

# Gary Graduate School

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## EDUCATION

**University of Richmond**, Richmond, VA, May 2013

Bachelor of Science in Biology, Chemistry Minor GPA: 3.70

### **Biology Honors Program**

*Honors:*

- Golden Key, International Honor Society
- Dean's List: Fall 2009 - Spring 2012

**Relevant Courses** - Molecular Genetics, Cell and Molecular Biology, Evolution and Diversity of Life, Research Methods and Analysis, General Chemistry, Organic Chemistry, Physics I and II with Calculus, Clinical Neuroscience, Cellular Neurophysiology

## PROFESSIONAL EXPERIENCE

**Volunteer**, *Home Again Emergency Shelter*, Richmond, VA Summer 2010 - present

- Care for children (ages 2-13) while mothers attend lifestyle improvement meetings
- Serve food to homeless and battered women at various festivals in Richmond throughout the year

**Intern**, *International Hospital for Children*, Richmond, VA Fall 2010 - present

- Set up and take children and families to and from doctor appointments, help purchase food, clothing, and medication necessary during stay in the United States
- Provide office aid to employees: data entry, background checks, filing, and mailing

**Summer Research Fellow**, *University of Richmond, Department of Neuroscience* Summer 2010

- Worked with Dr. Craig H. Kinsley in attempt to characterize the effects of reproductive experience on the rodent brain
- Specifically examined the effects of such an experience on mitochondrial abundance in hippocampus and preoptic area using immunocytochemistry and confocal microscopy

**Dialysis Technician**, *Bay Health Medical Center*, Dover, DE Summer 2009

- Assisted doctors and nurses in providing treatment for hospitalized patients experiencing acute or chronic renal failure
- Managed the regulation and maintenance of hemodialytic machines

## SHADOWING OPPORTUNITIES

*Bay Health Medical Center*, Dover, DE Summer & Fall 2009

Dr. Gertrude Findley- Christian: Nephrology

Dr. Frank Marrow: Nephrology

- Observed femoral line placements, kidney biopsies, and physician rounds

*Bon Secours Health System*, Richmond, VA Spring 2009

Dr. Stanley Tucker: Cardiology

- Observed echocardiograms, electrocardiograms, pacemaker evaluations, and routine office appointments

*Maimonidies Medical Center*, Brooklyn, NY Summer 2008

Dr. Richard Lazzaro: General Surgery

- Observed non-invasive gastric-bypass surgeries and post-surgery examinations

## RESEARCH / PUBLICATIONS

**Undergraduate Honors Research**, *University of Richmond*, Department of Biology, Fall 2005 & Spring 2006

- Worked with Dr. Craig Kinsley and Dr. Scot Knight in the development of a real-time PCR protocol for examination of mitochondrial specific cytochrome c oxidase protein abundance in the rat hippocampus
- Experiments extended to transgenic mice genetically predisposed to express Alzheimer-like symptoms

## RESEARCH / PUBLICATIONS continued

### **Undergraduate Research Grants, *University of Richmond***

- Wrote, submitted, and awarded three grants (Spring 2005, Summer 2005 & Fall 2005) for research projects all attempting to characterize the effects of reproductive experience on neuronal mitochondrial abundance and efficiency

### **Undergraduate Research, *University of Richmond*, Department of Neuroscience, Fall 2004-present**

- Investigated the subtle neurological alterations that occur following pregnancy

### **Presented Research Posters, Richmond, VA & Washington, D.C.**

- Sensory and Neural Up-Regulation in Females Following Reproductive Experience. Banks, M., Kinsley, C., Karelina, K., Contino, R., Rima, B. and Graduate, G.
- Presented Spring 2005 at the UR Undergraduate Research Symposium, Richmond, VA
- Abstract available: [research.richmond.edu/students/Gary\\_Graduate.htm](http://research.richmond.edu/students/Gary_Graduate.htm)
- Pregnancy/Motherhood induction and maintenance of neuroplasticity in the Maternal Rat. Kinsley, C., Banks, M., Karelina, K., Rima, B., Contino, R., and Graduate, G. Presented Fall 2005 at the 35th Annual Society for Neuroscience Meeting, Washington D.C.

## LABORATORY / COMPUTER SKILLS

- Confocal microscopy
- Image J analysis
- Immunocytochemistry
- Golgi Stain
- Gel Electrophoresis
- IR spectroscopy
- Standard oocyte physiologic recording techniques (i.e. voltage-clamp)
- Internet, Microsoft Word, PowerPoint, Excel, Origin
- Ample experience with journals and library research including Medline, Pubmed and EBSCO host

## HONORS / ACTIVITIES

### **Kappa Sigma Fraternity, Beta-Beta Chapter, *University of Richmond***

Spring 2003-present

- Vice President, Fall 2005
- TOTS- Team Captain (Philanthropic event), Fall 2004
- Alumni Relations Committee, Spring 2005-Present

### **Physics Olympics, *University of Richmond*, Department of Physics**

Spring 2005

- Helped in the planning and coordination of the 1st Physics Olympics with Dr. Con Beausang
- Served as a judge for the high school competition

### **Rho Iota, *University of Richmond***

Fall 2005- present

- Greek life Christian group, weekly meetings

### **Undergraduate Student Symposium, *University of Richmond*,**

Spring 2004

- Presented findings from mitochondria and pregnancy project

### **Society for Neuroscience 35<sup>th</sup> Annual Meeting, *Washington, D.C.*,**

Fall 2005

- Presented findings from the summer fellowship investigation of the effect of reproductive experience on functional levels of cytochrome c oxidase protein in the rat hippocampus

## RESEARCH INTERESTS

- Helping children in need through work with Home Again Emergency Shelter and The International Hospital for Children
- Biomedical research and the theoretical mechanisms of the aging process
- Medicine & Neurophysiology
- The intersection of science and religion