

Jonathan R. Blackhall

EDUCATION

- *Medical Doctorate (M.D.)*
Rush Medical College: 2007 – 2011 (expected)
 - Activities
 - Rmstudents (Sept. 2007 - Present): I completely redesigned the student website using a Content Management System (Drupal). We are actively promoting technology in medical education and teaching students how to use available technology effectively.
- *Bachelor of Science in Biochemistry with Distinction (GPA 3.47/4.00)*
University of Illinois at Urbana-Champaign: 2002 – 2006
 - *Senior Thesis:* I collaborated with Dr. Pieter Dorrestein of Prof. Neil Kelleher's lab on two related projects to develop a high-throughput screening method to study nonribosomal peptide synthetases (NRPSs) using large molecule mass spectrometry. Since these systems often produce bioactive compounds with properties ranging from virulence factors to natural antibiotics, like penicillin, this technique provides an accurate and efficient method to characterize NRPS systems that has applications in the development of novel pharmaceuticals. I designed and characterized the reactions and prepared them for analysis by mass spectrometry. I also analyzed the samples on a custom-built 8.4 T Fourier-transform mass spectrometer under Dr. Dorrestein's supervision.
 - Awards Received
 - Thomas O. Sidebottom Award for an outstanding thesis in Biochemistry (May 2006)
 - William T. & Lynn Jackson Scholars in Biochemistry Award (May 2005)
 - Dean's List (Fall 2002, Spring 2003)
 - Activities
 - AMSA Pre-Med Member (Aug. 2003 – May 2006) and Webmaster (Aug. 2004 – May 2006): I created a blog-style group website using Wordpress. I created many web-based tools that were used by the group including paying membership dues online, an event calendar, an event attendance function, and an eBay-style auction system for fundraising
 - Relay for Life (April 2006): I raised \$125 and \$1,900 as part of a group

WORK EXPERIENCE

- *Phlebotomist II*
Carle Clinic Association (Urbana, IL): October 2006 – August 2007
 - I performed venipunctures on outpatients and inpatients.
 - On-call 1 night/week
 - I responded to Level I Trauma Events.
 - I became BLS CPR certified.
- *Technical Assistant/Student Worker*
UIUC School of Chemical Sciences Human Resources: April 2004 – October 2006
 - Initially, I processed paperwork and wrote a web page to interact with a FileMaker Pro Database.
 - I was promoted to Technical Assistant after 3 months, and my job focus switched to maintaining and improving office databases, web pages, and other automated technical tasks.
 - I improved my ability to work independently and improved office efficiency using computer skills.

SKILLS & CERTIFICATIONS

- Clinical
 - Phlebotomy (Strong but uncertified)
 - Certified Nursing Assistant (CNA) (Certified in IL)
 - Basic Life Support (BLS) CPR (AHA Certified)
- Research
 - ESI-FTMS
 - SDS-PAGE
 - Protein Overexpression and Purification
 - HPLC, SEC

- Computer/Technical
 - XHTML 1.0
 - CSS
 - PHP
 - MySQL
 - Operating Systems: Windows, GNU/Linux
 - FileMaker Pro

AFFILIATIONS & MEMBERSHIPS

- American Medical Student Association (AMSA): August 2004 – August 2007
- Free Software Foundation (FSF): February 2008 - Present

PUBLICATIONS & PRESENTATIONS

- Senior Thesis: *High-Throughput Substrate-Activity Screens and Mechanistic Studies with Nonribosomal Peptide Synthetases Using Large Molecule Mass Spectrometry.* Blackhall, J. R. (2006)
- Poster Presentation: *MCB Open House at the University of Illinois (U-C) (April 2006)*
- Poster Presentation: *Midwest Enzyme Conference at Loyola University Chicago (Oct. 2005)*
- Publication: *Activity Screening of Carrier Domains within Nonribosomal Peptide Synthetases Using Complex Substrate Mixtures and Large Molecule Mass Spectrometry.* Dorrestein, P. C.; Blackhall, J.; et al. *Biochemistry*; (Accelerated Publication); 2006; ASAP Article.
- Publication: *Characterization of a New Tailoring Domain in Polyketide Biogenesis: The Amine Transferase Domain of MycA in the Mycosubtilin Gene Cluster.* Aron, Z. D.; Dorrestein, P. C.; Blackhall, J. R.; Kelleher, N. L.; Walsh, C. T. *J. Am. Chem. Soc.*; (Communication); 2005; 127(43); 14986-14987.

REFERENCES

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| ● Bob Kimmy | Phlebotomy Supervisor | Bob.Kimmy@carle.com | 217-383-3356 |
| ● Neil Kelleher | Thesis Advisor | nkellehe@uiuc.edu | 217-244-3927 |
| ● Pieter Dorrestein | Research Mentor | pdorrestein@ucsd.edu | 858-534-6607 |
| ● Naomi Roberts | SCS HR Supervisor | nsrobert@uiuc.edu | 217-244-1745 |