

# GUIDELINES FOR ICB CDT/ BHF STUDENTSHIP APPLICATIONS

## 2017/18 | “BHF COHORT”



In partnership, the ICB CDT and the British Heart Foundation (BHF) <http://www.imperial.ac.uk/bhf-research-excellence> are releasing a joint call for up to 6 fully funded 4-year PhD studentships. This form outlines the guidelines for the call.

### CDT BACKGROUND INFORMATION

The Institute of Chemical Biology (ICB) has been awarded an Engineering and Physical Sciences Research Council (EPSRC) Centre for Doctoral Training (CDT) in physical sciences innovation in Chemical Biology for bio-industry and healthcare and is co-funding, alongside the British Heart Foundation (BHF), up to 6 studentships.

Studentships awarded through the ICB CDT/ BHF call will start in October 2017.

The CDT will train a new generation of PhD graduates (>90 over 5 years) in translational multidisciplinary research through a bespoke training and research program (MRes + 3 Year PhD). These students will be armed with an in-depth understanding of product development pipelines across a variety of sectors, acquired through first-hand experience of multi-disciplinary translational research and early stage commercialisation. This will enable them to become leaders of technology innovation and translation in the medical, pharma, life science, personal care and agri-science industries.

### BHF BACKGROUND INFORMATION

The British Heart Foundation (BHF) Centre of Research Excellence at Imperial is promoting innovative, world-leading cardiovascular research and training at the interface of science, technology and medicine. With research investigators drawn from across Imperial's Faculties of Medicine, Natural Sciences, and Engineering, the BHF focusses on world-leading postgraduate training at the interface of cardiovascular biology and the physical or computational sciences in the Centre, recruited from Imperial and other leading UK and EU universities.

### THE RESEARCH THEME OF THE CALL

The central research theme of the ICB CDT is concerned with the development of new molecular tools and technologies to study specific molecular interactions and their applications to strategic biological and biomedical problems. Project proposals concerned with either translational or basic research will be considered but in all instances there must be underpinning innovation in the physical sciences. The central research themes of the BHF encompass several grand challenges in Mechanobiology, Cardiovascular Inflammation, and Regenerative Medicine, underpinned by advances in Genomics, Imaging and Systems Biology (<http://www.imperial.ac.uk/bhf-research-excellence/research-themes/>). The project proposals must map onto one or more of these 6 themes. Proposals will require at least one applicant with a physical sciences background and one applicant with a biomedical background (preference will be given to current BHF Centre members).

As a joint call, proposals will have to be concerned with **the development of novel molecular tools and technologies to study specific molecular interactions relevant to the aforementioned BHF challenges.**

### THE STUDENTSHIP

The studentships, starting in the 2017/18 academic year, comprise a 1-year MRes in Chemical Biology: Industrial Innovation and Translation, followed by a 3-year PhD. The academic entry requirement for the students are a 2:1 degree or higher in any subject with more than 50% physical science content (e.g. Chemistry, Physics, Mathematics, Biophysics, Biochemistry, Bioengineering), from a UK institution or an equivalent overseas qualification. The MRes course involves taught elements in basic Chemical Biology, which lasts from October-January, followed by a research project that runs from January to September. There will be bespoke lectures in cardiovascular science and disease organized for the BHF cohort during their first year.

The studentship will cover tuition fees and stipend for a total of 4 years. In addition, there is a consumable allowance of £3,000 per annum and a total of £1,800 towards travel and the EVOLVE program per studentship.

# GUIDELINES FOR ICB CDT/ BHF STUDENTSHIP APPLICATIONS

## 2017/18 | “BHF COHORT”



### SUPERVISOR ELIGIBILITY

Imperial College rules	Supervisors must fulfill the usual College criteria for eligibility to act as a PhD supervisor.
Number of supervisors and tenure	At least two supervisors on the application must hold an academic position at Imperial College that is tenured over the complete period of the studentship. This does not mean that IC supervisors who do not hold a position for the full four year period cannot apply. However, in such circumstances a third supervisor (from Imperial College) who could continue the student supervision (if the original supervisor’s tenure was not extended) would have to be added.
Expertise	The supervisors should provide different skill sets, and the most usual division will be to have one “medical/biological” and one “physical/ engineering/ mathematics” supervisor. These definitions are not meant to be restrictive, nor are they necessarily defined by departmental affiliations. What is important is exposure of the student to multiple disciplines, wherever these are located. Refer also to “Multidisciplinarity” under “Project requirements” below.
External supervisors	The primary supervisor must be Imperial based. Non-Imperial supervisors may be included but at least two supervisors on the application must hold an academic position at Imperial College, as it is vital that the student has a multidisciplinary lab experience.
Restriction on number of applications	Each PI may only be submitting one project application as lead or co-PI.

