



Mark R. Lavery

General Biology Laboratory Coordinator and
Website Administrator (science.oregonstate.edu/genbio)

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Department of Integrative Biology,
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EDUCATION:

Masters of Science, Department of Wood Science and Engineering, Oregon State University, Corvallis, Oregon, June 1998

Thesis - *Total Hydrocarbon Emissions From Lumber Dry Kilns*

Course work in: Hydrogeology, Marine Geology, Safety Management, Forest Products Manufacturing, Statistics, Instrumental Analysis, Analytical Chemistry Techniques, Methods of College Teaching.

Focus: Monitoring of Volatile Organic (VOC) Emissions from lumber dry kilns, following guidelines documented by the EPA methods 25, 25A and modified method 25A. This research qualitatively and quantitatively determined the characteristic emissions released during the drying schedule of Douglas fir and Ponderosa Pine.

Bachelors of Science, University of Notre Dame, Indiana, December, 1991

Major: Biological Sciences (General and Aquatic Ecosystems)

Minor: Geology

Four year athletic scholarship.

EXPERIENCE:

Senior Instructor II/General Biology Laboratory Coordinator, Oregon State University, Corvallis, OR.

September 1999 – Current

Promoted to Senior Instructor II, July 2015 (Promoted to Senior Instructor, July 2008).

Facilities maintenance, laboratory materials and technology maintenance and purchasing, coordination of laboratory activities with course learning outcomes, Graduate Teaching Assistants (GTAs) training and management, undergraduate students instruction, undergraduate prep-team management, grade and demographic data base management, portfolio management.

General Biology Website Administrator, Oregon State University, Corvallis, OR.

September 2004 – Current

science.oregonstate.edu/genbio

Design and management of the BI10x website including: frequently updated and expanded.

Laboratory/Field Research Assistant, Oregon State University, Corvallis, OR.

August 1993 – June 2003

Department of Wood Science and Engineering

Image analysis software and hardware (CCD cameras, fiber-optics, video image frame grabbers), data acquisition software/hardware, x-ray densitometry, analytical chemistry technique, field sampling of trees, lumber dry kiln operation, VOC emissions monitoring using F.I.D., gas chromatography and mass-spectrophotometry.

Biogeochemistry/Field Technician, University of Notre Dame, Notre Dame, IN.

August 1991 – August 1993

Analytical analysis of samples via: scanning visible spectrophotometry, elemental analysis, gas chromatography, analytical chemical technique, polycarbonate equipment fabrication, lyophilization, oxygen micro-electrode measurements, digitization, radio-isotope analysis. Field sampling, including sampling of lakes and streams, requiring SCUBA.



SUMMARY OF EMPLOYMENT:

General Biology Senior Instructor II, Oregon State University, July 2015 – Current.
Website Administrator, General Biology, Oregon State University, September 2004 – Current.
General Biology Senior Instructor I, Oregon State University, July 2008 – July 2015.
General Biology Instructor, Oregon State University, September 1999 – July 2008.
Faculty Research Assistant, Oregon State University, June 1998 – June 2003.
Wood Magic Instructor, Oregon State University, One week session, 1999-2003.
Saturday Academy Instructor, Oregon State University, Summers, 1998-2001.
Research Assistant, Oregon State University, August 1993 - August 1996.
Research Technician, University of Notre Dame, 1991-1993.
Saratoga County City Landscaping Department, Summers 1985, 1986.

SKILLS:

Instructor: Instructed and evaluated over 300 GTAs and 12 Undergraduate Interns, work directly with undergraduate students, lectured to larger audiences (600+).

Facilities/construction/remodel management/design: Designed, coordinated, impliment several extensive remodel projects in OSU laboratories. From design to completion.

Management: Coordinate, train, and manage General Biology work-study prep-team of undergraduate students (2-4 students/term).

Informational/Educational Display Design and Installation: (Co)Designed and (Co)installed public display cases around the OSU campus.

