

# Genomics and Proteomics program

## National Centre for Biomolecular Research

Guarantor: Assoc. Prof. Jan Paleček, PhD, [jpalecek@sci.muni.cz](mailto:jpalecek@sci.muni.cz), room C02-214

FGP seminar – 12th of September 2022

(seminar for supervisors in October)

# I will talk about:

- Our program basics and specifics
  - board, statistics, roadmap, deadlines,
  - Thesis advisory committee (TAC)
  - state exam, thesis defense
  - awards
- University level
  - Info hubs
  - MUNI PhD news

# GenPro PhD program Scientific board

## **Assoc. Prof. Jan Palecek, Ph.D. (Chair)**

Prof. RNDr. Jiří Fajkus, CSc (Vicechair)

Prof. Mgr. Martin Lysák, Ph.D., DSc.

Prof. RNDr. Zbyněk Zdráhal, Dr.

Assoc. Prof. Mgr. Miloslava Fojtová, CSc.

Assoc. Prof. RNDr. Lenka Fajkusová, CSc.

Assoc. Prof. Jan Hejátko, Ph.D.

Assoc. Prof. Jan Havliš, Dr.

Assoc. Prof. Miroslav Fojta, CSc.

Assoc. Prof. Ctirad Hofr, Ph.D.

## **External members**

Assoc. Prof. Eduard Kejnovský, CSc. (Inst. of Biophysics, ASCR, Brno)

RNDr. Roman Hobza, Ph.D. (Inst. of Biophysics, ASCR, Brno)

Prof. Mgr. Marek Šebela, Ph.D. (Palacky University, Olomouc)

Assoc. Prof. RNDr. Petr Pečinka, CSc. (University of Ostrava)

**Objectives:**The aim of the Genomics and Proteomics program is to train top class specialists in these subjects ...

... under the supervision of highly experienced researchers/supervisors.

Current students: 61  
 Interrupted stud.: 7  
 Avg. length of study (grads): 5.5 yrs.  
 Women: 61 %  
 Slovak stud.: 23 %  
 Foreign stud. (others): 31 %

*4+1 is standard*

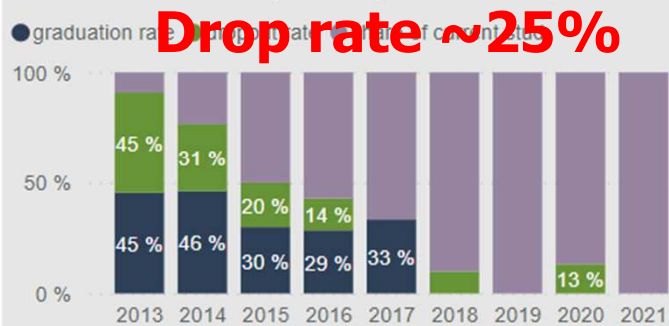
Student population development (2013–2021)



Overview of admissions by enrollment yr.

Enroll.yr	Applied	Admitted	Enrolled
2017	17	12	11
2018	10	6	5
2019	13	8	7
2020	16	13	13
2021	10	10	10
<b>Celkem</b>	<b>66</b>	<b>49</b>	<b>46</b>

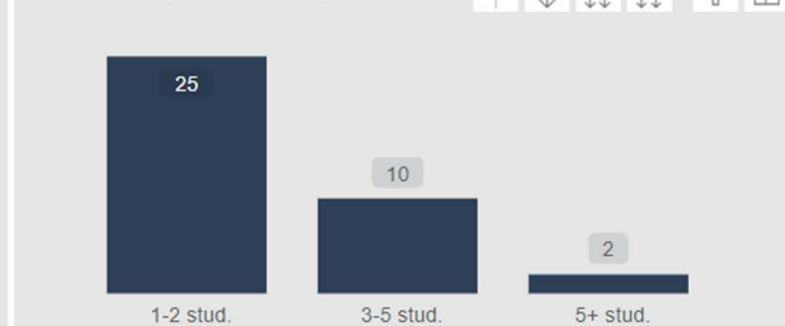
Graduation and drop rate by enrollment year



