

**Antoine Abou Fayad**  
**Date of Birth: 21.04.1986 Nationality: Lebanese**  
**School of Chemistry, University of St Andrews, North Haugh, St. Andrews, Fife. KY16 9ST**  
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I am a highly motivated **BioOrganic Medicinal Chemist** with research interests in the synthesis, biosynthesis and biosynthetic manipulation of natural products. Through my MSc I have developed skills in organic synthesis and I have extended these skills in biochemistry further through my PhD. I have a deep interest in the medical research field especially in the discovery and isolation of antibiotics. I am interested in how biosynthetic pathways may be harnessed in order to create natural products of my own design with improved biological. Combining synthetic chemistry and biosynthesis provides **expeditious access to series of otherwise synthetically intractable natural product analogues**. These libraries may be used to gain a greater understanding of the drug's structure activity relationships.

### **Employment record**

**Post-doctoral research associate, School of Chemistry, University of St Andrews, supervisor Dr Rebecca Goss**  
May 2014- present

### **Education**

**PhD in Combining Chemical Synthesis and Biosynthesis to Generate Novel Antibiotics, School of Chemistry, University of St Andrews, supervisor Dr Rebecca Goss.**  
2012- May 2014

**PhD in Combining Chemical Synthesis and Biosynthesis to Generate Novel Antibiotics, School of Chemical Sciences, University of East Anglia, supervisor Dr Rebecca Goss.**  
2010- 2012

**MSc in Advanced Organic Chemistry (with distinction), School of Chemical Sciences, UEA**  
2009-2010

**BSc in Chemistry, University of Balamand, Lebanon**  
2005-2009

### **Awards and Honours**

- The prestigious Katritzky award by Prof. Alan Katritzky for PhD funding.
- Distinction and top of class on the MSc degree in Advanced Organic Chemistry from University of East Anglia.
- Poster prize for the best poster in the University of East Anglia school colloquia (July 12, 2011)
- FIFA award for the best goalkeeper in the Asian futsal cup for the year 2005.
- Lebanese Football federation award for my essential role with the Lebanese football national team as a captain and a team player throughout the 5 years I have spent with the team (2002-2007).

### **Previous Employment Record**

**Demonstrator for undergraduates in the laboratories of University of Saint Andrews**

2012-February 2104

**Senior Resident, for an accommodation block at the University of East Anglia**

2011-2012

**Demonstrator for undergraduates in the laboratories of University of East Anglia**

2010-present

**Supervised and trained several students during there undergraduate work at the University of East Anglia**

2010-2012

**Resident Tutor, for an accommodation block at the University of East Anglia**

2009-2010

**Chemistry Tutor, for students in University of Balamand for first year students and second year.**

2006-2009

**Assistant and demonstrator in the chemistry laboratory at University of Balamand, Lebanon.**

2004 - 2008

**Volunteer as a paramedic in the international association, Red Cross (in Lebanon)**

2004-2008

**Member of the Lebanese Independence Scouts for 12 years**

1994-2005

### **Relevant Skills**

During my MSc and PhD I have quickly mastered skills and concepts in a wide range of organic chemistry techniques, specializing in stereo-controlled non-proteinogenic amino acids, peptide synthesis, the manipulation of air sensitive and unstable compounds by the use of Schlenk technique, and compound isolation and purification, including the use of semi-prep HPLC. I also have strong analytical skills including various 1D and 2D NMR experiments, analytical HPLC/UPLC, LC-MS, HRMS, MS-MS, IR, and optical rotation. I have attended several high level workshops on NMR, mass spec, and HPLC maintenance and analysis. (certificates are available upon request)

In addition to my skills in synthesis, I am experienced in a variety of biological techniques. I have worked under sterile conditions with a range of organisms including moderately hazardous, class II organisms such as wild type *Escherischia coli* and *Pseudomonas aeruginosa*. I am currently undergoing training to become certified with handling class III microorganisms such as *Mycobacterium tuberculosis*. I am experienced in PCR, and antibiotic assays. I have experience in the extraction, isolation, and purification of natural products as well as gDNA from actinomycetes.

In order to progress my research, I am always keen to determine from the literature and from colleagues new techniques that will be of benefit to my research and to the research team. I pride myself as being very fast at learning these new techniques and disseminating know-how across the research team.

I believe that with the cross disciplinary skills I bring, my creative thinking, collegiate attitude, ability as a team player and an encourager coupled to my capacity to learn and develop, would make me a valuable asset to your group. I also have excellent IT skills in a variety of programmes including Windows Word,

Excell and Powerpoint, Scifinder Scholar, ISI WOS and Beilstein. I have good skills in the presentation of research and demonstration to audiences with a variety of different backgrounds. I am fluent in English, French and Arabic, and have a working knowledge of Spanish and Greek..

### Presentations/Publications

1. The generation of “unNatural” products: Synthetic biology meets synthetic Chemistry” R.J.M. Goss\*, S. Shankar, A. Abou Fayad, *Nat. Prod. Rep.* 2012, **29**, 870-889 (DOI: 10.1039/c2np00001f)
2. A One-Pot Synthesis of Symmetric and Asymmetric Ureas, A. Abou Fayad, N. Cairns, D. Day, R. J. M. Goss, *submitted*
3. Trap Ants Use Bacteria Capable of Producing an Antifungal “Weed Killer” to Maintain their Cultivated Fungal Traps, H. Gao, E. F. Nogueira, A. Abou Fayad, S. Grünschow, N. P. Lopes, L. Hill, J. Orivel, D. W. Yu, M. Huchings, and R. J. M. Goss, *submitted*

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| 1. UEA Medchem  | March 2010, UEA               | Poster Presentation |
| 2. ANOROQ 2010  | April 2010, Southampton       | Poster Presentation |
| 3. Streptomycetes   | April 2010, John Innes Centre | Poster Presentation |
| 4. RSc Awards Symposium                                     | May 2010, Norwich             | Poster Presentation |
| 5. UEA school colloquia                                     | July 2010, Norwich            | Poster Presentation |
| 6. 3 <sup>rd</sup> South and East Regional, Organic Meeting | April 2011, London            | Poster Presentation |
| 7. 20th Lakeland Symposium,                                 | May, 2011, Grasmere           | Poster Presentation |
| 8. Interreg Summer School,                                  | July 2011, Norwich            | Research Talk       |
| 9. UEA school colloquia                                     | July 2011, Norwich            | Poster Presentation |
| 10. UEA school colloquia                                    | July 2012, Norwich            | Research Talk       |
| 11. The Chemistry and Biology of Natural Products Symposium | June 2013, Warwick            | Research Talk       |