



PhD Position in Organic Synthesis and Chemical Biology

School of Chemistry, Trinity College Dublin, Ireland.

We invite applications for a fully funded PhD in organic synthesis and chemical biology, with a focus on carbohydrate chemistry in marine systems. The successful candidate will join the [research group](#) of Dr. Conor Crawford and use chemical synthesis to uncover how marine polysaccharides contribute to global carbon sequestration.

Project Description

Marine algae produce complex polysaccharides (glycans) that play a poorly understood but potentially critical role in long-term carbon sequestration. This PhD project will use chemical synthesis and chemical biology to decode the molecular structures responsible for these properties.

This project will combine organic synthesis and chemical biology to:

- Synthesise defined oligosaccharides and chemical probes using organic synthesis
- Use chemical probes to investigate glycan carbon cycling in marine microbiomes
- Explore the biological and potential medical properties of algal glycans

Working at the interface of organic synthesis and chemical biology, the successful candidate will investigate how specific glycans sequester carbon. The project is in a rapidly expanding research area, offering opportunities to publish and collaborate internationally and carry out your PhD in the TCD School of Chemistry, within the [Trinity Biomedical Sciences Institute](#) (TBSI).

Candidate Profile

The ideal candidate will:

- Hold a Bachelor's or Master's degree in chemistry, chemical biology, or a related discipline
- Have experience and strong interest in organic synthesis, carbohydrate chemistry, and/or chemical biology
- Demonstrate analytical skills in the laboratory
- Be curious, motivated, and enthusiastic about interdisciplinary research

Enthusiasm and willingness to learn new techniques are more important than existing specialisation in the glycosciences.

Funding

This is a fully funded 4-year PhD position. This includes:

- Annual stipend: €25,000
- Annual student fee contribution: €5,750
- Full project costs covered (consumables, conference travel, equipment)

Application Process

Please send:

1. CV
2. 1-page personal statement outlining:
 - Why you are interested in this PhD project
 - Why you are a strong candidate
3. Names and contact details of at least two referees

For full consideration, please apply by 29th of May 2026 to Dr. Conor Crawford.

Email: crawfoco@tcd.ie

Please use the subject line PhD Application - Organic Synthesis & Chemical Biology.

Applications will be reviewed on a rolling basis; early application is encouraged.

Informal enquiries are welcome prior to application.

Start Date

September 2026

We are committed to fostering an inclusive environment and value a wide range of skills and experiences. We strongly encourage candidates from underrepresented groups in STEM to apply.