC Discovery Grant: *"In situ* fate of wastewater-derived micropollutants - impacts of future climatic scenarios".	$180,000
2021 – 2026	PI – NSERC Discovery Grant Supplemental for Early Career Researchers	$12,500
2020 – 2022	PI – University of Alberta, Faculty of Engineering Start-up Funding	$150,000
2020 – 2023	PI – University of Alberta, Future Energy Systems Award for ECR. **"**Employing *in vitro* bioassays to assess OSPW treatment"	$100,000
2020 – 2022	Co-PI – Environment and Climate Change Canada – Increasing Knowledge on Plastic Pollution Initiative: "Microplastic fate and transport to predict impacts and thresholds of exposure"	$159,117

PREVIOUS RESEARCH FUNDING OBTAINED (in CAD)

2018 – 2020	ETH-Zürich PDF. (Equivalent to CHF205,600 for salary and research expenses)	$270,000
2018 – 2020	Natural Sciences and Engineering Research Council (NSERC) PDF Proposal was ranked 1/33 applications submitted to Committee 201 (Civil Eng)	$90,000
2015 – 2018	NSERC Postgraduate Scholarship, Doctoral, (PhD stipend)	$63,000
2015 – 2018	University of Waterloo President's Graduate Scholarship (PhD stipend)	$30,000

SCHOLARSHIPS, AWARDS, AND DISTINCTIONS

2021	Nominee, Faculty of Engineering Teaching Award, University of Alberta
2018	William B. Pearson Medal for Creative Doctoral Thesis, University of Waterloo
2018	Nominee, Alice Wilson Award, The Royal Society of Canada
2018	Tri-Agency Early Degree Completion Award, University of Waterloo
2017	Biology Department Teaching Assistantship (TA) Award, University of Waterloo
2016	Waterloo Institute for Nanotechnology – Nanofellowship, University of Waterloo
2016	Philip Jones Award – Best Student Presentation, Canadian Association on Water Quality
2016	Allan Holmes Scholarship, Grand River Conservation Foundation
2016	Biology Graduate Symposium – People's Choice Award, University of Waterloo
2016	Society of Toxicology and Chemistry (SETAC) North America Travel Award
2016 & 2017	Graduate Student Research Travel Assistantship, University of Waterloo
2015	Golder Associates Graduate Scholarship, Water Institute, University of Waterloo
2014	Royal Bank of Canada Water Scholars Graduate Entrance Scholarship
2013	Sanford Fleming TA Award, CEE, University of Waterloo
2006 – 2011	Queen Elizabeth II Undergraduate Aiming for the Top Scholarship, Ontario Government
2006	President Entrance Scholarship, University of Waterloo
2006	Faculty of Engineering Entrance Scholarship, University of Waterloo

PEER-REVIEWED PUBLICATIONS (h-index = 10; FWCI* including new (2021) publications = 1.44

