

# PhD project application guidelines

## Copenhagen Center for Health Technology

This document provides some overall guidelines concerning the application of PhD scholarships at the Copenhagen Center for Health Technology (CACHET).

### Introduction

CACHET is a strategic research partnership between the Capital Region of Denmark (RH), the City of Copenhagen (KK), the Faculty of Health and Medical Sciences at the University of Copenhagen (KU SUND), and the Technical University of Denmark (DTU). Through evidence-based health and technological research, CACHET will create the foundation for new personalized health technologies and products for the benefit of citizens and the society in general. The strategic objective is to strengthen interdisciplinary and cross-organizational research and development within personalized health technology. The aim is to promote and support three main areas:

- Healthy living
- Active ageing
- Chronic disease prevention and management.

CACHET projects are characterized by being:

- Focused on the design, development, and evaluation of personalized health technology
- Interdisciplinary across the health and technological sciences
- Application focused and grounded in end-user organizations (like private homes, municipalities, nursing homes or hospitals)
- Innovative by developing new solutions for the healthcare system and/or new products for companies

## Eligibility

CACHET can co-fund PhD scholarships at KU SUND or DTU within the following scope:

- A PhD project should have both a medical and technical supervisor, with one being the main supervisor and project owner.
- The project and grant must be anchored at, and managed by, DTU or KU SUND. The PhD candidate is enrolled and employed at the university and institute of the main supervisor and project owner.
- If the project owner is affiliated with the Institute of Clinical Medicine (Institut for Klinisk Medicin, IKM) and is hence employed at a University Hospital, the PhD candidate is enrolled at IKM and employed at the hospital.
- The project should involve either RH or KK as project partners. CACHET does not fund projects with partners outside of RH or KK.

Total costs	Example I		Example II		Example III		Example IV		
	external	cachet	external	cachet	external	cachet	external	3rd party	cachet
PhD salary incl. PhD tuition	500.000	1.000.000	1.000.000	500.000	500.000	1.000.000	500.000	500.000	500.000
VIP travel	0	0	0	0	10.000	0	0	0	0
VIP conferences	0	0	0	0	20.000	0	0	0	0
equipment	0	0	0	0	30.000	0	0	0	0
open acces journals	0	0	0	0	15.000	0	0	0	0
staff	0	0	0	0	0	0	0	0	0
<b>sum</b>	<b>500.000</b>	<b>1.000.000</b>	<b>1.000.000</b>	<b>500.000</b>	<b>575.000</b>	<b>1.000.000</b>	<b>500.000</b>	<b>500.000</b>	<b>500.000</b>
+44% overhead	220.000	0	440.000	0	253.000	0	220.000	0	0
<b>total</b>	<b>720.000</b>	<b>1.000.000</b>	<b>1.440.000</b>	<b>500.000</b>	<b>828.000</b>	<b>1.000.000</b>	<b>720.000</b>	<b>500.000</b>	<b>500.000</b>

Figure 1 – Examples of CACHET Funding

## Funding

CACHET operates with a co-funding model, as shown in Figure 1. You can apply for 1/3 or 2/3 of a PhD scholarship (salary + tuition) **provided** that you have the remaining funds from an external source (public fund, private fund, company, etc.).

1/3 scholarship incl. tuition is fixed to be 500.000 DKK.

The examples in Figure 1 are:

- **Example I** illustrates funding of the salary and tuition of a PhD scholarship with 1/3 external and 2/3 CACHET funding. In this case, you should raise 500.000 DKK + overhead in external funding, and CACHET can fund the remaining 1.000.000 DKK.
- **Example II** illustrates funding of the salary and tuition of a PhD scholarship with 2/3 external and 1/3 CACHET funding. In this case you should raise 1.000.000 DKK + overhead in external funding, and CACHET can fund the remaining 500.000 DKK.
- **Example III** illustrates an application for a PhD scholarship (like example I) plus additional funds for travel and equipment for the project, as well as funds for open access journal publication.
- **Example IV** illustrates an application with three partners, each funding 1/3. This could, for example, be a company, a hospital, and CACHET. If this hospital is the host, the no overhead is associated with the project.

As illustrated in the examples, project funding beyond PhD salary and tuition – such as travel, conference participation, staff, and equipment – needs to be covered by external funding. Note here, that there is a difference in the availability of tuition fee for the project between the two universities; at DTU the tuition fee include a limited budget for a laptop, travel, and thesis printing,

whereas at KU SUND funds for this needs to be secured in addition to the tuition fee (as illustrated in Example III).

**Overhead** is added according to existing rules and regulations of the host institution (DTU or KU SUND). In the examples above, 44% is used, which is the standard overhead percentage for Danish public funding. Other rates apply for private funding, funding from private foundations, etc. The applicant should enquire about the requirements for overhead at his/her host university.

**Administration** of the project economy is handled by the applicant's host university or hospital. Once the project has been granted from CACHET, the money is transferred to the host on a yearly basis.

## Application procedure

An application is submitted by the main supervisor and project owner. PhD students cannot apply on their own but should contact a relevant supervisor.

In CACHET we want to work collaboratively with you, when applying for a project. We encourage you to contact us early in the process for guidance. There are basically three scenarios:

1. **Project idea.** You have an initial project idea, which involves interdisciplinary research across the health and technical sciences. You don't have a fixed set of partners (but some ideas), and you don't have any funding.

In this scenario, you should contact Jakob E. Bardram ([jakba@dtu.dk](mailto:jakba@dtu.dk)) and/or a person from your organization in the management group of CACHET<sup>1</sup> and discuss the project. If we find the project to be great (what we of course will) and relevant for CACHET, we will work with you to put together a consortium of partners and help you in fundraising. You will then get assistance from CACHET as well as be standing on a solid platform once you submit a funding application. You may choose to apply for partly funding at CACHET before submitting externally, or the other way around.

