

# John Ernest Kratz, PhD

## CONTACT

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## EDUCATION

**COLUMBIA UNIVERSITY**  
PHD IN BIOLOGICAL SCIENCES  
New York, NY | October 2010

**RICE UNIVERSITY**  
BA/BFA IN BIOLOGY AND  
PHOTOGRAPHY  
Houston, TX | May 2000

**UCSD EXTENSION**  
C/C++ PROGRAMMING CERTIFICATE  
San Diego, CA | December 2012

## INTERESTS

Data Science • Data Publication • Data  
Citation • Data Metrics • Open Access •  
Open Science

## COURSEWORK

**COLUMBIA UNIVERSITY**  
Channel Structure & Function  
Signal Transduction  
Computational Genomics  
**Teaching Assistant**  
Neurobiology I  
Bioinformatics of Gene Expression

**MOOCS**  
Introduction to Databases  
Computing for Data Analysis  
Writing in the Sciences

## SKILLS

**Computer & Software**  
Data Analysis: IPython, Pandas, Numpy,  
Spyder • Imaging: Adobe Photoshop,  
ImageJ • Sequence Analysis: BLAST,  
ClustalW, ApE • Language/Syntax: C/C++,  
LaTeX, Markdown, Python  
**Bench Biology**  
Microscopy: Confocal, TEM, DIC •  
Biochemistry: Immunohistochemistry,  
Western Blot, BNAGE, in situ Hybridization.  
• Genetics: Classical, RNAi, Behavioral  
Assays.

## EXPERIENCE

**CALIFORNIA DIGITAL LIBRARY | POSTDOCTORAL FELLOW**  
University of California Curation Center | Oakland, CA | 2013 – present  
Investigate and advise the California Digital Library on issues around data publication.

- **Research:** Investigate data publication in the library, publishing, and research communities; comprehensively review the present state of data publication; conduct and analyze online surveys of researchers and data managers.
- **Dissemination:** Present at local and international meetings; author posts for DataPub blog and an associated guide to data citation; revise data management guidance for the DMPTool website.
- **Community engagement:** Attend Research Data Alliance (RDA) plenaries as an RDA/US Fellow; serve on Data Citation Implementation and Data Bibliometrics Working Groups.
- **Current Projects:** **Making Data Count:** partnership with PLOS and DataONE to define metrics for dataset impact and extend the PLOS Article Level Metric tool to capture them; requirements gathering via literature, focus groups, and online surveys. **Dash:** project to develop a beautiful and easy-to-use data repository ingest and discovery application; UX design and usability testing.

**COLUMBIA UNIVERSITY | PHD CANDIDATE**  
Department of Biological Sciences | New York, NY | 2002 – 2010  
**Dissertation:** Prohibitin Homology Domain Proteins in *Caenorhabditis elegans*.

- Applied methods from neurobiology, bioinformatics, and genetics to study the nematode representatives of an ancient and ubiquitous protein family.
- Collaborated with WormAtlas to characterize complete protein family expression and subcellular localization. Identified a neuron-specific subfamily with a novel role in odor sensing.
- Developed confocal microscopy protocol for cell mapping. Established cell culture system for expression of *C. elegans* proteins. Implemented various behavioral and biochemical assays.

**JOHNS HOPKINS UNIVERSITY | SENIOR LABORATORY TECHNICIAN**  
Department of Neuropathology | Baltimore, MD | 2000 - 2002

- Studied role of Wnt signaling pathways in a common pediatric brain tumor.
- Characterized transgenic mouse strains and managed mouse colony.

**SAN DIEGO ZOO | VOLUNTEER**  
Behavioral Biology Division | San Diego, CA | 2012 - 2013

- Compiled behavioral and ecological data from the literature on species in the San Diego Zoo's collection for an exhaustive database.

## FELLOWSHIPS

Research Data Alliance (RDA)/US Fellowship	2014 - 2015
CLIR/DLF Postdoctoral Fellowship in Data Curation for the Sciences and Social Sciences	2013 - 2015
National Institutes of Health Training Grant	2005 - 2007
Columbia University Presidential Fellowship	2002 - 2010

## AFFILIATIONS & SERVICE

Berkeley Institute for Data Science	2015 - present
Future of Research Communication and e-Scholarship Data Citation Implementation Working Group	2014 - present
Research Data Alliance Co-Chair, Data Bibliometrics Working Group	2014 - present
National Postdoctoral Association	2013 - present
Electronic Frontier Foundation	2008 - present

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## PUBLICATIONS

J. Star, E. Castro, M. Crosas, M. Dumontier, R. R. Downs, R. Duerr, L. Haak, M. Haendel, I. Herman, S. Hodson, J. Hourclé, **J. E. Kratz**, Lin J, Nielsen LH, Nurnberger A, Pröll S, Rauber A, Sacchi S, Smith AP, Taylor M, Clark T. **Achieving human and machine accessibility of cited data in scholarly publications.** in press, PeerJ Comp Sci. doi:10.7287/peerj.preprints.697v4

