Curriculum Vitae

Since 2014 my research work has been reduced from 100% to 60% - 80 % due to family duties

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Hernández R., Aurea C. (Dr.)

1. Personal Information

Mexican Citizen
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2. Education

Ph.D.	2013	ETH Zurich, Switzerland, Department of Environmental Systems Science
M.S.	2008	Oregon State University, USA, Department of Chemistry
B.S	2006	Oregon State University, USA, Department of Chemistry

3. Employment History

2022 - Present	SNSF PRIMA Professorial Fellowships, Institute of Geography and Oeschger Center for Climate Change Research, University or Bern (UniBe), Switzerland
2018 - 2022	Research Fellow, Institute of Geography and Oeschger Center for Climate Change Research, University or Bern (UniBe), Switzerland
2014 - 2017	Post-Doctoral Research Fellow, Swiss Federal Institute of Aquatic Science and Technology (Eawag), Switzerland
2014	Post-Doctoral Research Fellow, Institute for Chemical and Bioengineering, ETH Zurich (Last months of pregnancy before maternity leave)
2005 - 2009	Graduate Research Assistant, Department of Environmental and Molecular Toxicology, Oregon State University
2004	Student Assistant - International Internship, Cooperative for Social Action and Sustainable Development, San Jose, Costa Rica
2001 - 2003	Technical Collaborator, Brookhaven National Laboratory, New York, USA

4. Institutional Responsibilities

2022–Present	Group leader Organic Micropollutants, Paleolimnology Unit, Department of Geography, UniBe, Switzerland
2018–Present	Deputy group leader (PI - Prof. Martin Grosjean), Paleolimnology Group, Department of Geography, UniBe, Switzerland
2018–Present	Seminar Series Organizer, Environmental Pollution Cluster, UniBe, Switzerland
2021	Representative in Laboratory Commission, Department of Geography, UniBe, Switzerland

5. Approved Research Projects

2021 TraPPP: Tracing plant protection products (PPPs) across the environment
PRIMA Professorial Fellowship, Swiss National Sciences Foundation (SNSF).
PI A.C. Hernández. 1,507,000 CHF

2017 Evaluating Organic Contaminant Fluxes in Sediments
Academic Transition Grant, Eawag, Swiss Federal Institute of Aquatic Science and Technology
PI A.C. Hernández……46,000 CHF

6. Supervision of Students

***1 PhD student**:* Praveen Kuma (2013, Eramus Programme).
***2 PhD Scientific Committee member**:* Rosa María Baena Noruegas (Univeristy of Cádiy, Spain, 2016) and Marina Pintado Herrera (Univeristy of Cádiy, Spain, 2015).
***9 M.S students**:* Emmanuel Schaad (ongoing- UniBe), Nanyan Gosain (ongoing- UniBe), Michelle Duer (UniBe, 2022), Nicole Fahrni (UniBe, 2021). Raymmah Garcia (Oregon State Univeristy, USA, 2017), Adrian

Mueller (ETH Zurich, 2016), Barbara Günthardt (ETH Zurich, 2016), Tobias Hollingshaus (University of Applied Sciences, Idstein, Germany, 2011), and Joris Buiter (University of Duisburg-Essen, Germany, 2011).
1 B.S studens*:* Olivia Wagner (ongoing- UniBe).

7. Teaching Activities

2019 - Present	Seminar Paleolimnology: Environmental Pollution of Aquatic Ecosystems (Master program course, 5ETC), UniBe, Switzerland
2018-2020	Soil Biogeochemistry (Master program course, 3ETC, co-taught) UniBe, Switzerland
2018-2020	Challenges in Geography II; Environmental Pollution (Master program course, 3ETC co-taught), UniBe, Switzerland
2009 - 2013	Analysis of Organic Pollutants -Tracing polar organic contaminants (Master program course, 3ETC, co-taught), ETH Zürich, Switzerland

8. Scientific Reviewing Activities

2021-202	Guest Editorial: Environmental Science and Pollution Research Journal – Special Issue on Contaminated Sediments
2009–Present	*Regular reviewer for journals:* Analytical Chimica Acta, Chemosphere, Current Analytical Chemistry, Environmental Toxicology and Chemistry, Environmental Pollution, Environmental Science and Technology, Environmental Science and Technology Letters, Environmental Science and Pollution Research, International Journal of Environmental Pollution and Remediation, Journal of Hazardous Materials, Science of the Total Environment and Water Research
2016	Guest Editorial: Environmental Science and Pollution Research Journal – Special Issue on Contaminated Sediments (ESPR, 2016)