Current and finished students by length of study

Degree programme	Number of current students*
Biomolecular Chemistry and Bioinformatics	32
Animal Physiology, Immunology and Developmental Biology	41
Mathematics and Statistics	49
Biochemistry	40
Geology	53
Ecological and Evolutionary Biology	57
Molecular and Cell Biology and Genetics	65
<b>Genomics and Proteomics</b>	<b>63</b>
Environmental Health Sciences	69
Chemistry	69
Life Sciences	70
Physics	73
<b>Total</b>	<b>784</b>

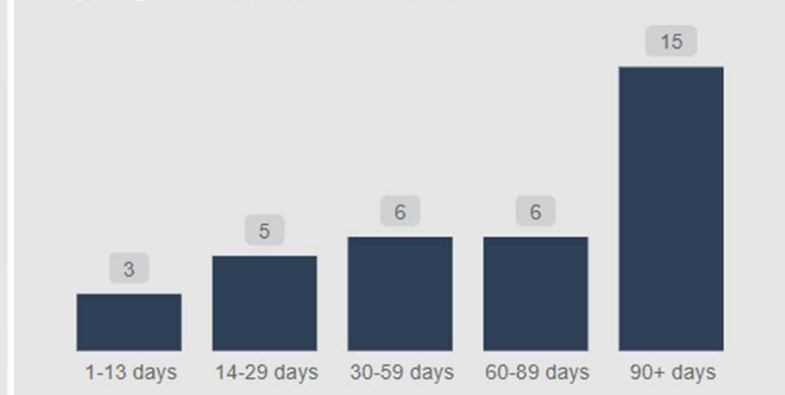
Current supervisors by number of



Foreign students development (2013–2021)



Outgoing mobility by duration in 2013–2021



# As PhD you should:

- understand theories, concepts, and methods that represent current trends in Genomics and Proteomics field ... **become independent expert**
- independently design and conduct research in all its stages
- interpret research outcomes and present them at international conferences
- write a research paper and **publish** it in an impacted international scientific journal
- be competitive at job market (e.g. as postdoctoral fellow in a foreign laboratory)
- supervise students ... to once become a science leader

# Studies roadmap – Mandatory duties

General requirements for all students in the programme (please see detailed requirements for the Individual Study Plan in the detailed table below):

Mandatory duties: *checked by Dean's Office*

XD100	Ph.D. thesis / Příprava dizertační práce	Enrolled every semester during entire studies, recommended 20-25 ECTS for semesters 1-4, 30 ECTS for semesters 5-8, 20 ECTS for semesters 9 +
C9950	FGP seminar / Seminář oddělení FGP	Obligatory for all 8 semesters of standard study duration (with exception of stay abroad)
C7777	Handling chemical substances / Zacházení s chemickými látkami	Enrolled every year of study, every autumn semester
XD102	Teaching Assistance / Pomoc při výuce	Maximum 150 hours total during studies – 4-times XD102 (zero ECTS) during semesters 1-4.
XD106	Lecture in the foreign language / Odborná přednáška v cizím jazyce	Minimum once during studies (recommended 0 ECTS)
	Placement Abroad / Zahraniční pracovní pobyt	Minimum 1 month stay, min. 1-time during studies (usually 5 ECTS/month), requirement given by law Instructions for recognition of Placement Abroad: <a href="https://www.sci.muni.cz/en/students/go-abroad/recognition-of-stay-abroad">https://www.sci.muni.cz/en/students/go-abroad/recognition-of-stay-abroad</a> (the recognition is done via IS application Internship and Stays, by creating record of the stay and request for recognition; the course is then registered by Dean's Office)

Theoretical courses and all other requirements: *checked by the Head of Doctoral Board*

- minimum 4 courses during semesters 1-4 (before theoretical doctoral exam, SDE\*)

- (FGP) seminars during whole regular study (not in **combined study**)
- Semesters 1-4 (first 2 years of study) - research project + theoretical courses, preparing for state doctoral exam and project topics
- Semesters 5 + – main focus on research project

# FGP seminar

- Every 1st lecture in Autumn semester dedicated to program updates
- FGP seminar serves to PhD students (NCBR-FGP group, 7th and 8th year students, those outside MU etc.)
- 2 students only – presentation skills training, project overviews ... (20 minutes, intro, results, major conclusions – as for PhD defense)
- Those registered but having their own seminar platform – talk to prof. Fajkus (send him PPT from your seminar presentation)

