Professor/Reader/Senior Lecturer/Lecturer in Digital Pharmaceutical Process Development

Department	SIPBS/CMAC https://www.cmac.ac.uk/		
Faculty	Faculty of Science (www.strath.ac.uk/science/)		
Staff Category	Academic	**Reference No**	816231
Reports To	CMAC Director	**Grade**	Professorial or as appropriate to experience
Salary Range	Salary commensurate with experience and standing	**Contract Type**	Open Contract
FTE	1	**Closing Date**	22/06/2026
Working Arrangements	Hybrid. The standard requirement across the University is that at least three days per week (based on 1FTE) will be spent working on-site (with flexibility as appropriate).		
Work Location	Glasgow, UK		

Job Advert

Prestigious Global Talent Fund Opportunity

The University of Strathclyde has been awarded significant funding by UK Research and Innovation's Global Talent Fund to recruit leading international researchers in areas of national and global strategic importance. As one of only 12 UK institutions to secure this highly prestigious investment, Strathclyde is uniquely positioned to accelerate its world-class strengths at the intersection of research excellence, industry collaboration and societal impact.

This landmark funding underpins the appointment of a new Professor/Reader/Senior Lecturer/Lecturer in Digital Pharmaceutical Process Development — a career-defining opportunity to shape the global agenda for accelerated digital Chemistry, Manufacturing and Control (CMC) development processes for sustainable medicines production. You will drive innovation working within Strathclyde's CMAC, a strategic medicines manufacturing research centre within the University's Technology and Innovation Zone and the Glasgow City Innovation District. In this role, you will lead an internationally acclaimed research programme focused on digital approaches to pharmaceutical process development, spanning drug substance processing (with particular strength in crystallisation and particle engineering) and its interfaces with synthesis and drug product design, in the context of Quality by Digital Design (QbDD) and advanced digital CMC. This will include leading pre-competitive research programs sponsored by industry and T2I programs in collaboration with industry and/or with strategic partners.

We seek to appoint a **Professor/Reader/Senior Lecturer/Lecturer in Digital Pharmaceutical Process Development** to join the academic team in CMAC and develop and lead new scientific research programmes aligned to the Centre's strategic programme to transform the ways that medicines are designed and made through digital CMC and QbDD. Appointments will be made at a level appropriate to a successful candidate's experience and career stage.

CMAC is a world leading centre for medicines development and manufacturing research, co-created with industry to address a shared vision to transform the way medicines are designed and produced. The centre's programme lies at the intersection of the strategically important areas of life sciences, data/AI and advanced manufacturing and is supported by a unique industrial consortium comprising nine large global pharma manufacturers (AZ, Roche, Takeda, Lilly, UCB, Chiesi, Shionogi, Pfizer and Sanofi), leading CDMOs (Lonza, Ajinomoto) and over 20 process and digital technology vendors (e.g. Siemens, CCDC, Huxley Bertram, Technobis, DigiM, and others).

The industry demand-led research programme is delivered across four main pillars: research, training and skills, technology & infrastructure and translation to industry and is supported by a vibrant portfolio of funded programmes (EPSRC CDT in Cyber-physical Systems for Medicines Development and Manufacture; EPSRC MediForge Industry 5.0 Manufacturing Hub for a Sustainable Future; EPSRC Digital Design and Manufacturing of Amorphous Pharmaceuticals and MHRA sponsored Digital CMC CERSI). In addition, the centre houses a dedicated team supporting applied and contract research providing knowledge exchange with partners. CMAC is also benefitting from over £16M in direct capital investment via UK RPIF CMAC Data Lab and University support to ensure researchers have access to state of the art facilities. This includes investment in extensive computational and data infrastructure to support our digital medicines manufacturing programme, an extensive suite of CMC DataFactory™, self driving lab platforms and CMC Microfactory™ process test beds. This outstanding research, development and innovation ecosystem supports a world class multidisciplinary engineering and physical sciences team that spans expertise in pharmaceutical materials, advanced process engineering, data science, optimisation, green chemistry, analytical science, AI, robotics and automation.

