Annual Report 2021
Graduate School for Health Sciences

Faculty of Medicine
Faculty of Human Sciences

The greatest wealth is health.
Virgil
Introduction

In 2021, the COVID19 pandemic had become a part of the everyday life also in the GHS. Despite the remaining challenges, the GHS adopted creative solutions to provide support to students and supervisors. We managed to keep up with research progresses and deadlines, with both students and supervisors demonstrating extraordinary resilience and productivity.

All the planned defenses could take place, making 2021 a record year with 16 defenses. From the GHS beginning in 2008 to the end of 2021, 95 doctoral students have earned their PhD in the GHS.

In 2021, the GHS continued to grow: in the course of the year, we had a total of 140 doctoral students enrolled, 72% of which were women. In the last three years 2018 - 2021, the number of students has increased by 146% showing the attractiveness of this PhD program within our University, and the Swiss and international academic landscape.

The development of the GHS is not only about numbers, but continues to rely on our intentions to improve, keep up the quality and the ability to adapt to societal challenges in which health maintains a key function.

Our biggest challenge caused by the successful growing, as already becoming apparent in 2021, is to balance the administrative and management resources with the demands to keep up with a high-profile program. Therefore, we need to develop solutions to ensure the continuity of services, maintaining the current level of quality and success.

Also, in 2021 one of the highlights was the GHS symposium: it was a great pleasure to be able to meet again in person at Schloss Münchenwiler in November and enjoy great success with many enthusiastic students and GHS members participating.

Highlights

From 2020 to 2021 the GHS enjoyed a 23% increase in enrollment, with a total of 140 students enrolled in 2021. Thanks to the young Expert Committee III, Clinical Sciences continues to enjoy significant interest as a result of the innovative 50:50 model.

2021 was also a record year in terms of graduations, with 16 PhD candidates successfully defending their theses.

The 2021 GHS Symposium was held at Schloss Münchenwiler in November and enjoyed great success with many enthusiastic students and GHS members participating.

In December 2021 the GHS submitted a self-evaluation report, upon request from the Vice Rector for Development at the University of Bern. The evaluation, which was conducted with the support of the evaluation team of the Institute for Medical Education (IML), showed very high satisfaction related to GHS and its structures.

This was evidenced by the fact that 90% of the GHS students and 100% of supervisors and committee members who participated in the evaluation would recommend GHS to others, and that more than 85 % of the students and 100 % of the participating supervisors and committee members were satisfied with the performances of the GHS office and the program coordinator.
New GHS President and Committee members

In January 2021, Prof. Dr. phil. Sissel Guttormsen took over the GHS Steering Board Presidency from Achim Elfering.

Furthermore, the GHS welcomed seven new Expert Committee (FK) members and two new Steering Board Members during 2021:

- Prof. Dr. sc. Tobias Nef (Chair of the FKII and member of the Steering Board)
  ARTORG Center for Biomedical Engineering Research
- Prof. Dr. med. Dr. phil. nat. Lorenz Räber (Chair of the FKIII and member of the Steering Board)
  University Hospital Inselspital, Department of Cardiology
- Prof. Dr. med. Selma Aybek (FKII)
  University Hospital Inselspital, Department for Neurology
- Prof. Dr. med. Adrian Guggisberg (FKII)
  University Hospital Inselspital, Department for Neurology
- PD Dr. phil. Maria Stein (FK II)
  University Psychiatric Services
- Prof. Dr. med. Simon Jung (FKIII)
  University Hospital Inselspital, Department for Neurology
- PD Dr. med. Evangelia Liakoni (FKIII)
  University Hospital Inselspital, Clinical Pharmacology and Toxicology, Department of General Internal Medicine
- Prof. Dr. phil. Alice Panchaud (FKIII),
  Institute of Primary Health Care (BIHAM)
- PD Dr. med. Anke Salmen (FKIII),
  University Hospital Inselspital, Department for Neurology

Vision and Mission

**Vision**
PhD students at the GHS have best conditions and support to advance their knowledge and research competencies in a health science related topic.

**Mission**
The PhD program promotes and offers scientifically oriented courses in combination with clinical, experimental, and translational research, ensuring integrity and stimulating students to work responsibly and independently in the pursuit of in-depth knowledge.

From these statements, strategic goals and foci have been inferred, that guide the work of the GHS on all levels:

**Promote Excellence, Quality, and Integrity**
Guide and prepare doctoral students to deepen knowledge, become competent & successful researchers, ensuring integrity in training and research, in line with ethical principles applied to health sciences and to achieve an internationally recognized and competitive PhD title.

**Foster a solid and advanced knowledge on global health issues**
Provide a program that encourages doctoral students to expand their knowledge beyond their specific research training through interdisciplinary courses, content, and methods in the field of health sciences.

**Support and Develop**
Support doctoral students throughout their PhD program, ensuring the best supervision and structure and motivate them to become competent, qualified, and innovative professionals who will contribute to the improvement of health. PhD candidates are supported in building networks within and outside of their PhD group.
GHS Organization

The GHS implements the vision and the missions consequently, realizing a very attractive study and supervision program. The PhD program supports the candidates in accomplishing the demands, particularly with regards to admission requirements, courses, and publication output expectations. Additionally, the GHS expects and promotes a lively exchange of ideas from our students.

The GHS is an interfaculty and truly multidisciplinary graduate school. The strength of this multidisciplinary approach to health, using different paradigms and methodologies, is to render the research and clinical interventions more effective.

The program is jointly organized by the Faculty of Medicine and the Faculty of Human Sciences and offers a comprehensive and internationally acclaimed training in the theory and practice of experimental research, as well as in-depth specialist knowledge of the individually selected research area, addressing questions rooted in both basic research and applied fields.

The GHS is strategically run by the executive board with members from the two faculties and the expert committees.

The GHS has three expert committees covering a wide spectrum of research approaches and methods: in preventive and social medicine, public health, medical education, psychology, rehabilitation & clinical research. (Expert Committee I), neuroscience (Expert Committee II) or clinical sciences (Expert Committee III).

These committees are also responsible for the admittance, guidance, and evaluation of the PhD candidates.