Laboratory: Analytical laboratory technique, microscopy, lab safety, radiation safety, G.C., GC-MS, vacuum pump/lyophilizer use and maintenance, glass micro-electrode fabrication, muffle furnace use, purchasing, facilities and equipment maintenance, UV and IR Spectrophotometry, High Pressure Liquid Chromatography, Nuclear Magnetic Resonance, Fluorometry, Potentiometry, Elemental Analysis.

Certifications: Institutional Animal Care and Use Committee (IACUC), SAIFer driver, OSU 15 passenger van driver, OSU Lift Truck, Private Pilot, SCUBA, Radiation Safty.

Research: Multimedia presentation, research and laboratory organization, technique development, spreadsheet manipulation, data mining.

Computers: PC (Windows and DOS) and Apple
Microsoft Office Suite (Word, Excel, PowerPoint), Adobe Photoshop, Dreamweaver.



OREGON STATE UNIVERSITY AND INTEGRATIVE BIOLOGY COMMITTEES:

2013 - Current– Integrative Biology Weniger Space Committee.

2015 – Current - OSU Classroom Improvement Workgroup. Pedigogy (Technology, Adaptation, Research), Classroom Utilization/Stewardship of Resources, Excution/Operationalization.

2014 – Current – WNGR 247 laboratory remodel committee.

2014-15 – Integrative Biology Research Seminar Committee.

OREGON STATE UNIVERSITY SERVICE, PROPOSALS, DOCUMENTS, AND PROJECTS:

2015-Current: Blair, L.M., & Lavery, M.R., [@VividScience](#) “art + design + science + teaching = object assemblages for lifelong learning.” Twitter.

2014-Current: Blair, L.M., & Lavery, M.R., co-designed and built 70+ new Weniger 127 and 129 hallway “window assemblages.”

2014-Current: Blair, L.M., & Lavery, M.R., co-design, install, and manage 12 hallway displays.

2015 – Blair, L.M., & Lavery, M.R., co-Assisted with the Grand Opening of the Learning Innovation Center (LInC).

2015 – Blair, L.M., & Lavery, M.R., co-Hosted an OSU Family Weekend Event in LInC 100.

2015 – Lavery, M.R., Painted *OneNorth* Weniger including door frames (121, 125, 125a, 127, 129, 129, 131, 133, 135).

2015 – Lavery, M.R., Installed (conduit, wire, mounting) digital 18.5” NIX displays outside of WNGR 127 & 129.

2015 – Blair, L.M., & Lavery, M.R., rebranded BI10x to General Biology. Website completely reworked, Domain name changed from bi10x to genbio, **VividScience** expanded.

2015 - Lavery, M.R., Installed adjustable shelving brackets to WNGR 127 & 129 hallway window frame. Drilling and tapping steel and aluminum frames. Painted frame inside and out (light gray).

2015 – Blair, L.M., & Lavery, M.R., On May 28, 2015, OSU hosted The Co. an Oregon maker fair. **VividScience** participated with a booth “**VividScience** Handmade & Upcycled: Exploring Nature with 2D Mixed Media Projects.” <http://www.science.oregonstate.edu/genbio/supportpages/inchies.html>

2014 - Lavery, M.R., Design, coordination, and implementation of the Weniger 121 remodel. General Biology Projects room.

2014 - Lavery, M.R., Coordinated the remodel of the Cordley 3014 hallway display case.

2013-14 - Lavery, M.R., *OneNorth* Weniger hallway display cases re-arrangement and new installations. Including purchasing, installation, retrofitting, and coordination of electrifying. Display cases; *112/126, 114/C, 116, 121, 125, 125/A, 127, 129(A), 129(B), 129/131, and 133/135.*

2013 - Lavery, M.R., Hands on design, coordination, and implementation of WNGR 127/A remodel. Floor to ceiling remodel, from co-recognition of initial curricular need of teaching space redesign to the room co-design, demo, materials selection and installation, coordination of OSU Facilities and outside contractors, and budget and schedule management.