1. Fattahi A, Jaciw-Zurakowsky I, Srikanthan N, Bragg L, Liang R, Zhou N, Servos M, **Arlos M** (2021). Effect of Background Water Matrices on Pharmaceutical and Personal Care Product Removal by UV-LED/TiO_2. Catalyst 11(5):576. Impact Factor [IF] = 4.15
2. Fattahi A, **Arlos M**, Bragg L, Liang R, Zhou N, Servos M. (2021). "Degradation of natural organic matter using Ag-P25 photocatalyst under continuous and periodic irradiation of 405 and 365 nm UV-LEDs". J. Environ. Chem. Eng. 9(1):104844. IF= 4.3.
3. Tetreault G, Kleywegt S, Marjan P, Bragg L, **Arlos M**, Fuzzen MLM, Smith B, Moon T, Massarsky A, Metcalfe C, Oakes K, McMaster M, Servos M. (2021). "Biological responses in fish exposed to municipal wastewater treatment plant effluent *in situ".* Water Quality Research 56(2):83-99. IF = 1.5.
4. Fattahi A**, Arlos M**, Bragg L, Kowalczyk S, Liang R, Schneider O, Zhou N, Servos M. (2021). "Photodecomposition of pharmaceuticals and personal care products using P25 modified with Ag nanoparticles in the presence of natural organic matter". Sci. Total Environ. 752:142000. IF = 7.9.
5. **Arlos M**, Focks A, Hollender J, Stamm C. (2020). "Improving risk assessment by predicting the survival of field gammarids exposed to dynamic pesticide mixtures". Environ. Sci. Technol. IF = 7.9
6. **Arlos M,** Schuerz F, Fu Q, Lauper B, Stamm B, Hollender J. (2020). "Coupling river concentration simulations with a toxicokinetic model effectively predicts the internal concentrations of wastewater-derived micropollutants in field gammarids". Environ. Sci. Technol. 54(3): 1710-1719. IF = 7.9
7. de Wilt A, **Arlos M**, Servos M, Rijnaarts H, Langenhoff A, Parker W. (2020). "Improved biodegradation of pharmaceuticals after mild photocatalytic pre-treatment". Water and Environment Journal. 1:1-11. IF = 1.3
8. Liang R, Van Leuwen J, Bragg L, **Arlos M**, Fong L, Schneider O, Jaciw-Zurakowsky I, Fattahi A, Rathod S, Peng P, Servos M, Zhou N. (2019). "Utilizing UV-LED pulse width modulation on TiO_2 advanced oxidation processes to enhance the decomposition efficiency of pharmaceutical micropollutants". Chem. Eng. J. 361: 439-449. IF = 13.3
9. Fattahi A, Liang R, Kaur A, Schneider O, **Arlos M**, Peng P, Servos M, Zhou N. (2019). "Photocatalytic degradation using TiO_2-graphene nanocomposite under UV-LED illumination: Optimization using response surface methodology". J. Environ. Chem. Eng. 7(5): 103366. IF = 4.3
10. **Arlos M**, Parker W, Bicudo J, Law P, Hicks K, Fuzzen M, Andrews S, and Servos M. (2018). "Modeling the exposure of wild fish to endocrine active chemicals: Potential linkages of total estrogenicity to field-observed intersex". Water Res. 139: 187-197. IF = 9.1
11. **Arlos M**, Parker W, Bicudo J, Law P, Marjan P, Andrews S, Servos M. (2018). "Multi-year prediction of estrogenicity in municipal wastewater effluents". Sci. Total Environ. 610: 1103-1112. IF = 7.9
12. **Arlos M**, Liang R, Fong L, Zhou N, Ptacek C, Andrews S, Servos M. (2017). "Influence of methanol when used as a water-miscible carrier of pharmaceuticals in TiO_2 photocatalytic degradation experiments". J. Environ. Chem. Eng. 5(5): 4497-4504. IF = 4.3.
13. Hatat-Fraile M, Liang R, **Arlos M**, He X, Peng P, Servos M, Zhou N. (2017). "Concurrent photocatalytic and filtration processes using doped TiO_2 coated quartz fiber membranes in a photocatalytic membrane reactor". Chem. Eng. J.330: 531-540. IF = 13.3
14. Liang R, Fong L, **Arlos M**, Van Leeuwen J, Shahnam E, Peng P, Servos M, Zhou N. (2017). "Photocatalytic degradation using one-dimensional TiO_2 and Ag-TiO_2 nanobelts under UV-LED controlled periodic illumination". J. Environ. Chem. Eng. 5(5): 4365-4373. IF = 4.3
15. Hicks K, Fuzzen M, McCann E, **Arlos M**, Bragg L, Kleywegt S, Tetreault G, McMaster M, Servos M. (2017). "Reduction of intersex in a wild fish population in response to major municipal wastewater treatment plant upgrades". Environ. Sci. Technol. 51(3): 1811-1819. IF = 7.9
16. **Arlos M**, Liang R, Hatat-Fraile M, Bragg L, Zhou N, Servos M, and Andrews S. (2016). "Photocatalytic decomposition of selected estrogens and their estrogenic activity by UVLED irradiated TiO_2 immobilized on porous titanium sheets via thermal-chemical oxidation". J. Haz. Mat. 318: 541-550. IF = 9.0
17. **Arlos M.**, Hatat-Fraile M, Liang R, Bragg L, Andrews S, Servos M. (2016). "Photocatalytic decomposition of organic micropollutants using immobilized TiO_2 having different isoelectric points". Wat Res. 101: 351-361. IF = 9.3
18. **Arlos M**, Bragg L, Parker W, Servos M. (2015). "Distribution of selected antiandrogens and pharmaceuticals in a highly impacted watershed". Water Res., in Special Issue entitled " Occurrence, fate, removal and assessment of emerging contaminants in water in the water cycle (from wastewater to drinking water)". 72: 40-50. IF = 9.3
19. **Arlos M**, Bragg L, Servos M, Parker W. (2014). "Simulation of the fate of selected pharmaceuticals and personal care products in a highly impacted reach of a Canadian watershed". Sci. Total Environ. 485: 193-204. IF = 7.9

