UNIVERSITY OF COPENHAGEN FACULTY OF HEALTH AND MEDICAL SCIENCES **ANNUAL REPORT 2019 GRADUATE SCHOOL OF** HEALTH AND MEDICAL **SCIENCES**

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Introduction

As new Head of Graduate School from 1 January 2020, I have the pleasure of presenting the 2019 annual report for the Graduate School of Health and Medical Sciences at the University of Copenhagen.

The Graduate School is the largest of its kind in Denmark with 1665 enrolled PhD students across most research fields in biomedicine, clinical medicine, odontology, public health, pharmaceutical sciences, veterinary medicine, and animal science. In July 2019, the Faculty was expanded with a new Globe Institute which excitingly adds life, earth and environmental sciences to the research fields covered. Like previous years, the Graduate School of Health and Medical Sciences again sees a very high intake. In 2019 505 new PhD students were enrolled, which is the highest number since 2014.

In this report, selected PhD statistics for 2019 are presented, and in addition I take the opportunity to look towards new activities that 2020 will bring upon us.

Following up on the international evaluation of the Graduate School in 2019

The Graduate School concluded an international evaluation of the PhD programme at the Faculty in the autumn of 2019. I was very happy to read that the panel found that the "Graduate School offers and excellent scientific environment for training young scientists, performing good quality research" with engaged supervisors, Heads of Graduate Programmes and PhD coordinators and a

professionally driven and efficient administration. But one can always improve, and to address the weaknesses pointed out by the panel, we have developed an action plan for the coming years. We plan to work with increased community and onboarding activities; launching two new PhD Supervisor courses starting in the autumn of 2020; formalizing and clarifying the role of graduate programmes and other stakeholders; sharpening the focus on transferrable skills; introducing tools for evaluation of PhD courses and finally revising the framework for regular assessments. In addition, in the autumn of 2020 we will launch a new "Responsible Conduct of Research 2: Getting Ready for Submission" course aimed at PhD students in their final year.

In the beginning of 2020, I took over from now former Head of Graduate School, Professor Jørn Wulff Helge and I wish to take the opportunity to thank him for all his efforts since 2016. I look forward to continue onwards from here, working closely with Vice-Dean for Research, Professor Mogens Holst Nissen, the Graduate Programmes and all the other stakeholders of the Graduate School. Thank you to all supervisors and PhD students for your important contributions in 2019.

Hans Bräuner-Osborne Professor Head of Graduate School of Health and Medical Sciences

May 2020

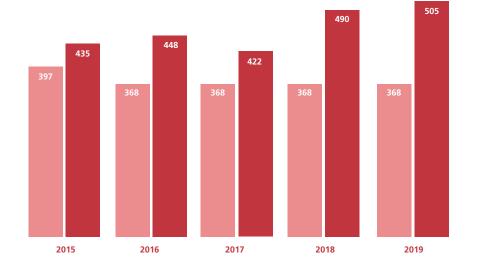


PhD students enrolled and target figures for enrolment

A total of 505 PhD students were enrolled in 2019. The target was 368 new enrolments.

All six faculties at the University of Copenhagen have target figures for their PhD enrolments per year. The target figures are agreed with the management of the University of Copenhagen.





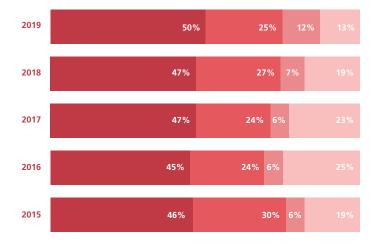
• Target figures for enrolment

PhD students enrolled



PhD students enrolled during the year by place of employment

This figure shows the distribution (in pct.) by place of employment in four overall categories: Hospitals, departments and research centres at the Faculty of Health and Medical Sciences, and other places of employment. The latter include PhD students in the industry, international living cost stipends, self-employed or institutions abroad. The information is provided by PhD students themselves at the time of enrolment and are not validated.



