Isaac Richardson

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**Vanderbilt University, Nashville, TN**

Major: Chemical Engineering, B.E.

Minors: Engineering Management and Chemistry May 2019

GPA: 3.65

**RESEARCH EXPERIENCE**

**Vanderbilt University, Reinhart-King Lab, Engineering and Science Building**

*Undergraduate Research Assistant* May 2018 to Present

* Apply cell culture techniques to run in-vitro experiments with breast cancer cell lines
* Use multiple microscopy techniques to obtain data for analysis
* Use Western Blot technique to determine presence and relative amounts of proteins in cells
* Analyze experimental data using ImageJ, Matlab and other resources
* Present research at VUSE Summer Research Program poster session

**Vanderbilt University, Zanic Lab, MRB3 Biosciences Building**

*Undergraduate Research Assistant* May 2017 to May 2018

* Research in a biophysics lab studying the effects of proteins on microtubule polymerization
* Apply problem solving skills to analyze results and plan next steps
* Write weekly reports discussing results using technical writing skills
* Conduct experiments and obtain movies of dynamic microtubules using TIRF microscopy
* Analyzed and determined kinetic effects of 2 distinct proteins during a 10 week summer session

**LEADERSHIP**

**Beta Upsilon Chi, Brothers Under Christ** January 2016 to Present

*Cell Group Chair*

* Maintain 5 different small groups within my fraternity
* Resolve issues within the groups using interpersonal relationship skills
* Utilize effective communication skills to monitor the groups are through biweekly meetings

**Nashville Navigators** August 2015 to Present

*Freshman Bible Study Leader*

* Lead a weekly bible study on Wednesday nights for 8 freshman
* Meet on Tuesday nights and Monday afternoons to prepare for the study
* Meet throughout the week to connect with the guys in the study one on one

**HONORS VOLUNTEERING**

* National Merit Scholar ● Preston Taylor Ministries
* National AP Scholar ● Room in the Inn
* Dean’s List ● Turning Point Domestic Violence Services

**SKILLS**

Matlab, Aspen, Excel, TIRF Microscopy, LabVIEW, ImageJ, Time Management, Data Analysis

**Research Work**

**Richardson I**, Rahman A, Lawrence EJ, Strothman C, Zanic M. “Investigating the kinetics of microtubule polymerization”. Poster presented at: VUSE Summer Research Poster Session: 2017 September 3; Nashville, TN.

**Richardson I**, Hapach L, Reinhart-King CA. “Characterization of phenotypically sorted breast cancer cells”. Poster presented at: VUSE Summer Research Poster Session: 2018 September 4; Nashville, TN.

Hapach L, **Richardson I**, Cao T, Reinhart-King CA. “Collective cell migration in breast cancer” Poster presented at: 2018 Biomedical Engineering Society Annual Meeting: 2018 October 18. Atlanta, GA.