*FWCI excluding new (2021) publications = 1.2

SELECTED ORAL PRESENTATIONS (since 2017 only) *Speaker, underlined = HQP

1. Barrow K*, Escher B, **Arlos M** (2021). "Using in vitro bioassays to predict the impact of OSPW on receiving aquatic environments." 47th Canadian Ecotoxicology Workshop. Halifax, Nova Scotia.
2. Barrow K*, **Arlos M** (2021). "Assessment of the efficiency of water treatment using a battery of in vitro bioassays". 1st IWA Canadian Young Water Professionals Conference (Virtual Meeting).
3. **Arlos M*,** Focks A, Hollender J, Stamm C (2020). "Predicting the survival of gammarids in the field provides additional insights on the impacts of dynamic pesticide exposures". SETAC North America (Virtual Meeting).
4. **Arlos M*,** Schürz F, Fu Q, Lauper BL, Stamm C, Hollender J. (2019). "Coupling of river and toxicokinetic models effectively predicts the whole-body burden in field gammarids". SETAC North America. Toronto, Canada
5. **Arlos M*,** Schürz F, Fu Q, Lauper BL, Stamm C, Hollender J. (2019) "Employing river and toxicokinetic models to estimate the whole-body burden in field gammarids". 11th IWA Micropol Conference. Seoul, South Korea
6. **Arlos M*** (2017). "Modeling the exposure of wild fish to endocrine disrupting chemicals: linkages of stressor concentrations to intersex". Eawag. Dübendorf, Switzerland.
7. **Arlos M*,** Parker WJ*, Andrews SA, Hicks KA, Fuzzen MLM, Servos MR (2017). Modelling the exposure of wild fish species to endocrine active chemicals: linkages of stressor concentrations to physiological consequences. Water Environment Federation Technical Exhibition and Conference. Chicago, IL.
8. **Arlos M*,** Parker WJ*, Andrews SA, Hicks KA, Fuzzen MLM, Servos MR (2017). Modelling the exposure of wild fish species to endocrine active chemicals: linkages of stressor concentrations to intersex. 10th Micropol & Ecohazard Conference. Vienna Austria.

INVITED PRESENTATIONS

1. **Arlos, M.** (2021) "Evaluating exposure to micropollutants: linkages of stressor concentrations to biological effects in aquatic organisms". Guest Lecturer BBME 600 Seminar. Biomedical Engineering. McGill University
2. **Arlos, M**. (2021). "Assessing fate and transport modelling of emerging contaminants". Environment and Climate Change Canada (ECCC) Municipal Wastewater Effluent Working Group Seminar. Virtual Meeting.
3. **Arlos M.** (2020). "My academic job interview journey". Eawag Postdoctoral and Scientist Association - Professional Development. Dübendorf, Switzerland.
4. **Arlos M,** Liang R, Hatat-Fraile M, Zhou N, Andrews S, Servos MR (2017). "Bench-scale treatment of selected pharmaceuticals and endocrine disrupting compounds using UV-LED irradiated TiO_2 immobilized on porous supports". 14th International Forum on Micro-Nano Manufacturing Technology for Graduate Students (Beihang University). Beijing, China.

HIGHLY QUALIFIED PERSONNEL including FUNDING/AWARDS

	First and Last Name	*Degree*	*Scholarship*
1.	Kia Barrow	MSc (2020 – 2022)	COBCARES Scholarship
2.	Afrida Nurain	MSc (2021 – 2023)	-–
3.	Daniela Pulgarin Zapata	MSc (2021 – 2023)	Colfuturo Scholarship
4.	Seth Bumagat	UG (Chem Eng)	Dean's Research Award (Winter 2021) NSERC USRA (Summer 2021)
5.	Demi Meier	UG (Animal Health)	I-STEAM Pathway Intern (Summer 2021)
6.	Kyra Jubinville	UG (Env Eng)	FoE Co-op Funding (Summer 2021)
7.	Alex Zhou	UG (Env Eng)	Dean's Research Award (Fall 2021)

MEDIA ARTICLES ABOUT ME

1. "Meet Dr. Arlos" Female Engineering Mentorship, University of Alberta, 2021. https://bit.ly/3A5cpbQ
2. "Making connections beyond the classroom". Water Institute, University of Waterloo, May 2, 2018. https://goo.gl/p3oZUk
3. "Water connections – from Canada to the Philippines" by Sylvie Spraakman, Waterlution, July 14, 2017. https://goo.gl/N5S636

REFERENCES

1. Dr. Kelly Munkittrick: ACWA Project Collaborator. Department of Biological Sciences, University of Calgary. Email: kelly.munkittrick@uacalgary.ca
2. Dr. Juliane Hollender: Postdoctoral Fellowship Supervisor (2018 – 2020), Swiss Federal Institute for Aquatic Science and Technology (Eawag). Email: juliane.hollender@eawag.ch