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ANNUAL REPORT 2023 · GRADUATE SCHOOL OF HEALTH AND MEDICAL SCIENCES · UNIVERSITY OF COPENHAGEN

### Introduction

As Head of Graduate School, it is my pleasure to present the 2023 annual report for the Graduate School of Health and Medical Sciences at the University of Copenhagen (SUND).

In 2023, 518 new PhD students were enrolled at the Graduate School while 491 students successfully defended their theses and were awarded the PhD degree. For more than five years, we have witnessed a steady increase in the number of enrolled PhD students, reaching 1,900 in 2023, solidifying our position as the largest Graduate School in Denmark.

We know that feeling a sense of belonging within a research community is essential for successfully completing your PhD studies and the Graduate School continues to be committed to enhancing our research training, focusing on fostering high research ambitions, well-being, and a strong sense of community among our students and faculty. Here are some key highlights from our efforts in 2023.

#### Understanding a new generation

Lately, understanding and acknowledging diversity has been on the agenda in society. In 2023, developing an ethical code of conduct for the study and teaching environment was a focus for the faculty. Therefore, the heads of graduate programmes were also introduced to this at their inspirational seminar for improving their research programmes. They were presented with generation characteristics and how to gain a better understanding of the new generations more specifically. Developing skills in meta-communication and making efforts to cross the generation gaps were emphasized which has also been integrated into all the PhD supervisors courses.

Training of experienced supervisors and co-supervisors

In 2022, we introduced a course tailored for experienced supervisors. It was well-received and will continue annually. Additionally, a course for co-supervisors was developed in 2023, with sessions available from 2024 onwards.

#### Onboarding of new PhD students

Recognizing the importance of a smooth transition into PhD studies, we have developed a new onboarding course. The course is meant to prepare the PhD students for what they can expect as a PhD student at SUND, and at the same time give them a warm welcome into the research community.

The Graduate School has been working on this initiative in 2023, and the first students will be participating in 2024. From 2025, the course will be mandatory for all new PhD students at SUND.

#### Redefining the role of our PhD coordinators

In 2023, the Graduate School completed the work of reorganising the PhD coordinator function. This means that each graduate programme from April 2024 will have a PhD coordinator. The aim is to create a clearer framework and more local support for the research environments. Additionally, we are establishing PhD counsellor roles in both basic and clinical research to offer impartial and cross-faculty advisory support to students facing challenges during their studies.

#### Cost-of-living scholarships

New regulations introduced in 2023 aim to safeguard the well-being of PhD students with international cost-of-living



scholarships. Recent actions include the suspension of cooperation with the China Scholarship Council program due to concerning conditions uncovered by the press.

#### Security in international research collaboration

While maintaining our commitment to openness and internationalization, it is crucial for researchers, students, and administrators to be aware of and address potential risks proactively.

#### Focus on copyright

Throughout 2023, we have emphasized the importance of copyright compliance, with expanded coverage in our Responsible Conduct of Research (RCR) courses and clear guidance on our website to ensure all PhD students are well informed about copyright rules.

This report presents selected statistics of our PhD training program. I hope you find it informative. Please note that numbers may differ slightly from previous annual reports. This is due to minor data revisions carried out after data collection.

Rikke Buhl, Professor

P. L. Ces Bull

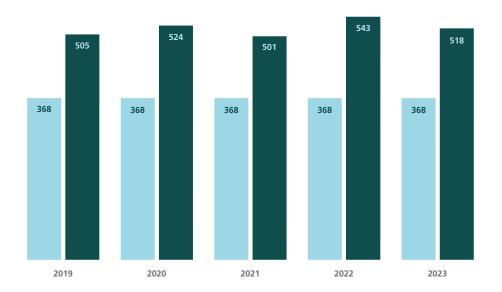
Head of Graduate School of Health and Medical Sciences April 2024

## PhD students enrolled during 2023 and target figures for enrolment

A total of 518 PhD students were enrolled in 2023. The target was 368 new enrolments. The Faculty of Health and Medical Sciences has a target for yearly PhD enrolments. The target is 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 percent) by place of employment in four overall categories: Hospitals in Region Zealand and Capital Region of Denmark, departments and research centres at the Faculty of Health and Medical Sciences, and other places of employment. The latter include PhD students in industry, international living cost stipends, self-employed, and institutions abroad. The information is provided by PhD students themselves at the time of enrolment and is 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)



