

10 Years BioTechMed-Graz Anniversary Report



2013 – 2023

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2013 – 2023

Anniversary Report

Cover photos:
University of Graz
Graz University of Technology
Medical University of Graz

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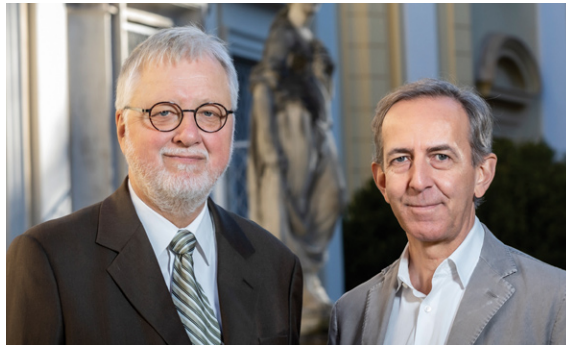
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Rudolf ZECHNER,
Robert KRAUSE

Prolog

It is with great pleasure and pride that we present this commemorative publication on the 10th anniversary of BioTechMed-Graz. This cooperative research program, involving three universities in Graz, is unique in Austria. It has implemented a concept of close cooperation across university borders, which has amplified the development potential for biomedical research in Graz over the past 10 years.

BioTechMed-Graz was founded due to the foresight of the rectors Gutschelhofer, Neuper, Smolle and Sünkel. They understood that internationally competitive research in the field of biomedicine in Graz is only possible through inter-university cooperation. Through the subsequent continuous support and promotion of BioTechMed-Graz by Rectors Kainz, Polaschek, Riedler and Samonigg and an equally strong commitment by the vice-rectors and university councils, it was possible to develop the project into a beacon on the Austrian research landscape. BioTechMed-Graz comprises four research areas (Molecular Biomedicine; Neurosciences; Pharmaceutical-, Medical- and Biotechnology; and Quantitative Biomedicine and Modeling) and has over



Em.Univ.-Prof. Dr. **Rudolf Zechner**
and Univ.-Prof. Dr. **Robert Krause**
Director and Co-Director of BioTechMed-Graz
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160 full members, each leading their own research groups, and over 700 associate members. BioTechMed-Graz thus represents a focal point of the Graz research spectrum, both quantitatively and qualitatively.

An annual budget of about 1.8 Mio € supports (and challenges!) BioTechMed-Graz scientists from all subfields of the initiative over different career stages via Flagship projects, Young Researcher Group projects and rotational fellowships. In addition, BioTechMed-Graz offers numerous communication platforms for networking of the research groups as well as external communication with society. These include the Faculty Club, the Science Breakfast, or the discussion forum “Reden wir über Wissenschaft – im Kaiserfeld”, as well as the highly popular annual Nobel Lecture.

And the investments and interactions pay off: BioTechMed-Graz full members raise an average of 30 Mio € annually in third-party funding and publish nearly 1,000 publications per year, and the trend is rising. Another highlight of this positive development of BioTechMed-Graz is the 2023 founding of a new Austrian Academy of Sciences institute in Graz: The Carl

and Gerty Cori Institute of Molecular and Computational Metabolism.

As the board of directors, we would like to thank the university decision-makers on behalf of the entire BioTechMed-Graz community for many years of strong commitment and funding. We would also like to thank the many dedicated employees of the university administration, who helped us to successfully arrange even unconventional means of funding. We are grateful to the International Scientific Advisory Board for their enthusiasm for BioTechMed-Graz and their committed and competent guidance. A very personal “Thank you” goes to the staff of the BioTechMed-Graz coordination office, Ms. Christina Prix, Ms. Julia Rohrer and Ms. Margit List-Schleich. They are the driving force behind BioTechMed-Graz, keeping the whole operation running. Our final “Thank you” goes to all the scientists of BioTechMed-Graz. They provide the soul of this interuniversity cooperation and are responsible for the success we are now celebrating on this 10th anniversary.



OPENING STATEMENTS



10 Years BioTechMed-Graz
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Martin POLASCHEK

To many more years! The success story of BioTechMed-Graz



Ao.Univ.-Prof. Dr. **Martin Polaschek**
Federal Minister for Education, Science
and Research
Rector of the University of Graz
(2019–2021)
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Over the past decade, I have observed BioTechMed-Graz grow into the prestigious cooperative research initiative it is today: First, as a member of the steering committee, then as university president and – most recently – as Minister of Education, Science and Research.

Since its inception, BioTechMed-Graz has promoted top tier medical research in Styria and beyond, solidifying its reputation as a key driver of innovation and interdisciplinary work. It has put the City of Graz on the international map as a prime location for research excellence.

In a forward-looking strategic move, BioTechMed-Graz invested in state-of-the-art infrastructure and core facilities for top-level research at the intersection of biomedicine, technological innovation, and medical applications. It champions lighthouse projects for up-and-coming academics like the Young Researchers Groups to give them access to labs and equipment.