# Milestones and deadlines

- Research project **plan** – 1st year  
(max 1 page describing background, objectives, methods, and timeline).
- State Doctoral **Exam** (SDE/SDZ) – 2nd to 4th year (award)
- Thesis **defense** – 4th to 5th year (award) = standard time (4+1)  
or later ... extended = 8+1 (9th year only exceptions – dean must approve)

1. 6. 2022 – 20. 9. 2022	Student's semestral plan
15. 6. 2022 – 30. 9. 2022	Supervisor approves
1. 9. 2022 – 7. 10. 2022	Scientific board/chair approves
1. 12. 2022 – 31. 1. 2023	Student's feedback
15. 12. 2022 – 15. 2. 2023	Supervisor evaluates
Anytime	Scientific board/chair evaluates

Supervisor guides you best

I am watching you ;-)  
Introducing TAC!!



# Thesis Advisory Committee (TAC)

student + supervisor + **2 independent scientists**

- **Scientific board decided to implement TAC in December 2021 to help students to:**
- **1st year:** set up your doctoral project plan (*1 meeting during 1st year*)
- **4th/5th year:** get your thesis finished in the standard study time of 4+1 years  
(*1 meeting before the end of 4th year or beginning of 5th year*)
- **6th year:** get your thesis finished as soon as possible (*1 meeting during 6th year*)
  - **TAC extended by 1 member of the Scientific board**
- **7th/8th year:** get your thesis finished as soon as possible (*meeting every semester*)
- mediate disagreements between students and supervisors ... (*you can organize TAC anytime you need*)

# State Doctoral Exam (SDE)

- prove student's professional orientation in the following areas
- prove sufficient general knowledge in the field studied and in-depth knowledge in areas related to the Ph.D. thesis

## Areas:

Genomics and molecular biology

Proteomics and structural biochemistry

Methods in genomics or proteomics

## Example:

Hormonal regulation

Posttranscriptional regulation

Primary sequence analysis

- **5 min** PPT and questions from (~7) committee members

# Thesis defense

- student must be the first author on at least one publication (WoS IF above the subject median)
- student's contribution must be stated
- If the student co-authored at least 3 papers - comprehensive introduction and commentary on papers
- If there are less than 3 publications - monography.

Defense: supervisor introduces student, student gives **20 min** lecture on major results/achievements, reviewers report and discuss

SDE and defense applications via IS (Iva Klimova)

# Awards

- NCBR director (*continually*):
  - SDE in time (2nd to 4th year) – 5000CZK
  - Defense in time before the end of 5th year – 10000CZK
  - Poster presentation, oral presentation
- dean (*deadlines*)
  - Best student in doctoral program
- vicerector (*deadlines*)
  - Excelent results in doctoral studies
- rector (*deadlines*)
  - Best student in doctoral program
  - Outstanding Doctoral Thesis

# New MUNI PhD standards – since 2021

<https://portal.muni.cz/> → Research

MUNI Employee Portal

Search...

Čeština 0 1 0

University ▾ Employee ▾ Research ▾ Teaching ▾ Administration and operations ▾ Services ▾

## Research support

- > Newsletter
- > Grant opportunities
- > Publications
- > Open Access
- > Bibliometrics
- > Contact information

## Infrastructure

- > Bibliometric services
- > Research Ethics
- > Research infrastructure
- > Protection and commercialisation

## Doctoral studies

- > Doctoral studies news
- > Information for Ph.D. students
- > Information for supervisors
- > Information for faculty referents
- > Information for doctoral boards
  - > Principles and Recommendations for Doctoral Studies
- > Admission to Doctoral Study Programmes at Masaryk University
- > Measures IP 2021 and PPSŘ 2022–2025
- > Contact
- > Scholarship
- > PhD Ombudsman