The extensive body of academic experts and resources available enable the GHS students to develop into highly qualified professionals as researchers and academics, in private or not-for-profit industries, ready to use their knowledge and skills in complex subjects in their chosen area. Today 86 academic experts support the PhD Candidates in their endeavors.

The GHS Office is directed by the GHS Coordinator Dr. Tullia Padovani. Dr. Padovani is responsible for the operative organization. She is supported by the GHS office team consisting of Brigitte Schutte, Te Moana Tschabold and Zakia Curmally.

Awarded PhD title:
PhD in Health Sciences (specialist area).
GHS Organization Chart
(December 2021)

STEERING BOARD
• Sissel Guttormsen (Med), President
• Thomas Abel (Med)
• Achim Elfering (Hum Sci)
• Tobias Nef (Med)
• Claudio Nigg (Hum Sci)
• Lorenz Räber (Med)
• Tullia Padovani (Coordinator)

ADMINISTRATION
• Tullia Padovani, Coordinator
• Brigitte Schutte, Secretary
• Te Moana Tschabold, Secretary
• Zakia Curmally, Secretary

FACULTIES
• Faculty of Medicine (Med)
• Faculty of Human Sciences (Hum Sci)

Expert Committee I (FKI)
Research areas: Preventive and social medicine, public health, medical education, psychology, rehabilitation & clinical research
• Sissel Guttormsen (Med), Chair
• Thomas Abel
• Annalisa Berzigotti (Med)
• Cinzia del Giovane (Med)
• Jennifer Inauen (Hum Sci)
• Stefanie Julia Schmidt (Hum Sci)
• Matthias Wilhelm (Med)
• Marcel Zwahlen (Med)
• Tullia Padovani (Coordinator)

Expert Committee II (FKII)
Research area: Neurosciences and Clinical Neurosciences
• Tobias Nef (Med), Chair
• Selma Aybek (Med)
• Dario Cazzoli (Med)
• Stéphane Ciocchi (Med)
• Thomas Dierks (Med)
• Daniel Erlacher (Hum Sci)
• Andrian Guggisberg (Med)
• Daniela Hubl (Med)
• Maria Stein (Med and Hum Sci)
• Roland Wiest (Med)
• Tullia Padovani (Coordinator)

Expert Committee III (FKIII)
Research area: Clinical Sciences; clinical career & patient-oriented research (50:50 model)
• Lorenz Räber (Med), Chair
• Guido Beldi (Med)
• Thomas Berger (Hum Sci)
• Lorena Gianotti (Hum Sci)
• Simon Jung (Med)
• Stefan Klöppel (Med)
• Philipp Latzin (Med)
• Evangelia Liakoni (Med)
• Alice Panchaud (Med)
• Anke Salmen (Med)
• Sven Trelle (Med)
• Matthias Zumstein (Med)
• Tullia Padovani (Coordinator)
The Graduate School is managed by a Steering Board. The Steering Board is composed of two representatives each from the Faculty of Human Sciences and the Faculty of Medicine, together with the Program Coordinator. Those representing the faculties are professors. At least one representative per faculty must be a member of the respective Faculty Council (Fakultätskollegium). Additional persons can be elected to sit on the Steering Board if the faculties concerned are in agreement.

The members of the Steering Board must be renowned scientists and are elected by the University Board of Directors for a period of office of four years, upon application by the faculties involved. They can be reappointed. The representatives of the faculties on the Steering Board preside over the Board in turn, each for a period of two years.

Prof. Dr. phil. Sissel GUTTORMSEN
Director, Institute for Medical Education (IML)
Founding President and Member since August 2008
Chair of Expert Committee I

Prof. Dr. phil. Thomas ABEL
Institute of Social and Preventive Medicine
Member since August 2008

Prof. Dr. Achim ELFERING
Work and Organizational Psychology, Institute of Psychology
Member since 2009

Prof. Dr. phil. Claudio NIGG
Department Health Science, Institute of Sport Science
Member since January 2020

Prof. Dr. med. Dr. phil. nat. Lorenz RÄBER
University Hospital Inselspital Department of Cardiology
Member since January 2020

Prof. Dr. Tobias NEF
ARTORG Center for Bio-medical Engineering Research
Member since August 2021

Dr. phil. Tuilla PADOVANI
GHS Coordinator and Lecturer
Member since January 2019
Expert Committees

PhD candidates (listed on the [GHS Website](#)) currently carrying out their research projects within the framework of the GHS are grouped by GHS Expert Committees (Fachkommissionen: FKI, FKII and FKIII):

1. Preventive and Social Medicine, Public Health, Medical Education, Psychology, Rehabilitation & Clinical Research (FKI)
2. Neuroscience (FKII)
3. Clinical Sciences (FKIII)

The committees are responsible for the admittance, guidance, and evaluation of the PhD candidates. Each PhD candidate is assigned to one of the GHS Expert Committees, which together with the candidate decides upon the individual training program.

### Expert Committee I / Fachkommission I / FKI

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Institute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sissel Guttormsen</td>
<td>Faculty of Medicine</td>
<td>Institute for Medical Education</td>
</tr>
<tr>
<td>Thomas Abel</td>
<td>Faculty of Medicine</td>
<td>Institute of Social and Preventive Medicine</td>
</tr>
<tr>
<td>Annalisa Berzgotti</td>
<td>Faculty of Medicine</td>
<td>University Department of Visceral Surgery and Medicine</td>
</tr>
<tr>
<td>Cinzia del Giovane</td>
<td>Faculty of Medicine</td>
<td>Institute of Primary Health Care</td>
</tr>
<tr>
<td>Jennifer Inauen</td>
<td>Faculty of Human Sciences</td>
<td>Institute of Psychology</td>
</tr>
<tr>
<td>Stefanie Schmidt</td>
<td>Faculty of Human Sciences</td>
<td>Institute of Psychology</td>
</tr>
<tr>
<td>Matthias Wilhelm</td>
<td>Faculty of Medicine</td>
<td>Institute of Sport Science</td>
</tr>
<tr>
<td>Marcel Zwahlen</td>
<td>Faculty of Medicine</td>
<td>Institute of Social and Preventive Medicine</td>
</tr>
<tr>
<td>Tullia Padovani</td>
<td>GHS Coordinator</td>
<td>Graduate School for Health Sciences</td>
</tr>
</tbody>
</table>

