

## STESHA JOSEPH

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Bon Air Gardens, Arouca, Trinidad and Tobago, W.I.

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**OBJECTTIVE:** Obtain an opportunity working in industry.

### EDUCATION

#### Seton Hall University, South Orange, New Jersey

Doctor of Philosophy of Chemistry, August 2014

Biochemistry Concentration, GPA: 3.86

Masters of Chemistry, May 2013

Chemistry Concentration, GPA: 3.85

#### Utica College of Syracuse University, Utica, New York

Bachelor of Science, May 2009

Major: Chemistry, GPA: 3.00

### Doctoral Dissertation

Seton Hall University, South Orange NJ, 2012, Department of Chemistry and Biochemistry

Synthesis, Characterization, and Biological Activity of Poly(Arginine) derived Cancer-Targeting Peptides in HepG2 Liver Cells

### HONORS

Member of Phi Theta Kappa Honor Society Spring 2005

### LABORATORY SKILLS

GC/MS

GC/MS/MS

HPLC

LC/MS

Wet Chemical Analyses

GC x GC-TOF MS

Gel Electrophoresis

SPPS

NMR Spectroscopy

IR Spectroscopy

CD Spectroscopy

Western Blotting

Southern Blotting

Polarimetry

UV-Vis Spectrophotometry

Dynamic Light Scattering

Transmission Electron

Microscopy

Flow Cytometry

(FACS)

### RESEARCH EXPERIENCE

Seton Hall University, South Orange, NJ January 2010 – July 2014

#### Research Assistant

- Designed, synthesized, characterized the structural and biophysical properties of cancer-targeting polypeptides
- Developed techniques for synthesizing difficult polypeptides by Solid Phase Peptide Synthesis
- Currently studying cytotoxicity of these polypeptides within HepG2 liver cancer cells

Stonehill College, Easton, MA June 2007 – August 2007

#### Research Assistant

- Collaborated working under Professor of Chemistry in the SURE Program
- Synthesized carbohydrates to be used in the inhibition of prostate cancer
- Studied the mechanism of action of these carbohydrates on prostate cancer and HIV/AIDS using computer simulation techniques

### TEACHING EXPERIENCE

Seton Hall University, South Orange, NJ

#### Teaching Assistant, August 2010 – July 2014

- Teach fundamentals of General Chemistry Lab, Organic Chemistry I and II – Lab, and Biochemistry Lab
- Explain and assist students with experimental procedures outlined in syllabus, proctor exams and grade papers
- Train students and ensure students follow the correct laboratory protocols and maintain proper lab journals
- Provide students with additional instructions to supplement lecture courses

**TEACHING EXPERIENCE**

Seton Hall University, South Orange, NJ

**Professional Tutor**, January 2011 – July 2014

- Provided both group and one on one assistance to students with majors in Chemistry, Biochemistry, Biology and Mathematics
- Provided study strategies, reviews for quizzes and exams, as well as discussions on lab material
- Facilitated mock exams to prepare students for exams

**TRIO Upward Bound Program Instructor**, June 2011 – July 2014

- Designed the curriculum for high school students which included Biology, Biochemistry, Chemistry and Physics
- Prepared students for the greater demands of college-level study and campus-life
- Encouraged disadvantaged high-school students to pursue careers in the field of science
- Provided students with research experience within the university lab setting

**Adjunct**, June 2011 – July 2014

- Teach fundamentals in General Chemistry, Organic Chemistry and Biochemistry
- Provided one on one assistance to students in General Chemistry, Organic Chemistry and Biochemistry
- Provided students with research experience within a university lab setting

Utica College of Syracuse University, Utica, NY, August 2007 – May 2009

**Peer Tutor**

- Provided additional assistance to students in General Chemistry, Organic Chemistry, Physical Chemistry, Algebra, Geometry, Pre-Calculus, Calculus, and Statistics
- Provided study strategies for quizzes and exams
- Provided answers to students' questions on lecture material

Massasoit Community College, Brockton, MA, Fall 2006 – May 2007

**Peer Tutor**

- Provided additional assistance to students in General Chemistry, Organic Chemistry, Microbiology, General Biology, Algebra, Geometry, Pre-Calculus, and Calculus
- Provided study strategies for quizzes and exams

