Our PhD application portal has been updated to version 2.0, as the old version from 2011 went to retirement. The Fall 2020 recruitment was conducted in an entirely online form. This enabled us having more candidates in the panel interviews than ever - as many as 64!
Due to the unprecedented situation caused by the COVID-19 pandemic, all training activities had to be adapted for the alternative online formats. Our first step upon transition to Emergency operation mode in Spring was assembling a collection of free online training opportunities offered by various platforms, such as massive open online course platforms (MOOC), and training pages of universities or other research institutes. Soon after, we established a Training grants fund for professional courses. In Fall 2020, a collection of online courses was offered at the MDC, within two topic modules: Science communication and Time/Project management.

### 2020 Courses

**Good scientific practice**  
Obligatory for all MDC PhDs

**Science communication module**  
Science graphics and illustration  
Slidewriting & storylining  
Creating a poster in science  
Storytelling techniques for scientists  
Almost there: preparing for viva defense  
Online writing hour

**Project & Time management module**  
From Surviving to Thriving  
Applying Essential Project Management Tools to the Research Project

**Graduate School Training Grants**  
To encourage and support the development of research-related skills tailored to the individual needs, since Spring 2020 the MDC Graduate School awards educational Training grants of up to 200 EUR for specialized online courses that are not freely available on-site or via online training platforms.

### Student seminar series

- Student Seminar in Sys Biology
- Student Seminar in Sys Medicine

### Orientation sessions

- for new PhDs

### Collection of 107

free online courses curated from different training platforms

- Data science, analysis and visualisation
- Programming
- Machine learning
- Data management
- Life Science & Technologies
- Research integrity & ELSI
- Team work & Management
- Career development
- Personal development
- Well-being
- Writing & Language
Transforming all Graduate School activities and services to the new online formats

After the COVID-19 pandemic changed every aspect of our everyday work & life, new communication formats and workflows needed to be established within a very short timeframe. With the start of the Emergency operations at the MDC, the Graduate School moved all of its services to the online forms, as well as organised own or provided help & support with external online activities. Orientation session for the new PhDs, counselling sessions, administrative support, Student Seminars, annual TAC meetings, theses defences, even the 2020 Graduation ceremony, were organised and/or supported as online meetings and events.

New PhD application portal and recruitment format

A new, updated and improved PhD application portal saw the light of day shortly before the Fall 2020 recruitment round. New portal incorporates various features and options developed specifically for the MDC International PhD Program central recruitment, including different functions customised for the new online format of panel interviews.

Development of the new Training curriculum

Newly structured and improved training curriculum, in line with feedback received from our students, as well as requirements from the partner universities, tailored to the needs of the early-stage researchers, will be initiated in the beginning of 2021. Following the development of COVID-19 crisis, alternative online forms are prepared for all planned training opportunities.

New structure of Student Seminars

Student Seminars are now offered within two seminar series: Student Seminar in Systems Biology (students of the BIMSB-Mitte, every other Friday) and Student Seminar in Systems Medicine (students of the MDC-Buch, every Thursday). An info email on Monday morning informs students on the training events of the upcoming week.

Erasmus+ program continues the MDC

In 2019, the MDC, together with partners from Humboldt Universität, offered a possibility of conducting a master thesis research to the students of Taras Shevchenko National University of Kyiv (KNU), Ukraine. In 2019/2020, two students successfully conducted their internship programs at the MDC. In 2020, the program received European funds for its continuation, and we will be happy to welcome another 3 students from Kyiv, as soon as exchange activities are possible again.

Initiation of iNAMES - MDC-Weizmann Helmholtz International Research School in Imaging and Data Science

Our newly established iNAMES International Research School recruited its first 3 PhD students in Fall 2020. Please find details on the iNAMES webpage.
In late 2019, iNAMES - MDC-Weizmann Helmholtz International Research School for Imaging from THE NAno to THE MESo, was confirmed to receive 1.8 million EUR from the Helmholtz Association’s Initiative and Networking Fund.

- 1st PhD Recruitment within Fall 2020 MDC central recruitment
- 8 tandem project proposals received for Fall 2020
- 3 PhD students + 2 associated projects recruited (starting in 2021)

Outlook 2021:
- 5 PhD positions
- Kick-off event in Fall 2021

4 SPECIALISED RESEARCH SCHOOLS

MDC-NYU

- 2 student publications
- All research visits and exchange meetings on hold due to COVID-19 related travel restriction.
- The program focused on the recruitment of excellent new fellows: Isabella Douzoglou for the Birol lab, Lena Nitsch for the Ludwig lab, and Philipp Stachel-Braum for the Grosswendt lab. All new hosting labs have been established within 2020, either at the BIMSB or at the joint BIH/Charité/BIMSB Single Cell Focus Area.