### Expert Committee II / Fachkommission II / FK II

**Research Areas:** Neurosciences and Clinical Neurosciences

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Institute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobias Nef</td>
<td>Faculty of Medicine</td>
<td>ARTORG Center for Biomedical Engineering Research</td>
</tr>
<tr>
<td>Selma Aysbek</td>
<td>Faculty of Medicine</td>
<td>University Hospital Inselspital Department for Neurology</td>
</tr>
<tr>
<td>Dario Cazzoli</td>
<td>Faculty of Medicine</td>
<td>ARTORG Center for Biomedical Engineering Research</td>
</tr>
<tr>
<td>Stéphane Ciocchi</td>
<td>Faculty of Medicine</td>
<td>Systems Neuroscience Group</td>
</tr>
<tr>
<td>Thomas Dierks</td>
<td>Faculty of Medicine</td>
<td>University Psychiatric Services</td>
</tr>
<tr>
<td>Daniel Erlacher</td>
<td>Faculty of Human Sciences</td>
<td>Institute for Sports Science</td>
</tr>
<tr>
<td>Adrian Guggisberg</td>
<td>Faculty of Medicine</td>
<td>University Hospital Inselspital Department for Neurology</td>
</tr>
<tr>
<td>Daniela Hubl</td>
<td>Faculty of Medicine</td>
<td>University Psychiatric Services</td>
</tr>
<tr>
<td>Maria Stein</td>
<td>Faculty of Medicine and Faculty of Human Sciences</td>
<td>University Psychiatric Services</td>
</tr>
<tr>
<td>Roland Wiest</td>
<td>Faculty of Medicine</td>
<td>Center for Translational Medicine and Biomedical Entrepreneurship</td>
</tr>
<tr>
<td>Tullia Padovani</td>
<td>GHS Coordinator</td>
<td>Graduate School for Health Sciences</td>
</tr>
</tbody>
</table>

### Expert Committee III / Fachkommission III

**Research Areas:** Clinical Sciences, clinical career and patient-oriented research (50:50 model)

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Institute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorenz Räber</td>
<td>Faculty of Medicine</td>
<td>Department of Cardiology</td>
</tr>
<tr>
<td>Guido Beldi</td>
<td>Faculty of Medicine</td>
<td>Department of Visceral Surgery and Medicine</td>
</tr>
<tr>
<td>Thomas Berger</td>
<td>Faculty of Human Sciences</td>
<td>Institute of Psychology</td>
</tr>
<tr>
<td>Lorena Gianotti</td>
<td>Faculty of Human Sciences</td>
<td>Institute of Psychology</td>
</tr>
<tr>
<td>Simon Jung</td>
<td>Faculty of Medicine</td>
<td>University Hospital Inselspital Department for Neurology</td>
</tr>
<tr>
<td>Stefan Klöppel</td>
<td>Faculty of Medicine</td>
<td>University Hospital of Old Age Psychiatry</td>
</tr>
<tr>
<td>Philipp Latzin</td>
<td>Faculty of Medicine</td>
<td>Department of Pediatrics</td>
</tr>
<tr>
<td>Evangelia Liakoni</td>
<td>Faculty of Medicine</td>
<td>University Hospital Inselspital Clinical Pharmacology and Toxicology, Department of General Internal Medicine</td>
</tr>
<tr>
<td>Alice Panchaud</td>
<td>Faculty of Medicine</td>
<td>Institute of Primary Health Care (BIHAM)</td>
</tr>
<tr>
<td>Anke Salmen</td>
<td>Faculty of Medicine</td>
<td>University Hospital Inselspital Department for Neurology</td>
</tr>
<tr>
<td>Sven Trelle</td>
<td>Faculty of Medicine</td>
<td>Clinical Trials Unit Bern</td>
</tr>
<tr>
<td>Matthias Zumstein</td>
<td>Faculty of Medicine</td>
<td>Department of Orthopedic Surgery and Traumatology</td>
</tr>
<tr>
<td>Tullia Padovani</td>
<td>GHS Coordinator</td>
<td>Graduate School for Health Sciences</td>
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</tbody>
</table>
PhD Program

Doctoral Program
The Graduate School for Health Sciences (GHS) offers research-oriented curricula on psychological and physiological factors that determine the health of individuals and groups in their social contexts and physical environments. The GHS in general focuses on patient-oriented clinical research that is carried out directly with patients or healthy volunteers. The doctoral degrees are issued jointly by the Faculty of Medicine and the Faculty of Human Sciences, after submission of the written thesis and successful defense of the thesis. As a rule, the PhD thesis must be submitted no later than one year after completion of the experimental work. The University regulations require enrollment until the successful completion of studies. The PhD typically lasts 3 - 4 years (Expert Committees I and II) or 4 - 6 years (Expert Committee III).

Supervision
Each PhD candidate is supervised by a thesis committee consisting of the thesis advisor and a co-referee. In addition, the candidates of the Expert Committee III have a mentor assigned, who also chairs the PhD defense. The candidates of the Expert Committees I and II choose a member of the Expert Committees as GHS Representative for chairing the PhD defense.

Thesis Committee
The thesis advisor is responsible for the research project, adequate supervision, the laboratory infrastructure, and the salary of the candidate.

Co-referee (optional) can be appointed to support the thesis advisor. The co-referee is an expert within the field of the dissertation and is chosen by the thesis advisor.

Financial Support
By granting a financial contribution, the GHS actively supports the participation of candidates in national and international conferences and in special training courses offered by recognized institutions in Switzerland and abroad.

PhD Program Structure

GHS structured PhD Studies Timeline after official acceptance
Courses and Seminars

Seminars and courses are selected for each candidate individually from courses supported by GHS, from the teaching units of the faculties, and also from courses offered by other Swiss universities. Students may choose the courses best for their PhD studies, within University of Bern, as well as other national and international academic institutions. Some candidates also take part in internationally organized Summer Schools, which provide high quality training in specific fields.

