Rachel Davidowitz, PhD

rachel@racheldavidowitz.com
racheldavidowitz.com
41 Park St. Apt. 306 Brookline, MA 02446
516-668-4783

Education

Harvard University | 2008-2013
Ph.D., Biological and Biomedical Sciences, Cell Biology

Cornell University | 2005-2008
B.S., Biological Sciences, Genetics and Developmental Biology, cum laude

Experience

Scientific Animator | 2013-Present
Digizyme, Inc., Brookline, MA
- Specialized in using visual media to better communicate complex scientific ideas to various audiences.
- Collaborated with Apple Inc. to create videos and illustrations for E. O. Wilson's Life on Earth, a digital high school biology textbook.
- Created animations and posters for biotechnology clients including Novartis and Cell Signaling Technologies.
- Created animations for the Museum of Science, Boston, Hall of Human Life.

Freelance Scientific Illustrator | 2008-Present
Selected Clients: Journal of Molecular Biology, Beth Israel Deaconess Medical Center, Duke University, Cancer Discovery, Journal of Clinical Investigation

Graduate Student | 2008-2013
Harvard University, Department of Cell Biology, Dr. Joan Brugge
- Investigated the molecular mechanisms by which ovarian tumor spheroids intercalate into a mesothelial monolayer to gain insight into the mechanisms of ovarian cancer metastasis.
- Experience authoring several peer-reviewed publications and grant proposals.

Skills/ Software

3D: Autodesk Maya, The Foundry Modo, Autodesk Mudbox, Pixologic Zbrush
2D: Adobe Photoshop, Adobe Illustrator, Adobe After Effects, Adobe Premier Pro
Interactive/ Web: iBooks Author, Adobe Dreamweaver, HTML, CSS, Javascript
Science: Chimera, Pymol, VMD, Molecular Maya

Teaching

Instructor Clarafi.com | 2015-Present
Design the curriculum and created video coursework to teach Maya, After Effects, iBooks Author, Chimera, Pymol and VMD

Instructor | 2009
Mentoring for Science, Harvard Medical School
Educational outreach program for middle school students in the Boston area

Teaching Assistant | 2007
Autotutorial Biochemistry, Cornell University

Teaching Assistant | 2006
Introduction to Multivariate Analysis, Cornell University

Presentations and Talks

American Association for Cancer Research Annual Conference, 2011, Mini Symposium, "Identification of Mechanism Involved in Mesothelial Clearance by Ovarian Tumor Spheroids"

Gordon Research Conference, 2010, Signaling by Adhesion Receptors, "Mechanisms Governing Mesothelial Cell Clearance by Ovarian Cancer Cell Aggregates"

Publications

Davidowitz RA, Selfors L, Iwanicki M, Elias K, Karst A, Piao H, Ince T, Drage M, Dering J, Konecny G, Matulonis U, Mills G, Slamon D, Drapkin R, Brugge JS. Mesenchymal gene program–expressing ovarian cancer spheroids exhibit enhanced mesothelial clearance. Journal of Clinical Investigation. 2014; 124; 2611–2625.

Labidi-Galy SI, Clauss A, Ng V, Duraisamy S, Elias KM, Piao HY, Bilal E, Davidowitz RA, Lu Y, Badalian-Very G, Györffy B, Kang UB, Ficarro S, Ganesan S, Mills GB, Marto JA, Drapkin R. Elafin drives poor outcome in high-grade serous ovarian cancers and basal-like breast tumors. Oncogene. 2015; 34; 373-383.

Davidowitz RA, Iwanicki M, and Brugge, JS. In vitro Mesothelial Clearance Assay that Models the Early Steps of Ovarian Cancer Metastasis. J. Vis. Exp. 2012; 60.

Iwanicki M, Davidowitz RA, 1, Ng MR, Besser A, Muranen T, Merritt M, Danuser G, Ince T, and Brugge JS. Ovarian Cancer Spheroids Use Myosin-Generated Force to Clear the Mesothelium. Cancer Discovery. 2011; 1; 2-13

Liachko N, Davidowitz RA and Lee SS. Combined informatic and expression screen identifies the novel DAF-16 target HLH-13. Dev Biol. 2009; 327: 97-105