CONTINUED: OREGON STATE UNIVERSITY SERVICE, PROPOSALS, DOCUMENTS, AND PROJECTS:

2012 – OSU TRF (\$10,000) OSU Technology Resource Fund (TRF), Repair and Capacity Expansion Program

2012 – OSU TRF (\$92,242) Co-recipient. Extensive Weniger Hall remodel work, technology systems design and integration.

2011 - Lavery, M.R., Hands on design, coordination, and implementation of WNGR 131 remodel.

2011 – OSU TRF (\$92,242) Co-recipient. Extensive Weniger Hall remodel work, technology systems design and integration.

2010 – Provost funds (\$22,500) Co-recipient, used to purchase anatomical models for BI103.

2008 - General Biology GTA Professional Development, including pedagogy and classroom supervisions with pre- and post-interviews.

2005 - Lavery, M.R., Universal Design for Instruction (UDI) stipend award winner and conference participant.
<http://science.oregonstate.edu/genbio/innovations/DIAL.htm>

2004 - Lavery, M.R., Blair, L.M., & Mason, R.T., Equipment Proposal To Enhance Teaching, Learning, and Community Outreach Within General Biology, A proposal to the: Initiatives to Advance the Oregon State University Strategic Plan: Investments in Equipment to Enhance the Teaching and Learning Environment.

2004 - Mason, R.T., Blair L.M., Lavery, M.R., & Clark, D L., Oregon State University (OSU) Biology Program Overview of Program Goals, Outcomes, and Assessment, Biology Outcomes Assessment Team (B.O.A.T.).
<http://science.oregonstate.edu/genbio/outcomes/biologyprogram/bpscope.htm>.

2002 - Blair, L.M., & Lavery, M.R., Innovation in Introductory Biology Courses for Non-majors: General Biology Series at Oregon State University.

2002 - Lavery, M.R., Hands on design, coordination, and implementation of WNGR 129 remodel. Floor to ceiling remodel, from co-recognition of initial curricular need of teaching space redesign to the room co-design, demo, materials selection, and installation, coordination of OSU Facilities and outside contractors, and budget management.

OREGON STATE UNIVERSITY PUBLICATIONS:

Blair, L.M., & Lavery, M.R. *Diversity, ecology, and environmental science*. General Biology 101 Laboratory Activity Manual: 2008 (9th edition), 2009 (10th edition), 2010 (11th edition), 2011 (1st discovery edition), 2012 (2nd discovery edition), 2013 (1st KICC edition), 2014 (2nd KICC edition), 2015 (3rd KICC edition)

Blair, L.M., & Lavery, M.R. *Genetics, evolution, and animal behavior*. General Biology 102 Laboratory Activity Manual: 2009 (9th edition), 2010 (10th edition), 2011 (11th edition), 2012 (1st discovery edition), 2013 (2nd discovery edition), 2014 (1st KICC edition), 2015 (2nd KICC edition), 2016 (3rd KICC edition)

Blair, L.M., & Lavery, M.R. *Human anatomy, physiology, and disease*. General Biology 103 Laboratory Activity Manual: 2009 (9th edition), 2010 (10th edition), 2011 (11th edition), 2012 (1st discovery edition), 2013 (2nd discovery edition), 2014 (1st KICC edition), 2015 (2nd KICC edition)

CONTINUED: OREGON STATE UNIVERSITY PUBLICATIONS:

Blair, L.M., & Lavery, M.R. *Diversity, ecology, and environmental science*. Summer General Biology 102 Laboratory Activity Manual: 2010, 2011, 2012, 2013, 2014, 2015

Blair, L.M., & Lavery, M.R. *Genetics, evolution, and animal behavior*. Summer General Biology 102 Laboratory Activity Manual: 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

Blair, L.M., & Lavery, M.R. *Human anatomy, physiology, and disease*. Summer General Biology 103 Laboratory Activity Manual: 2008, 2009, 2011, 2012, 2013, 2014, 2015

Blair, L.M., & Lavery, M.R. General Biology 101 Graduate Teaching Assistant Instructional Manual: 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016

Blair, L.M., & Lavery, M.R. General Biology 102 Graduate Teaching Assistant Instructional Manual: 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016