- Hospitals in Region Zealand and Capital Region of Denmark
- Departments at SUND
- Research centres at SUND
- Other (e.g. industry, international scholarships, universities abroad and other research institutions)



Total number of enrolled PhD students at the end of the year

Number of industrial PhD students by the end of the year

Number of PhD degrees awarded

By 31 December 2019, the Graduate School of Health and Medical Sciences had a total of 1665 enrolled PhD students, making it the largest of its kind in Denmark.

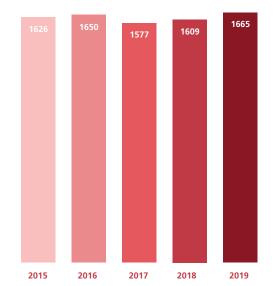
The number includes PhD students on leave.

The Graduate School of Health and Medical Sciences had 59 industrial PhD students by the end of 2019.

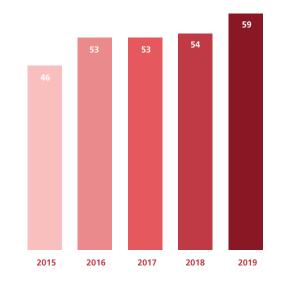
An industrial PhD project is a three-year industrially focused PhD project where the PhD student is employed at a company and enrolled at a university. Read more about the programme here: innovationsfonden.dk

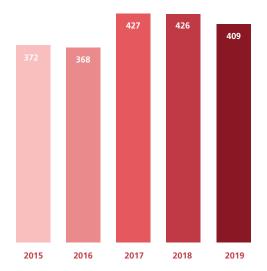
A total of 409 PhD degrees were awarded in 2019. The number is slightly lower compared with degrees awarded in 2018. The numbers include PhD degrees awarded without prior enrolment (also known as § 15,2)

The PhD degree is awarded by the university when the PhD thesis is positively reviewed by an assessment comittee and afterwards successfully defended at a public defense.



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PhD without enrolment (§15,2)

It is possible to submit a PhD thesis without enrolment at the Graduate School of Health and Medical Sciences. This requires qualifications that are comparable to the qualifications obtained through a PhD programme as well as a university representative that acts as supervisor.

These numbers show how many PhD degrees were awarded without enrolment in 2015-2019.

PhD degrees awarded without enrolment

2015 2018 2019 2016 2017

Duration of PhD programme (vears)

The average length of the PhD study at the Faculty of Health and Medical Sciences is 3.2 years. This length of time is close to equal to the average of University of Copenhagen.

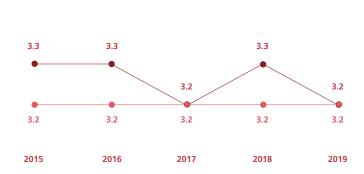
The average is calculated as the period of time from enrolment date to the date of submission of the thesis. Leave periods are excluded and PhD students on flexible models (3+5 and 4+4) are excluded.

If leave of abscence is included, the duration is 3.6 years for both the Faculty of Health and Medical Sciences and the University of Copenhagen (2019).

University of Copenhagen

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• Faculty of Health and Medical Sciences

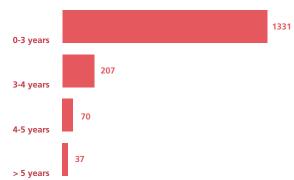


Current enrolment period for PhD students enrolled by the end of 2019

The prescribed period of study of the Danish PhD programme is three years equivalent of 180 ECTS, equivalent of three years. Most PhD students submit their PhD thesis within the expected enrolment period of three years, however some PhD students takes leave of abscence or apply for an extension of their PhD programme. Examples may be parental leave, illness, other professional activities or project-related issues. These figures show data on enrolment periods. PhD students on flexible models (3+5 and 4+4) are excluded.

1331

PhD students had an expected enrolment period of 0-3 years by the end of 2019

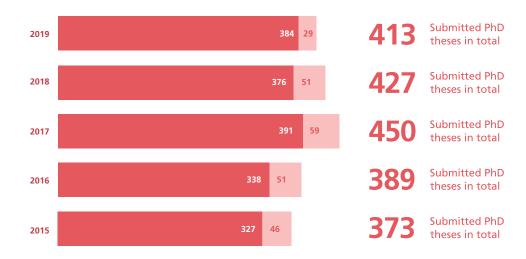


Number of submitted PhD theses and resubmissions

When a PhD student submit his/her thesis, an assessment committee recommends to the University as to whether the PhD thesis can proceed to oral defence. The majority of submitted PhD theses proceed straight to defence after the preliminary assessment, as shown in this figure. A smaller number of resubmissions occur, where the PhD student is given the opportunity to resubmit the thesis in a revised version for assessment and possibly be recommended for oral defence.