18 ECTS credit points are necessary for the GHS PhD program. These ECTS include:

- **Mandatory Requirements** (min. 3 ECTS)
- **Core Courses** (2 to 4 ECTS)
- **Method Skills** (4 to 6 ECTS)
- **Special Knowledge** (min. 6 ECTS)
- **Meetings / Conferences** (subject to prior approval)

The Course Catalog lists suggestions for the different course categories. The Mandatory, Core, Methods and Special Knowledge Courses offered by the GHS are listed on the website under Training/Course Catalog. GHS recognizes external courses when they meet the appropriate requirements, and can provide financial support in many cases.

Curriculum

- Each PhD candidate compiles an individual curriculum based on qualifications and relevance to the research interests.
- Also courses not listed in the GHS Course Catalog can be selected upon agreement with the GHS the courses must last at least one day and involve active participation.
- The selection of courses should be documented in the Doctoral Agreement (DA).

Partner Programs

The BENEFRI Neuroscience Program is a convention between the Universities of Bern and Fribourg and is available to GHS students. Its purpose is the organization of joint postgraduate courses and lectures for PhD students in Neuroscience at the two Universities. At the moment it includes the Faculty of Medicine in Bern and the Faculty of Science in Fribourg.

The Swiss School of Public Health PhD program (SSPH+) assembles the inter-university faculty of public health sciences affiliated with the twelve Swiss universities of the SSPH+ Foundation: Basel, Bern, Fribourg, Geneva, Lausanne, Lucerne, Neuchâtel, Svizzera italiana, Zurich, BFH, SUPSI and ZHAW. SSPH+ is the national coordinating body for the promotion of postgraduate university education and research in the fields of public health.

Transferable Skills (University of Bern) provide key qualifications for your academic and non-academic career: individual feedback from experts, intensive learning in small groups, and multidisciplinary networking. These skills are competencies acquired in one context that can be applied to other contexts, jobs, positions, functions or fields of work.

Clinical Neurosciences Bern is an Interdisciplinary collaboration pivotal to success in clinical neuroscience research and methodology. The research focus of Clinical Neurosciences Bern aims to improve information exchanges and promote cooperation with internal and external partners.

The Graduate School for Cellular and Biomedical Sciences (GCB) (University of Bern) is jointly administered by the Faculties of Medicine, Science and Vetsuisse, offers structured, experimental research training programs leading to a PhD, MD, PhD or DVM, PhD degree.

MD-PhD Scholarships

GHS doctoral students with a Master in Medicine may apply annually for the MD-PhD scholarships. The National MD-PhD Program, which is supported by the Swiss National Science Foundation (SNSF), the Swiss Academy of Medical Sciences (SAMS/SAMW), and several other foundations, awards scholarships every year to outstanding graduates in human medicine, veterinary medicine and dentistry with residency in Switzerland.

Students in FKIII are not eligible for the MD-PhD Scholarship since the minimum research time is 75%.

Further information can be found on the SNSF and SAMS websites.
GHS self-evaluation

In December 2020, the Vice Rector for Development at the University of Bern requested a self-evaluation document of the Graduate School for Health Sciences (GHS).

The resulting self-evaluation report was submitted on December 16, 2021. The report was written and edited by the GHS President and Coordinator with the assistance of the GHS office and was reviewed and approved by the Steering Board. In order to plan the strategic orientation of the Graduate School of Health Sciences for the coming years, the purpose of the evaluation was to find out more about needs, obstacles, requirements and experiences of the GHS stakeholders.

To have the most objective and professional evaluation possible, the GHS turned to the evaluation team of the Institute for Medical Education (IML) for advice and support. The IML evaluation team conducted the surveys and interviews with doctoral students, alumni and members of expert committees and the Steering Board.

Evaluation themes

The following themes were covered in the evaluation:

- Application procedure: criteria and terms of acceptance and graduate school acceptance processes; key indicators for admission.
- Doctoral student supervision: e.g., periodicity of feedback; content of feedback.
- Performance assessment of the doctoral students: e.g., mid-term assessment.
- Assisting doctoral students from abroad with their start in studying, research and with life in Bern.
- Other tools to support the next generation of academics, e.g., special information and advisory events incl. making use of what is on offer.
- Strengths and weaknesses as well as future challenges for the GHS.

Furthermore, demographics and organizational aspects as well as career plans of PhD candidates and alumni were included.

Results

Overall satisfaction with the GHS

Overall, the results show high satisfaction related to GHS and its structures, which is evidenced by the fact that over 90% of the students and alumni and 100% of supervisors and committee members who participated in the evaluation would recommend GHS to others.

Table 1: Further recommendation of the GHS

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>fully disagree</th>
<th>rather disagree</th>
<th>rather agree</th>
<th>fully agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current PhD candidates</td>
<td>30</td>
<td>0.0%</td>
<td>10.0%</td>
<td>60.0%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Alumni</td>
<td>18</td>
<td>0.0%</td>
<td>5.6%</td>
<td>55.6%</td>
<td>38.9%</td>
</tr>
<tr>
<td>Supervisors</td>
<td>25</td>
<td>0.0%</td>
<td>0.0%</td>
<td>24.0%</td>
<td>76.0%</td>
</tr>
<tr>
<td>Committee members</td>
<td>7</td>
<td>0.0%</td>
<td>0.0%</td>
<td>42.9%</td>
<td>57.1%</td>
</tr>
</tbody>
</table>

Informal learning (educational goals)

Both current PhD candidates and alumni were asked from what they learned most:

Graph 1: What the current PhD candidates and the Alumni learned a lot from (so far) during my PhD I have learned a lot by:

The current PhD candidates agree that the GHS promotes the following competencies:

Table 2: Questions to the current PhD candidates on competencies promoted by the GHS

