

UNIVERSITY OF COPENHAGEN
FACULTY OF HEALTH AND MEDICAL SCIENCES



ANNUAL REPORT 2020 GRADUATE SCHOOL OF HEALTH AND MEDICAL SCIENCES

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Introduction

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

The Graduate School is the largest in Denmark with 1769 enrolled PhD students across most research fields in bio-medicine, clinical medicine, odontology, public health, veterinary medicine, pharmaceutical, animal and evolutionary sciences.

In this report, selected PhD statistics for 2020 are presented, and in addition I take the opportunity to address some of the challenges the COVID-19 pandemic has brought upon us.

Despite the COVID-19 pandemic, the Graduate School of Health and Medical Sciences has again seen a very high intake of new PhD students. In 2020, 524 new PhD students were enrolled, which is the highest number in the history of the Graduate School of Health and Medical Sciences. Compared to 2017-2019, fewer PhD degrees were awarded in 2020 likely reflecting delays caused by COVID-19. I expect that the COVID-19 pandemic will continue to affect these numbers in the coming years as we continue to receive an increased rate of applications for extensions of enrolment.

Mitigating the effects of the COVID-19 pandemic

It was only a few months into my appointment as Head of Graduate School that the first COVID-19 lockdown started in mid-March 2020. Since then, the Graduate School has worked on mitigating the consequences of COVID-19

for PhD students and supervisors at SUND in constantly changing conditions. I would like to mention some of these measures:

- › Offering more online PhD courses and approving more external, online PhD courses
- › More flexible requirements for change of research environment
- › A framework for digital PhD defences (which will likely continue in the future)
- › Easing requirements for leave, part-time and extensions of enrolment if related to COVID-19
- › Workshops on reducing stress are offered on an ongoing basis

I would like to express my continuing support to all PhD students during these challenging times and I hope you will reach out to the different support systems available for you. Please find more information at the Graduate School website.

Improving the PhD programme beyond the COVID-19 pandemic

While mitigating the effects of the COVID-19 pandemic has been our main priority in 2020, the Graduate School continues to work on implementing the recommendations from the international evaluation from 2019, which are summed up in a working plan for 2020-2024. We are working on initiatives related to supervisor training; increased onboarding activities and stronger support systems for PhD students; formalizing and clarifying the role of graduate programmes and other stakeholders; and introducing tools for evaluation of PhD courses.



As part of this, I am proud that we were able to launch two major initiatives in 2020 despite the challenges caused by the COVID-19 pandemic: a new PhD course “Responsible Conduct of Research 2: Getting Ready for Submission of Manuscripts and Thesis” aimed at

PhD students in their final year and an online and 3-day course on PhD supervision aimed at our supervisors. I am convinced that both initiatives will improve the quality of our PhD programme and am happy to note that they have been well received.

Thank you to all supervisors and PhD students for your important contributions and hard work in challenging times. I look forward to continue working closely with Vice-Dean for Research, Professor Mogens Holst Nissen, the Graduate Programmes, the PhD Study Board and all the other stakeholders of the Graduate School.

A handwritten signature in blue ink that reads "Hans Bräuner-Osborne". The signature is fluid and cursive, with a long horizontal stroke at the end.