This figure shows theses, that were submitted for the first time in each year. Resubmissions may have occured in the same year or the year(s) after. Those theses are still included in the year, where they first were submitted.

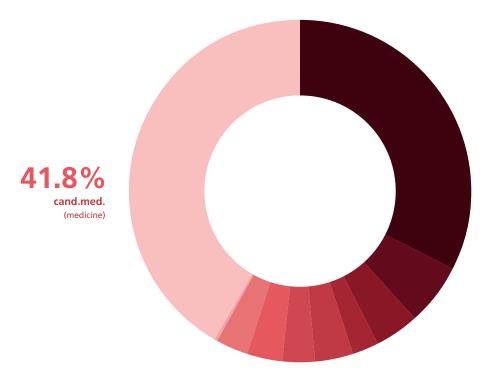




Qualifying degree for PhD students enrolled in 2019

Most newly enrolled PhD students held a qualifying degree in either medicine (cand.med.) or scientific areas such as molecular biomedicine, human biology or biochemistry (cand.scient or MSc). These numbers account for 74 %.

The remaining 26% held qualifying degrees in other scientific areas, such as odontology, pharmacy, veterinary medicine, engineering, public health and social sciences.



32.5% cand.scient. or MSc (biochemistry, molecular biomedicine, human biology, etc.)

5.9% cand.scient.pharm., cand.pharm or similar (pharmacy, pharmaceutical sciences, etc.)

3.2% cand.med.vet. (veterinary medicine)

4.2%Recognition of prior learning (study and research experience equivalent to a five-year Master's degree)

3.4% cand.scient.san., cand.cur. (nursing, health sciences, physiotherapy etc.)

2.4% cand.scient.san.publ. (public health)

3% cand.polyt. (engineering)

3.6% cand.psych., cand.mag., cand.scient.anth. etc. (psychology, social sciences and humanities)

0.2% cand.odont. (odontology)

Gender, age and nationality of PhD students enrolled in 2019

Average age at time of enrolment (years)

The average age at the time of enrolment was 30.4 years in 2019. Only a very small variation occurs in these numbers over the last few years.



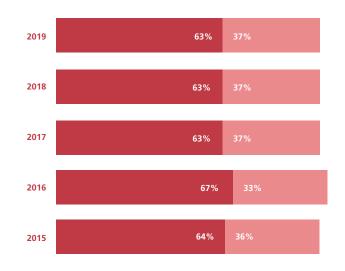
Gender

The gender distribution of the 505 new PhD students enrolled in 2019 is 63 % female and 37 % male. There is no variation over the last three years.









Nationality

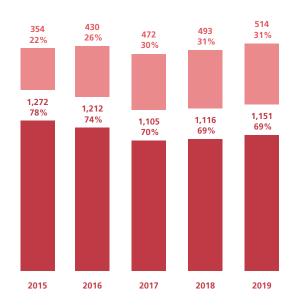
The internationalisation of the PhD programme is improving, although the majority of PhD students are Danish. The Graduate School of Health and Medical Sciences had a total of 514 international PhD students by the end of 2019. In 2018 there were 493 international PhD students.