### PROJECT REQUIREMENTS “ANNUAL CALL” - ASSESSED COMPONENTS

PROJECT REQUIREMENTS “ANNUAL CALL” - ASSESSED COMPONENTS		Threshold / maximum score
Science Remit (fit to theme)	Proposals will typically be concerned with the development of new molecular tools and technologies to study specific molecular interactions that address <b>key challenges in the cardiovascular research field</b> . Project proposals concerned with either translational or basic research will be considered, but in both instances there must be underpinning innovation in the physical sciences and links to one or more of the 6 BHF research themes (Mechanobiology, Cardiovascular Inflammation, and Regenerative Medicine, Genomics, Imaging and Systems Biology). In particular note that in addition to the previous remit of the study of protein-protein and protein-lipid interactions, any <b>molecular interactions of biomedical and biological importance</b> such as (but not restricted to) protein-nucleic acid, lipid-drug, lipid-lipid, lipid-nucleic acid and lipid-metabolite interactions will also be considered.	(3.0/5.0)
Physical science innovation	The application must demonstrate <b>innovation in the physical sciences</b> . Technologies can be experimental or theoretical (making, measuring, manipulating and modelling). A solely biological/medical proposal, no matter how interesting, cannot be funded. Typically, projects would involve the development or the translation of a new technology applied to a biological problem. Modification of an existing technology to solve a specific biological problem is allowed as well, but there has to be considerable novelty in the development of the technology underpinned by innovation in the physical sciences. Translation into a new sector without innovation in the physical sciences is not within the remit of the CDT.	(5.0/10.0)

# GUIDELINES FOR ICB CDT/ BHF STUDENTSHIP APPLICATIONS

## 2017/18 | “BHF COHORT”



Multidisciplinarity	It is fundamental that the project is inherently multidisciplinary. Therefore it must include at least two supervisors. The supervisors should provide the different skill sets, and the most usual division will be to have one “medical/biological/agri science” and one “physical” supervisor. These definitions are not meant to be restrictive, nor are they necessarily defined by departmental affiliations. What is important is exposure of the student to multiple disciplines, wherever these are located. It is expected that the student will typically undertake work in each research environment for some part of the study, including the MRes project.	(4.0/6.0)
Feasibility and Suitability	<p>ICB-CDT / BHF PhD studentships are fully funded for 4 years (1+3 year format). The first year is an MRes course with taught components in the first few months and a research project subsequently starting in January and finishing in September. Even though this research project directly feeds into the 3 year PhD, the proposal must put forward a self-contained MRes project that can be achieved within 9 months.</p> <p>If the proposed project builds on a previously funded CDT studentship you must include details of the innovation that has been <b>successfully</b> achieved and list outputs (the work must be published or patented).</p> <p>OR</p> <p>If the suggested technology is completely new please explain why you think the proposed work will be successful and provide a risk mitigation plan (“plan B for the student”)</p>	(5.0/10.0)
Synergy	In order to facilitate networking amongst the students, new projects must have synergy with existing ICB core activities and/or BHF CRE core activities. It is important to explain the communalities of the proposed project with existing ones ( <a href="http://www.icb-cdt.co.uk/research/projects">http://www.icb-cdt.co.uk/research/projects</a> ) e.g. in terms of tools and technology development, common biological problem/target, potential for technology translation. Please mention which supervisors you have talked to about synergies. This also extends to the BHF CRE core activities and other proposals of this call.	(3/5.0)
Impact	Describe the intended impact/ scientific merit that would arise from this work. This can include a translational element (e.g. how the application of the new technology could be applied to other biological problems) and / or any other added value that the project can bring to the ICB, such as outreach, new collaborations (with companies) and follow-on funding. Indicate the timeframe for the achievements listed in your impact statement.	(2.5/4.0)
<b>Please note the different weighting and threshold of each requirement!</b>		<b>Maximum Score : 40.0</b>