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

June 2021

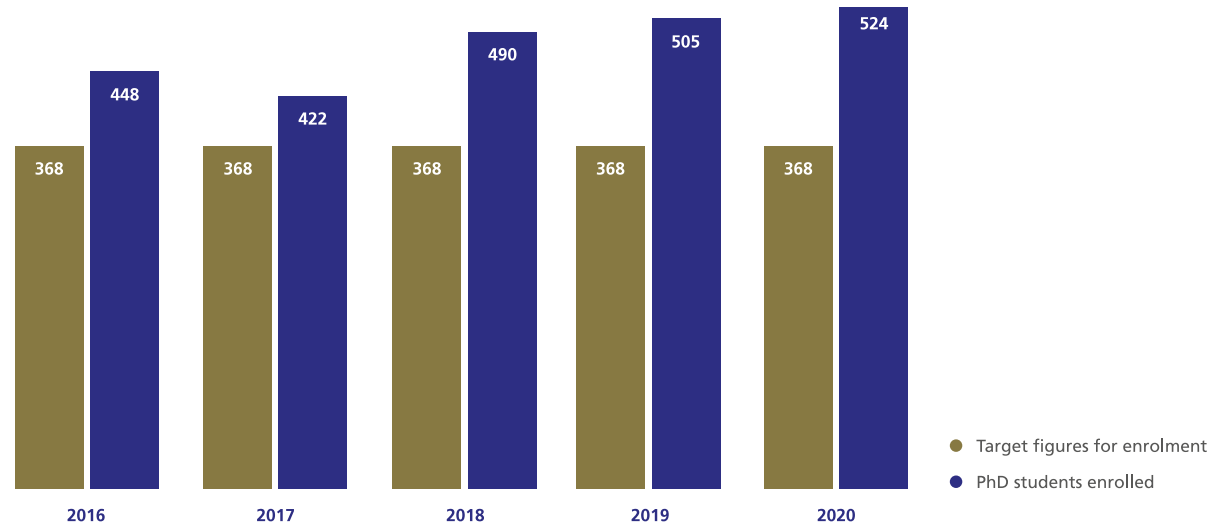


PhD students enrolled and target figures for enrolment

A total of 524 PhD students were enrolled in 2020. The target was 368 new enrolments.

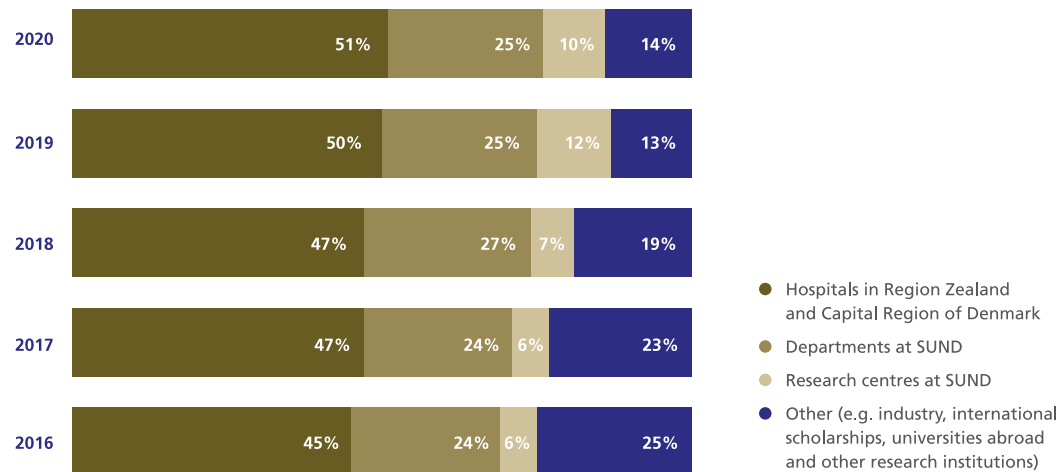
Faculty of Health and Medical Sciences has a target figure for their PhD enrollments per year. The target figure is agreed with the management of the University of Copenhagen.

 **524**
New PhD students
were enrolled in 2020



PhD students enrolled during the year by place of employment

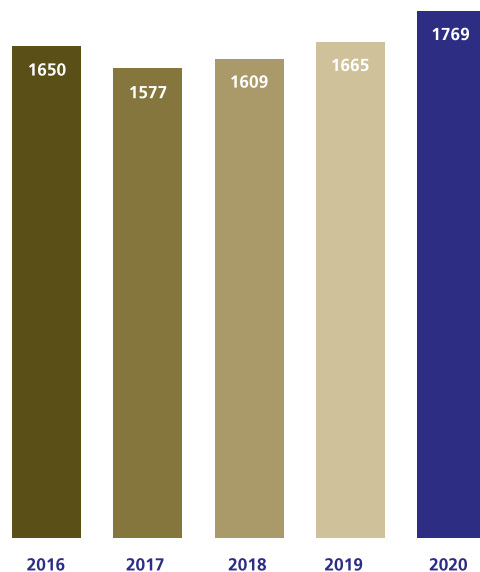
This figure shows the distribution (in pct.) by place of employment in four overall categories: Hospitals, departments and research centres at the Faculty of Health and Medical Sciences, and other places of employment. The latter include PhD students in the industry, international living cost stipends,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



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

By 31 December 2020, the Graduate School of Health and Medical Sciences had a total of 1769 enrolled PhD students, making it the largest in Denmark.

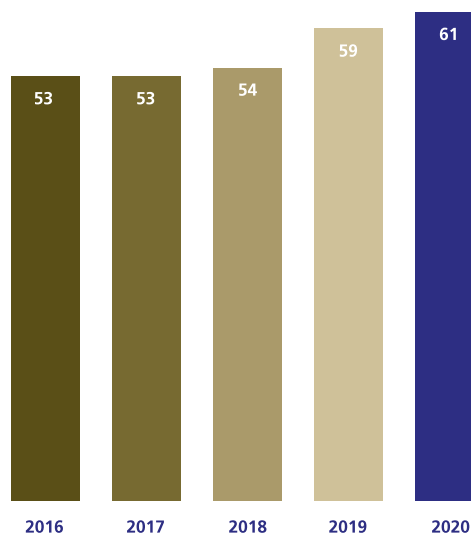
The number includes PhD students on leave.