With recent growth in the funded portfolio and industry membership, we seek to grow our academic team and build on the excellent track record of nurturing talent within a dynamic research environment, well supported with world class facilities, academic and industrial collaborations, funding and researchers. Building on the strength of our crystal and particle engineering, amorphous and formulation expertise and the emerging capabilities of high performance computing, AI and CMC Datafactory™ approaches, we are targeting the significant research challenges across drug substance and process design and development to develop a comprehensive digital CMC platform enabling a system level approach to medicines development. This includes key challenges at the interfaces of API crystallisation process design with API

synthesis (e.g. purification, impurity rejection, solvent selection, form control) and with downstream formulated drug product design and processing. To meet industry's and patients' needs for better performing, sustainable purification, isolation and API performance for use in pharmaceutical products, CMAC's integrated research strategy for digital CMC seeks to embed Industry 5.0 principles throughout. Our commitment to driving impact from our research through effective translation to industry is reflected in the recent strategic spin out, OpenCMC Ltd, creating opportunity for colleagues in CMAC to accelerate impact from promising research outputs.

CMAC's drive to establish a connected cyberphysical Lab of the Future environment is based on effective multidisciplinary collaboration, bringing together expert domain knowledge in end to end process development, robotics and lab automation, data engineering, AI, modelling and simulation, and advanced process technologies. This post creates an exciting opportunity to join a world class team, engage with leading industry and collaborate to bring creative new science and technology to innovate in this economically, socially and environmentally vital sector.

This post complements our existing academic team and will provide leadership in model-driven approaches to pharmaceutical process development, with crystallisation and drug substance processing as priority areas of expertise, but with openness to candidates whose digital and modelling expertise spans the drug substance/drug product interface or related areas of pharmaceutical sciences. The post will help develop and embed Quality by Digital Design (QbDD) systems engineering approaches across the CMAC programme. In addition to having active support to develop your research funding portfolio from research council, industry and other sources, you will engage in strategic CMAC collaborative initiatives and contribute to high-impact multi-disciplinary research, skills and infrastructure development and translation to industry.

Job Description

Brief Outline of Job:

As an acknowledged expert and leader (appropriate to the appointment level) in digital approaches to pharmaceutical process development, with deep expertise in drug substance processing and a commitment to advancing Quality by Digital Design (QbDD) you will: grow an internationally acclaimed research programme in digital CMC innovation, developing new model-based and cyberphysical approaches for the digital design of sustainable processes and embed Industry 5.0 principles; to lead and support the development of knowledge exchange and translation to industry activities; to advance the regulatory readiness of developed digital methods; to identify and support opportunities to enhance CMAC's infrastructure; to provide academic leadership and contribute at a strategic level to the work of all areas of the CMAC Centre programme as well as SIPBS, the Faculty and University.

Relevant areas of expertise include — but are not limited to — novel methods for solid form discovery and control; kinetic modelling and prediction; fundamentals of crystallisation and the role of impurities, solvents and additives in controlling outcome; particle engineering including co-precipitation, spherical crystallisation/agglomeration; wet-milling and external fields; PAT and design of process control strategies; process optimisation for solvent selection and sustainable process design across synthesis/isolation interface; crystallisation of complex molecules (e.g. protacs, peptides, oligonucleotides, proteins, ADCs). Candidates with complementary expertise at the drug substance/drug product interface — for example in crystal property-to-bioavailability modelling, integrated DS/DP process design, model predictive control, or digital twin implementation for pharmaceutical unit operations — are also strongly encouraged to apply.

Main Activities/Responsibilities:

1.	Manage significant activities and resources and provide leadership, support and direction to academic/professional staff.
2.	Working with the Director and leadership team, provide research leadership within CMAC through identifying, developing and leading significant research directions and projects in sustainable crystallisation and particle engineering process development, working collaboratively with colleagues and teams where appropriate to drive scale and impact.

