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Engineering & Scientific Consulting

Kishor Acharya, Ph.D., M.Sc.

Senior Scientist | Chemical Regulation and Food Safety
Harrogate
+44 (0) 1423 878978 | kacharya@exponent.com

Professional Profile

As a member of the environmental fate team, Dr. Acharya conducts environmental risk assessments for industrial chemicals and biocides as part of the regulatory requirements for these compounds (Commission Regulations 1907/2006 and 528/2012). He assists with the preparation of assessment reports and dossiers for EU and national regulatory authorities for both Biocidal product and active substance renewals.

Prior to joining Exponent, Dr. Acharya worked as a post-doctoral researcher with Environmental Engineering research team at Newcastle University and played a leading role in assembling a portable toolbox called “Lab in Suitcase” for real-time and on-site in-depth microbial hazard surveying. He has experience in using multitude of techniques and data analysis tool for water quality and quantity surveying, pollution source tracking in the river basin management, hazard mapping, microbial risk assessment and ecosystem services. Dr. Acharya holds a Ph.D. in Environmental Engineering from Newcastle University. His Ph.D. research provided the basis for a rational framework to establish and calibrate QSBR models that can be applied to predict biodegradation rates and ultimately the half-life of a given chemical, which is the endpoint used for persistence assessment of chemicals. In addition, his research also provided an insight on the microbial ecology of putative degraders for a given environment and their relationship with chemical biodegradation.

Academic Credentials & Professional Honors

Ph.D., Environmental Engineering, Newcastle University, UK, 2018

M.Sc., Water Science, University of Duisburg-Essen, Germany, 2013

B.Sc., Pharmacy, Kathmandu University, Nepal, 2010

Academic Appointments

Postdoctoral Fellow, Newcastle University, Jan 2018 - October 2021

Prior Experience

Research Associate: Water Quality and Risk Modelling, Newcastle University, 2018 - 2021

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Languages

Hindi

English

Nepali

Publications

Selected Publications

Pantha K, Acharya K, Mohapatra S, Khanal S, Amatya N, Ospina-Betancourth C, Butte G, Shrestha S, Rajbhandari P, Werner D. Faecal pollution source tracking in the holy Bagmati River by portable 16S rRNA gene sequencing. npj Clean Water 2021, 4, 12.

Acharya K, Blackburn A, Mohammed J, Haile AT, Hiruy AM, Werner D. Metagenomic water quality monitoring with a portable laboratory. Water Research 2020, 184, 116112.

Ott A, Martin TJ, Acharya K, Lyon DY, Robinson N, Rowles B, Snape JR, Still I, Whale GF, Albright VC, Baverback P, Best N, Commander R, Eickhoff C, Finn S, Hidding B, Maischak H, Sowders KA, Taruki M, Walton HE, Wennberg AC, Davenport RJ. Multi-laboratory Validation of a New Marine Biodegradation Screening Test for Chemical Persistence Assessment. Environmental Science & Technology 2020, 54(7), 4210-4220.

Acharya, K., Werner, D., Dolfing, J., Barycki, M., Meynet, P., Mrozik, W., Komolafe, O., Puzyn, T. and Davenport, R.J., 2019. A quantitative structure-biodegradation relationship (QSBR) approach to predict biodegradation rates of aromatic chemicals. Water Research.

Martin TJ, Snape JR, Bartram A, Robson A, Acharya K, Davenport RJ. Environmentally relevant inoculum concentrations improve the reliability of persistent assessments in biodegradation screening tests. Environmental Science and Technology 2017, 51(5), 3065-3073.

Martin TJ, Goodhead AK, Acharya K, Head IM, Snape JR, Davenport RJ. High Throughput Biodegradation-Screening Test to Prioritize and Evaluate Chemical Biodegradability. Environmental Science and Technology 2017, 51(12), 7236-7244.

Presentations

A Kishor, D Werner. Comparative assessment of conventional and molecular methods, including MinION nanopore sequencing, for surveying water quality. Platform Presentation, 8th IWA Microbial Ecology and Water Engineering Specialist Conference (MEWE2019), Hiroshima, Japan, 2019

Acharya K, Dolfing J, Meynet P, Mrozik W, Werner D and Davenport R. Assessing the biodegradation potential of environmental inocula for organic pollutants by quantifying their catabolic genes and transcripts. Poster Presentation, 7th Federation of European Microbiological Societies (FEMS), Valencia, Spain, 2017

Acharya K, Dolfing J, Meynet P, Mrozik W, Werner D and Davenport R. Quantitative structure-biodegradation relationship (QSBR) development and thermodynamic analysis to understand the biodegradation rates of chemicals. Poster Presentation, 25th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) Europe, Barcelona, Spain, 2015