Number of industrial PhD students by the end of the year

The Graduate School of Health and Medical Sciences had 61 industrial PhD students by the end of 2020.

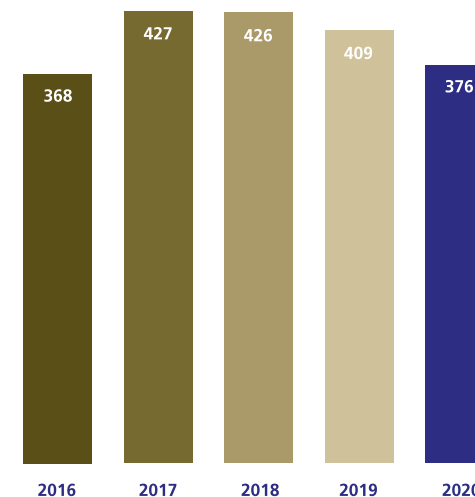
An industrial PhD project is a three-year industrially focused PhD project where the PhD student is employed at a company and enrolled at a university. Read more about the programme here: innovationsfonden.dk



Number of PhD degrees awarded

A total of 376 PhD degrees were awarded in 2020. The number is lower compared with degrees awarded in 2019 which may be caused by COVID-19 and restrictions related to organising physical PhD defences.

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 committee and afterwards successfully defended at a public defence.

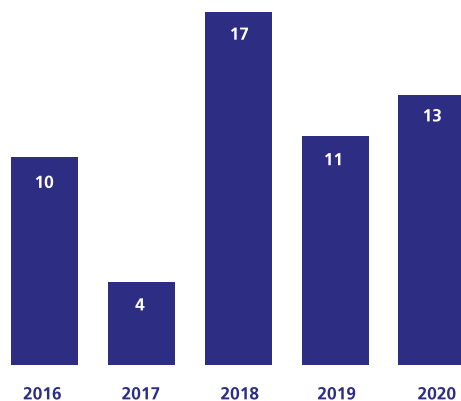


PhD without enrolment (§15,2)

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 2016-2020.

● PhD degrees awarded without enrolment

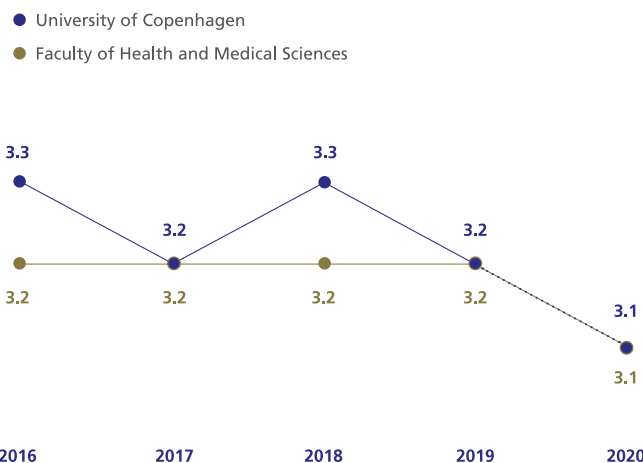


Duration of PhD study (years)

The average length of the PhD study at the Faculty of Health and Medical Sciences is 3.1 years. This length of time is equal to the average of the 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 absence is included, the duration is 3.5 years for both the Faculty of Health and Medical Sciences and for the University of Copenhagen (2020)

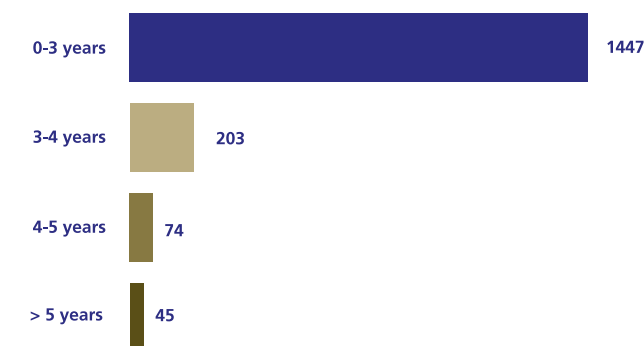


Current enrolment period for PhD students enrolled by the end of 2020

The prescribed period of study of the Danish PhD programme is three years equivalent of 180 ECTS. Most PhD students submit their PhD thesis within the expected enrolment period of three years, however some PhD students take leave of absence 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.