<table>
<thead>
<tr>
<th>Competencies</th>
<th>n</th>
<th>fully disagree</th>
<th>rather disagree</th>
<th>rather agree</th>
<th>fully agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and understanding (contents)</td>
<td>31</td>
<td>0.0%</td>
<td>19.4%</td>
<td>58.1%</td>
<td>22.6%</td>
</tr>
<tr>
<td>Research</td>
<td>31</td>
<td>0.0%</td>
<td>19.4%</td>
<td>38.7%</td>
<td>41.9%</td>
</tr>
<tr>
<td>Practical application of knowledge and understanding (methodology)</td>
<td>31</td>
<td>3.2%</td>
<td>19.4%</td>
<td>54.8%</td>
<td>22.6%</td>
</tr>
<tr>
<td>Problem solving (analysis) and evaluation (e.g. sources)</td>
<td>29</td>
<td>3.4%</td>
<td>31.0%</td>
<td>55.2%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Interdisciplinary academic skills (soft skills)</td>
<td>31</td>
<td>6.5%</td>
<td>16.1%</td>
<td>51.6%</td>
<td>25.8%</td>
</tr>
</tbody>
</table>
Organizational aspects
Overall, the survey participants were satisfied with the quality of information they received through the different channels. The survey participants were pleased with the performances of the GHS office and the program coordinator with over 80% satisfaction from students and alumni and 100% satisfaction from supervisors and committee members. Nevertheless, the survey also showed that there is room for improvement on facilitating the access to information on the website.

Career Plans and Supporting the Next Generation of Academics
The results show that the majority of the current PhD candidates are interested in an academic career, and the large majority of the alumni work in academia. While the desired positions vary among the current PhD candidates, the majority of the alumni currently are post-docs.

Conclusion
The main conclusion of the specific survey carried out by the IML evaluation team shows that as a center of academic excellence, the standard of the GHS is very high. On the other hand, the survey revealed that there is room for improvement in the administrative processes of the PhD application and on facilitating the access to information on the website, as shown in table 3. The main challenge for the GHS is seen in the growing number of candidates and applications from candidates who live abroad permanently, which creates substantial additional administrative burden for the GHS. The increasing number of PhD candidates asks for further streamlining of information and processes.

Table 3: Questions on administrative and organizational information

<table>
<thead>
<tr>
<th>How satisfied are you with the quality (accessibility, timeliness) of administrative and organizational information by the GHS office?</th>
<th>n</th>
<th>fully disagree</th>
<th>rather disagree</th>
<th>rather agree</th>
<th>fully agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current PhD candidates</td>
<td>31</td>
<td>0.0%</td>
<td>4.8%</td>
<td>54.8%</td>
<td>32.3%</td>
</tr>
<tr>
<td>Alumni</td>
<td>18</td>
<td>0.0%</td>
<td>0.0%</td>
<td>61.1%</td>
<td>38.9%</td>
</tr>
<tr>
<td>Supervisors</td>
<td>23</td>
<td>0.0%</td>
<td>0.0%</td>
<td>30.4%</td>
<td>69.6%</td>
</tr>
<tr>
<td>Committee members</td>
<td>7</td>
<td>0.0%</td>
<td>0.0%</td>
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<th>How satisfied are you with the quality (accessibility, timeliness) of administrative and organizational information by the Program Coordinator?</th>
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<td>Current PhD candidates</td>
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<td>Alumni</td>
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<td>52.6%</td>
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<tr>
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<th>How satisfied are you with the quality (accessibility, timeliness) of administrative and organizational information on the Website of the GHS?</th>
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<tr>
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<tr>
<td>Supervisors</td>
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<td>22.7%</td>
<td>45.5%</td>
<td>31.8%</td>
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<tr>
<td>Committee members</td>
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<td>0.0%</td>
<td>16.7%</td>
<td>50.0%</td>
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Review: 2021 in numbers

Students

Growth in GHS Matriculations 2008 - 2021

Expert Committees

Student Distribution across Expert Committees 2008-2021
Institutes

GHS Students – Institutes where research is performed

- University hospital of Psychiatry UPD
- Department of Neurology Insel
- Institute of Social and Preventive Medicine (ISPM)
- Bern Institute of Primary Care (BIHAM)
- Vetuisse
- Department of Cardiology
- Institute of Medical Education (IML)
- Department for BioMedical Research (DBMR)
- Institute of Psychology
- Institute for Infectious Diseases (IFID)
- Bern University of Applied Sciences
- Institute of Pharmacology
- Other

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Country of Master’s Degree

The 2021 cohort of doctoral students in the GHS was made up of 140 students who obtained their master’s degree from 28 different countries.
GHS Symposium

The 13th GHS Symposium was held from Tuesday, November 23, to Wednesday, November 24, 2021, at Schloss Münchenwiler. The Symposium program comprised talks by 31 students and posters by 46 students, making it the most attended GHS Symposium to date. The high academic level of the student presentations and the lively atmosphere promoted a constructive and enriching exchange between the participants, which was also expressed in the enthusiastic feedback from the participants.

The main idea of the Symposium is to promote scientific exchange and networking between students, specialists, and members of the three expert committees. Therefore, it was a great pleasure and relief to again be able to hold the Symposium in person, giving participants the opportunity to meet and talk.

Day One: Talks and Posters

The Symposium 2021 was opened with welcome speeches by the GHS President Sissel Guttormsen and the GHS Coordinator Tullia Padovani. Following the welcome speeches were four talk sessions, held parallelly, two at the same time. The afternoon of the first symposium day was devoted to a dynamic and entertaining poster flash session followed by poster viewings with an Apéro which took place in the special atmosphere of the castle church. In the evening, the participants got together for a pleasant dinner in the castle restaurant.
Day Two: Workshops and Talks

The second day of the Symposium began with two parallel workshop sessions on the theme “Philosophy and History of Science: how health sciences produce evidence”. The two guest speakers, Prof. Marcel Weber, Université de Genève, and Dr. Raphael Scholl, University of Cambridge, started the workshops with the lectures “Can scientific policy advice be value-neutral? The case of COVID-19” and “Taking evolution seriously in the philosophy of medicine” respectively. Due to COVID measures, the lecturers gave the same lecture twice, one in each session. The lectures gave rise to interesting discussions about the implications of the pandemic from a philosophical perspective.

After lunch, the program continued with two parallel talk sessions.

