PIPS Advert DATE 2024

*Organisations Interested in hosting an EASTBIO-funded PhD student for a 3-month placement, are asked to fill in this form and send it to* [*placements@eastscotbiodtp.ac.uk*](mailto:placements@eastscotbiodtp.ac.uk)*. The EASTBIO team will advertise the internship opportunity directly to funded students who are between year 1 and 3 of their PhD study and issue reminders, as necessary. We also publicise opportunities regularly via our monthly EASTBIO Newsletter. Please make sure you visit our webpage* [*http://www.eastscotbiodtp.ac.uk/information-organisations*](http://www.eastscotbiodtp.ac.uk/information-organisations)*, or contact the EASTBIO DTP Manager at* [*Maria.Filippakopoulou@ed.ac.uk*](mailto:Maria.Filippakopoulou@ed.ac.uk) *for further information.*

*EASTBIO students interested in exploring this PIPS opportunity further, please follow the instructions within the posting and, if contacting the organisation, copy in* [*placements@eastscotbiodtp.ac.uk*](mailto:placements@eastscotbiodtp.ac.uk) *to keep the EASTBIO team informed of your expression of interest/application.*

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| Host Organisation Details | | | |
| Host Organisation Name | MiAlgae Ltd | | |
| Host Organisation Sector Type  Please select from list in [Appendix](#Appendix) | Science & Research; Biotechnology | | |
| Please write a brief, plain description of what your organisation does (max 200 words) | MiAlgae aims to revolutionize the current livestock and pet feed industries by producing microalgae rich in polyunsaturated fatty acids (PUFAs) to offer as a replacement to fishmeal in feed.  Feed suppliers are in need of this alternative to fishmeal due to declining wild fish stocks and rising demand for Omega-3s. MiAlgae has developed an environmentally beneficial, effective, and simple solution of producing microalgae which delivers the required nutrients to livestock and pets without the need for fish.  Our zero-waste solution recycles the nutritional co-products from whisky production to grow Omega-3 rich microalgae, returning clean water in the process.  Our mission is to create a product that will contribute substantially towards the sustainable production of livestock, a prerequisite to fulfilling the needs of the growing world population. | | |
| Postal address | Units 12 – 16 The Curve,  Research Avenue,  Currie,  EH14 4AP | | |
| Website | mialgae.com | | |
| Contact person name and role in the organisation  *Please confirm whether they will be different to the Student Mentor/Supervisor (details to be confirmed below).* | Jamie Gilman  Head of Research and Development  Will also be supervisor | | |
| Contact person email and phone number | jamie.gilman@mialgae.com  0131 376 3064 | | |
| Will your Organisation provide physical premises external to the University with professional staff who will support the development of an intern’s professional skills appropriate to PhD level?  *Please note that EASTBIO DTP may approve remote or hybrid placements as long as the PIPS project is suitable for this*. | **Yes** | ~~No~~ | ~~TBC~~ |
| Any other relevant information, for instance how the project is suited to a remote or hybrid placement:  N/A | | |

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| **PIPS Internship Details and Desired Outcomes** | |
| PIPS Project Title | From whisky to omega-3; using industrial co-products to sustainably produce essential fatty acids |
| Description of the internship project you are offering, which will be shared directly with eligible PhD students (max 500 words). | MiAlgae’s fermentation platform uses co-products from the Whisky industry as a feedstock for growing microalgae as a sustainable source of omega-3. Our research and development work focuses on developing and optimising all aspects of our process, including scaling promising results from the lab to our 30,000 L production bioreactors. Current areas of research include growth media and fermentation conditions, downstream processing, and new product development.  The placement student would be integrated with our Research and Development team working towards the technical objectives of the company, with the aim of developing skills and understanding of industrial process development and scale-up. The student will gain an appreciation for the differences in working environment between academic and industry through experience working in an early stage biotechnology company.  Given the fast-moving nature of our research, the exact project area would be determined closer to the placement start date. The work will include training in technical skills including microalgal fermentation, gas chromatography and statistical Design of Experiments for process optimisation.  At MiAlgae we run technical projects using an agile project management framework, where project teams are given specific objectives to work towards on a quarterly basis. These teams then independently identify, prioritise and plan experiments and work towards these goals. A placement student would be integrated in one of these project teams at the start of a 3-month cycle, with exposure to all parts of the project process, including experimental planning, analysis, and execution. These project teams contain members of staff from multiple departments and typically involve work that spans laboratory scale R&D for process development and optimization, scale-up to 1,000 and 30,000 L bioreactors and product analysis. The student would therefore be exposed to and gain experience of multiple areas of the company. |
| Option for inviting interested students to apply directly by CV to generate a tailored internship project with your Organisation | Yes |
| Geographic location of this internship?  AND/OR  Option for a remote or hybrid placement, and a rationale for a virtual internship (max 150 words) | MiAlgae offices / laboratory at address on page 1. There may also be the possibility for the student to visit our commercial demonstrator site in Balfron, Stirlingshire. Travel would be provided from our offices to the demonstrator site in this case. |
| What range of professionals will the PhD student work with during this internship? | The student will be placed in our R&D team. This team is a mix of Technicians, Scientists and Senior Scientists with backgrounds in microbiology, fermentation and engineering biology. The student may also work with our Engineering, Tech Transfer and Production teams. |
| Based on the project’s objectives, what specific results do you want the PhD intern to achieve? | * Understanding of research in an industrial environment. * Contribution to all aspects of a project cycle, including planning, execution and analysis. * Exact project objectives to be confirmed closer to project start date. |
| How do these outcomes fit with your wider business objectives? | The student would be working on research projects that are targeted at meeting the technical objectives of the company – given our size, the majority of our active research projects work on problems with the potential for immediate impact and scale up. |