2. **External funding secured.** You have secured external funding for at least 1/3 of a PhD scholarship including overhead e.g. from a fund or a company. You may have a set of partners, but are looking for more or you might be in need of a co-supervisor from the 'sister' university (remember that clinical/technical co-supervision is mandatory).

In this scenario, you should contact Jakob E. Bardram ([jakba@dtu.dk](mailto:jakba@dtu.dk)) and/or a person from your organization in the management group of CACHET and present the project. We will help you find additional partners, if needed, and review your project. Then you should fill in the CACHET PhD project application form and submit it to us. We will then evaluate it according to the criteria listed below.

3. **Part of a larger project.** In this scenario, the PhD scholarship(s) at CACHET is part of a large project that you are applying for, e.g. at the Danish Research Funds or at Horizon 2020.

In this scenario, you should do as in scenario 1, and basically seek to involve CACHET as part of the application process up-front. If you have already secured funding from e.g. H2020 we will of course be able to associate the project with CACHET, but it would be due to closer investigation if it will be possible to do a co-funding setup.

As you can see – talking to Jakob E. Bardram ([jakba@dtu.dk](mailto:jakba@dtu.dk)) and/or your local CACHET manager is relevant in all scenarios in order to establish if the project lies within the research focus of CACHET.

You should use the [CACHET PhD application form](#)<sup>2</sup> for applying for funding from CACHET. The template has instructions for use in it. Note that you can apply both with and without a specific

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<sup>1</sup> See <http://www.CACHET.dk/about/organisation>

<sup>2</sup> See <http://www.CACHET.dk/about/phd>

PhD candidate, which could be found later in a hiring process. PhDs can be applied for in pairs of clinical/technical projects. In this case you should submit two applications – one for each PhD project – but note the pairing in each.

The application form plus all enclosures should be sent to Jakob E. Bardram at jakba@dtu.dk as ONE PDF file (NOT as a Word file). The application deadlines will be posted on the web site.

Applications will be evaluated by 2-3 independent reviewers and the CACHET management group according to the criteria listed below. Final decision will be made by the CACHET management group, taking into consideration incapacity of members<sup>3</sup>.

If your project is accepted pending external funding (i.e., scenario 1) this will be valid until the next application deadline (typically 6 months). After this period you will need to reapply by resubmitting the same project application again. The project will not be reviewed again, but will be prioritized in competition with other projects.

## Criteria for evaluation

When evaluating a PhD project proposal, CACHET will apply the following criteria for evaluation. The more criteria an application meets, the better.

1. **Alignment with the CACHET research focus.** In what way does the project fit into the research agenda of strategic focus of CACHET?
2. **Scientific quality.** What are the scientific contributions? In what way does this project go beyond state-of-art? What is the expected impact in terms of publications and scientific dissemination?
3. **Interdisciplinary research.** Is the project interdisciplinary – or part of an interdisciplinary project – working collaboratively across the health and technical sciences? Does the project have both a clinical and technological objective and contribution? Will the project have impact in both disciplines? Does the project have both a clinical and technical supervisor? Does this project have a corresponding sister project?
4. **Grounded and applicable.** Is the project grounded in real problems in an end-user organization (e.g. nursing home, hospital, or patient's own home)? Does the project involve end-user organizations? Will the research be involving end-users in design, evaluations or testing?
5. **Innovative potential.** Can the results of the project be applied in end-user organizations or transferred to companies for commercial growth? Does the project involve companies? Are the potential patent applications planned in the project?
6. **Feasibility & Scientific Environment.** Can the project be done in practice? Have core issues like e.g. ethical approval, recruitment, technical development, support, hosting, end-user involvement, pilot testing, and partner commitments been addressed? Is the scope of the project suitable for a PhD? What is the scientific quality of the supervisors and the research group? What is the support offered by the research environment/group?
7. **PhD candidate.** If a specific PhD candidate is part of the application, the credentials of the candidate will be taken into consideration.

## Recruitment, Evaluation, and Employment of PhD Students

If CACHET decides to financially fund a PhD project, the project administration will be handed over to the university institute or hospital of the applicant and project owner. The recruitment,

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<sup>3</sup> We follow the incapacity rules laid out by the Danish Research Councils, as e.g. described at the home page of the Innovation Foundation <http://innovationsfonden.dk/da/habilitetsregler>

evaluation, and employment of the PhD student will be handled by, and according to, the rules and regulations of the host university (i.e. either DTU or KU SUND). CACHET is not involved in this process.

## **Obligations**

Once CACHET is financially funding a PhD project, the project will be part of CACHET, which carries a few simple obligations.

### **Reporting**

Once CACHET is financially funding a PhD project, the entire project economy will be part of the CACHET accounting. This includes all external and internal co-funding. For the purpose of reporting to the CACHET steering group, the project owner must report to the CACHET management on a biannual basis on the entire budget, co-funding, external and internal, and project spending

More details on reporting will be provided, once a project has been granted. However, it is our intention to keep reporting to an absolute minimum.

### **Participation**

The project will be part of CACHET, which means that researchers in the project – both supervisors and PhD student(s) – should participate actively in the events and activities of CACHET.

### **Dissemination**

The project should be disseminated widely as being part of CACHET, using the CACHET logo and references to the CACHET web site. The project and its results should be published and updated regularly on the website and broadcasted on social media linking to CACHET (LinkedIn and Twitter).