To conclude the event there was a closure talk from the GHS President Sissel Guttormsen, followed by the award ceremony where the winners of the best talk and the best poster awards were announced by the GHS Coordinator Tullia Padovani:

Best talk price went to Jan Rosner for the presentation “Central Neuropathic Pain: From Phenotypes to Mechanisms”.

Best poster price went to Kirstin Schürch for the poster entitled “Cerebral blood flow and its association with cognitive and motor performance in pediatric cancer survivors”.

Congratulations!

We would like to thank all of you very much for your participation and for the feedback we received. Many thanks also to Prof. Dr. Tobias Nef for his invaluable technical support.

We look forward to the 14th GHS Symposium from November 29 - 30, 2022, at Seminarhotel Gerzensee.
Graduations

February 01

Severin Pinilla PhD in Health Sciences (Medical Education)
Institute for Medical Education (IML)
Project title: Entrustable Professional Activities (EPAs) in the Psychiatry Core Clerkship
Thesis advisor and co-referee: Prof. Dr. Sören Huwendiek and Prof. Dr. Christoph Nissen

February 24

Eva Kathrin Hennel PhD in Health Sciences (Medical Education)
Institute for Medical Education (IML)
Project title: Improving Residency Training with the Help of Multisource Feedback
Thesis advisor and co-referee: Prof. Dr. Sören Huwendiek and Prof. Dr. Sigrid Harendza

February 24

Lea Franziska Wildisen PhD in Health Sciences (Epidemiology)
Institute of Primary Health Care (BIHAM)
Project title: Subclinical Thyroid Dysfunction and Depressive Symptoms: A Prospective Evaluation and the Impact and Prevalence of Levothyroxine Therapy
Thesis advisor and co-referee: Prof. Dr. med. Nicolas Rodondi and Prof. Dr. Robin Peeters

March 04

Roger Hilfiker PhD in Health Sciences (Epidemiology)
Institute of Social and Preventive Medicine (ISPM)
Project title: Determinants of disability in patients with lower limb osteoarthritis
Thesis advisor and co-referee: Prof. Dr. med. Stephan Reichenbach and Prof. Dr. Marcel Zwahlen

March 11

Charlotte Waremboig PhD in Health Sciences (Epidemiology)
Veterinary Public Health Institute
Project title: Contribution to free-roaming domestic dog ecology and its impact on infectious disease control
Thesis advisor and co-referee: Prof. Dr. Gertraud Irene Schüpbach and Prof. Dr. Jakob Zinsstag

April 07

Daniela Anker PhD in Health Sciences (Epidemiology)
Institute of Primary Health Care (BIHAM)
Project title: Blood pressure and frailty in older adults: description and prediction from population-based data
Thesis advisor and co-referee: Prof. Dr. Arnaud Chiolero and Prof. Dr. Marcel Zwahlen

April 23

Katharina Tabea Junge PhD in Health Sciences (Epidemiology)
Institute of Primary Care (BIHAM)
Project title: Optimizing Medication Use in Older Adults with Multimorbidity and Polypharmacy
Thesis advisor and co-referee: Prof. Dr. med. Dr. phil. Sven Streit and Prof. Dr. Jacobijn Gussekloo

April 27

Katharina Klink PhD in Health Sciences (Neurosciences)
University Hospital of Psychiatry and Psychotherapy
Project title: The Aging Brain: Neural correlates of episodic memory and their interaction with transcranial electric current stimulation
Thesis advisor and co-referee: Prof. Dr. med. Stefan Klöppel and Prof. Dr. med. René Muri
April 27
Christine Renate Krebs PhD in Health Sciences (Neurosciences)
University Hospital of Psychiatry and Psychotherapy
Project title: Forever Young: Innovative ways to assess and counteract cognitive decline
Thesis advisor and co-referee: Prof. Dr. med. Stefan Klöppel and Prof. Dr. med. René Muri

June 01
Carole Chantal Wagnon PhD in Health Sciences (Neurosciences)
University Hospital of Psychiatry and Psychotherapy
Project title: Modulation of episodic memory with transcranial direct current stimulation and incidental learning
Thesis advisor and co-referee: Prof. Dr. med. Stefan Klöppel and Prof. Dr. Beat Meier

June 22
Hamoon Zohdi PhD in Health Sciences (Neurosciences)
Institute of Complementary and Integrative Medicine (IKIM)
Project title: Effects of exposure to colored light on cerebral and systemic physiology in humans
Thesis advisor and co-referee: Prof. Dr. med. Ursula Wolf and Prof. Dr. Tobias Nef

June 29
Antonella Mazzei Abba PhD in Health Sciences (Epidemiology and Biostatistics)
Institute of Social and Preventive Medicine (ISPM)
Project title: Background Ionizing Radiation and the Risk of Childhood Cancer
Thesis advisor and co-referee: PD Dr. Ben Spycher and Prof. Dr. Maria Blettner

July 05
Christophe Leopold Folly PhD in Health Sciences (Epidemiology and Biostatistics)
Institute of Social and Preventive Medicine (ISPM)
Project title: Modelling exposure to background ionizing radiation in Switzerland
Thesis advisor and co-referee: PD Dr. Ben Spycher and Prof. Dr. Reinhard Furrer

July 08
Leonie Serena Steiner PhD in Health Sciences (Neurosciences)
Department of Neuropediatrics
Project title: Functional brain networks in the healthy young brain and after pediatric stroke: insights from resting-state fMRI
Thesis advisor and co-referee: Prof. Dr. phil. Regula Everts and Prof. Dr. Andrea Federspiel

September 03
Valentina Gonzalez Jaramillo PhD in Health Sciences (Epidemiology)
Institute of Social and Preventive Medicine (ISPM)
Project title: Challenges and gaps delivering palliative care to patients with heart failure
Thesis advisor and co-referee: Prof. Dr. med. Steffen Eychmüller and PD Dr. med. Georg Bossard

September 29
Kathrin Chiffi PhD in Health Sciences (Neurosciences)
Department of Neurology
Project title: Cognitive processes in healthy and stroke subjects, methodological considerations, and the relation to sleep
Thesis advisor and co-referee: Prof. Dr. med. René Muri and Prof. Dr. med. Jean-Marie Annoni
Publications 2021

