

## EDUCATION

**Coursework**, HTML5 and CSS3, JQuery, JQuery Mobile, Cambridge Center for Adult Education, MA—2010-present

**Professional Certificate**, Graphic & Interactive Design, The Center for Digital Imaging Arts (CDIA) at Boston University, Boston, MA – 2007

**Participant**, Multimedia Bootcamp (intensive workshop in audio, video and Flash web development), School of Journalism and Mass Communications, University of North Carolina-Chapel Hill, NC – 2005

**Ph.D.**, Physiology/Zoology, North Carolina State University, Raleigh, NC – August 2001

**B.S.**, Biology (*Summa Cum Laude*), Towson University, Towson, MD – January 1995

**A.B.**, History of Religion (*Cum Laude*), Bryn Mawr College, Bryn Mawr, PA – May 1992

## TECHNICAL SKILLS

**Web Design and Development**: HTML5/xHTML, CSS2/CSS3, JQuery, Responsive Design. Cross-browser compatibility. Basic knowledge of PHP and Javascript.

**Graphic Design**: Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe Acrobat, Bridge, QuarkXpress.

**Microsoft Office**: Word, Excel, Powerpoint.

**Platforms**: Mac & PC.

## WEB DESIGN AND FRONT-END DEVELOPMENT EXPERIENCE

**Web Specialist, Science Media Group, Harvard-Smithsonian Center for Astrophysics, 2007-present**

Design, develop, maintain and update websites related to science education (selected sites)

- Design & front-end development of *Chemistry* course website, currently in development.
- Design of Haber Interactive within the *Chemistry* course, currently in development.
- Design & front-end development of *DIY Planet Search* website, currently in development.
- Design of AsteroidImpact!, an iphone/ipad app, currently in development.
- Design & front-end development (responsive design) of *Learner Express* website ([www.learner.org/series/modules](http://www.learner.org/series/modules)).
- Front-end development of *Here, There & Everywhere* exhibit website ([hte.si.edu](http://hte.si.edu)).
- Ongoing help with front-end development of *Chandra* website ([www.chandra.harvard.edu](http://www.chandra.harvard.edu)).
- Redesign & front-end development of *MOSART* website ([www.cfa.harvard.edu/smgphp/mosart/index.html](http://www.cfa.harvard.edu/smgphp/mosart/index.html)).
- Collaborated on design & development of *Neuroscience & the Classroom* website ([www.learner.org/courses/neuroscience](http://www.learner.org/courses/neuroscience)).
- Collaborated on design & development of *Physics for the 21st Century* website ([www.learner.org/courses/physics](http://www.learner.org/courses/physics)).
- Design & front-end development of *Other Worlds* website ([www.cfa.harvard.edu/smgphp/otherworlds](http://www.cfa.harvard.edu/smgphp/otherworlds)).
- Design & front-end development of *Understandings of Consequence* website for Harvard University Graduate School of Education professor, Tina Grotzer ([www.cfa.harvard.edu/smg/Website/UCP](http://www.cfa.harvard.edu/smg/Website/UCP)).
- Maintain *From the Earth to the Universe* website ([www.fromearthtotheuniverse.org](http://www.fromearthtotheuniverse.org)), a project that won the IYA2009/ Bhaumik Prize for Excellence in Astronomy Education and Public Outreach.
- Design & front-end development of *Observing With NASA* website ([mo-www.cfa.harvard.edu/OWN/](http://mo-www.cfa.harvard.edu/OWN/)).
- Front-end development of *The Habitable Planet Interactives* ([www.learner.org/courses/envsci/interactives](http://www.learner.org/courses/envsci/interactives)).

**Freelance Web Designer and Graphic/Production Artist 2005-present**

Design and develop creative elements and websites for various companies and/or individuals.

- Produced development-ready Illustrator files to be converted into interactive widgets for an adapted World History textbook (Six Red Marbles).

- Design & development of exhibit website for photographer, Randy H. Goodman ([www.iranbeneathchador.com](http://www.iranbeneathchador.com)).
- Design & front-end development of website for a rental apartment in Saint Tropez, France ([www.mystudio-st-tropez.com](http://www.mystudio-st-tropez.com)). Integrated Google Maps API and Google Calendar.
- Design of promotional movie poster for screening of film, *Betty Anne*, for the CDIA Filmmaking Department.
- Maintain website for *The Children's Bookstore*, Baltimore, MD ([www.theebstore.com](http://www.theebstore.com)).