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## Total number of enrolled PhD students by the end of the year

## Number of industrial PhD students by the end of the year

## Number of PhD degrees awarded

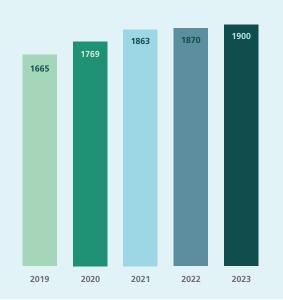
By 31 December 2023, the Graduate School of Health and Medical Sciences had a total of 1,900 enrolled PhD students, making it the largest in Denmark and the second largest in Northern Europe.

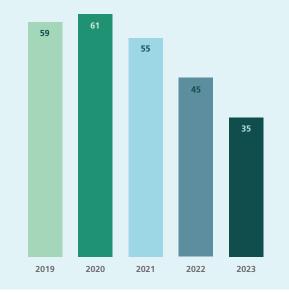
The number includes all PhD students, including those currently on leave.

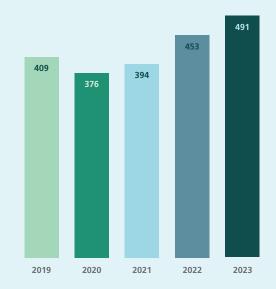
The Graduate School of Health and Medical Sciences had 35 industrial PhD students by the end of 2023. An industrial PhD project is a three-year industrially focused PhD project where the PhD student is employed at a company and enrolled at a University. Read more about the programme here: innovations fonden.dk

A total of 491 PhD degrees were awarded in 2023.

The number includes PhD degrees awarded without enrolment (also known as section 15(2)). The PhD degree is awarded by the University when the PhD thesis is positively reviewed by an assessment comittee and subsequently successfully defended at a public defence.







## PhD without enrolment (section 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 a supervisor. These numbers show how many PhD degrees were awarded without enrolment in 2019-2023.

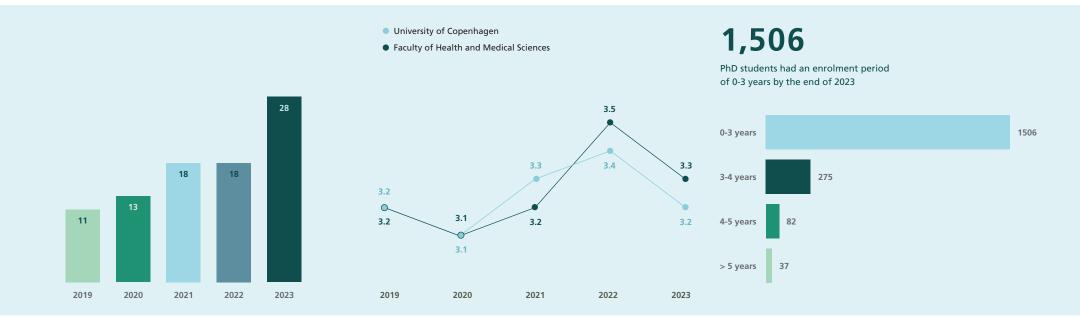
## Duration of PhD study (years)

In 2023 the average length of the PhD study at the Faculty of Health and Medical Sciences was 3.3 years.

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

# Current enrolment period for PhD students enrolled by the end of 2023

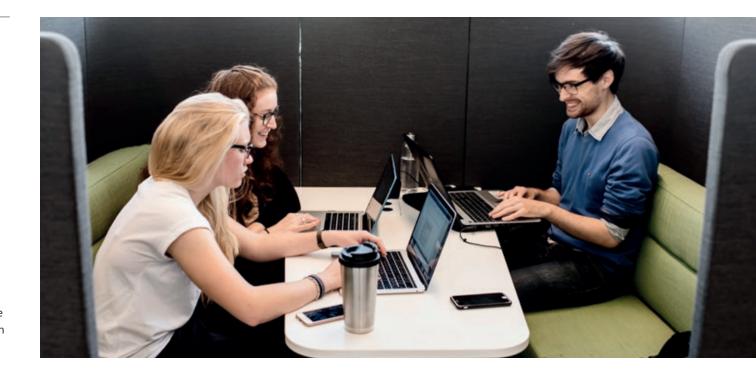
The prescribed period of study for the Danish PhD programme is three years which corresponds to 180 ECTS. Most PhD students submit their PhD thesis within the expected enrolment period of three years, however some PhD students take leave of absence or apply for an extension of their PhD programme. Reasons 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.