9. Active Memberships in Scientific Societies

Swiss Chemical Society
PAGES: Past Global Changes

10. Organization of conferences and scientific meetings

2022	Swiss Chemical Society Lecture Series (2020/2021-CoV postponed), UniBe, Switzerland
2021	Chair and main organizer of the 2nd International Conference on Contaminated Sediments (ConTaSed 2021-)/120 participants/UniBe, Switzerland http://oeschger.unibe.ch/contased2021
2021	International PhD/Postdoc Summer School: Environmental Pollution: From Soils to Human Health/30 participants/UniBe, Switzerland https://www.onehealth.unibe.ch/
2015	Satellite Event on Combining Strategies and Tools to Identify Priority Chemicals in the Environment, 15th EuCheMS - International Conference on Chemistry and the Environment /80 participants, Leipzig, Germany
2015	International Conference on Contaminated Sediments (ConTaSed 2015)/100 participants, Monte Verita, Ascona, Switzerland –Assistant Organizer

11. Prizes and awards

2021	***ES&T* Excellence in Review Award** Environmental Science and Technology. Journal of the American Chemical Society, Washington, D.C., USA	
2020	**Scientific Exchange** Swiss National Sciences Foundation (SNSF)	20,000 CHF
2019	**120% Solution Grant** Faculty of Natural Sciences, University of Bern	13,000 CHF
2018	**120% Solution Grant** Faculty of Natural Sciences, University of Bern	15,000 CHF
2019	**Conference Grant** Division of Fundamental Research (DFR) of the Swiss Chemical Society support grant	3,000 CHF
2019	**Young Academics Support Travel Grant** Faculty of Natural Sciences, University of Bern, Switzerland	1,000 CHF
2014	**Support Grant for Young Scientist** Division of Analytical Sciences of the Swiss Chemical Society support grant for young scientist. Contaminated Sediment Conference (ConTaSed 2015), Monte Veritá, Ascona, Switzerland	1,000 CHF

2008 **Fellowship program** 1,200 USD
Carl Storm Underrepresented Minority Fellowship program. Gordon Research Conference, Holderness, NH, USA

2006 **Intern Program Grant** 2,000 USD
National Institute of Environmental Health Sciences (NIEHS) minority Intern Program Grant. Oregon State University, Corvallis, OR, USA

12. Career breaks

I have two children born on 22.04.2014 and on 01.12.21 with a total pregnancy/health leave of one year. Since 2014 my research work has been reduced from 100% to 60% to 80% due to family duties.

Major Scientific Achievements

I have integrated two disciplines: environmental chemistry and sedimentology. By linking these two research areas, I am a pioneer in the analysis of medium polar organic contaminants in sediment records using high-resolution mass spectrometry (HR-MS) and data mining. I have developed novel analytical methods and applied multiproxy-workflows to detect and identify a wide range of organic contaminants in natural archives over the last 100 years. The approaches are being applied to study compounds that could not be detected in the past and to understand depositional systems to provide context to soil and sediment records. Publication of these research findings in the journal Environmental Science and Technology (ES&T) has ignited considerable interest in the research community; one of my articles (2184 views, 43 almetric) was distributed in a press release from ES&T in October 2017, and my latest publication (ES&T 2020, 848 views, 40 altmetric) was distributed in a press release from the University of Bern in October 2020. Some of my specific aims have been to characterize the Anthropocene and understand organic contaminate fluxes. Furthermore, my research has been extended to the investigation of the occurrence, fate, and environmental impact of plant protection products (organic pesticides) in soil and sediment and their effect on microbial communities and benthic organisms. Additionally, I actively contribute to the scientific community through editing and reviewing activities, and in 2021 I have received the ES&T Excellence in Review Award.

Keywords: Organic contaminants, soil, sediment, biogeochemistry, pollution, pesticides, plant protection products, lakes, aquatic environments, analytical chemistry, mass spectrometry, liquid chromatography, high-resolution, spatial distribution, temporal trends, risk assessment, Anthropocene, fluxes, multiproxy-workflows .

Founding sources for research: Oregon Health Sciences University Medical Research Fund (OHSU), Federal Office for the Environment (FOEN), Swiss National Sciences Foundation (SNSF), Swiss Federal Institute of Aquatic Sciences and Technology (Eawag), Interfaculty Research Cooperation (IRC) - University of Bern.