Danish PhD students
 International PhD students

69%
Danish PhD students

31%

International PhD students

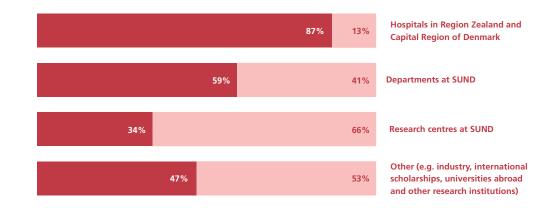


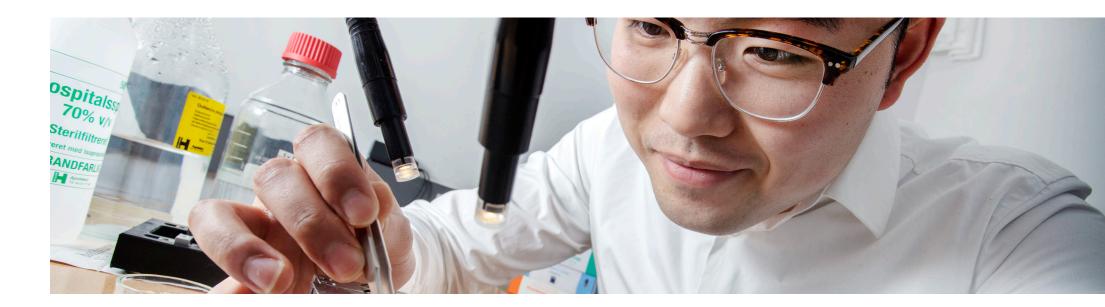
Nationality of PhD students enrolled during 2019 by place of employment

This figure shows the quite large variation of internationalisation across different places of employment for PhD students. The information is provided by PhD students themselves at the time of enrolment and are not validated.

Danish PhD students

International PhD students





Number of enrolled PhD students by graduate programme

The graduate programmes are a key organisational and quality framework for the PhD programme at the Faculty of Health and Medical Sciences. All PhD students are affiliated with a graduate programme, which offer a variety of courses, seminars and other academic activities. By the end of 2019, the Graduate School of Health and Medical Sciences had 22 graduate programmes.

The sum of affiliated PhD students by graduate programmes listed here (1,647) does not equal the total number of enrolled PhD students (1,665). The difference is due to seven PhD students at Globe Institute, which will etablish its own graduate programme in 2020 and 11 PhD students in the former graduate programme in Clinical Research, that are still affiliated to this programme. The graduate programme in Clinical Research was phased out in 2018.

1,647PhD students enrolled by graduate programme

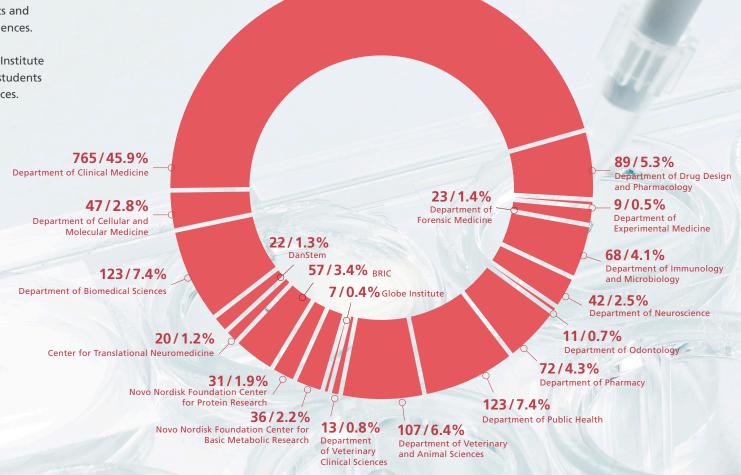
Graduate programme	Head of graduate programme Number of P	nD students
Airways, Anesthesiology and Skin	Professor Charlotte Suppli Ulrik	52
Basic and Clinical Research in Musculoskeletal and Oral Sciences	Professor Michael Kjær	70
Basic Metabolic Research	Professor Torben Hansen	131
Biostatistics and Bioinformatics	Professor Torben Martinussen	43
Cardiovascular Research	Professor Thomas Jespersen	101
Cellular and Genetic Medicine	Professor Lene Juel Rasmussen	51
Clinical Cancer Research	Professor Inge-Marie Svane	85
Herd and Population Oriented Research	Associate Professor Helle Stege	29
Immunology and Infectious Diseases	Professor Charlotte Menne Bonefeld	121
In Vivo Pharmacology and Experimental Animals	Professor Jens Lykkesfeldt	37
Life Cycle in Medicine	Professor Anders Juul	58
Medical and Molecular Imaging	Professor Andreas Kjær	34
Medicine, Culture and Society	Professor Klaus Lindgaard Høyer	36
Molecular Bacteriology and Infection	Associate Professor Rikke Heidemann Olsen	35
Molecular Mechanisms of Disease	Professor Kim Bak Jensen	140
Neuroscience	Professor Nanna MacAulay	127
Oral Sciences, Forensic Medicine and Bioanthropology	Professor Niels Lynnerup	31
Pharmaceutical Sciences	Professor Hans Bräuner-Osborne	159
Psychiatry	Professor Merete Nordentoft	57
Public Health and Epidemiology	Professor Naja Hulvej Rod	180
Surgical Sciences	Professor Ismail Gögenur	57
Veterinary Clinical Sciences	Professor Mette Berendt	13
Total		1,647