Pedersen, Eva S., Mallet, Maria Christina; Lam, Yin Ting; Bells, Sara; Cizeau, Isabelle; Copeland, Fiona; Fernandez, Trini Lopez; Manion, Michelle; Harris, Amanda L.; Luca, Jane S.; Santamaria, Francesca; Goutaki, Myrofora; Kuehni, Claudia E. (2021). COVID-19: Vaccinations; Perceptions and Behaviour in People with Primary Chronic Dyskinasia. Vaccines, 9(12), p. 1496. MDPI 10.3390/vaccines9121496 http://dx.doi.org/10.3390/vaccines9121496


Publications 2021


Raguindin, Peter Francis; Fränkli, Gian; Itodo, Ocche Adam; Bertoli, Alessandro; Zeh, Ramona Maria; Caposella, Simona; Minder, Claudia; Beattie, Stoyanov; Ijuka; Stucki; Gerold; Franco Duran; Muka, Taulant; Glic, Marija (2021). The neurological level of spinal cord injury and cardiovascular risk factors: a systematic review and meta-analysis. Spinal cord, 59(11), pp. 1135-1145. Springer Nature 10.1038/s41393-021-00678-6 http://dx.doi.org/10.1038/s41393-021-00678-6


Waespe, Nicolai; Strøbek, Sven; Marin, Denis; Mattiello, Veneranda; Muet, Fanny; Nava, Tiago; Schindera, Carmen; Malsch, Fabien; Mader, Luiz; Sterpone, Adrià; Kuehni, Claudia E.; Ansari, Marc (2021). Predictors for participation in DNA self-sampling of childhood cancer survivors in Switzerland. BMC Medical research methodology, 21(1), p. 238. BioMed Central 10.1186/s12874-021-01428-1 http://dx.doi.org/10.1186/s12874-021-01428-1
Publications 2021


Ruffieux, Yann; Muchengeti, Mazita; Egger, Matthias; Ethimioiu, Orestis; Bartels, Lina; Olago, Victor; Davidović, Maia; Dhoikotera, Tatadzwa; Boolhi, Julia; Singh, Elvira; Rohner, Eliane (2021). Immunodeficiency and Cancer in 3.5 Million People Living with Human Immunodeficiency Virus: the South African HIV Cancer Match Study. Clinical infectious diseases, 73(5), e735-e744. Oxford University Press 10.1093/cid/ciaa087 http://dx.doi.org/10.1093/cid/ciaa087

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Gonzales-Jaramillo, Valentina; Fuhrer, Valérie; Gonzalez-Jaramillo, Nathalia; Kopp-Heim, Doris; Eychmüller, Steffen; Maessen, Maud (2021). Impact of home-based palliative care on health care costs and hospital use: A systematic review. Palliative & Supportive Care, 19(4), pp. 474-487. Cambridge University Press 10.1017/S1478951520001135 http://dx.doi.org/10.1017/S1478951520001135

Göldlin, Martina; Radojiwski, Piotr; Siepen, Bernhard; Müller, Madlaine; Wüst, Roland; Mordasini, Pasquale; Ploymeris, Alexandros; Engelter, Stefan T; Lyser, Philippe; Z’Graggen, Wiemer; Fischer, Urs; Steffy, David (2021). [Intra-cerebral haemorrhage – acute event and chronic disease]. Therapeutische Umschau, 78(6), pp. 328-327. Hogrefe 10.1024/0048-5930/a001276 http://dx.doi.org/10.1024/0048-5930/a001276


Severin, Anna; Strienzel, Michaela; Egger, Matthias; Domingo, Marc; Barnis, Tiago (2021). Characteristics of scholars who review for predatory and legitimate journals: linkage study of Cabells Scholarly Analytics and Publish data. BMJ open, 11(7), e050270. BMJ Publishing Group 10.1136/bmjopen-2021-050270 http://dx.doi.org/10.1136/bmjopen-2021-050270

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Blum, Manuel R; Salleveld, Bastiaan T G M; Spinewine, Anne; O’Mahony, Denis; Moutouzouri, Elisavet; Feller, Martin; Baumgartner, Christine; Roumet, Marie; Jungo, Katharina Tabea; Schwab, Nathalie; Bretteg, Lisa; Biegler, Sharnith; Aubert, Carola E; Wilting, Ingeborg; Thørvilin, Støfanes; Murphy, Kevin; Hubers, Corlina A; Drenth-J Van Maanen, A; Clara; Boland, Benoît; Crowley, Erin; (2021). Optimizing Therapy to Prevent Avoidable Hospital Admissions in Multimorb Older Adults (OPERAM): cluster randomised controlled trial. BMJ, 374, n1585. BMJ Publishing Group 10.1136/bmj.n1585 http://dx.doi.org/10.1136/bmj.n1585

Wunderlin, Marina; Zust, Marc A; Hertenstein, Elisabeth; Fehér, Kristoffer D; Schneider, Carlotta L; Klöppel, Stefan; Nissen, Christoph (2021). Modulating overnight memory consolidation by acoustic stimulation during slow wave sleep – a systematic review and meta-analysis. Sleep, 44(7) Oxford University Press 10.1093/sleep/zsaa296 http://dx.doi.org/10.1093/sleep/zsaa296


Folly, Christophe L; Konstantinoudis, Garyfallou; Mazzei Abba, Antonella; Antonella, Maria Salome; Christian; Züst, Marc A; Clavel, Olivier; Schwenkglenks, Matthias; Rodondi, Nicolas; Streit, Sven (2021). Baseline characteristics and comparability of older multimorbid patients with polypharmacy and general practitioners participating in a randomized controlled primary care trial. BMC family practice, 22(1), p. 123. BioMed Central 10.1186/s12875-021-01488-8 http://dx.doi.org/10.1186/s12875-021-01488-8
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Seo, Michael; Funakawa, Tohji A; Veroniki, Aristi Angeliki; Pillinger, Toby; Tomlinson, Anneka; Salanti, Georgia; Cirpani, Andrea; Efthimiou, Orestis (2021). The Kilim plot: A tool for visualizing network meta-analysis results for multiple outcomes. Research Synthesis Methods 12(1), pp. 86-95. Wiley 10.1002/rssm.1428 http://dx.doi.org/10.1002/rssm.1428