#### **Lead Content Developer, Institute for Science Learning, University of North Carolina–Chapel Hill, NC 2004-2005**

Edited and managed all scientific content for complex, interactive multimedia learning materials to be used for an introductory genomics course, which was developed to help students visualize and learn about the microarray process, a technique widely used in the genomic sciences. Participated in idea conception through development (<http://multimedia.jomc.unc.edu/img/>)

#### **OTHER PROFESSIONAL EXPERIENCE**

##### **Postdoctoral Research Fellow (NIH NRSA Individual Fellowship), Dept. of Cell & Molecular Physiology, University of North Carolina–Chapel Hill, NC 2001-2004**

Supervised and mentored students, performed scientific research focused on Crohn's disease, wrote manuscripts for peer-reviewed journals, and presented findings at local symposia and national conferences.

##### **Graduate Research Assistant, Department of Zoology, North Carolina State University, Raleigh, NC 1998-2001**

Mentored students, managed and organized laboratory safety plans, performed scientific research on growth and osmoregulatory physiology, wrote manuscripts for peer-reviewed journals, and presented findings at local symposia and national and international conferences.

##### **Graduate Teaching Assistant, several Zoology Courses, North Carolina State University 1996-1998**

Helped develop new custom edition lab manual (in conjunction with Addison-Wesley Education Publishers). Also helped develop lab syllabus, wrote all lectures and quizzes to labs, directed set-up of labs, and taught lab sections, and corrected lab reports for upper division writing course.

#### **AWARDS & HONORS**

Pirelli International Award, 9th edition, Education Section (a2) for *Microarrays MediaBook*, Content Developer, 2005

NIH Ruth L. Kirschstein National Research Service Award Individual Fellowship, 2003

Invited Speaker, Fourth International Symposium on Fish Endocrinology, Seattle, WA, 2000

Outstanding Graduate Student Award, Phi Kappa Phi, North Carolina State University, 1999

Phi Kappa Phi Member, North Carolina State University Chapter, 1999

Outstanding Graduate Student Teaching Assistant Award, NCSU 1997, 1998

Best Poster Award, Physiology Symposium, NCSU, 1997

CRC Press Chemistry Award, Towson University, 1995

Summa Cum Laude, Towson University, 1995

Beta Beta Beta, National Biological Honors Society, 1995

Cum Laude, Bryn Mawr College, 1992

#### **INTERESTS**

Traveling

Reading

Scuba Diving

Hiking

Competitive Sports

Playing with my two daughters

## ADDENDUM

### PUBLICATIONS

- 2005** Fruchtman S, Simmons JG, Michaylira CZ, Miller ME, Greenhalgh CJ, Ney DM, Lund PK 2005 Suppressor of cytokine signaling-2 (SOCS-2) modulates the fibrogenic actions of GH and IGF-I in intestinal mesenchymal cells. *Am. J. Physiol.* 289: G342-G350.
- 2004** Theiss AL, Fruchtman S, Lund PK Growth factors and inflammatory bowel disease: the actions and interactions of growth hormone (GH) and insulin-like growth factor-I (IGF-I). *Infl. Bowel Dis.* 10: 871-880.
- 2002** Fruchtman S, McVey DC, and Borski, RJ Characterization of pituitary IGF-I receptors: modulation of prolactin and growth hormone. *Am J. Physiol.* 283: R468-R476.
- 2002** Borski RJ, Hyde GN, Fruchtman S Signal transduction mechanisms mediating rapid, nongenomic effects of cortisol on prolactin release. *Steroids* 67: 539-548.
- 2001** Borski RJ, Fruchtman S, Hyde GN and Tsai WS Cortisol inhibits prolactin release through a nongenomic, membrane associated signaling pathway. *Comp. Biochem. Physiol. B* 129: 533-541.
- 2001** Fruchtman S, Gift B, Howes B, Borski R Insulin-like growth factor-I augments prolactin and inhibits growth hormone release through distinct as well as overlapping cellular signaling pathways. *Comp. Biochem. Physiol. B* 129: 237-242.
- 2000** Fruchtman S, Jackson L, and Borski R Insulin-like growth factor I disparately regulates prolactin and growth hormone synthesis and secretion: Studies using the teleost pituitary model. *Endocrinology* 141: 2886-2894.
- 2000** Jackson LF, Swanson P, Duan CM, Fruchtman S, and Sullivan CV Purification, characterization and bioassay of prolactin and growth hormone from temperate basses, genus *Morone*. *Gen. Comp. Endocrinol.* 117: 138-150.
- 2000** Borski, RJ, Fruchtman, S, Hyde, GN, Mita, M, and Nagahama, Y Steroid and insulin-like growth factor-I regulation of prolactin cell activity in teleosts. *Proceedings of the Japan Society of Comparative Endocrinology, Noto, Kanazawa, Japan* (eds. Sasayama, Y. and Suzuki, N.) 15:3.
- 1998** Borski RJ, Hyde GN, and Fruchtman S Cortisol rapidly reduces prolactin release through a nongenomic, membrane-associated action involving the calcium and cAMP messenger systems: The fish PRL cell model system. *Exp. Clin. Endocrinol. Diabetes* 106: A39-A51.

