

# DIANA KIROV



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Maggie Valley, NC



Texas Tech University Health Sciences Center School of Medicine

University of Texas at Dallas

M.S. Applied Cognitive Neuroscience

Computational Modeling Specialization

Eugene McDermott Scholar (2011-2015)

**B.S.** Neuroscience

Brain and Behavioral Sciences Major Honors (2014) Collegium V Honors (2014)

Friendswood High School **High School Diploma** 

Honors Graduate
AP Scholar with Honors 2011
National Merit Finalist 2011
United States Presidential Scholar 2011
Awarded by US Department of Education
Moody Honors Scholar 2011
Awarded by Moody Foundation

Aug 2007 – June 2011 Class Rank: 7 GPA: 4.00

Aug 2015 – Dec 2018

Aug 2014 – June 2015

Aug 2011 – June 2014

GPA: N/A

GPA 3.67

GPA 3.58

#### **SKILLS**



- Data collection
- Statistical analysis
- Data mining
- MATLAB, C++
- HTML, CSS, Java
- Teaching/leading team members
- Strong clinical knowledge base and understanding

### Micro and macro laboratory experience:

- PCR
- microRNA extractions
- DNA gel electrophoresis
- cytology
- LCMS
- preparing media
- agar plating
- culturing bacteria
- animal handling
- animal surgical experience
- building electrodes to specification
- working under a microscope



## RESEARCH AND LABORATORY EXPERIENCE

#### **Molecular Laboratory Technologist**

2021-Present

Sanesco International, Inc.

- Perform routine and complex technical procedures and functions according to departmental SOPs, such as PCR-based genetic testing and analyzing urine samples to determine concentrations of specific analytes
- Maintains quality results by running standards and controls, verifying equipment function through routine equipment maintenance and advanced troubleshooting
- Calibrating equipment utilizing approved testing procedures;
- Perform and document preventive maintenance and quality control procedures
- Determine the acceptability of specimens for testing

**Researcher** for Lesley Motherall, M.D.

2016-2017

TTUHSC School of Medicine

Literacy and its impact in healthcare: Demonstrate the correlation between illiteracy and access to healthcare.

- Gathered data on the non-literate adult population of Lubbock where illiteracy rates are some of the highest in the country--at 13%
- Coordinated with Literacy Lubbock, a non-profit organization geared towards educating the adult population and providing GED classes
- Poster presentations given during TTUHSC School of Medicine Student Research Week in 2016 and 2017.

Neural Engineering Laboratory at the University of Texas at Dallas PI: Robert Rennaker, Ph.D.

Sensory Enhancement Project: The goal of this project was to enhance acuity of hearing. Vagus nerve stimulation increases release of neurotransmitters in the brain, including acetylcholine and norepinephrine, which enhances neural plasticity.

- Developed research plan and worked with engineers to implement methodology, including building of experimental station and automating experimental process.
- Hired a team of five undergraduates and trained them in laboratory practices and animal care
- Surgically implanted a custom-made vagus nerve cuff on every rat in the project.
- Maintained the health of dozens of rats through meticulous data collection and entry of weights, food consumption, and notes of overall health and surgical recovery.
- Presented finding and progress updates at weekly lab meeting and to outside faculty and staff.
- Analyzed the data in MATLAB using statistical methods and generated clear and useful outcome report.

#### **Neural Engineering Researcher**

2012-2013

Neural Engineering Laboratory at the University of Texas at Dallas PI: Robert Rennaker, Ph.D.

Olfactory Project: The goal was to determine how contaminants in complex mixtures encoded in the piriform cortex and the differences in activities in the anterior and posterior piriform cortices.

- Monitored water in-take (as rats were intermittently water-restricted) and ensured rats that failed to perform the task adequately were not inhumanely dehydrated.
- Maintained the health of rats through meticulous data collection and entry of weights and notes of overall health and surgical recovery.
- Set up for surgeries, maintained gas anesthesia throughout, monitored vitals and assisted with miscellaneous tasks.

#### **MD Anderson Cancer Prevention Research Intern**

June 2014-August 2014

Inflammatory Breast Cancer Laboratory at MD Anderson Cancer Center

PI: Wendy Woodward, M.D., PhD.

Application of drug treatment to altering the gene expression of miR200c and prevent inflammatory breast cancer from metastasizing to the brain.

- Cultured cells biopsied from inflammatory breast cancer in plates and treated them with a demethylating agent.
- Extracted RNA and used a microRNA taqman polymerase chain reaction and measured the expression of miR141/200c
- Poster Presentation: 8/8/14 at the MD Anderson Summer Research Experience Poster Session
- Used EMR to compile and sift through patient information look for a correlation between cholesterol medications and inflammatory breast cancer



### **MORE ABOUT ME**

- In the past 12 years I've also worked for a casino, a restaurant, the meteorology department at the FOX26 news station in Houston, and with renowned Balkan historian, Dr. Gale Stokes.
- My hobbies include horseback riding, tennis, and baking.



## **REFERENCES** (and the best way to reach them)

Lisa Samuelson: lsamuelson@sanescohealth.com
Susana Segrist: 828-497-8424
Dr. Robert Rennaker: renn@utdallas.edu
Dr. Michael Kilgard: kilgard@utdallas.edu
Dr. Shine Chang: shinechang@mdanderson.org