## Number of submitted PhD theses and resubmissions

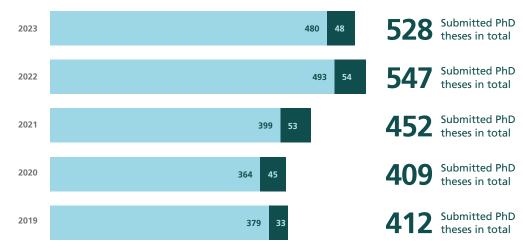
When PhD students submits their thesis, an assessment committee recommends to the university whether the PhD thesis can proceed to oral defence. The majority of submitted PhD theses proceed straight to defence after the preliminary assessment. A small number of resubmissions occur (about 10 percent),, 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 the initial submission of PhD theses each year. Resubmissions may have occurred either in the same year or in subsequent year(s). Resubmissions remain accounted for in the year of the initial submission.



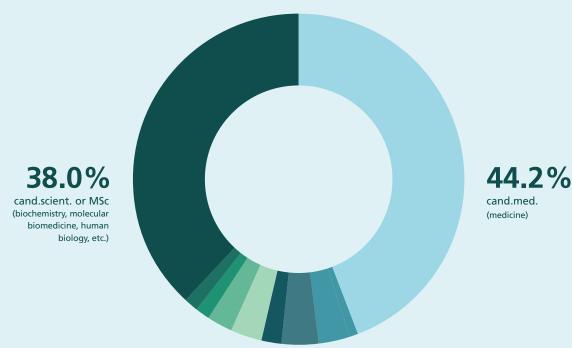






### **Qualifying degree for** PhD students enrolled in 2023

Most newly enrolled PhD students held a qualifying degree in either medicine (cand.med. or MD) or scientific areas such as molecular biomedicine, human biology, or biochemistry (cand.scient. or MSc). These numbers account for 82%. The remaining 18% of the PhD students held qualifying degrees in other scientific areas, such as odontology, pharmacy, veterinary medicine, engineering, public health, and social sciences.



3.7%

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

3.1%

cand.polyt. (engineering)

1.9%

cand.med.vet. (veterinary medicine) 1.4%

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

3.1%

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

2.5%

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

1.5%

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

0.6%

cand.odont. (odontology)

### Gender, age and nationality of PhD students

#### Average age at time of enrolment

The average age at the time of enrolment was 30.9 years in 2023. Only limited variation occurs in these numbers over the last few years.

#### Gender

The gender distribution of the 518 new PhD students enrolled in 2023 is 65% female and 35% male. There is limited variation in these numbers in the last five years. The data in this figure is based on information from the Danish Central Person Register (CPR – Det Centrale Personregister).

Female Male

65% Female students



#### Nationality

The Graduate School of Health and Medical Sciences had a total of 600 international PhD students by the end of 2023 which is almost the same as in previous years.

Danish PhD students
 International PhD students

**68%**Danish PhD students

32%

International PhD students



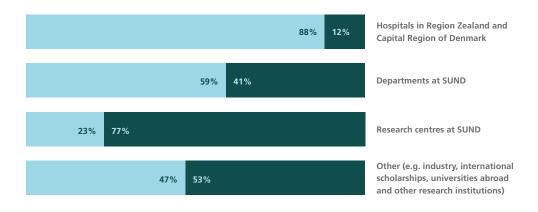




### Nationality of PhD students by place of employment

This figure shows how much internationalisation varies by PhD students' place of employment. The figure covers the total number of PhD students enrolled by the end of 2023 (1,900 PhD students).