### PUBLISHED ABSTRACTS

- 2004** Fruchtman S, Simmons JG, Fuller CR, Greenhalgh CJ, Lund PK Suppressors of cytokine signaling (SOCS) limit fibrogenic actions of growth hormone and insulin-like growth factor-I in intestinal myofibroblasts. *Gastroenterology* 126: A-138.
- 2004** Wilkins HR, Fruchtman S, Fuller CR, Lund PK Insulin receptor substrate-1 (IRS-1) inhibits apoptosis and protects stem cells in mouse small intestinal crypts. *Gastroenterology* 126: A-138.
- 2003** Picha ME, Fruchtman S, Noga EJ, Borski RJ Increases in insulin-like growth factor-I during compensatory growth in a teleost fish. *Integrative and Comparative Biol* 43: 1012.
- 2002** Fruchtman S, Simmons JG, Wilkins HR, Sartor RB, Greenhalgh CJ, Heath JK, Lund PK SOCS-2 deficiency leads to increased intestinal collagen deposition, and STAT3 activation in a mouse model of mucosal injury, inflammation and repair. *Gastroenterology* 122: T862.
- 1997** Fruchtman S, McVey DC, and Borski, RJ Insulin-like growth factor-I regulation of prolactin and growth hormone secretion in hybrid striped bass. *Amer. Zool.* 37: 180A.

## GRANTS

- 2003** Recipient, Postdoctoral National Research Service Award (Priority Score: 129), National Institutes of Health. Title: SOCS-2 and Intestinal Fibrosis

## PRESENTATIONS

- 2003** Wilkins HR, **Fruchtman S**, Fuller CR, Ling Y, Lund PK Insulin receptor substrate-1 inhibits apoptosis and protects stem cells in mouse small intestinal crypts. 5<sup>th</sup> EMBL Mouse Molecular Genetics Meeting, Heidelberg, Germany.
- 2003** Picha M.E., Fan, Z., **Fruchtman, S**, Noga E.J., and Borski, R.J. Compensatory Growth in Cold-Banked Hybrid Striped Bass. International Conference of the World Aquaculture Society, Salvador, Brazil.
- 2002** Goodrich AL, **Fruchtman S**, Simmons JG, Lund PK Suppressors of cytokine Signaling (SOCS) limit the fibrogenic actions of GH and IGF-I. 14<sup>th</sup> International Symposium on Regulatory Peptides Boston, MA.
- 2002** **Fruchtman S**, Simmons JG, Wilkins HR, Sartor RB, Greenhalgh CJ, Heath JK, Lund PK SOCS-2 deficiency leads to increased intestinal collagen deposition, and STAT3 activation in a mouse model of mucosal injury, inflammation and repair. Digestive Disease Week, AGA, San Francisco, CA.
- 2000** **Fruchtman S**, Gift B, Howes B, Borski R Insulin-like growth factor-I augments prolactin and inhibits growth hormone release through distinct as well as overlapping cellular signaling pathways. Fourth International Symposium on Fish Endocrinology, Seattle, WA.
- 2000** Borski, RJ, **Fruchtman, S**, Hyde, GN, Mita, M, and Nagahama, Y Steroid and insulin-like growth factor-I regulation of prolactin cell activity in teleosts. Japanese Society of Comparative Endocrinology, Noto, Kanazawa, Japan.
- 1998** **Fruchtman S** and Borski RJ Localization and characterization of IGF-I receptors in hybrid striped bass pituitary glands. Hawaii Institute of Marine Biology, U. of HI.
- 1998** Borski, RJ, Hyde, GN, and **Fruchtman, S** Cortisol Rapidly Reduces Prolactin Release through a Nongenomic, Membrane-Associated Action Involving the Calcium and cAMP Messenger Systems: The Fish PRL Cell Model System. First International Meeting of Rapid Responses to Steroid Hormones, Mannheim, Germany.
- 1997** **Fruchtman S** and Borski RJ Insulin-like growth factor-I stimulates prolactin and inhibits growth hormone secretion in temperate basses, genus *Morone*. Zoology Department Symposium, NCSU, Raleigh, NC.
- 1997** **Fruchtman S**, McVey DC, and Borski RJ Insulin-like growth factor-I regulates prolactin and growth hormone secretion in hybrid striped bass, *Morone saxatilis* X *M. chrysops*. Physiology Symposium, College of Veterinary Medicine, NCSU, Raleigh, NC.
- 1997** **Fruchtman S**, McVey DC, and Borski, RJ Insulin-like growth factor-I regulation of prolactin and growth hormone secretion in hybrid striped bass. Society of Integrative and Comparative Biology, Boston, MA.