3.	Lead an internationally acclaimed programme of research and disseminating results through regular and sustained publications in high impact journals, books and conference proceedings.
4.	Secure substantial research grant funding and attract income through knowledge exchange activities both as project lead and strategic collaborative initiatives.
5.	Oversee the design and delivery of educational degree curricula and playing a lead role in the development of educational strategy and operational standards, with a particular focus in CMAC on postgraduate and professional development growth.
6.	Engage and align with CMAC Industry Director and team, supporting CMAC's industry engagement and translation to industry (T2I) initiatives. Provide academic leadership to the development of knowledge exchange activities and promote public engagement in your specialist field. For example, establishing research and/or educational links with industry and influencing public policy and the professions at national and international level.
7.	Act as an ambassador and champion of CMAC's research strategy, promoting developments and supporting periodic strategy refresh through expert input. Influencing key stakeholders i.e. funding agencies and reg authorities i.e. acting as a KOL
8.	Engage in, and where appropriate set the agenda in, national and international academic debates and within professional institutes, learned/practitioner societies and governmental committees.
9.	Contribute, at a strategic level, to the work of CMAC as a senior academic member of the CMAC Executive Group, reporting to the Director and leadership team on areas of responsibility, and participation in key research and/or operational committees. Contribute as appropriate to the strategic direction of CMAC, supporting the Centre's long-term sustainability and reputation and the quality of deliverables re assigned or agreed tasks and programs. (Professor/Reader) OR Contribute to the delivery and development of CMAC activities through participation in research, education and/or operational initiatives, supporting the quality and sustainability of Centre outputs appropriate to career stage. (Senior Lecturer/Lecturer)
10.	Engage in continuous professional development.

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

	Essential/ Desirable
E1 Good honours degree and PhD (or equivalent) in appropriate discipline/s.	Essential
D1 Membership of relevant Chartered/professional bodies (including the Higher Education Academy).	Desirable

Experience

E2 Research interests consistent with the strategic direction of CMAC and the Faculty/University.	Essential
E3 An established international reputation as an expert and leader in model-driven or digital approaches to pharmaceutical process development, with recognised expertise in drug substance processing (including crystallisation, particle engineering or related areas) and/or the drug substance/drug product interface, relevant to medicines development and manufacturing. (Professor/Reader) OR Evidence of a developing national and/or international research profile in model-driven or digital pharmaceutical process development (Senior Lecturer/Lecturer)	Essential

E4 Ability to build an internationally leading research group and successfully manage and promote CMAC's and your group's research within an international arena, highlighting innovative methods and approaches. (Professor/Reader) OR Ability to develop an independent research profile and contribute to the delivery, visibility and impact of CMAC's research through collaboration and project leadership (Senior Lecturer/Lecturer)	Essential
E5 Extensive experience of delivering high quality teaching to undergraduate and postgraduate students and supervision of research students.	Essential
E6 Track record or evidence of the potential to develop research directions and operate strategically, informed by industry, research, regulatory and public sector policies and strategy.	Essential
D2 Sustained track record of leading the development and delivery of large and varied educational programmes. (Professor/Reader) OR Experience of contributing to the development and delivery of educational programmes (Senior Lecturer/Lecturer)	Desirable

Job Related Skills and Achievements

E7 An outstanding and inspiring record of achievement in research in model-driven pharmaceutical process development — including modelling, simulation, digital design or cyberphysical systems approaches applied to drug substance processing, crystallisation, particle engineering, or related pharmaceutical sciences — with internationally recognised publications.	Essential
E8 Proven ability to attract substantial research funding over a sustained period – appropriate for job level applied for.	Essential
E9 Track record of multi/inter-disciplinary research collaborations and developing and maintaining active external partnerships.	Essential
E10 An established track record of team building, project, budget and staff management. (Professor/Reader) OR Experience of contributing to team development and managing projects and resources (Senior Lecturer /Lecturer)	Essential
D3 Established links with industry, learned societies, government and/or relevant Chartered/professional bodies.	Desirable

Personal Attributes

E11 Ability to think strategically and contribute at a senior level to CMAC, the Department/School, Faculty and University. (Professor/Reader) OR Ability to contribute to strategic planning and delivery within CMAC and the Department/School, with engagement across Faculty and University priorities appropriate to career stage (Senior Lecturer /Lecturer)	Essential
E12 Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.	Essential

Application Procedure

Applicants should visit Strathclyde's vacancies portal and complete an online application form including the name of three referees who will be contacted without further permission, unless you indicate you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job as well as a Research Plan outlining your research strategy for the next 5 years. Applicants should also complete the Equal Opportunities Monitoring Form.

The University of Strathclyde encourages the recruitment of disabled and neurodivergent candidates. If you require any reasonable adjustments or support at any stage of the recruitment or application process, please contact us at humanresources@strath.ac.uk, and we will be happy to assist you. This includes supporting you with the option to submit a paper application or a CV instead of completing the online application form.