1447

PhD students had an current enrolment period of 0-3 years by the end of 2020



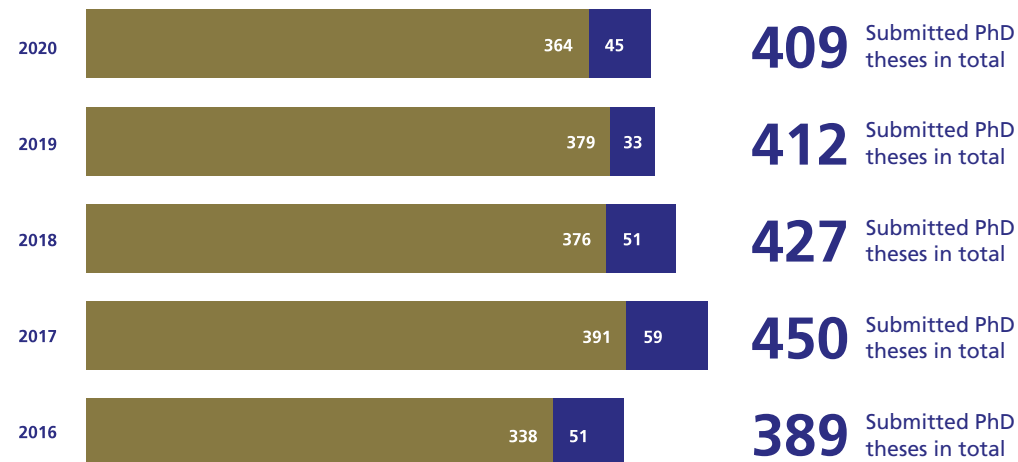
Number of submitted PhD theses and resubmissions

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



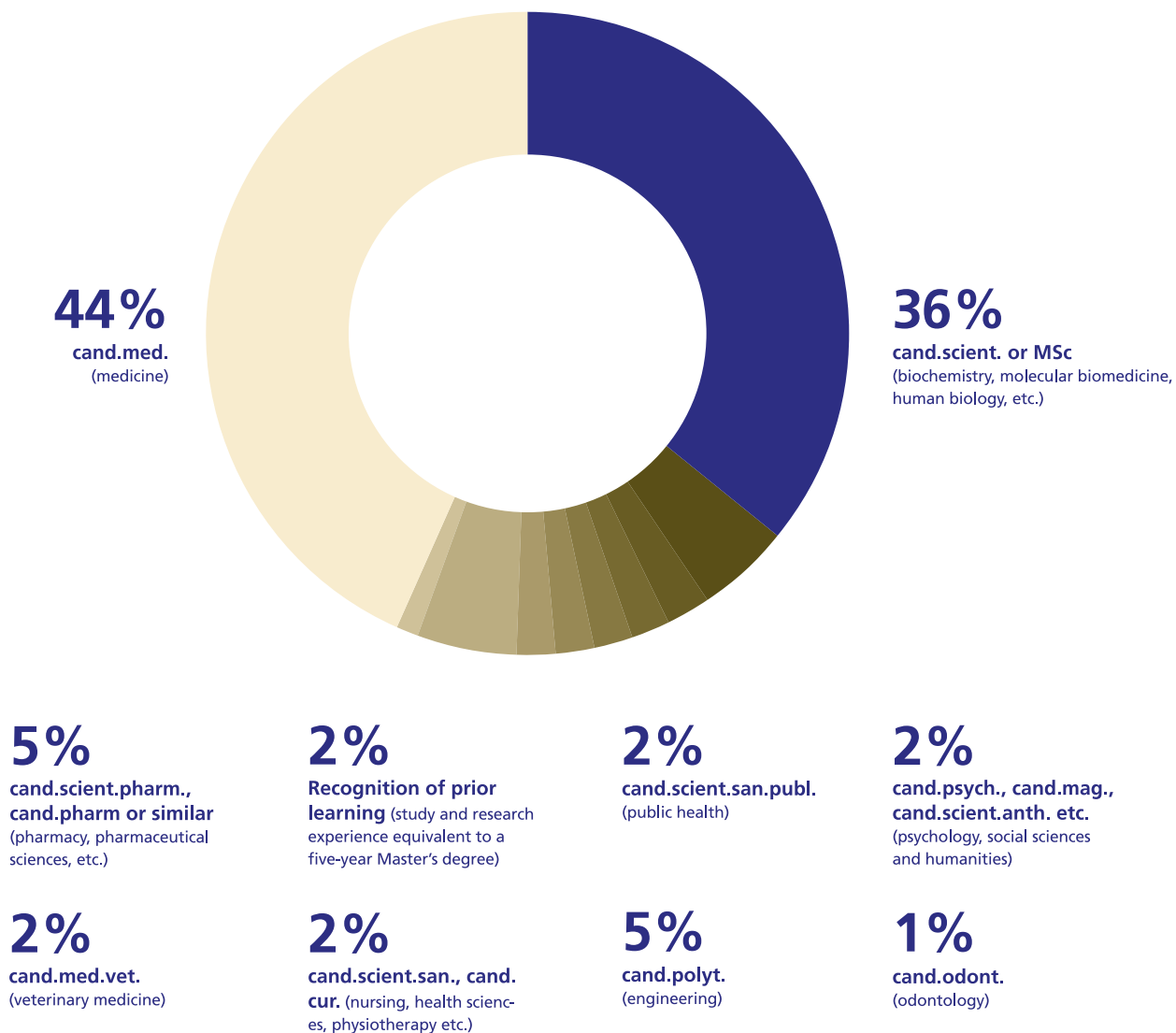
- Submitted PhD theses (no resubmissions)
- Resubmitted PhD theses



