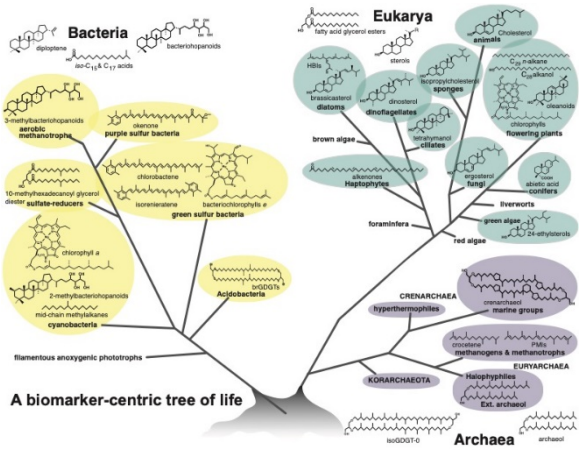
Molecular fossils to understand environmental change in the past, present, and future



About the project or challenge area: The cellular membrane is an essential mediator between the cell and its environment. These dynamic systems are comprised of various building blocks, including lipids. Organisms can modify their cell membrane lipids depending on environmental conditions (e.g. temperature). While lipids can be rapidly recycled and degraded, some can be preserved for a billion years and these are called biomarkers or molecular fossils. Harnessing the environmental information preserved in these molecular fossils has transformed our ability to characterize Earth systems of the past and constrain the diversification of life.

Why choose this opportunity?: This project focusses on developing and applying novel biomarker proxies to characterize environmental changes in the past and present, which may have implications for constraining the impact of human-driven climate change in the future. As part of this project, you will receive state-of-the-art training in the rapidly developing field of organic geochemistry. You will be hosted at the Organic Geochemistry Unit (https://www.bristol.ac.uk/chemistry/research/ogu/) a world-leading research group with over 50 years of experience in analysing environmental samples for their lipid content. The OGU is a vibrant and diverse research group with extensive links to industry and leading research groups from across the globe, ideal for an ambitious student.

Your training is essential to this project. Besides world-class training in the field of organic geochemistry, you will be supported throughout the project through (bi)weekly group and individual meetings and seminars, journal clubs, graduate courses, professional development courses, all tailored to your specific needs and future career plans. You are encouraged and supported to present your work at (inter)national conferences. In addition, if you are interested, research visits to other research labs are encouraged and supported.

About you: You have a degree in Chemistry, Earth Science, Geography, Biology or related fields and are passionate about the environment. Experience in analytical chemistry is not essential as you will receive training where needed.

Bench fees: A bench fee of £ 4,000 is required. Support is available to (partly) cover bench fees.

How to apply: Contact supervisor David Naafs (david.naafs@bristol.ac.uk) for further information. Applications are accepted throughout the year through the online application form for Chemistry; MSc by Research.

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