

Candidate Information

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| Position: | Flow Chemist/Chemical Engineer – KTP Associate – Almac Sciences Ltd |
| School/Department: | KTP and Business Networks |
| Reference: | 20/108070 |
| Closing Date: | Monday 27 January 2020 |
| Salary: | £24,000 to £32,000 per annum. One of the key KTP benefits for graduates is access to a £9,200 training and travel budget over the 29 month project. |
| Anticipated Interview Date: | Wednesday 12 February 2020 |
| Duration: | 29 months |

Job Purpose:

To embed a highly innovative combination of chemo- and enzymatic catalysis under tandem flow conditions for the preparation of chiral amines from commercially available raw materials.

Main Activities and Responsibilities:

We wish to recruit a dynamic, highly skilled individual to work in Almac on a collaborative project with Queen's University Belfast over 29 months. The post-holder will be based at Almac, Craigavon. This project will embed capability in flow chemistry, an innovative approach to chemical synthesis that is emerging from School of Chemistry and Chemical Engineering at Queen's University Belfast.

This KTP project aims to design and develop an innovative flow technology platform for fast, flexible, robust and continuous production of amines for synthesis of Active Pharmaceutical Ingredients by combining intensified flow reactors with immobilized catalyst technology. Under the supervision of the company and academic supervisors the KTP Associate will provide the expertise necessary to will deliver the following key integrated project phases:

- Stage 1: Review commercial focus and state of the art Flow chemistry techniques
- Stage 2: Design and construction of flow rigs.
- Stage 3: Development of flow process for synthesis of chiral mono-acid from di-ester for production of API-1.
- Stage 4: Development of flow process for synthesis of chiral amines for production of API-1.
- Stage 5: Development of flow process for nitro reduction for production of API-2.
- Stage 6: Development of flow process for resolution of chiral amines for production of API-3.
- Stage 7: Dissemination of the findings
- Stage 8: IP Protection.

In summary, we propose a complete KTP programme to create a synergistic knowledge base by combining together the University and Industry expertise on one joint platform to develop fast, flexible and robust flow technology for continuous production of pharmaceutical chemicals. The successful completion of KTP requires multidisciplinary approach in reaction engineering, catalysis, process economics, commercialization and route to market, which requires the strategic partnership of QUB catalysis cluster and Almac Sciences Ltd.

Planning and Organising:

1. Manage and coordinate the items of work as laid out in the project plan (individual work plan will be provided by Supervisors).
2. Plan day-to-day activity within the framework of the agreed work plan.
3. Contribute to the planning and management of the project, approximately 3-6 months in advance.
4. Ensure that all training and development activity is scheduled to ensure that progress on the work plan objectives is not interrupted or delayed.

Resource Management and Responsibilities:

1. Plan and manage day-to-day resources to ensure the project runs to time and on budget.

2. Coordinate and obtain approval for planned expenditure/allocation of resources with the Management Committee and Steering Group.
3. Carry out supervision of placement students or other staff members as required.
4. Monitor travel and development budgets and produce a Personal Development Plan which will ensure best use of financial resources.
5. Attend training modules (mandatory and additional job-specific training). This may be local, national and international.
6. Perform any other additional duties as agreed by the Local Management Committee and Steering Groups to contribute to the development of the company, the university and the Associate.

Internal and External Relationships:

1. Present regular progress reports to members of the Steering and Management Groups and to external audiences.
2. Liaise with company staff on a daily basis. Contribute to training of staff in the company and university as required.
3. Build relationships with both company and university staff to ensure effective working practices are established.
4. Attend and contribute to any appropriate meetings, both in the company and the university as required.
5. Establish contacts with additional groups and organisations (other KTP Associates, other university departments, other industrial contacts, and Innovate UK) as required to develop knowledge and understanding and form relationships for future collaboration.
6. Act as an Ambassador for the Knowledge Transfer Partnership Scheme.

Additional Information:

1. Knowledge Transfer Partnerships is a UK programme that enables businesses to work with universities to gain access to specialist knowledge and expertise and apply it within their organisation. Each Partnership recruits a Graduate to work in the company, implementing and embedding the latest research techniques. Guidance is provided by the academic and company supervisors to ensure that the objectives of the project are met. Although the scheme is aimed at recent graduates, any suitably qualified individual may apply.
2. Each KTP is a fully salaried job that lasts between twelve and thirty six months, providing the graduate with an opportunity to fast track a career in industry. Each KTP Associate has a training and development budget and a travel budget. This funding provides opportunities for job-specific training, attending and presenting at conferences, visiting trade shows, customers and suppliers etc. Two, one week residential management training modules are also provided as part of the package.
3. This partnership received financial support from the Knowledge Transfer Partnerships (KTP) programme. KTP aims to help businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK knowledge base. This successful Knowledge Transfer Partnership project, funded by UK Research and Innovation through Innovate UK, is part of the government's Industrial Strategy.
4. As members of University staff, KTP Associates can join the University pension scheme, gain access to University resources such as the Library and sports facilities.

More details are available at www.ktpjobsni.com.

Essential Criteria:

1. Hold a 2.1 Honours Degree (or equivalent) in Chemistry or Chemical Engineering or a closely related discipline.
2. Experience and knowledge in organic chemistry and/or flow chemistry
3. Demonstrable experience of practical organic chemistry
4. Good oral written and presentation skills.
5. High level of IT skills.
6. Proven ability to compile scientific reports, publications and presentations
7. Ability to think logically, create solutions and make informed decisions.
8. A high level of numeracy and the ability to interpret data.
9. Proven ability to organise, plan and prioritise tasks within a high volume, varied workload.
10. Ability to work within a multi-disciplinary team.
11. Demonstrate scientific excellence, attention to detail and a passion for chemistry/science with good experience of literature searching tools.
12. Proficiency in the use of IT packages (to include Microsoft Word, Excel, PowerPoint, Outlook).
13. Proven ability to work effectively under own initiative.
14. Ability to work effectively as a member of a group.
15. Well organised, attention to detail and ability to meet tight deadlines.
16. Excellent communication skills.

17. An interest in staying with the Company. (Associates are normally invited to apply for permanent positions).
18. Ability to take part in Associate management courses (requiring two one-week periods in England).
19. Willingness to work for periods in other laboratories including industrial and academic laboratories.
20. Willing/able to travel throughout the UK and Ireland and abroad, as necessary.

Desirable Criteria:

1. Hold, or be about to obtain, a PhD in a relevant area.
2. 2 year's relevant practical experience* specifically in the area of organic chemistry and/or flow chemistry.
*can include relevant experience gained through a higher degree.
3. Able to demonstrate implementation of flow chemistry processes.
4. Working knowledge of flow chemistry principles such as:
 - Practical experience in designing and constructing flow chemistry equipment.
 - Demonstrable experience in performing heat and mass transfer calculations.
 - Experience of drawing P&IDs using CAD.
5. Recent and relevant experimental experience in chiral synthesis.
6. Recent and relevant experimental experience in heterogeneous catalysis.
7. Strong analytical chemistry skills and experience.
8. Publication record commensurate with stage of career.
9. Publications in Flow Chemistry.
10. Ability to deliver training and follow-up support to operatives.
11. Previous working knowledge of the following:-
 - COSHH.
 - Risk Assessments.
12. Tenacious and committed to achieving goals.