Qualifying degree for PhD students enrolled in 2020

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 80%.

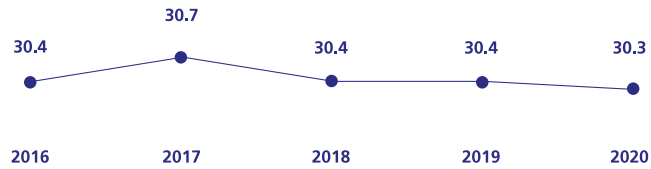
The remaining 20% held qualifying degrees in other scientific areas, such as odontology, pharmacy, veterinary medicine, engineering, public health and social sciences.



Gender, age and nationality of PhD students enrolled in 2020

Average age at time of enrolment (years)

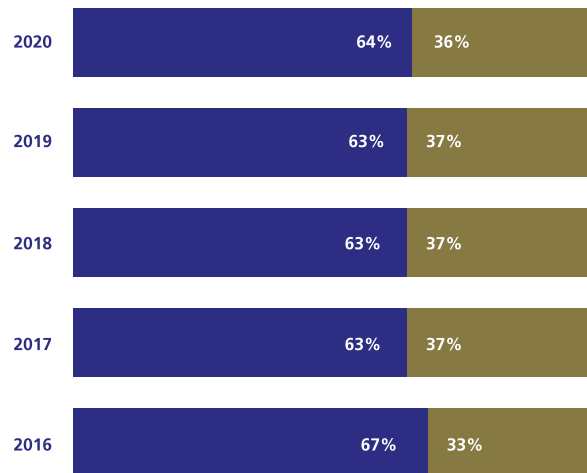
The average age at the time of enrolment was 30.3 years in 2020. Only a very small variation occurs in these numbers over the last few years.



Gender

The gender distribution of the 524 new PhD students enrolled in 2020 is 64% female and 36% male. Only slight variation occurs in these numbers in the last five years.

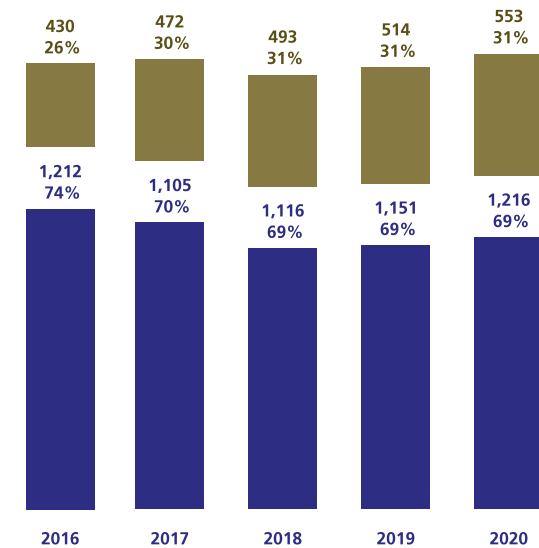
● Female ● Male



Nationality

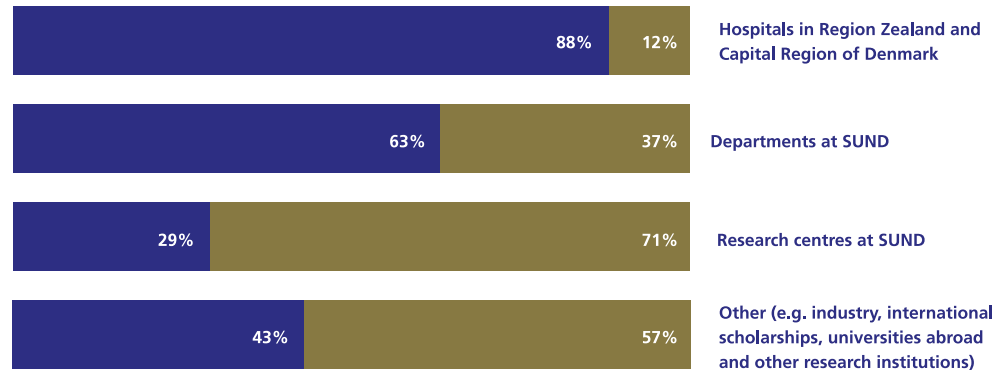
The number of international PhD students is increasing, although the majority of PhD students are Danish. The Graduate School of Health and Medical Sciences had a total of 553 international PhD students by the end of 2020. In 2019 there were 514 international PhD students.