SignGene

- 3 PhD defenses
- EMBO long-term and HFSP fellowship awarded to SignGene graduate W. Minzel
- ERC Advanced Grant for SignGene faculty Y. Ben-Neriah
- Outlook 2021: Final project report in Spring

3 German partner institutions (MDC, Charité, HU zu Berlin)
2 Israeli partner institutions (HUJI, Technion)

EVENTS 2020

- HEIBRIDS Workshop on Design Thinking
- MDC Graduate School Online Orientation sessions for new PhDs
- circRTrain: Student Workshop “Taking stock: Choosing the right job and preparing yourself to get there”
- circRTrain final meeting
- iNAMES Winter School 2021
- iNAMES Kick-off Event Fall 2021
- PhD Retreat 2021
- HEIBRIDS Spring School 2021
- Online Fall 2020 Recruitment
- MDC Online Graduation Ceremony 2020
- HEIBRIDS Online Retreat
- Entrepreneurship: Online Summer School, hosted by Mashauri Ltd. and Technology, and circRTrain partner CRG

Photos & Images: Michael Gotthardt, Grietje Krabbe, Hanna Singer, Eirini Kouskoumvekaki, Sanja Drakulic, Canva, Communications MDC.

OUTLOOK 2021

- IPSCC Online - Carcer Research UK Glasgow June 14-16, 2021
- Online SysBio lecture series “Cell fate specification & engineering”
- 1-day PhD Excursions
- Entrepreneurship: Online Summer School, hosted by Mashauri Ltd. and Technology, and circRTrain partner CRG
- Entrepreneurship: Online Summer School, hosted by Mashauri Ltd. and Technology, and circRTrain partner CRG

Photos & Images: Felix Noak, David Ausserhofer, Hanna Singer, Christin Sünkel.
In 2020, the first place of the PhD Publication Prize Awards was shared between Maria Ercu (Klußmann Lab) and Monika Litviňuková (Hübner Lab). The funds for the first prize were donated by the Dr. Pritzsche-Stiftung. Ricardo Paricio-Montesinos (Poulet Lab) and Jan Möller (Lohse Lab) were awarded the second place, sponsored by the Society of Friends of the MDC.

<table>
<thead>
<tr>
<th>164</th>
<th>PhD-authored publications in 2020</th>
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<td>51%</td>
<td>with PhD student as a first author (84 publications)</td>
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<th>70%</th>
<th>graduates of class 2020 with publication(s)</th>
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<tr>
<td>45%</td>
<td>graduates of class 2020 with first-author publication(s)</td>
</tr>
<tr>
<td>2.4</td>
<td>average number of publications per graduate of class 2020</td>
</tr>
</tbody>
</table>

Phosphodiesterase 3A and arterial hypertension
Maria Ercu et al. (2020) Circulation. 142:133–149. https://doi.org/10.1161/CIRCULATIONAHA.119.043061

Cells of the adult human heart

Single-molecule analysis reveals agonist-specific dimer formation of μ-opioid receptors
Jan Möller et al. (2020) Nature Chemical Biology. 16:946–954. https://doi.org/10.1038/s41589-020-0566-1

The sensory coding of warm perception
The COVID-19 crisis affected all aspects of University life, including the possibility of conducting the (onsite) theses defences, resulting in a lower number of graduates this year. Congrats to all of them!

Andreani, Matteo
Anwar, Rabia
Arlt, Birte
Bogdanow, Boris
Bunatyan, Lena
Cakmak, Nese
Delgado Benito, Veronica
Elmadany, Nirmeen
Fernandes, Ana Miguel
Geisberger, Sabrina Yasmin
Grinat, Johanna
Groenke, Nicole
Heimann, Andreas
Hüttemeister, Judith
Jeran, Stephanie
Kabrani, Eleni
Kanashova, Tamara
Kempfer, Rieke
Knape, Sara
Kostova, Simona
Larrosa, Madeleine
Lück, Jennifer Claudia
Miko, Henriette
Müller, Laura Mara
Nickl, Bernadette
Pimpinella, Sofia
Quinn, Hazel
Ramberger, Evelyn
Ronen, Jonathan
Ruzittu, Silvia
Thiede, Katerina
Zinnall, Ulrike

12 PHD REPRESENTATIVES

Olya Oppenheim, Samantha Mendonsa, AhLa Ghauri, Kerstin Johanna Fentker, Sandhya Balasubramanian, Leonie Milena Rosenberger, Jacobo Lopez Carballo, Nirmeen Elmadany, Somesh Sai, Thu Thi Pham, Elisabeth Baumann, Marta Bastos de Oliveira. Thank you for your devoted work!