**EXPERIENCE**

Helping Hands Program, Brooklyn, NY, February 2010 – August 2010

**Assistant Director**

- Provided additional instruction to students Mathematics and English during the school year
- Developed efficiency-enhancing workflow processes that allowed for the expansion of student services
- Decreased office expenditures by implementing needed controls on stock/supplies

**VOLUNTEER EXPERIENCE**

New York Presbyterian Hospital, New York City, NY, May 2008 – August 2008

**Volunteer**

- Provided assistance to staff, patients and family members
- Provided meals, bed supplies and other supplies to patients
- Monitored patients food intake and reported to nurses

**PUBLICATIONS**

1. Joseph, S., Blackman, B., Martinez, I.; Parronchi, C., Phillips, M.; Kelly, M.; Beaury, M.; Bitsaktis, C.; Blake, A., Sabatino, D. Synthesis, Characterization and Biological Activity of Poly(Arginine) derived Cancer-Targeting Peptides in HepG2 Liver Cells. *J. Pept. Sci.* **2014**, DOI: 10.1002/psc.2665.

**ACADEMIC SYMPOSIUM**

1. Joseph, S., Maina, A., Blackman, B., Martinez, I., Parronchi, C., Phillips, M., Kelly, M., Beaury, M., Bitsaktsis, C., Blake, A., Sabatino, D. Cancer-Targeted Delivery of siRNA in HepG2 Hepatoblastoma IBC's 16<sup>th</sup> Annual Oligonucleotide and Peptide Therapeutics from Research through Commercialization, Rhode Island, May 12-15, **2014**.
2. Joseph, S., Blackman, B., Parronchi, C., Blake, A., Sabatino, D. Synthesis, Characterization and Biological Activity of GRP78 Cancer-targeting Peptides. New York Academy of Science Chemical Biology Discussion Group Year-End Symposium, New York, June 5, **2013**.
2. Joseph, S., Maina, A., Phillips, M., Kurian, L., Borland, E., Martinez, I., Sabatino, D. Cancer-targeting Peptides in Cancer Therapy. 17<sup>th</sup> Annual Petersheim Academic Expositions, Seton Hall University, April 23, **2013**.
3. Joseph, S., Penny, W., Martinez, I., Sabatino, D. Cancer-targeting Peptides as Cancer Specific Drug Delivery Systems. 57<sup>th</sup> New Jersey Academy of Science Symposium, New Jersey, April 21, **2012**.
4. Joseph, S., Penny, W., Martinez, I., Sabatino, D. Cancer-targeting Peptides as Cancer Specific Drug Delivery Systems. 16<sup>th</sup> Annual Petersheim Academic Expositions, Seton Hall University, April 17, **2012**.
5. Joseph, S., Kurian, L., Poland, L., Silva, T., Sabatino, D. How do we make peptides in the lab? 15<sup>th</sup> Annual Petersheim Academic Expositions, Seton Hall University, April 12, **2011**.

**PRESENTATIONS**

1. "Synthesis, Characterization and Biological Activity of Poly(Arginine) derived Cancer-Targeting Peptides in HepG2 Liver Cells," Seton Hall PhD Seminar, South Orange NJ, Spring **2014**.
2. "Development of a high-performance liquid chromatography method for the simultaneous quantitation of glutathione and related thiols," Seton Hall Formal Seminar, South Orange NJ, Fall **2012**.

**SKILLS**

Computer: Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft Access

Scientific/Research Software: ChemBioDraw, ChemStation, Empower, LabSolutions, Varian

**PROFESSIONAL MEMBERSHIP**

American Chemical Society (ACS)

**ACTIVITIES**

**President:** Utica College, West Indian Connection Club, 2008-2009

**Vice President:** Utica College, Student Senate, 2007-2008

**Member:** Utica College, Chemistry Club, 2007-2009

**President:** Massasoit Community College, International Touch Club, 2005-2007

**Secretary:** Massasoit Community College, Student Senate, 2006-2007