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| **PIPS Internship Timing / Duration / Management** | | | | |
| Timing of the Internship  *If provisional dates at this stage, please mark on the form* | To start at the beginning of one of our project quarters. Next available = Late Sept / Early Oct. 2024, Jan 2025 | | 3 months post-start | |
| Format of the Internship, e.g.  3-month block or a number of shorter blocks | 3 months | | | |
| Internship anticipated time of work (e.g. full-time, 35 hours/week; part-time option, etc.) | 35 hours / week, Monday - Friday | | | |
| Name of person who will act as the PhD student supervisor/mentor (line manager) during this internship (if different to the contact mentioned above) | As above | | | |
| Supervisor position in the host organisation | As above | | | |
| Supervisor Contact email and phone number | As above | | | |
| Is the Organisation willing to make a contribution towards intern’s travel or accommodation costs?  *Please note that the student will be in receipt of their PhD stipend during the placement and they are also able to apply to EASTBIO for limited funds towards their travel and/or accommodation. If the student lives more than 50 miles from the Organisation’s location, we encourage a contribution from the PIPS host towards their travel or accommodation costs; this is optional. The only financial expectation from the PIPS host is to cover all costs associated with the PIPS project (consumables).* | ~~Yes~~ | ~~No~~ | | **TBC** |
| Any other information relevant to the intern’s financial support from your organisation? | N/A | | | |

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| **Person Specification**  *Please give details of what is required for this internship – skills, experiences and personal qualities, whether essential or desirable.* | |
| What skills does the PhD student need to complete this internship project? | * Microbiology / molecular biology / synthetic biology background. * Clear and concise written and oral communication. * Excellent problem-solving skills with the ability to offer solutions. * Experience working in a lab / using aseptic technique beneficial. |
| What soft attributes do they need to fit in/contribute? | * Able to work effectively in a team. * Positive approach. * Flexibility, adaptability and ability to work in a fast paced environment. * Keen interest in the use of biotech for environmental good. * Strong organisational and time management skills. |

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| **Application Details** | | |
| I wish this internship to be advertised open ended to PhD students? | **Yes** | ~~No~~ |
| If ‘No’, please specify a closing date for receiving CVs from interested students? | N/A | |
| Name and contact details for PhD students to submit their CV applications to | Jamie Gilman  jamie.gilman@mialgae.com | |
| Would you expect further support from EASTBIO regarding this advertised opportunity?  TBC | | |
| Any other relevant information:  N/A | | |
| Please provide, below, any further comments about his opportunity not covered in the sections above.  N/A | | |

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| **Completed & Signed by:** | |
| PIPS Host Organisation Name & Date | J. Gilman, MiAlgae, 29-MAY-2024 |
| Date Advert submitted to EASTBIO |  |
| Date Advert circulated by EASTBIO |  |

*Thank you for your support of the UKRI BBSRC PIPS Scheme.*

**APPENDIX - PIPS Organisations - Sector List**

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| Academia | Fire, Police & Security |
| Advertising, Marketing & Public Relations | Food & Beverage |
| Aerospace & Defence | Government & Civil Service (including public service administration) |
| Agriculture, Livestock breeding & Fishing (including production, animal welfare) | Health & Social Care |
| Biotechnology, Medical & Pharmaceuticals | Hospitality, Leisure, Travel, Tourism and Sports |
| Business and Management (including business intelligence & market research) | IT & Telecommunications (Hardware & Software) |
| Chemicals | Law (including legal services) |
| Clothing, Footwear & Fashion | Logistics, Transport, Purchasing & Supply |
| Consultancy | Media, Communication, Journalism & Publishing |
| Charities & Voluntary work (non-profit / third sector) | Metals & Construction Materials |
| Creative arts, Design and Culture | Product Manufacturing |
| Education & Training (including teaching) | Real Estate & Renting |
| Energy & Utilities (including renewable energy and energy conservation) | Recruitment & Human Resources |
| Engineering (civil and mechanical) | Retail, Buying & Merchandising |
| Environment (including recycling, environmental services, conservationism and industries) | Science & Research |
| Financial services (including accounting, auditing & banking) | Other |