● Danish PhD students ● International PhD students



Nationality of PhD students by place of employment

This figure shows the quite large variation of internationalisation depending on the place of employment for PhD students. The figure covers the total number of PhD students enrolled by the end of 2020 (1769 PhD students). Employment data is divided 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. Employment 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 2020, the Graduate School of Health and Medical Sciences had 23 graduate programmes. The graduate programme in Veterinary Clinical Sciences was phased out by 31 December 2020.

In 2020, a new graduate programme in Life, Earth and Environmental Sciences was established, as the GLOBE Institute was established at the Faculty of Health and Medical Sciences.

The sum of affiliated PhD students by graduate programmes listed here (1,756) does not equal the total number of enrolled PhD students (1,769). The difference is due to 13 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.

23 Different graduate programmes were available to PhD students by the end of 2020.


Graduate programme	Head of graduate programme	Number of PhD students
Airways, Anesthesiology and Skin	Professor Charlotte Suppli Ulrik	60
Basic and Clinical Research in Musculoskeletal Sciences	Professor Michael Kjær	65
Basic Metabolic Research	Professor Torben Hansen	158
Biostatistics and Bioinformatics	Professor Torben Martinussen	53
Cardiovascular Research	Professor Thomas Jespersen	99
Cellular and Genetic Medicine	Professor Lene Juel Rasmussen	51
Clinical Cancer Research	Professor Inge-Marie Svane	83
Herd and Population Oriented Research	Associate Professor Helle Stege	39
Immunology and Infectious Diseases	Professor Charlotte Menne Bonefeld	138
In Vivo Pharmacology and Experimental Animals	Professor Jens Lykkesfeldt	42
Life Cycle in Medicine	Professor Anders Juul	64
Life, Earth and Environmental Sciences	Associate Professor Enrico Cappellini	31
Medical and Molecular Imaging	Professor Andreas Kjær	45
Medicine, Culture and Society	Professor Klaus Lindgaard Høyer	42
Molecular Bacteriology and Infection	Associate Professor Rikke Heidemann Olsen	37
Molecular Mechanisms of Disease	Professor Kim Bak Jensen	155
Neuroscience	Professor Nanna MacAulay	133
Oral Sciences, Forensic Medicine and Bioanthropology	Professor Niels Lynnerup	31
Pharmaceutical Sciences	Professor Jukka Rantanen	139
Psychiatry	Professor Merete Nordentoft	54
Public Health and Epidemiology	Professor Naja Hulvej Rod	165
Surgical Sciences	Professor Ismail Gögenur	66
Veterinary Clinical Sciences	Professor Mette Berendt	6
Total		1,756

