TAIWO A. TOGUN

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Education

YALE UNIVERSITY — New Haven, CT — *2007*— 2013

PhD, Computational Biology and Bioinformatics — *5/2013*
Dissertation: *A Multivariate Computational Framework to Identify Genomic Biomarkers in Cancer*

MS, Computational Biology and Bioinformatics — *5/2010*
Thesis: *Towards Patient-Tailored Therapy: Identifying Genomic Biomarkers of Response to Trastuzumab-based therapy in Metastatic Breast Cancer*

UNIVERSITY OF WEST ALABAMA — Livingston, AL

BS, (Summa Cum Laude), Mathematics and Computer Information Systems — *2001— 2005*

TRAINING CERTIFICATES
Johns Hopkins University Certificates of course completion for:

- Statistical Reasoning for Public Health: Estimation, Inference & Interpretation — *3/2014*
- Design and Interpretation of Clinical Trials — *3/2014*

Competencies

- Computational Biology, Genomics, Bioinformatics, Data Mining, Next Generation Sequence Analysis, Microarray Gene Expression and DNA copy number analysis, Biomarkers, Data Science.
- Strong foundation in core analytics and data mining techniques for high-dimensional/big/genomic data
    - Application of statistical methods and techniques including regression, classification and time-to-event (survival) analysis for risk stratification and predictive modeling.
- Passion for, and practical approach to, statistical problem-solving
- Excellent oral and written communication skills
- Leadership and management experience
- Programming/ data analysis software experience with: R, Python, Java

Research

BIOSTATISTICS & COMPUTATIONAL BIOLOGY (GENOMICS)

- Developed a computational framework to identify genomic biomarkers in cancer
- Analyzed high-dimensional genomic data to draw biological and clinical insights from:
    - Single Nucleotide Polymorphisms data to identify candidate prognostic markers in glioblastoma
    - Genome-wide methylation data to investigate germline competency in embryonic stem cells
        - Publication: **Germline competency of parthenogenetic embryonic stem cells from immature oocytes of adult mouse ovary.** *Liu, Zhong; Hu, Zhe; Pan, Xinghua; Li, Minshu;* ***Togun, Taiwo A****, et al* Human molecular genetics (2011)20(7):1339-1352.
    - Protein expression levels data to identify determinants of response to therapy (Trastuzumab) in breast cancer
    - Integrated analysis (gene expression, DNA copy number and pathway data) to identify predictors of outcome, response to therapy, and relevant pathways in breast cancer.

- Explored and compared statistical methods for predictive modeling using high-dimensional data.

PATHOLOGY INFORMATICS
- Employed programming (R, Python) and Bioinformatics tools (genome browsers and sequence alignment tools) to:
    - Classify repetitive genomic elements in Head and Neck cancer into their respective classes
    - Resolve and integrate genome-wide methylation data from different platforms

MOLECULAR, CELLULAR & DEVELOPMENTAL BIOLOGY
- Performed the Chromatin Immuno-Precipitation procedure for the precipitation of binding sites of RNA polymerase II and acetylated Histone IV.

Professional Experience

SeqWise Next Generation Sequencing (NGS) Consulting New Haven, CT
Analytics Consultant *6/2014— present*
- Provide Bioinformatics (including downstream statistical analysis) support and solutions to clients who seek to draw insight from NGS data (ChIPseq, RNA seq, DNA seq).

UNIVERSITY OF NEW HAVEN New Haven, CT
Adjunct Faculty, Center for Learning Resources *1/2014— 6/2014*
- Provided support for Math, Statistics and Biological Science courses
- Designed and presented workshops to empower students and improve learning experience

PIERREPONT SCHOOL Westport, CT
Faculty, Computer Science and Mathematics *8/2012—present*
- Taught middle and high school students computer science and mathematics courses.
- Collaborated with a team of educators and parents to recognize students' potentials and aptly design and tailor course materials to ensure effective and enjoyable educational experience

UNIVERSITY OF CALIFORNIA San Francisco, CA
Staff Research Associate, Department of Neurological Surgery *6/2013— 8/2013*
- Performed analysis and statistical modeling of Single Nucleotide Polymorphisms data towards elucidating prognosis for Glioblastoma.
- Effectively communicated and discussed project progress through well documented R codes and elegant presentations to remote collaborators of diverse expertise.

YALE GRADUATE SCHOOL OF ARTS & SCIENCE New Haven, CT
Graduate Student Research Scientist, Computational Biology & Bioinformatics *7/2007—5/2013*
- Interdisciplinary collaborations: worked on a variety of data mining, statistical analysis and modeling projects across different departments and disciplines—biostatistics, pathology informatics, molecular biology, public health and medicine.

YALE SCHOOL OF PUBLIC HEALTH New Haven, CT
Graduate Teaching Assistant, Introductory Biostatistics *9/2011—6/2012*
- Managed and coordinated interactive lab sessions to assist students with homework problems, especially as it pertained to using statistical programming environments (SAS and/or R) to derive solutions and interpret results.

YALE SCHOOL OF MEDICINE New Haven, CT
Graduate Assistant, Summer Medical & Dental Program *6-7/2010 & 6-7/2009*
- Served on boards that critically evaluated students' applications and performances before and after the program.
- Organized tutorial sessions and activities to help college freshmen and sophomores prepare for medical school.

Extra-Curricular Work

AFRICAN CENTER FOR INNOVATION & LEADERSHIP DEVELOPMENT Toronto, Canada
Innovation Consultant 5/2013— present

- Coordinate and design grant applications focused on the use of scientific/technical, social and business innovations to address pressing global health challenges in developing countries.
- Facilitate quality-driven interventions in the Nigerian academy by sourcing opportunities for international academic collaborations, consultations and training for researchers, students, and educators.
    - Successfully mobilized 7 Nigerian secondary schools to participate in the 2013 Computer Science Education week.

Leadership Experience

YALE GRADUATE SCHOOL OF ARTS & SCIENCE New Haven, CT
Graduate Fellow, Office of Diversity and Equal Opportunity *8/2010—5/2013*

- Designed academic and professional development programs for graduate and professional students.
- Developed and implemented recruitment activities to increase minority enrollment and retention in the Biological and Biomedical Sciences graduate program

Chair, Black Graduate Network *8/2009—5/2010*

- Organized social and networking events such as graduate mixers and discussion panels to promote networking among black professional and graduate students

THE UNIVERSITY OF WEST ALABAMA Livingston, AL
Assistant to On-campus advisor, Alpha Phi Alpha Fraternity, Inc. *1/2006—5/2007*

- Oversaw and advised members on the affairs of the fraternity such as membership intake process, revision of chapter's academic criteria for active membership, and the business of the fraternity's step team.

Honors/Awards

- Edward A. Bouchet Graduate Honor Society (2014)
- Ruth L. Kirschstein National Research Service Award for Individual Predoctoral Fellows (2-year award of $42,000/annum by the National Cancer Institute to support proposed graduate research. 2010-2012)
- Biotechnology Institute Minority Travel Fellowship, 2010

References

Dr. David Tuck
EMD Serono, Inc., Senior Medical Director (Graduate Thesis Advisor)
david.tuck@emdserono.com

Dr. Annette Molinaro
University of California, San Francisco – Department of Neurological Surgery, Associate Professor (Dissertation Advisor)
MolinaroA@neurosurg.ucsf.edu

Mrs. Nancy Webber
Pierrepont School, Head of School
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