[https://is.muni.cz/auth/do/mu/Uredni\\_deska/Predpisy\\_MU/Masarykova\\_univerzita/Ostatni\\_dokumenty/Methodika/odbor\\_vyzkumu/metodicky\\_list\\_c\\_1\\_2021\\_zasady\\_a\\_doporuceni\\_pro\\_efektivni\\_a\\_kvalitni\\_doktorske\\_s/](https://is.muni.cz/auth/do/mu/Uredni_deska/Predpisy_MU/Masarykova_univerzita/Ostatni_dokumenty/Methodika/odbor_vyzkumu/metodicky_list_c_1_2021_zasady_a_doporuceni_pro_efektivni_a_kvalitni_doktorske_s/)

## Develop your skills

PHD DAY

TRANSFERABLE SKILLS

RESEARCH FUNDING

STAY ABROAD

NETWORKING

CAREERS AFTER PHD

# NEWS:

MUNI  
SCI



## PhD DAY 2022

14. 9. 2022 9:00

UNIVERSITY CAMPUS LIBRARY

9:00 WELCOME SPEECH

9:10 MEMORANDUM OF COOPERATION IN DOCTORAL STUDIES

9:25 KICK OFF MUNI MENDEL DOCTORANDUS

9:40 INTRODUCTION OF FACULTIES/INSTITUTES

MUNI

Mendel  
Doctorandus

MUNI  
SCI

MUNI  
MED

MUNI  
PHARM

MUNI  
SPORT

MUNI | RECETOX  
SCI



10:20 MOBILITY PROGRAMMES AND GRANTS

10:30 BRNO PHD TALENT CONTEST

10:40 MENTORING & TAC AT CEITEC

AFTER THE PRESENTATIONS, THE PROGRAM CONTINUES WITH THE  
ROLL-UP SESSION IN THE CAMPUS CORRIDOR

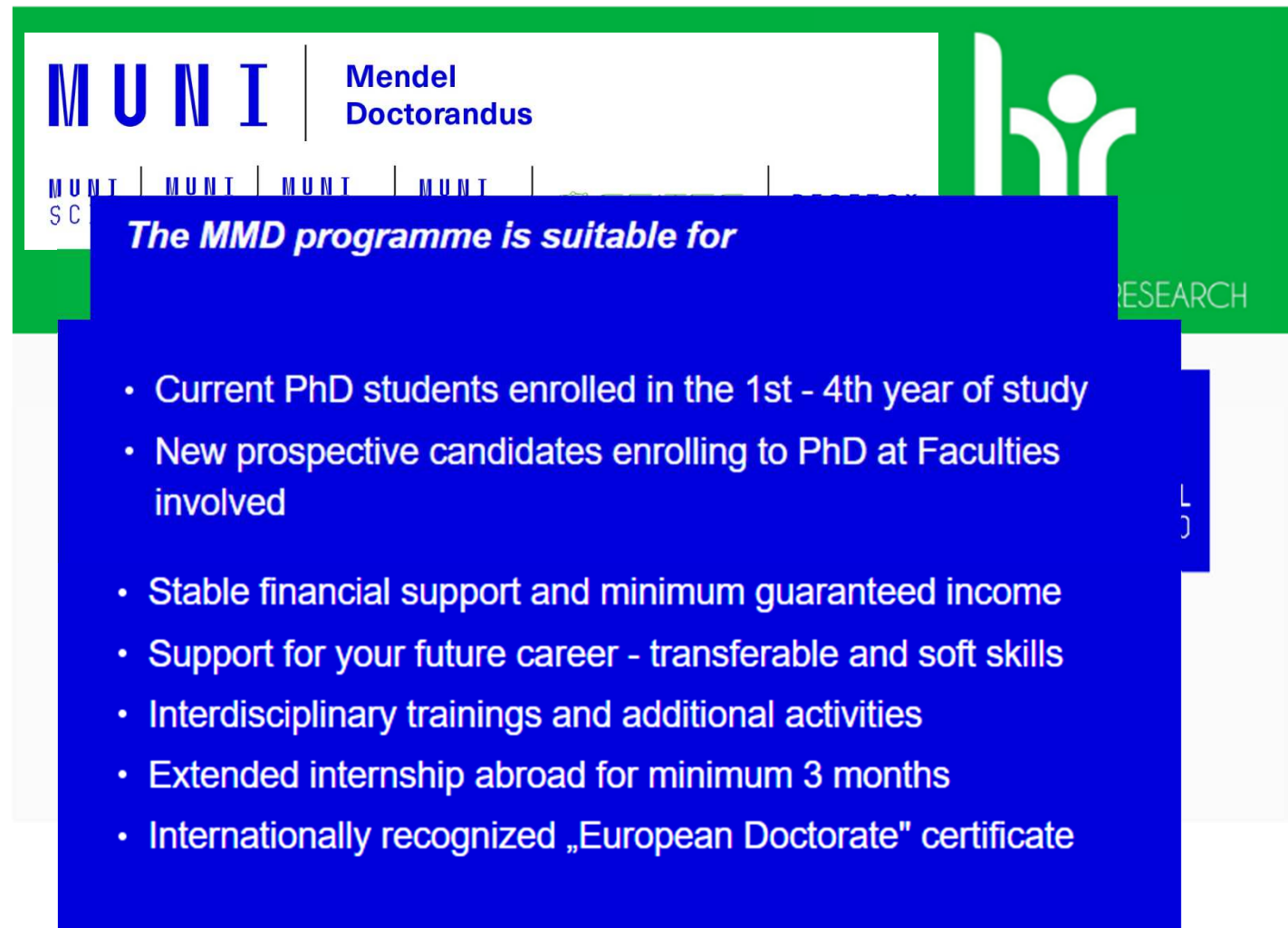
MUNI  
SCI



# MUNI MENDEL DOCTORANDUS programme

## Setting higher PhD standards at MUNI

- Kick off 14/9/2022
- <https://mmd.muni.cz>
- Coordinated by SCI MUNI
- Guaranteed minimum income of students
- Focus on interdisciplinary and soft skill trainings
- European Doctorate standards



The image shows a banner for the MUNI Mendel Doctorandus programme. The banner features the MUNI logo on the left, the text 'Mendel Doctorandus' in the center, and a stylized human figure icon on the right. Below the banner, there is a blue box containing text and a list of bullet points.

**MUNI** | Mendel Doctorandus

*The MMD programme is suitable for*

- Current PhD students enrolled in the 1st - 4th year of study
- New prospective candidates enrolling to PhD at Faculties involved
- Stable financial support and minimum guaranteed income