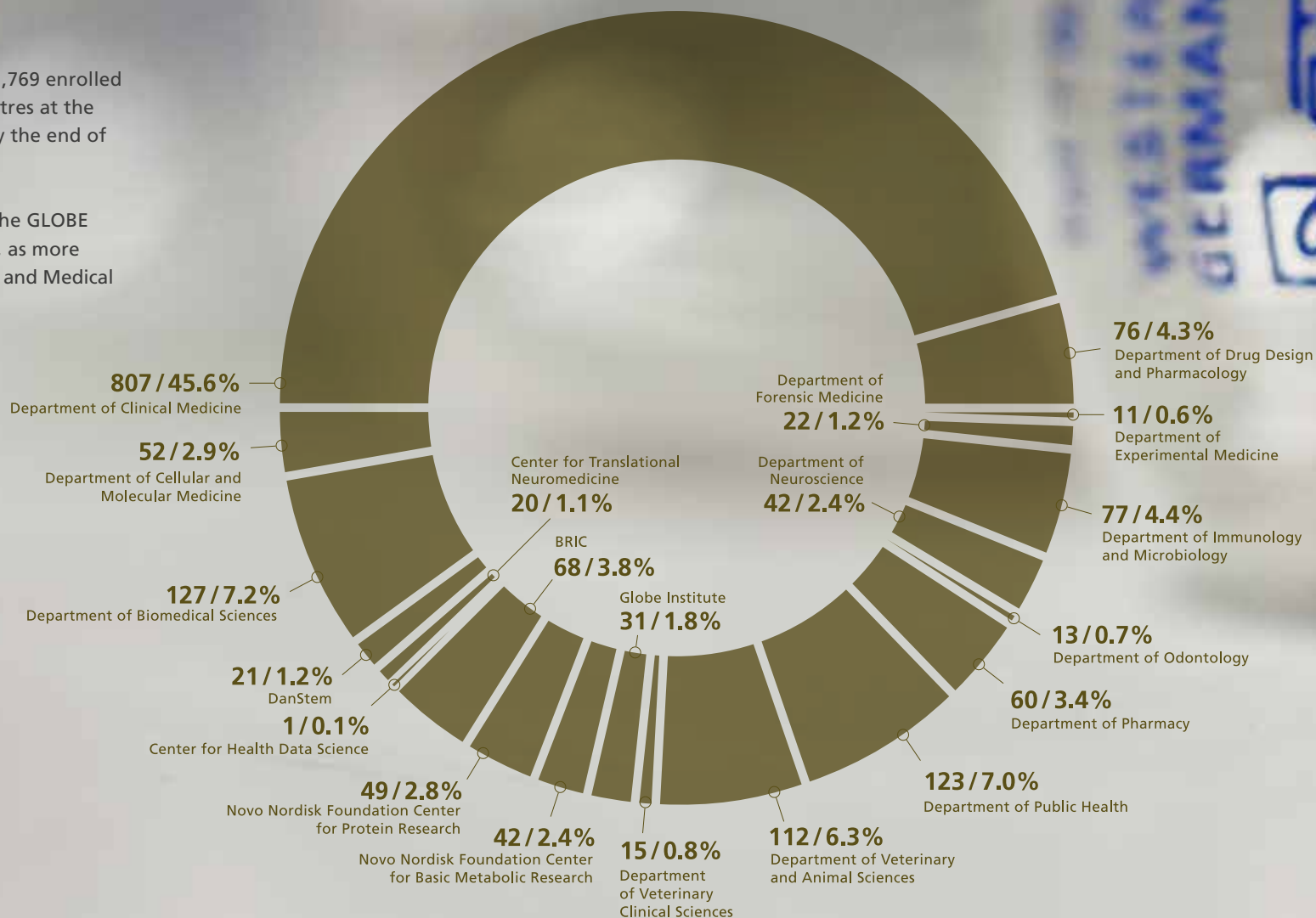


Number of enrolled PhD students by departments and centers by the end of 2020

This figure shows the distribution of the 1,769 enrolled PhD students by the departments and centres at the Faculty of Health and Medical Sciences (by the end of the year).

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

 **1,769**
Total number of enrolled PhD students in 2020



Number of new enrolments during 2020 by departments and centres

This figure shows the distribution of new PhD students enrolled during 2020 by the departments and centers at the Faculty of Health and Medical Sciences.



524

new PhD students enrolled
during 2020

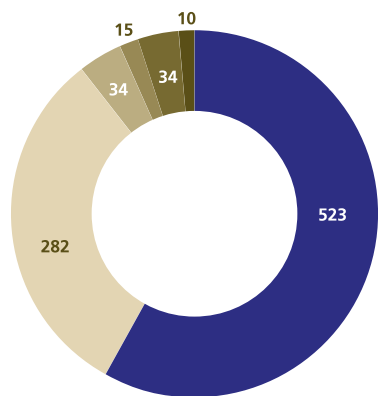
21 / 4.0%	BRIC
1 / 0.2%	Center for Health Data Science
2 / 0.4%	Center for Translational Neuromedicine
3 / 0.6%	DanStem
31 / 5.9%	Department of Biomedical Sciences
15 / 2.9%	Department of Cellular and Molecular Medicine
250 / 47.7%	Department of Clinical Medicine
19 / 3.6%	Department of Drug Design and Pharmacology
2 / 0.4%	Department of Experimental Medicine
4 / 0.8%	Department of Forensic Medicine
24 / 4.6%	Department of Immunology and Microbiology
10 / 1.9%	Department of Neuroscience
6 / 1.1%	Department of Odontology
15 / 2.9%	Department of Pharmacy
24 / 4.6%	Department of Public Health
33 / 6.3%	Department of Veterinary and Animal Sciences
4 / 0.8%	Department of Veterinary Clinical Sciences
24 / 4.6%	GLOBE Institute
15 / 2.9%	Novo Nordisk Foundation Center for Basic Metabolic Research
21 / 4.0%	Novo Nordisk Foundation Center for Protein Research



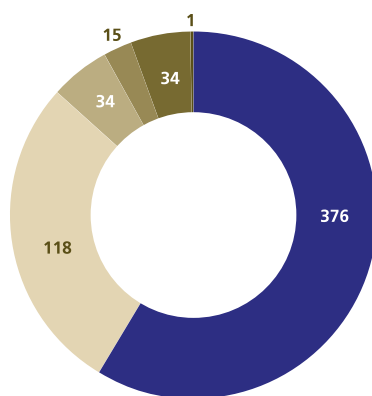
Key PhD statistics for the University of Copenhagen

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.

