

2025 AstraZeneca co-funded PhD Collaborations - Call for Proposals

Dear Collaborators,

Please forward to anyone within your department that might be interested in future PhD collaborations with AstraZeneca.

General context for new PhD collaborations:

AstraZeneca has been a strong supporter and sponsor of collaborative PhD studentships for many years. We have a significant portfolio of collaborations, which provide great benefits for the company, academics and students. As we also support a number of CDTs we would prefer that if your institution has a CDT in an appropriate area that proposals are progressed through the CDT.

General objectives and scope for the 2025 Call

We are looking to fund a number of individual and co-funded collaborations, typically this has been 10-15.

- We are looking for projects that provide opportunities for PhD students to receive an excellent training in research methodology and produce a body of pre-competitive knowledge that is of value to AstraZeneca R&D and to the wider scientific community.
- We will prioritize proposals that are expected to give rise to publications in leading journals.
- We aim to maintain a strong portfolio of PhD collaborations spanning all areas relevant to chemistry, chemical manufacturing and analysis. These are shared between Discovery Chemistry, Early Chemical Development and Chemical Development, and includes analytical chemistry and chemical engineering.

Areas of Research

The purpose of these PhDs is to enhance our core capability in discovering new medicines and developing manufacturing processes that can deliver them at commercial scales. This can be achieved by accessing innovative chemical approaches to enable new or challenging chemical syntheses, or by improving our understanding of existing operations such as crystallisation or work-up to optimise our existing approaches. We also seek to utilise new technology to revolutionise our approaches to manufacturing, characterisation and analysis. Recognizing that the manufacture of our medicines is a significant contributor to our carbon footprint we are also interested in technologies that can reduce the impact of drug discovery and manufacture on our carbon footprint and drive us towards our carbon ambitions [link](#).

Specifically, we are interested in proposals in the following areas:

- Innovative chemical biology / medicinal chemistry. e.g. PROTACS and protein degradation, cellular uptake through active transport.
- Innovative and improved computational, modelling, predictive and AI methodologies relevant to medicinal chemistry, process development and analytical sciences. For example, in the medicinal chemistry area, methods such as affinity and free-energy of binding predictions, conformational sampling, and identification of cryptic / allosteric pockets in proteins
- Innovative analytical methods relevant to all areas of discovery, early and late-stage development and manufacturing. For example, novel biomimetic chromatography; label-free technologies, quantification of in-cell drug concentrations and the vast range of analytical methodologies required to characterise and understand the properties of an increasingly diverse range of compounds, including new modalities, in addition to improved analysis for small molecules
- Innovative synthetic organic chemistry with medicinal chemistry relevance. e.g. novel heterocyclic synthesis; functional group tolerant CH activation, novel chemistry to covalently link to proteins
- Synthetic methods to enable shorter or more environmentally friendly manufacturing processes

- Proposals bringing additional understanding, improved synthesis and processing or alternative approaches to species such as peptides, oligonucleotides, antibodies, ADCs, dendrimers and polymer conjugates.
- Approaches for the optimization of reactions, including mechanistic modelling, process analysis and kinetic studies.
- Improvements to isolations and drying of drug substances and intermediates
- Physical aspects of processing, including work-ups and fundamental understanding of physical properties of drug substances and intermediates
- Understanding and modelling of crystallisation

Submission and selection of Proposals:

You are restricted to the submission of one proposal per individual academic as a UK based PI. However, we would like to encourage collaboration between academic staff at the same or different universities, so we very much welcome proposals with joint supervisory support, so a PI for one proposal can be a secondary contributor on additional proposals. We may also try and link proposals if they complement each other.

Proposals should be a **maximum three pages** in length. Proposals should provide a brief background to the area, any preliminary results (if relevant) and highlight research novelty. Of significant consideration to reviewers of proposals (in addition to novel and interesting science), is that the project should provide good research training to a prospective student and an expectation that publication(s) should arise. A brief statement summarising training benefit and potential publications should be included.

We will continue to use the portal system for proposal submission. Proposals in word or pdf format should be submitted to [the portal](#) which will be live from the end of July 2024. The deadline for submission is **September 27th 2024** so that offers of sponsored studentships can be made known in November 2022. Proposals will be shared and reviewed across AstraZeneca UK functions as part of AstraZeneca's internal review process. The portal also shows the proposals that were supported from the previous 3 years.

For the majority of successful proposals we plan to offer 'top-up' funding. The funds can be used, together with appropriate university or UKRI funds, to build a studentship. In-line with EPSRC guidance we prefer studentships to be funded for a minimum of 3½ years. In addition, we have a limited number of 4 year Industrial Doctoral Landscape Awards (IDLAs)

We would also welcome any feedback on the portal process

Best regards

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