Interviews

Formal interviews for this post are expected to be held in July/August 2026.

The University is a Disability Confident Employer and operates a guaranteed interview scheme for disabled candidates who meet all the essential criteria for the post that they are applying for.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (http://www.strath.ac.uk/hr/workforus).

Informal enquiries about the post can be directed to Professor Alastair Florence (alastair.florence@strath.ac.uk).

Conditions of Employment

Conditions of employment relating to the Academic staff category can be found at: Conditions of Employment and Professorial Zoning.

Rewards and Benefits

Our comprehensive benefits package, including generous annual leave, family-friendly benefits, flexible work options, and a commitment to continuous learning, reflects our appreciation for the valuable contributions of our colleagues.

We understand that each staff member has unique priorities and lifestyles, so our diverse benefits ensure there is something for everyone, details of which can be found on our Rewards and Benefits webpage.

- **Financial Rewards:** We provide attractive financial packages, including competitive salaries, relocation support for employees and a generous pension scheme, with university contributions of 14.5%.
- **Work-Life Balance:** We are dedicated to enhancing healthy work-life balance for our employees. We offer generous annual leave, an additional annual leave purchase option, flexible and agile work arrangements.
    - Annual Leave: Generous entitlement of 27 days (Grade 5 and below) or 31 days (Grade 6 and above), in addition to 11 public holidays and University closure days.
    - Additional annual leave purchase: Option to request purchase of 2 weeks' additional annual leave per year.
    - Flexible and agile working: The University provides flexible work arrangements. You can request arrangements that fit you and your role, such as hybrid, part-time, compressed hours, term-time, adjusted shifts, staggered hours. These requests can be made from the first day of your employment.
- **Family Friendly Benefits:** We offer a variety of enhanced family-friendly benefits to support our employees in balancing work and family responsibilities. These include Maternity Leave, Paternity/Maternity Support, Adoption Leave, Shared Parental Leave, Parental Leave, Carers Leave and support, Family Friendly Research & Scholarship Leave, and access to our on-campus nursery.
- **Career Development:** Our commitment to personal development is reflected in initiatives such as professional courses, subsidised educational programs, coaching and mentoring, leadership development, secondment opportunities, and access to our library.
- **Health & Wellbeing:** We place high importance on the safety, wellbeing, and health of all our staff and offer discounted Strathclyde Sport membership, an Employee Assistance Programme (EAP), Occupational Health Service, and Cycle to Work scheme.

- **Recognition Awards:** At Strathclyde, we place a strong emphasis on acknowledging and rewarding our staff's commitment and exceptional contributions. This is demonstrated through our Long-Service Awards and our Values-based Strathclyde Medals.

Level 1 Disclosure

This post requires a satisfactory Level 1 Disclosure certificate issued by Disclosure Scotland. The successful candidate will be asked to apply for a Level 1 Disclosure as part of the pre-employment process (or where based overseas, a Criminal Records Check will be required - details here). A start date will not be confirmed until this process had been completed and deemed satisfactory by the University.

Pre-Placement Health Screening

If you are offered a job with us, you'll be encouraged to let us know about any disability, medical condition, or neurodivergence you have by completing a confidential pre-placement health questionnaire. Completing the questionnaire is entirely voluntary but by doing so we can put in place the right support and make any reasonable adjustments before you start.

Probation

Where applicable, the successful applicant will be required to serve a 12 month probationary period.

Pension

The successful applicant will be eligible to join Universities' Superannuation Scheme. Further information regarding this scheme is available from Payroll and Pensions.

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

The University currently holds an Athena Swan **Silver award**, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. Our Values have been derived from how we act and how we expect to be treated as part of Strathclyde.

In delivering **our People Strategy**, we will contribute, act, and make decisions guided by these values.

- **People-oriented:** committed to our staff and students, providing opportunities, and investing in their development.
- **Bold:** confident and challenging in what we do, and supportive of embracing appropriate and managed risk in our decision-making.
- **Innovative:** focused on discovering and applying knowledge with impact and encouraging creative thinking and new ideas.
- **Collaborative:** working together, with our colleagues and external partners, with integrity and in an open, respectful way.
- **Ambitious:** for our institution, staff and students as well as supporting the ambitions of our partners.