

Holly Miller Ph.D.
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PROFESSIONAL EXPERIENCE

Scientific Informatics Analyst, Marine Biological Laboratory, *04/2008–present*

- Gather and curate content for Biology of Aging Portal
- Consult/advise groups on digital content and metadata management
- Conduct surveys and usability studies on Biology of Aging websites and applications
- Create a Biology of Aging Ontology

Reference and Outreach Librarian, Rockefeller University *01/2006–12/2007*

- Provide personalized information services to client groups
- Implemented IM reference
- Implemented Library News blog
- Designed and coded HTML electronic newsletter
- Designed and created library brochure
- Planned orientations and events for graduate students
- Created and analyzed library service/space surveys
- Organized and directed a journal club for postdoctoral fellows
- Wrote a planning document including, marketing, and evaluation strategies for implementing instructional classes at Rockefeller (document available up request)

Research Assistant Professor, Department of Pharm. Sci., Stony Brook University *1999–2005*

- Performed and published research on DNA damage
- Co-wrote funded NIH grant proposals
- Directed research of students and postdocs

Postdoc/Research Instructor, Stony Brook University *1995–1999*

EDUCATION

M.S. Library and Information Science, Certificate of Advanced Studies in Digital Libraries. Syracuse University. *Expected graduation Spring 2009*

Ph.D. Biochemistry Wake Forest University Winston-Salem, NC *1992*

B.S. Chemistry and Biology Bloomsburg University Bloomsburg, PA *1986*

SKILLS

Writing/Editing: 15 years experience writing and editing scientific manuscripts and grant proposals. Graduate course in Library Planning, Marketing, and Evaluation that required the creation of a Strategic Plan, Marketing Plan and Evaluation Plan for a specific library service. Documents available upon request.

Oral communication: 15 years experience preparing and presenting scientific talks and lectures, 2 years experience in community outreach.

Management: 4 years experience managing a lab, with students and postdocs, managed staff in implementing library news blog, IM reference and numerous outreach events. Graduate course in Management Principles for Information Professionals.

Computer proficiencies:

- *Internet/web:* Thorough knowledge of HTML/XHTML with CSS. Experience with Content Management Systems Mambo and Moodle. Experience with web blogging software (Blogger, Serendipity, WordPress) and template design. Graduate courses in Web Design for Libraries, Information Architecture and Digital Libraries. Attended WebSearch University 9/2007. Active participant in social web software, MySpace, FaceBook, LinkedIN, blogging, wikis, tagging, Google Groups, twitter, Flickr.
- *3D Virtual worlds, Second Life (SL) as an example:* More than 2 year experience in SL with skills in building, textures, scripting, photography, group management and land ownership. Member of “Librarians of Second Life” and several other SL library groups. Graduate course: Second Life and Librarianship.

- *Operating Systems*: Used both Windows-based PCs and Macintosh platforms extensively including Windows NT/2000/XP, Mac OS X, Linux (Red Hat), VMS, Unix.
- *Scripting*: Basic knowledge of Ruby, capable of writing simple scripts to manipulate data and collect data from web pages, NLM's E-Utills, and to interact with MySQL databases.
- *Digital Libraries and Databases*: Experience with MS Access, MySQL, basic knowledge of SQL. Graduate courses in Database Design and Administration, Digital Libraries and Creating, Managing and Preserving Digital Assets.
- *Bioinformatics*: Experience with web sequence and structure analysis programs and Vector NTI. Completed courses in Sequence analysis and Molecular dynamics at the Pittsburgh Supercomputer.
- *Software*: MS Word, Excel, PowerPoint, Publisher, Micrographics Designer, Adobe Illustrator, Adobe Photoshop, gimp (open source image manipulation program), SigmaPlot, Adobe Acrobat, Endnote, PyMol (molecular modeling program), and text editors (vi/vim, TextMate).

INFORMATION TECHNOLOGY EXPERIENCE

- Editor for the Open Source project BioMail (BioMail.org), a literature-alerting tool (2000-2005) that served over 40,000 subscribers.
- Created the documentation for BioMail in XML: <http://biomail.org/biomail/quick.html>
- Consultant on the successful grant proposal (\$45,000) to the National Library of Medicine to improve BioMail (2002).
- Member of the Board of Directors of Bioinformatics.Org (2002-2004).
- System administrator for a Unix-based molecular modeling workstation (1990-1992).