- Support for your future career - transferable and soft skills
- Interdisciplinary trainings and additional activities
- Extended internship abroad for minimum 3 months
- Internationally recognized „European Doctorate” certificate

# On-site visit programme – Chemistry (1st day)

Thursday 15-09-2022, University Campus MU, Brno-Bohunice, room 432/B17

14 –14.20	Welcome, introduction of MU and the Faculty of Science, evaluation panel, programme
14.20–15	Presentation of the National Centre for Biomolecular Research and its research areas
15–15.40	Presentation of the Department of Chemistry and its research areas
15.40–16	<i>Coffee break</i>
16–16.40	Presentation of the Department of Biochemistry and its research areas
16.50–17.20	<b>Meeting with PhD students of Biomolecular chemistry and bioinformatics, Genomics and proteomics, Life Sciences</b>
17.25–17.55	Meeting with PhD students of Analytical geochemist, Chemistry
18–18.30	Meeting with PhD students of Bioanalytical chemistry, Biochemistry
19.30	<i>Joint dinner</i>



# Information hub for PhD students

<https://www.sci.muni.cz/en/students/phd> → Research

**MUNI SCI** Masaryk University Faculty of Science

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## Doctoral Studies

**PhD studies**

**News and events calendar**

**Scholarships**

**Develop your skills**

**Office hours from July 1 to August 31**

<b>Monday</b>	No office hours
<b>Tuesday</b>	No office hours
<b>Wednesday</b>	12:30 - 14:30 pm
<b>Thursday</b>	No office hours
<b>Friday</b>	No office hours

**CONTACTS**

**IT Equipment loan for students in need**

The Faculty of Science has been provided with 14 laptops, 25 tablets, 22 graphics tablets, 9 headphones with a microphone and webcams with a microphone from a M I I project to support online education.

## Doctoral Studies

[Forms](#)

[Legislation](#)

[Manuals](#)

[Enrollment](#)

[Guide to PhD studies](#)

[Doctoral Programmes](#)

[Doctoral state examinations and defences](#)