Employment data is divided into four overall categories: Hospitals in Region Zealand and Capital Region of Denmark, 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 is 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 offers a variety of courses, seminars, and other academic activities. By the end of 2023, the Graduate School of Health and Medical Sciences had 22 graduate programmes.

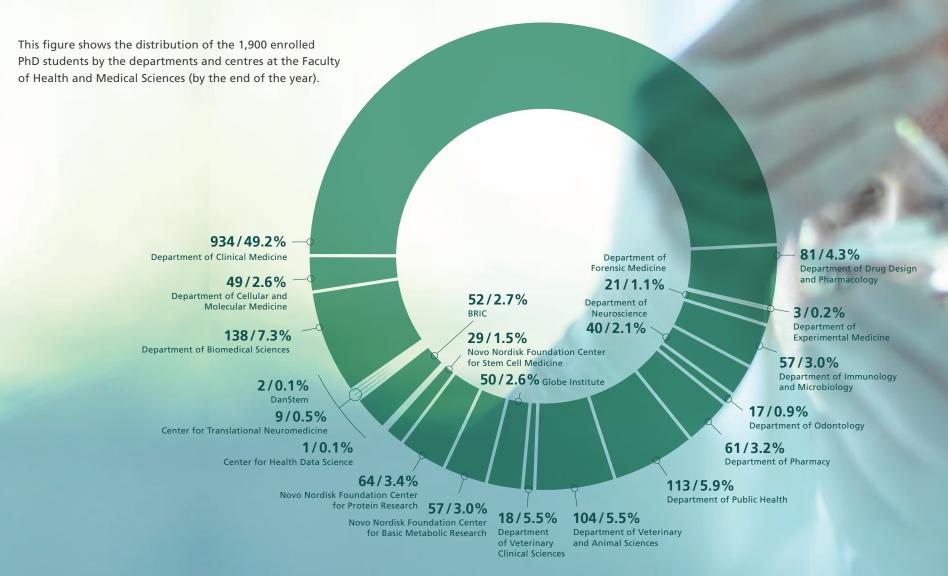
The sum of affiliated PhD students by graduate programmes listed here (1,898) does not quite equal the total number of enrolled PhD students (1,900). The difference is due to 2 PhD students affiliated with the former graduate programmes Clinical Research and Veterinary Clinical Sciences. The graduate programme in Clinical Research was phased out in 2018 while the graduate programme in Veterinary Clinical Sciences was phased out in 2020.

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Different graduate programmes were available to PhD students by the end of 2023.

Graduate programme	Head of graduate programme by the end of 2023	Number of PhD students
Airways, Anesthesiology and Skin	Professor Charlotte Suppli Ulrik	60
Basic and Clinical Research in Musculoskeletal Sciences	Professor Michael Kjær	72
Basic Metabolic Research	Professor Torben Hansen	144
Biostatistics and Bioinformatics	Professor Torben Martinussen	53
Cardiovascular Research	Professor Thomas Jespersen	145
Cellular and Genetic Medicine	Professor Lene Juel Rasmussen	55
Clinical Cancer Research	Professor Inge-Marie Svane	108
Herd and Population Oriented Research	Associate Professor Charlotte Amdi Williams / Associate Professor Inge Larsen	25
Immunology and Infectious Diseases	Professor Mogens Holst Nissen	144
In Vivo Pharmacology and Experimental Animals	Professor Jens Lykkesfeldt	21
Life Cycle in Medicine	Professor Anders Juul / Clinical Professor Katharina Main	88
Life, Earth and Enviromental Sciences	Associate Professor Enrico Cappellini	49
Medical and Molecular Imaging	Professor Andreas Kjær	41
Medicine, Culture and Society	Associate Professor Karin Tybjerg	37
Molecular Mechanisms of Disease	Professor Shohreh Issazadeh-Navikas	152
Molecular Microbiology and Infection	Associate Professor Rikke Heidemann Olsen	31
Neuroscience	Professor Nanna MacAulay	153
Oral Sciences, Forensic Medicine and Bioanthropology	Associate Professor Sys Stybe Johansen	34
Pharmaceutical Sciences	Professor Jukka Rantanen / Profesor Petrine Wellendorph	151
Psychiatry	Professor Merete Nordentoft	62
Public Health and Epidemiology	Professor Professor Katrine Strandberg-Larsen	175
Surgical Sciences	Professor Ismail Gögenur	98
Total		1898





## Number of new enrolments during 2023 by departments and centres

This figure shows the distribution of new PhD students enrolled during 2023 by the departments and centres at the Faculty of Health and Medical Sciences.