**J. E. Kratz** and C. Strasser, **Researcher perspectives on publication and peer review of data.** PLOS ONE 10(2): e0117619 (2015). doi:10.1371/journal.pone.0117619

**J. E. Kratz** and C. Strasser, **Data publication consensus and controversies.** F1000Research 3:94 (2014). doi:10.12688/f1000research.3979.3

E. M. Schurek, J. Tax, L. A. Völker, T. Lamkemeyer, D. Unglue, **J. E. Kratz**, Y. Tian, K. Kunzelmann, M. Chalfie, B. Schermer, T. Benzing, M. Höhne, **A disease-causing mutation illuminates protein membrane topology of the kidney protein podocin.** J Biol Chem 289, 11262-71 (Apr 18, 2014). doi:10.1074/jbc.M113.521773

**J. E. Kratz**, What is the circadian clock? in **The Where, The What & The How: 75 Artists Illustrate the Wondrous Mysteries of the Universe.** Ed. Julia Rothman. Chronicle Books, September 2012. isbn:9781452108223

A. Bounoutas, **J. E. Kratz**, L. Emtage, C. Ma, K. Nguyen, M. Chalfie, **Microtubule depolymerization in C. elegans touch receptor neurons reduces gene expression through a p38 MAPK pathway.** PNAS 108, 3982-3987 (Mar 8, 2011). doi:10.1073/pnas.1101360108

**J.E Kratz**, **Prohibitin Homology Domain Proteins in Caenorhabditis elegans** Doctoral Dissertation, Columbia University (2010). doi:10.7916/D88051FN

C. G. Eberhart, **J. E. Kratz**, Y. Wang, K. Summers, D. Stearns, K. Cohen, C. V. Dang, P. C. Burger, **Histopathological and molecular prognostic markers in medulloblastoma: c-myc, N-myc, TrkC, and anaplasia.** J Neuropath Exp Neur 63, 441-9 (May, 2004).

X. Fan, Y. Wang, **J. E. Kratz**, D. J. Brat, Y. Robitaille, A. Moghrabi, E. J. Perlman, C. V. Dang, P. C. Burger, C. G. Eberhart, **hTERT gene amplification and increased mRNA expression in central nervous system embryonal tumors.** Am J Pathol 162, 1763-1769 (June, 2003). doi:10.1016/S0002-9440(10)64311-8

**J. E. Kratz**, D. Stearns, D. L. Huso, H. H. Slunt, D. L. Price, D. R. Borchelt, C. G. Eberhart, **Expression of stabilized beta-catenin in differentiated neurons of transgenic mice does not result in tumor formation.** BMC Cancer 2, 33-42 (Dec 2, 2002). doi:10.1186/1471-2407-2-33

C. G. Eberhart, **J. E. Kratz**, A. Schuster, P. Goldthwaite, K. J. Cohen, E. J. Perlman, P. C. Burger, **Comparative genomic hybridization detects an increased number of chromosomal alterations in large cell/anaplastic medulloblastomas.** Brain Pathol 12, 36-44 (Jan, 2002). doi:10.1111/j.1750-3639.2002.tb00420.x

## PRESENTATIONS

**J. E. Kratz** and C. Strasser, **Researcher perspectives on publication and peer review of data.** Poster, FORCE 2015. Oxford, UK (January 12, 2015). doi:10.5281/zenodo.13967

S. Callaghan, T. Carpenter, **J. E. Kratz**, **Walk softly and carry a large carrot: how to give credit for academic work.** Poster, FORCE 2015. Oxford, UK (January 12, 2015). <http://cedadocs.badc.rl.ac.uk/1125/>

**J. E. Kratz** and C. Strasser, **What does "data publication" mean to researchers?** Presentation, DLF Forum. Atlanta, Georgia (October 27, 2014). doi:10.5281/zenodo.13969

**J. E. Kratz** and C. Strasser, **Researcher perspectives on publication and peer review of data.** Poster, RDA 4th Plenary Meeting. Amsterdam, Netherlands (September 22, 2014). doi:10.5281/zenodo.13967 (Winner, Best Poster)

**J. E. Kratz**, G. Janee, J. Kunze, J. Starr, S. Abrams, C. Strasser, **Metadata publication for datasets through EZID.** Poster, 9th IDCC. San Francisco, California (February 24, 2014). doi:10.5281/zenodo.13968

**J. E. Kratz** and M. Chalfie, **The PHB-domain protein STO-1 is required for sensitive chemotaxis to diacetyl.** Poster, 17th Biennial International C. elegans Conference. Los Angeles, California (June 24, 2009).

**J. E. Kratz**, S. Zhang, T. Benzing, M. Chalfie, **Characterizing the C. elegans PHB domain proteins.** Poster, 16th Biennial International C. elegans Conference. Los Angeles, California (June 27, 2007).

**J. E. Kratz** and M. Chalfie, **A worm identikit for neuron identification.** Poster, 15th Biennial International C. elegans Conference. Los Angeles, California (June 25, 2005). (Third place, Best Poster)