# GUIDELINES FOR ICB CDT/ BHF STUDENTSHIP APPLICATIONS

## 2017/18 | “BHF COHORT”



### REVIEW PROCESS

How to apply	<p>The awards will be made on the basis of written applications to the ICB / BHF. Applications to must be made using the separate application forms provided.</p> <p>When filling in the application form it is important to demonstrate that your proposed project meets all the criteria listed (see section “requirements” below). Proposals should clearly outline the innovative aspect of the research counterbalanced by its achievability in terms of time and funds.</p> <p>Please specify your research infrastructure, including the access to resources already in place and any additional needs in the feasibility section.</p> <p>With the award of a studentship, supervisors automatically become ICB members. Therefore, you <b>must</b> select at least one of the “ICB/BHF membership activities” (listed in the Annex) you would like to get involved in.</p> <p>Please select relevant supervisors from within the workshop and external ones.</p>
Page Limit and Font	Please complete your application by entering your text only into the tables in the word document and restrict your application to the <b>four page</b> limit. Do not use a font less than <b>10 pt Arial</b> .
Review and Award	Each proposal will be assessed by members of the Institute of Chemical Biology and BHF reviewing panel to ensure the proposed projects are feasible and fit the remit of the ICB CDT and BHF studentships.
Relevant Dates	<p><b>SUBMISSION DEADLINE:</b></p> <p>Please email the completed proposal as .doc or .docx file to Dr Natalia Goehring (<a href="mailto:n.goehring@imperial.ac.uk">n.goehring@imperial.ac.uk</a>) by <b>Sunday, 2<sup>nd</sup> of October 2016</b>.</p> <p>Deadline <b>extended to Monday 17<sup>th</sup> of October 2016, 9:00 am</b>.</p> <p>Please send your expression of interest by <b>3<sup>rd</sup> of October 2016</b>.</p>
Any Questions?	We actively encourage participants to discuss potential projects with members of the <a href="#">ICB Executive Board</a> and <a href="#">BHF Directors</a> if they are unsure of the procedure or the remit.

### POST AWARD

Student Eligibility	The awarding body for the ICB CDT studentships is the EPSRC. Students must therefore conform to the eligibility requirements laid down by the EPSRC, which normally means that the student must be a UK resident. All students must have a good honours degree (2.1 or above) in a <b>physical sciences subject</b> at MSci level (or equivalent).
Recruitment	<p>Eligible students will be interviewed by the ICB-CDT Board and the project supervisors on ICB-CDT recruitment days in February (dates to be announced).</p> <p>It is the responsibility of supervisors to ensure that studentship places are filled by 30st June 2017. Any studentship that does not have a suitable student signed up at this time will be deemed to have forfeited the award, which will be reassigned to reserve projects – this deadline will be strictly enforced.</p>
Supervision splits	All ICB students are registered in the Department of Chemistry. The lead supervisor must therefore be based in the Chemistry department. <b>This can be a nominal supervisor (1%)</b> and does not have to be listed on the application form. The data check is carried out in November and the supervision split can be adjusted accordingly then.
MRes	The 4 year program typically comprises a 1-year MRes followed by a 3-year PhD.
ICB events and EVOLVE program	The CDT program, under the administration of the ICB, involves colloquia and student organised conferences. In order to encourage wide interactions we make attendance at these programs a mandatory requirement for both students and supervisors. Students must also attend CDT specific courses in transferable skills (one per year) and take part in the EVOLVE program.

# GUIDELINES FOR ICB CDT/ BHF STUDENTSHIP APPLICATIONS

## 2017/18 | “BHF COHORT”



Through the EVOLVE program the student will spend a total of 2 months (in years 2-4) at a series of placements to support a key goal identified by each CDT student. Examples of such goals include engagement in the early stages of commercialisation of research they have pioneered, stimulating a new line of research not linked to their PhD or hosting an art exhibition for the general public to highlight the impact of research. EVOLVE is designed to give students workplace based experience of entrepreneurial activities, policy making, media/outreach, industrial research, or research within international academic institutions to meet a specific goal decided by the student. EVOLVE is supported from the outset by over 40 affiliated organisations who are committed to hosting students, provide mentoring advice and offering placement training.

### ICB membership

With the award of a studentship, supervisors automatically become ICB members and you will be approached by the CDT management regarding ICB responsibilities chosen on the application form (see Annex).