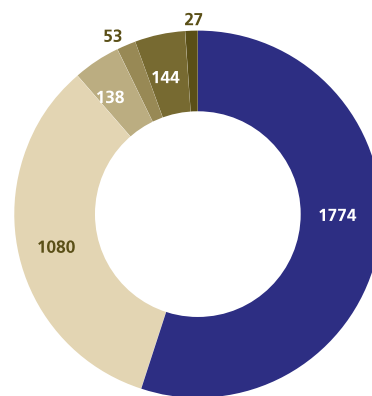
- Faculty of Health and Medical Sciences
- Faculty of Science
- Faculty of Humanities
- Faculty of Law
- Faculty of Social Sciences
- Faculty of Theology



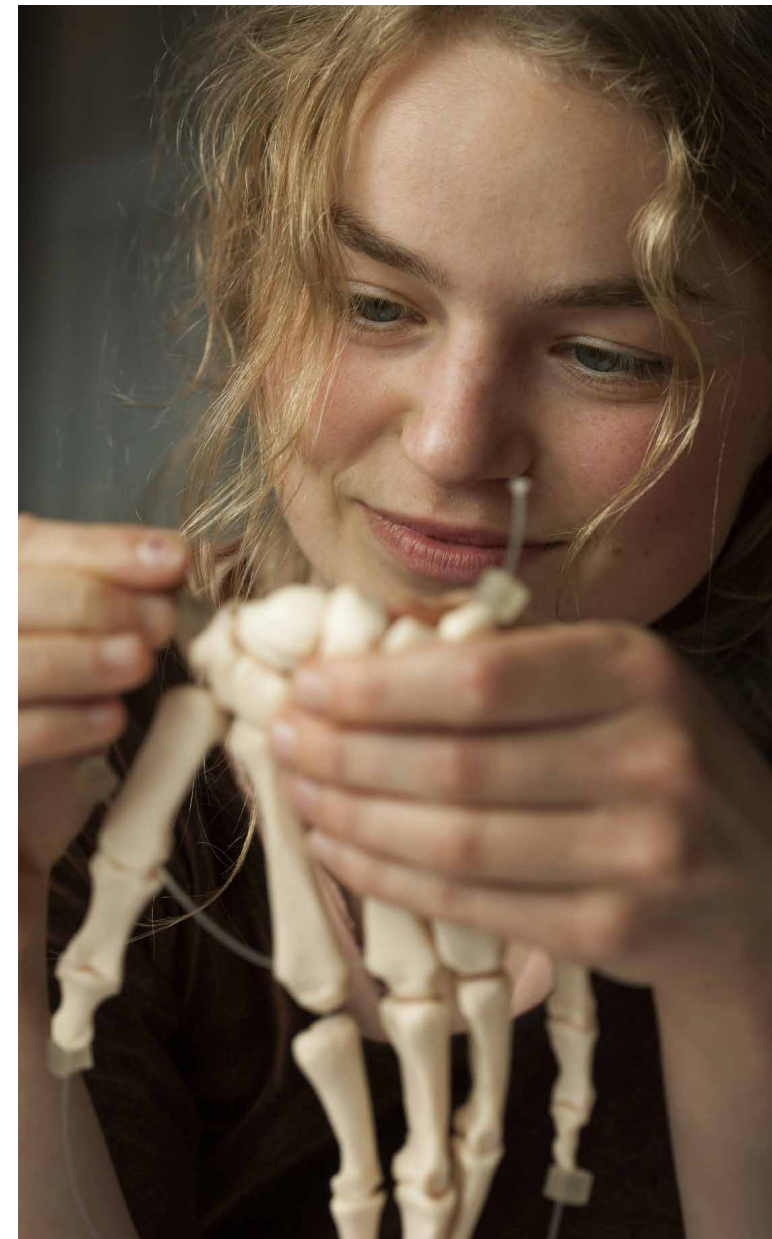
Number of PhD students enrolled during 2020



Number of awarded PhD degrees in 2020



Total number of enrolled PhD students by the end of 2020



The Graduate School organisation

Vice-Dean for Research

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

Head of the Graduate School

Overall responsibility for the 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 studies in accordance with the PhD Order.

Graduate programmes

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





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