Number of enrolled PhD students by departments and centres

This figure shows the distribution of the 1,665 enrolled PhD students by the end of 2019 in departments and centres at the Faculty of Health and Medical Sciences.

The number of enrolled PhD students at Globe Institute will increase in the coming years, as more PhD students start at the Faculty of Health and Medical Sciences.





Number of new enrolments during 2019 by departments and centers

This figure shows the distribution of the 1,665 enrolled PhD students by the end of 2019 in departments and centres at the Faculty of Health and Medical Sciences.

The number of enrolled PhD students at Globe Institute will increase in the coming years, as more PhD students start at the Faculty of Health and Medical Sciences.

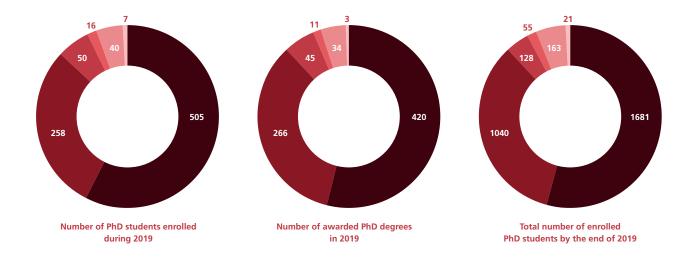


BRIC
Center for Translational Neuromedicine
DanStem
Department of Biomedical Sciences
Department of Cellular and Molecular Medicine
Department of Clinical Medicine
Department of Drug Design and Pharmacology
Department of Experimental Medicine
Department of Forensic Medicine
Department of Immunology and Microbiology
Department of Neuroscience
Department of Odontology
Department of Pharmacy
Department of Public Health
Department of Veterinary and Animal Sciences
Department of Veterinary Clinical Sciences
Globe Institute
Novo Nordisk Foundation Center for Basic Metabolic Research
Novo Nordisk Foundation Center for Protein Research

Key PhD statistics for the University of Copenhagen

In these figures we present a comparison among faculties at the University of Copenhagen on key numbers: PhD enrolments and PhD degrees awarded during the year, as well as the number of enrolled PhD students by the end of the year. The numbers are submitted to Statistics Denmark by the University of Copenhagen. Thus, the numbers differ slightly from the numbers shown on p. 4-6, due to different calculation time and method.

- Faculty of Health and Medical Sciences
- Faculty of Science
- Faculty of Humanities
- Faculty of Law
- Faculty of Social Sciences
- Faculty of Theology





The Graduate School organisation

Vice-Dean for Research

Responsible for strategy and framework for research training at the Faculty, including PhD programme. Delegates on behalf of the Dean.

Head of the Graduate School

Overall responsibility for PhD programme at the Faculty of Health and Medical Sciences. Decision making on behalf of the Faculty.

PhD study board

Administrative decision making and guidance on Graduate School activities in accordance with the University Act.

Graduate School

Administration of the PhD students' course of tudies in accordance with the PhD Order.

Graduate programmes

Research training programmes offering PhD students a variety of courses, seminars and other academic activities.



GRADUATE SCHOOL OF HEALTH AND MEDICAL SCIENCES FACULTY OF HEALTH AND MEDICAL SCIENCES

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