Evonne McArthur

evonne [.] mcarthur [at] gmail [.] com

EDUCATION

Vanderbilt University School of Medicine, Nashville, TN   *2016 – Present*
MD/PhD Candidate with the Medical Scientist Training Program (MSTP)

University of North Carolina at Chapel Hill, Chapel Hill, NC   *2011 – 2015*
B.S. Quantitative Biology · Highest Distinction · Honors Carolina Member
Double Minor: Chemistry & Computer Science
Cumulative GPA: 3.951 · Science GPA: 3.950 · Biology GPA: 4.0

School for International Training, Study Abroad, New Delhi, India   *Fall 2013*
Program: India – Health and Human Rights
GPA: 4.0

William G. Enloe Magnet High School, Raleigh, NC   *2007 – 2011*
International Baccalaureate Diploma, July 2011

HONORS

Canby Robinson Society Scholarship   **2016**
Full-tuition merit scholarship to Vanderbilt University School of Medicine

Order of the Grail-Valkyries Inductee   **2013**
Recognized for outstanding character and significant contribution to UNC's
intellectual climate

Phi Beta Kappa Inductee   **Fall 2013**

Phillips Ambassador Scholarship Awardee   **2013**
Selected to represent UNC as an ambassador to Asia (New Delhi, India)

WORK & RESEARCH EXPERIENCE

Research Technician & Programmer · Laedearch Lab, UNC Department of Biology   **5/2015 – 6/2015**
PI: Dr. Alain Laedearch · Mentor: Dr. Lela Lackey
- Investigated RNA structure's relationship with human disease through the development of computational tools to detect and classify riboSNitches

Research Assistant · Innocenti Lab, UNC Eshelman School of Pharmacy   **5/2015 – 5/2015**
PI: Dr. Federico Innocenti · Mentor: Dr. Eric Seiser
- Investigated the accuracy of multiple CNV-calling algorithms and developed a pipeline for more sensitive CNV calling for use in association studies

Independent Study Research Project: Investigating the barriers to adequate tuberculosis treatment and diagnosis for women in Bhopal, Madhya Pradesh   **11/2013**
Mentors: Dr. Azim A. Khan, Dr. Surya Bali
- Utilized Indian governmental health records and personal interviews to investigate and report barriers to TB treatment and diagnosis for Bhopali women in conjunction with the the All India Institute of Medical Science (AIIMS) Bhopal

Conte Center for Computational Neuropsychiatric Genomics
REU Participant · Cox Computational Genetic Medicine Lab,
University of Chicago · PI: Dr. Nancy Cox · Mentor: Dr. Lea Davis   **6/2013 – 8/2013**
- Developed a queryable database which integrates copy-number variant data with exome sequence data to investigate autism spectrum disorder

Research Assistant · ResultsSpace Project, UNC School of Information and Library Science · PI: Dr. Gary Marchionini · Mentor: Dr. Robert Capra   **4/2012 – 5/2013**
- Ran participants in a series of experiments, coded responses, provided input for future experimental design, and statistically analyzed and reported results to investigate the effect of collaborative features on human interaction with search databases

PEER-REVIEW PUBLICATIONS & CONFERENCE PRESENTATIONS

Accepted for publication: Lackey, L.L., Coria, A., Tolson, C., **McArthur, E.,** Laederach, A. (2017). Allele-specific SHAPE-MaP assessment of the effects of somatic variation and protein binding on mRNA structure. *RNA*.

Poster: Lackey, L.L., Coria, A., Tolson, C., **McArthur, E.,** Laederach, A. (2017). Somatic and inherited riboSnitches in TPT1 and LCP1 mRNA secondary structures. *American Association for Cancer Research Proceedings.*

McArthur, E., Bali, S., Khan, A.A. (2016) Socio-cultural and knowledge-based barriers to Tuberculosis diagnosis for women in Bhopal, India. *Indian Journal of Community Medicine.* 41(1), 62-64*.*

Lackey, L., **McArthur, E.,** Laederach, A. (2015). Alternative splicing leads to increased transcript complexity in genes associated with chronic obstructive pulmonary disease. *PLOS ONE.*

Poster: Lackey, L., **McArthur, E.,** Coria, A., Arend, K., Moorman, N., Laederach, A. (2015). The biological impacts of RiboSNitches: Linking RNA structural changes with molecular phenotypes. *North Carolina Symposium on RNA Biology XI*.

Poster: **E. McArthur**, X. Zhang, E.R. Gamazon, J.S. Sutcliffe, E.H. Cook, L.K. Davis and N.J. Cox. (2014) Integration of Copy Number and Exome Sequence Data in a Queryable Database for the Investigation of ASDs. *International Meeting for Autism Research (IMFAR 2014)*.

Capra, R., Chen, A.T., **McArthur, E.**, Davis, N. (2013) Searcher Actions and Strategies in Asynchronous Collaborative Search. In *Proceedings of the American Society for Information Science and Technology (ASIST '13)*, Vol. 50.

ORGANIZATIONS & ACTIVITIES

Student Technology Committee Member   **2016 - Present**
- An official liaison between medical students, administration, and IT leaders with regard to all technologies related to Vanderbilt School of Medicine

Shade Tree Clinic Volunteer   **2016 - Present**
- Approximately 20 hours providing primary care as a clinical volunteer with Vanderbilt's free clinic

Mentor for pre-medical and pre-MD/PhD students   **2016 - Present**
- Mentored one underserved pre-medical student through Student National Medical Association (SNMA) and one pre-MD/PhD student through Vanderbilt's Scientific Immersion & Mentorship (SIM) Program

Scholars' Latino Initiative Mentor   **2012 – 2015**
- Mentor in a structured three-year college preparatory program to provide support for a Latina student from a under-resourced high school

Outward Bound Full Scholarship Recipient   **06/2014 – 07/2014**

UNC Club Competitive Ski and Snowboard Race Team   **2011 – 2013**
- Represented UNC as an alpine racer in US Collegiate Ski Association Southeast Division sanctioned races

Published Photography
- Cover of Dick's Sporting Good's Magazine and featured in many other publications from Vancouver, Warsaw, Finland, Malaysia, the UK, and the US News & World Report website
- Created a two month 30 photo exhibit exploring the diversity of India's life and landscape

SKILLS

Software and Computer Language Knowledge:
- Python, R, MATLAB, Perl, Java, AWK, Linux Shell Scripting, Mathematica, MS Office, HTML, CSS
- Web authoring tools such as Adobe Flash, Illustrator, Photoshop, and Lightroom

Language Knowledge:
- Moderate conversational Spanish
- Introductory conversational Hindi-Urdu, Proficiency in Devanagari and Nastaʿlīq Script