Amstutz, Deborah; Michelli, Joan Philip; Debove, Ines; Maradan-Gachet, Marie-Eline; Lachenmayr, Martin Leon; Mussieri, Julia; Schwogger, Kyrill; Krack, Paul (2021). Reckless generiosity, Parkinson’s disease and dopamine: A case series and literature review. Movement disorders clinical practice, 8(3), pp. 469-473. Wiley 10.1002/mdc3.13156 http://dx.doi.org/10.1002/mdc3.13156

Bundo, Marvin; de Schrijver, Evan; Federnpiel, Andrea; Toreti, Andrea; Xoplaki, Elena; Luterbach, Jürg, Franco, Oscar H; Müller, Thomas; Vicedo-Cabrera, Ana M (2021). Ambient temperature and mental health hospitalizations in Bern, Switzerland: A 45-year time-series study. DASMAF [Dataset]. https://bosis.unibe.ch/157254/

Bundo, Marvin; de Schrijver, Evan; Federnpiel, Andrea; Toreti, Andrea; Xoplaki, Elena; Luterbacher, Jürg, Franco, Oscar H; Müller, Thomas; Vicedo-Cabrera, Ana Maria (2021). Ambient temperature and mental health hospitalizations in Bern, Switzerland: A 45-year time-series study. PLoS ONE, 16(10), e0255392. Public Library of Science 10.1371/journal.pone.0255392 http://dx.doi.org/10.1371/journal.pone.0255392


Klink, Katharina; Jaun, Urs; Federnpiel, Andrea; Wunderlin, Marina; Teunissen, Charlotte E.; Kiefer, Claus; Wiest, Roland; Scharnowski, Frank; Sladky, Ronald; Haugg, Amelie; Helf RNG, Lydia; Peter, Jessica (2021). Targeting hippocampal hyperactivity with real-time fMRI neurofeedback: protocol of a single-blind randomized controlled trial in mild cognitive impairment. BMC psychiatry, 21(1) BioMed Central 10.1186/s12888-021-03091-8 http://dx.doi.org/10.1186/ s12888-021-03091-8


Meinel, Thomas R; Eggmann, Angela; Brigonii, Kristina; Wustmann, Kerstin; Eff, Eric; Meinrl, Felix G.; Schetz, Jan F.; Holet, Christian H.; Göldlin, Martina Béatrice; Siepen, Bernhard Matthias; Müller, Thomas; Vicedo-Cabrera, Ana Maria (2021). Ambient temperature and mental health hospitalizations in Bern, Switzerland: A 45-year time-series study. PLoS ONE, 16(10), e0258392. Public Library of Science 10.1371/journal.pone.0258392 http://dx.doi.org/10.1371/journal.pone.0258392


Warembourg, Charlotte; Wira, Evaldas; Oddoo, Terence; Bulu, Petru; Mabo, Berger González, Monika; Alvarez, Dario; Abakar, Mahamat Fayiz; Maximiano Sousa, Filipa; Cunha Silva, Laura; Alobo, Grace; Bal, Valentin; Dingamnul; López Hernandez; Alexis Leon; Madaye, Eno; Meo, Maria Satri; Namnus, Akbar; Roquel, Pablo; Hartnack, Sonja; Dürr, Salome (2021). Comparative Study of Free-Roaming Domestic Dog Management and Roaming Behavior Across Four Countries: Chad, Guatemala, Indonesia, and Uganda. Frontiers in veterinary science, 8 Frontiers Media S.A. 10.3389/ fvs.2021.617900 http://dx.doi.org/10.3389/fvs.2021.617900

Information about procedures and changes on the GHS Website

To improve clarity and communication, the GHS Office will inform the students by email if there are changes in the procedures of the GHS or if new information is added on the GHS website. The changes below were communicated to the students in June 2022.

**Updated Doctoral Agreement and Progress Report forms**
The forms for the Doctoral Agreement and Progress Reports were updated in April 2022. Please use the new forms for your next Doctoral Agreement and Progress Report. You can find the new forms [here](#).

**Recognition of courses**
When planning your courses and conferences, please pay attention to the recognition requirements described on the GHS website.
When applying for recognition of courses and conferences, please remember to send to the GHS Office the course or conference certificate and a proof of your active participation. You can find more information about the certificate requirements on the GHS website.

**Submission of PhD Degree Application and Thesis**
Prior to the defense, you must hand in an electronic copy of your thesis. A hard copy is no longer needed prior to the defense. Please be aware that it is still required to hand in three paper-bound hard copies of the final version of your thesis within two weeks after your defense.

If you plan to defend your thesis in July or August, please be aware that the defense date cannot be during the summer closure of the GHS. The summer closure this year is from July 21 to August 7, 2022.

If you plan to defend in August or September, the deadline for submitting the application documents as well as for the assessments by the thesis advisor and co-referee is 8-9 weeks prior to the defense date instead of 6 weeks. This is to make sure the dean is in place to approve the procedure for PhD defense. The GHS Office will inform you about the exact deadline.

Please find more information about the submission requirements [here](#).

**Publications**
A PhD candidate is required to submit at least three scientific papers to peer-reviewed journals. One paper for which the candidate is the first author must be accepted for publication. It has been specified that in case of a first shared authorship, two papers with a shared authorship are required. Please find more information about the GHS publication requirements [here](#).

**Supervision roles**
Please pay attention to the specific roles of the different supervisors and thesis committee members described in the table on the GHS website.

Acknowledgments

Our sincere and special thanks go to:

**All the members of the GHS committees** for their very valuable work and contributions to keep up the quality of the GHS.

**Raffaele Battaglia** and the Institute of Social and Preventive Medicine (ISPM) IT Support Team for their helpfulness and availability, keeping the GHS on track and running with their professional support and patience in dealing with staff turnover, equipment changes, varying levels of IT-literacy, the need for stable internet connections and the many last-minute urgent requests.

**Barbara Järmann** from the Institute of Biochemistry and Molecular Medicine for her prompt and calm support with the time recording system bridge4erp.