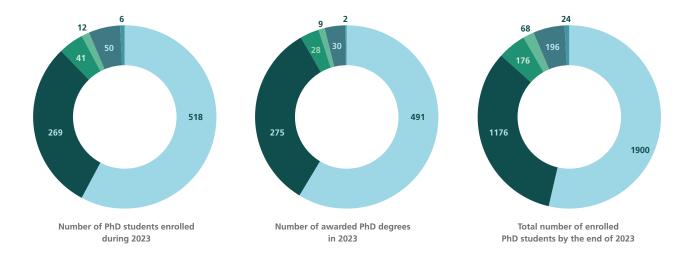
20/3.9%	BRIC
0/0.0%	Center for Health Data Science
3/0.6%	Center for Translational Neuromedicine
0/0.0%	DanStem
43/8.3%	Department of Biomedical Sciences
14/2.7%	Department of Cellular and Molecular Medicine
270/52.1%	Department of Clinical Medicine
25/4.8%	Department of Drug Design and Pharmacology
1/0.2%	Department of Experimental Medicine
8/1.5%	Department of Forensic Medicine
12/2.3%	Department of Immunology and Microbiology

6/1.2%	Department of Neuroscience
2/0.4%	Department of Odontology
8/1.5%	Department of Pharmacy
34/6.6%	Department of Public Health
20/3.9%	Department of Veterinary and Animal Sciences
3/0.6%	Department of Veterinary Clinical Sciences
7/1.4%	Globe Institute
15/2.9%	Novo Nordisk Foundation Center for Basic Metabolic Research
21/4.1%	Novo Nordisk Foundation Center for Protein Research
6/1.2%	Novo Nordisk Foundation Center for Stem Cell Medicine

## **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



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### The Graduate School organisation



#### **Heads of Graduate Programmes and Steering Committees**

- Focused research training programmes
- Offer PhD students a variety of courses, seminars and other scientific, networking and social activities

#### PhD Coordinators

- Appointed by hospitals or graduate programmes
- Available for advice and guidance for PhD students and help to facilitate the contact between PhD students, the department and the Graduate School
- Organise events and activities to foster a good academic and social environment

#### Dean

- Head of the Faculty
- Responsible for the overall development and financial affairs of the Faculty with reference to the Rector
- > Has the overall decision-making power at the Faculty

#### Vice-Dean for Research

- Overall responsibility for the PhD programme on behalf of the Dean
- Responsible for the strategy and framework for the PhD programme
- Consulted by the Graduate School in questions of doubt

#### **Head of Graduate School**

- Appointed by the Dean
- Has the decision-making power on behalf of the Faculty on the individual PhD student's studies and approves content in the PhD programmes as defined in the PhD Order
- Approves e.g. study elements, PhD courses and assessment committees, which has been delegated by the PhD Study Board

#### **Graduate School Administration**

- Aministration and case-handling of approx. 2000
   PhD students' studies in accordance with laws, rules and regulations
- Supports and advises on PhD programme matters with reference to the Head of the Graduate School



#### PhD Study Board

- A democratically elected committee consisting of scientific staff and PhD students representing different academic areas
- Provides feedback on issues of relevance to the PhD programme
- As defined in the University Act, the Board has decision-making authority on parts of the PhD programme

#### **Supervisors**

- Ensure that the PhD project is feasible and represents state-of-the-art research
- Principal supervisor offers regular supervision and guidance for the PhD student regarding the PhD programme and has primary responsibility for the PhD project and assessment of the PhD student
- Primary co-supervisor participates in the regular assessments and is obliged to have contact with and supervise the PhD student at least twice a year
- Additional co-supervisors may be appointed

**PhD Students** 



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