

## Candidate Information

<b>Position:</b>	Research Fellow - Chemical Biology
<b>School/Department:</b>	School of Pharmacy
<b>Reference:</b>	20/108434
<b>Closing Date:</b>	Monday 7 December 2020
<b>Salary:</b>	£33,797- £36,914 per annum
<b>Anticipated Interview Date:</b>	Wednesday 16 December 2020
<b>Duration:</b>	This post is available for 12 months with possibility of extension.

### JOB PURPOSE:

To be an active member within the research group of Prof Gerd Wagner in the School of Pharmacy, Queen's University Belfast. The Research Fellow will carry out chemical biology research investigating the role of glycans for bacterial pathogenicity, virulence, and antimicrobial resistance. They will contribute to the preparation of manuscripts and grant applications. In addition, they will have a senior role in the day-to-day running of the research laboratory, including the co-supervision of postgraduate and undergraduate students, and the implementation of appropriate health & safety protocols.

### MAJOR DUTIES:

1. Develop and plan research to study the role of glycans for bacterial pathogenicity, virulence, and antimicrobial resistance.
2. Design and prepare, by chemical and/or enzymatic synthesis, small molecular chemical tools and inhibitors for applications in bacterial cell culture and cell lysates.
3. Carry out the characterization of chemical tools and inhibitors with relevant analytical techniques (e.g., NMR, mass spectrometry).
4. Establish experimental protocols and assays for the evaluation of chemical tools and inhibitors in bacterial cell culture and cell lysates.
5. Analyse, interpret and critically evaluate experimental data.
6. Present regular research progress reports to members of the research group and disseminate and publicise research findings to external audiences.
7. Prepare, in consultation with the line manager, material for publication in high-impact journals and presentation at national/international conferences.
8. Assist the line manager in the preparation of funding proposals and applications to external bodies, including the identification of appropriate funding streams.
9. Play a senior role in the day-to-day running of the research laboratory, including the co-supervision of postgraduate and undergraduate students, the set up and maintenance of equipment, and the implementation of appropriate health & safety protocols.
10. Carry out routine administrative duties as requested, e.g. organisation of project meetings and documentation and risk assessment of research activities.
11. Read academic papers, journals and textbooks to keep abreast of developments.
12. Carry out any other duties designated by the line manager and which fall within the general ambit of the post.

### Planning and Organising:

1. Plan own day-to-day activity within the framework of the agreed research programme.
2. Plan for specific aspects of research programmes, with timescales ranging from 1-3 months in advance, and contribute to research group planning.
3. Plan for the use of research resources, laboratories and workshops where appropriate.
4. Plan up to 2 months in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
5. Coordinate and liaise with other members of the research group over work progress.

**Resource Management Responsibilities:**

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and students who may be assisting with research.

**Internal and External Relationships:**

1. Liaise with internal and external collaborators.
2. Make internal and external contacts to develop knowledge and understanding and form relationships for future collaboration.
3. Attend and contribute to relevant meetings.
4. Join external networks to share information and ideas.
5. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.

**ESSENTIAL CRITERIA:**

1. 2:1 Honors Degree or equivalent in chemistry, chemical biology, biochemistry, pharmacy, or a related subject.
2. Have or about to obtain a PhD in chemistry, chemical biology, biochemistry, pharmacy, or a related subject.
3. At least 3 years recent and relevant experience in laboratory-based chemical biology research.
4. Experience in the development and/or application of (bio)analytical techniques as relevant to the project (e.g., NMR, HPLC, SDS-PAGE, MS, fluorimetry).
5. Evidence of publication(s) in journals and/or books commensurate with career stage.
6. Experience in research project supervision.
7. Good planning, organization, and execution skills.
8. Manage allotted tasks to completion and issuing of report.
9. Practical problem-solving skills and independence of thought.
10. Good technical writing and presentation skills.
11. Ability to communicate complex information clearly.
12. Ability to build contacts and participate in internal and external networks.
13. Ability to work as part of a team.
14. Ability to devise, advise on and manage research programmes.
15. Ability to prioritize and re-prioritize activities as needed to accomplish unanticipated requests or initiate new projects requiring immediate attention.
16. Ability to coordinate and motivate other team members.

**DESIRABLE CRITERIA:**

1. 1st class Honors Degree in chemistry, chemical biology, biochemistry, pharmacy, or a related subject.
2. At least 2 years' experience in one or more of the following:
  - Small molecule preparation by chemical or enzymatic synthesis
  - Experimental carbohydrate chemistry and/or glycobiology
  - Development and application of cell- and/or protein-based bioassays
  - Experimental microbiology (e.g., bacterial cell culture)
  - Protein biochemistry and molecular biology (e.g., protein expression and purification, cloning).
3. Experience of supervising PhD/MSc research projects.
4. Good knowledge of the chemical biology of carbohydrates and glycans.
5. Good knowledge of microbiology.
6. Good knowledge of bioassays.