TEACHING EXPERIENCE

Courses/Lectures:

Developed a Supplementary Pharmacology course for Respiratory Care students (2005-2006)
 Small groups Medical Pharmacology (HBH531) (2004-2005).
 Medical Pharmacology (HBH531) "Herbal Remedies and the Placebo Response" (2005).
 Medical Pharmacology (HBH331) "Anti-epileptics" (1999).
 Introduction to Research (WSE187) (2000, 2001) "Becoming a Scientist at USB" (USB101) (2000)
 Undergraduate Pharmacology Seminar Series (1997,1999, 2005).

Individual mentoring:

Advised graduate students during laboratory rotations Instructed undergraduate students performing Independent Research.
 Guided high school students working on independent science projects, including an Intel Semifinalist in 2004.

AWARDS

National Research Service Award, 1993-1996
 National Science Foundation Predoctoral Fellowship, 1988-1991

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science
 American Chemical Society
 American Library Association, ACRL, RUSA

Special Libraries Association
 New York Academy of Sciences
 Medical Library Association

PUBLICATIONS

Please refer to separate listing of Recent Publications

RECENT PUBLICATIONS

- Gening, L.V., Klincheva, S.A., Reshetnjak, A., Grollman, A.P. and Miller, H. (2006) RNA aptamers selected against DNA polymerase β inhibit the polymerase activities of DNA polymerase β and DNA polymerase κ *Nucleic Acids Res.* 34:2579-86.
- Valiunas, V., Polosina, Y.Y., **Miller, H.**, Potapova, I., Valiuniene, L., Doronin, S., Mathias, R.T., Robinson, R.B., Rosen, M.R., Cohen, I.S. and Brink, P.R. (2005) Connexin specific cell-to-cell transfer of short interfering RNA by gap junctions. *J. Physiol.* 568:45968.
- Braithwaite, E.K., Kedar, P.S., Lan, L., Polosina, Y.Y., Asagoshi, K., Poltoratsky, V.P., Horton, J.K., **Miller, H.**, Teebor, G.W., Yasui, A., Wilson, S.H. (2005) DNA polymerase λ protects mouse fibroblasts against oxidative DNA damage and is recruited to sites of DNA damage/repair. *J. Biol. Chem.* 280:31641-7.
- Conlon, K.A., **Miller, H.**, Rosenquist, T.A., Zharkov, D.O., Berrios, M. (2005) The murine DNA glycosylase NEIL2 (mNEIL2) and human DNA polymerase β bind microtubules *in situ* and *in vitro*. *DNA Repair* 4:419-31.
- Fisher, P.A., Moutsiakis, D.L., McConnell, M., **Miller, H.**, Mozzherin, D.J. (2004) A single amino acid change (E85K) in human PCNA that leads, relative to wild type, to enhanced DNA synthesis by DNA polymerase δ past nucleotide base lesions (TLS) as well as on unmodified templates. *Biochemistry* 43:15915-21.
- Yasui, M., Suzuki, N., **Miller, H.**, Matsuda, T., Matsui, S., Shibutani, S. (2004) Translesion synthesis past 2'-deoxyxanthosine, a nitric oxide-derived DNA adduct, by mammalian DNA polymerases. *J. Mol. Biol.* 344:665-74.
- Mozzherin, D. Ju., McConnell, M., **Miller, H.**, Fisher, P.A. (2004) Site-specific mutagenesis of Drosophila proliferating cell nuclear antigen enhances its effects on calf thymus DNA polymerase δ . *BMC Biochemistry* 5:13.
- Polosina, Y.Y., Rosenquist, T.A., Grollman, A.P. and **Miller, H.** (2004) Knock down of DNA polymerase β by RNA interference: recapitulation of null phenotype. *DNA Repair* 3:1469-1474.
- Freisinger, E., Grollman, A.P., **Miller, H.**, and Kisker, C. (2004) Lesion (in)tolerance reveals insights into DNA replication fidelity. *EMBO J.* 23:1494-1505.
- Miller, H.**, Fernandes, A.S., Zaika, E., McTigue, M.M., Torres, M.C., Wenthe, M., Iden, C.R., Grollman, A.P. (2004) Stereoselective Excision of Thymine Glycol from Oxidatively Damaged DNA. *Nucleic Acids Res.* 32: 338-345.
- Minetti, C.A.S.A., Remeta, D.P., **Miller, H.**, Gelfand, C.A., Plum, E., Grollman, A.P., and Breslauer, K.J. (2003) The Thermodynamics of Template-Directed DNA Synthesis: Base Insertion and Extension Enthalpies. *Proc. Natl. Acad. Sci.* 100:14719-24.
- Miller, H.** and Grollman, A.P. (2003) DNA Repair Investigations using siRNA. *DNA Repair* 2:759.