

John Perona, Ph.D., J.D.

Experienced professional brings expertise in scientific research, environmental law and education to address how advances in science and engineering can be incorporated into policymaking and advocacy. Specializing in climate change, the transition to a renewable energy economy, and biotechnology.

PROFESSIONAL PROFILE

Policy, advocacy and writing

- Author of a comprehensive handbook on climate science and policy, targeted to US citizen advocates, titled *From Knowledge to Power: The Comprehensive Handbook for Climate Science and Advocacy* (Ooligan Press, Portland OR, 352 pp, to be published in October, 2021).
- Critical analysis of the California Sustainable Groundwater Management Act, combining legal and scientific perspectives (published in *Environmental Law* 46(3), (2015)).
- Critical analysis of the basis for government regulation of genetically modified organisms in agriculture, combining legal and scientific arguments (published in *J. Land Use & Environmental Law*, 32(1), 75-101 (2016)).
- Exhaustive review of the legal, policy and scientific basis of biofuels development in the United States, with particular focus on biodiesel (published in *Energy Law Journal*, 38(1), 165-212 (2017)).
- Citizens' Climate Lobby: citizen lobbyist. Participation in nonpartisan Oregon and Washington DC meetings with US senators and representatives to advocate for CCL's carbon fee & dividend proposal. Diverse community outreach activities for CCL (2014-2021), including public presentations and panel discussions on CCL's carbon pricing policy. Presently serving as CCL liaison for Senator Ron Wyden.
- Climate Reality leader training with Vice President Gore (Houston, August 2016).
- Active participant on the Transportation Committee of the Metro Climate Action Team, Oregon League of Conservation Voters.

Environmental and energy law

- Seven awards for academic achievement towards J.D. in 2008 (class rank: 3/26)
- Legal internship: Environmental Defense Center, Santa Barbara CA (2005-2008)
--State and federal Public Records Act requests

--Analysis of scientific/legal materials: fossil fuel infrastructure, water rights, and land use

- Earthrise legal clinic, Lewis & Clark University (2014-2015) – Preparation of internal memoranda and legal briefs related to East Coast natural gas pipeline development. Expertise with NEPA, Endangered Species Act, Natural Gas Act, FERC and EPA proceedings. Credit towards LL.M.
- Volunteer, CRAG environmental law firm, Portland OR (2015-2016). Preparation of legal materials and advocacy against industry proposals for liquified natural gas (LNG) facilities on the Oregon coast.

Scientific research and service

- Full professor of Biochemistry with tenure since 2004
- 27 years service on university faculties in Chemistry and Biochemistry
- Authored over 100 articles in Biochemistry and related scientific fields.
- Supervised 14 Ph.D. dissertations in Biochemistry and related fields.
- Career fundraising of ~\$10 million from federal and state sources.
- Presently funded by NASA and NIH for work in environmental biochemistry.
- *Professional service*: includes review panels at the National Institutes of Health (2001-2010), associate editorship of the *Journal of Biological Chemistry* (2004-2008), and ongoing reviews of grants and articles by other researchers.
- Consultant for private biotechnology firms in California.
- Patent: *Generation of mini-circle DNA with physiological supercoiling*; PTA 05-064. US patent application number 7,622,252 B1 issued Nov 24, 2009. University of California Reference No. UC2006-035-2
- University webpage <https://www.pdx.edu/chemistry/peronamembers> provides detail on current laboratory research projects in synthetic biology and sulfur assimilation by methanogens.
- *Dissertation*: “Crystal structure of the *E. coli* glutaminyl-tRNA synthetase:tRNA^{Gln} complex at 2.8 Å resolution” (Yale University, 1990). Advisors: Dr. Dieter Soll and Dr. Thomas Steitz. Lead articles published in *Science*, December, 1989.
- Details of publications, grants and supervised dissertations available on request.

Work as an educator

- Extensive experience teaching graduate and undergraduate courses at universities in California and Oregon, including:
 - Environmental chemistry/ biochemistry (graduate/undergraduate).
Topics: pollution control, energy, climate, synthetic biology solutions
 - Metabolic biochemistry (upper level undergraduates)
 - Synthetic biology and biotechnology (graduate level)

- Public lectures/interviews on climate change and renewable energy in Santa Barbara, CA and Portland OR (2008-2021)
- Coordinated and delivered a public seminar series on climate change, renewable energy, and policy solutions, for citizen advocates (eight monthly seminars in Portland OR, 2017-2018). Created supporting website for the series. Further climate education speaking engagements in 2019-2021.

PROFESSIONAL EXPERIENCE

27 years experience leading a prolific, well-funded laboratory (3-12 students, research assistants and postdoctoral scholars), integrating techniques in genetics, molecular biology, biochemistry and biophysics to learn how proteins and nucleic acids interact to maintain the living cell. *Recently, we are applying our expertise in Biochemistry to study microorganisms that play a key role in Earth's carbon cycle.*

2011-2021	Professor, Department of Chemistry, Portland State University
2011-2021	Adjunct Professor of Biochemistry & Molecular Biology, Oregon Health & Science University
2004-2012	Professor, Department of Chemistry & Biochemistry, University of California, Santa Barbara (UCSB)
2000-2004	Associate Professor, Dept. of Chemistry & Biochemistry, UCSB
1994-2000	Assistant Professor, Dept. of Chemistry & Biochemistry, UCSB
1990-1994	Postdoctoral Scholar, University of California, San Francisco
1990	Postdoctoral Scholar, Yale University

TRAINING AND EDUCATION

1983	B.S., Chemical Engineering, Rutgers University (<i>cum laude</i>)
1986	M.Phil., Molecular Biophysics and Biochemistry, Yale University
1990	Ph.D., Molecular Biophysics and Biochemistry, Yale University
2008	J.D., Santa Barbara College of Law (<i>with honors</i>)
2016	LL.M., Environmental and Natural Resources Law, Northwestern College of Law, Lewis & Clark University (<i>magna cum laude</i>)