

## Danai Stella Gkotsi

**Date of Birth: 15<sup>th</sup> July 1990. Nationality: Greek/American**  
**School of Chemistry, University of St Andrews, North Haugh, St. Andrews, Fife. KY16 9ST**  
E-mail: dsg5@st-andrews.ac.uk

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I am a PhD student with a background in **molecular biology/bioinformatics** and a research focus on discovering and developing enzymes, particularly halogenases, as tools for synthesis. Through my studies I am gaining expertise in molecular biology, enzymology, biocatalysis, analysis and assay design.

### Employment Record

**PhD Studentship, funded by Syngenta and the University of St Andrews, Department of Chemistry, UK.**

September 2013 - present

**Demonstrator in First Year Organic Chemistry Practical Class, University of St Andrews.**

February 2014 - present

**Demonstrator in First Year Inorganic and Physical Chemistry Practical Class, University of St Andrews.**

September 2014 - present

**Research Assistant, Institute Euromedica Encephalos, Department of *In vivo* MR Spectroscopy, Greece**

August 2012 – August 2013

### Education

**CASE PhD Studentship, University of St Andrews, Department of Chemistry, Supervisor: Dr Rebecca JM Goss. Syngenta, Jealott's Hill, UK, Supervisor Dr Matthew McLachlan.**

September 2013-Present

**Integration of Biohalogenation and Cross Coupling Chemistry**

**BSc Thesis, University of Aberdeen, Institute of Medical Sciences, Supervisors: Dr Alisdair McKenzie, Dr Andrew Starkey.**

February 2012- May 2012

**A Bioinformatics Analysis of Changes in the Methylation Status of Genomic Sequences Versus Genetic Variation: A method for Understanding the Genetics of Bipolar Disorder and Depressive Diseases.**

**Degree Molecular Biology BSc (Hons.), Institute of Medical Sciences, University of Aberdeen**

September 2008- July 2012

## **Skills and Knowledge**

- Various bioinformatics software and comparative genomics tools
- SQL, Visual Basic and R Programming Languages
- MySQL database management system
- Molecular Biology
- Reverse Phase Chromatography for polar compounds
- 1D and 2D NMR
- *In vivo* MR spectroscopy
- Calculation of absolute concentrations of specific metabolites in brain through *in vivo* MR spectroscopy
- Cryopreservation and handling of human gametes and embryos
- Immunochemical methods such as ELISA and Immunoblotting
- Protein Purification
- Microbiological culturing

## **Research Presentations**

### **April 2014, University of St Andrews, Department of Chemistry, Organic Seminars**

Integration of Biohalogenation and Cross Coupling Chemistry

### **November 2014, Syngenta, Jealott's Hill, UK**

Biohalogenation as a Tool for Organic Synthesis

### **December 2014, University of St Andrews, Department of Chemistry, Organic Seminars**

Enzymatic Tools for Accessing Halogenated Molecules

## **Publications**

Smith, DRM; Willemse, T; Gkotsi, DS; Schepens, W; Maes, BU; Ballet, S; Goss, RJM: The first one-pot synthesis of L-7-iodotryptophan from 7-iodoindole and serine, and an improved synthesis of other L-7-halotryptophans, *Organic Letters*, 2014, 16 (10) 2622-2625

Grüschow, S; Smith, DRM; Gkotsi, DS; Goss, RJM: Halogenation in Science of Synthesis Reference Library: Biocatalysis in Organic Synthesis Eds. Faber, K; Fessner, W-D; Turner, NJ.

Willemse, T; Smith, DRM; Gkotsi, D; Schepens, S; Maes, BUW; Ballet, S; Goss, RJM: Simple and scalable access to L-7-halotryptophans and other L-halotryptophans through an improved one-pot biotransformation, *Journal of Peptide Science*, 2014, 20, S143-144