Blair, L.M., & Lavery, M.R. General Biology 103 Graduate Teaching Assistant Instructional Manual: 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

PUBLICATIONS:

Lavery, M.R., & Blair, L.M., Biology 10X Website (Continually Updated). science.oregonstate.edu/genbio

Lavery, M.R. (2005). *Punnett Squares, Monohybrid and Trihybrid Crosses*
<http://www.science.oregonstate.edu/genbio/supportpages/punnett%20squares.html>

Blair, L.M., & Lavery, M.R. (2005). *How to Draw a Phylogenetic Tree (Using differences in molecular sequence)*.
<http://science.oregonstate.edu/genbio/otherresources/phylogenetictree.htm>

Lavery, M.R. (2005). *Protein Synthesis, Translation, and Amino Acid Translation Table*.
<http://www.science.oregonstate.edu/genbio/supportpages/proteinsynthesis.html>

Rhatigan, R.G., Milota, M.R., Morrell, J.J., & Lavery, M.R. (2003). Effect of high temperature drying on permeability and treatment of western hemlock lumber. *Forest Products Journal* 53(9):55-58.

Milota, M.R., & Lavery, M.R. (2003). Temperature and Humidity Effects on Emissions of Volatile Organic Compounds from Ponderosa Pine Lumber. *Drying Technology* 21(10): 165-174.

Lavery, M.R., & Milota, M.R. (2001). Measurement of VOC emissions from ponderosa pine lumber using commercial and laboratory kilns. *Drying Technology* 19(9):2151-2173.

Lavery, M.R., & Milota, M.R. (2000). VOC emissions from Douglas-fir: Comparing a commercial and a lab kiln. *Forest Products Journal* 50(7/8):39-47.

Milota, M.R., & Lavery, M.R. (1999). Effect of temperature and humidity on the total hydrocarbon emission from Douglas-fir lumber. *Forest Products Journal*. 49(5):47-48.



GENERAL BIOLOGY COURSE HALLWAY DISPLAY CASES (2013-2015):

(Display's are expanded and improved over time, they regularly start as "piloted" display of information and concepts.)

WNGR 125/A, panel 1, Hallway Display, "*Science is Tentative, Science is Durable*" Co-Installer.

WNGR 131/135, Hallway Display, "*Before and After*" Co-Installer.

WNGR 114/C, Hallway Display, "*Normal Distributions*" Co-Installer.

PUBLIC INFORMATIONAL/EDUCATIONAL DISPLAY CASES (2013-2015):

2015 Fall - CORD 3014, Hallway Display, "*Biology in the Round*" Co-Installer.

WNGR 125/A, panel 3, Hallway Display, "*Spring Biology*" Designer and Installer.

2014 Fall - CORD 3014, Hallway Display, "*Ants*" Co-Installer.

WNGR 129, panel 1, Hallway Display, "*Can Science Be Pink*" Co-Installer.

WNGR 129, panel 2, Hallway Display, "*Science of the Winter Olympics*" Co-Installer.

2014 Winter - CORD 3014, Hallway Display, "*Darwin, Mendel, and Watson & Crick*" Co-Installer.

WNGR 125/A, panels 1 & 3, Hallway Display, "*Fall Biology*" Designer and Installer.

WNGR 127, panel 2, Hallway Display, "*WNGR 127/A Remodel*" Designer and Installer.

HONORS/ACTIVITIES:

Promoted to Senior Instructor II, July 2015, Inducted into the Ballston Spa Athletic Hall of Fame 2015, Nominated for the 2010 *U.H.C. Outstanding Professor of the Year award*, Promoted to Senior Instructor, July 2008, Coeur d'Alene Ironman finisher 2003, 33rd overall Las Vegas marathon 2003, Olympic Torch Bearer (2002 Winter Olympics), UNDERC Scholarship, Athletic Scholarship (U. of Notre Dame), Three NCAA Division I Varsity Monograms (U. of Notre Dame), 1989 NCAA Competitor, Junior Olympic National Champion (1500m), Private Pilot, National Public Broadcasting/Oregon Public Broadcasting supporter.