Finally – a topic particularly close to my heart as Minister of Science and Research – BioTechMed-Graz promotes science communication to engage the general public through frequent lectures and events. It also organizes the Nobel Lectures, which draw renowned researchers.

This evolution fills me with joy and so does the publication of this commemorative book – a tribute to research excellence, technological progress, and innovation. These pages celebrating BioTechMed-Graz's ten-year-anniversary mark an important milestone and are a tangible sign of the hard work, acumen, and passion for research that so many people have put into building this institution.

I commend BioTechMed-Graz on their many successes and accomplishments over the past decade and wish them all the best for a bright and promising future conducting pioneering research.

Ad multos annos!



Barbara EIBINGER-MIEDL

A success story of cooperation



MMag. **Barbara Eibinger-Miedl**
Regional Minister for Science and
Research
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For the last ten years BioTechMed-Graz has stood for bundled research competence in the field of health and is one of the flagships of excellent cooperation at the university center Graz. With the founding of this interuniversity platform, the University of Graz, the Medical University of Graz and the Graz University of Technology have set a strong example in research and demonstrated with this model, which is unique in Austria, the added value that cooperation brings for students, teachers and researchers. This culture of cooperation is also the secret of Styria's success, making it the number one research region in Austria and earning us an excellent international reputation.

It should be particularly emphasized that BioTechMed-Graz plays a significant role in supporting young scientists and promoting excellent research projects. This is essential to sustainably strengthen and expand our top position in research, especially in the life science sector. The Corona pandemic and the drug supply shortages in particular clearly demonstrate the great relevance of this sector for society. The research and development of new, effective drugs as well as medical devices is an important factor in modern health care.

I warmly congratulate BioTechMed-Graz on this success story. They can look on the first decade of their existence with pride. I wish them continued success!



Hellmut SAMONIGG

The 10th Anniversary of BioTechMed-Graz



Univ.-Prof. Dr. **Hellmut Samonigg**
Rector of the Medical University of Graz
Chair of the BioTechMed-Graz Steering Committee
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It is my great pleasure to congratulate BioTechMed-Graz on its 10 year anniversary! In 2013, BioTechMed-Graz was founded as an interuniversity research alliance of the University of Graz, the Graz University of Technology, and the Medical University of Graz with the intention to merge biomedical, technological and medical research activities to promote joint research for health. Now, 10 years later, it is my great privilege to thank our partner universities, the directors, and the administrative staff of BioTechMed-Graz as well as the local and international advisory boards for their contributions to the overall success of this collaboration. BioTechMed-Graz offers a wide range of educational activities and competitive funding. By providing dedicated programs for young scientists BioTechMed-Graz plays a major role in the education, scientific development and progress of students as well as postdoctoral fellows. Experienced researchers are supported by funding of excellent interuniversity research projects (flagship projects) and acquisition of shared infrastructure. The importance of BioTechMed-Graz funding is underlined by the fact that one of the

flagship projects provided the basis for acquisition of a FWF SFB funding (Lipid Hydrolysis) at the Medical University of Graz. Furthermore, BioTechMed-Graz organizes public scientific events including the annual BioTechMed-Graz Nobel Lecture with onsite presentations of Nobel Laureates or “Reden wir über Wissenschaft – im Kaiserfeld”, a new forum for discussion of BioTechMed-Graz topics with researchers from all three universities. The interuniversity collaboration of BioTechMed-Graz recently culminated in the establishment of the Carl and Gerty Cori Institute of Molecular and Computational Metabolism in Graz, a cooperative research Institute of the Austrian Academy of Sciences (ÖAW) and all three BioTechMed-Graz partner universities. Taken together, BioTechMed-Graz is a story of collaborative university success. In my role as steering committee chair I am looking forward to continuing this fruitful research alliance and to the upcoming collaborative projects.



Harald KAINZ

10 year BioTechMed-Graz anniversary



Univ.-Prof. Dr. **Harald Kainz**
Rector of the Graz University of
Technology
BioTechMed-Graz Steering Committee
Member
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Technological progress and disruptive innovation have instigated dynamic developments in the health care sector. In response to these changes, the University of Graz, Graz University of Technology and Medical University of Graz embarked on uncharted territory 10 years ago with BioTechMed-Graz. The chosen interdisciplinary approaches of our alliance facilitate future-oriented answers to important health issues of our time. The cooperative acquisition and utilization of outstanding research infrastructure, coupled with attractive financial support, forms the foundation for internationally recognized cutting-edge research in Graz.

As a university of technology, we are involved in a variety of fields, ranging from health care engineering, biomechanics and pharmaceutical engineering to biotechnology and brain-computer interfaces. In addition to the important contributions in imaging, analysis and diagnostic methods, we also sustain research in material sciences. Progressive digitalization, including modeling, simulations and artificial intelligence is

further contributing to groundbreaking research approaches.

BioTechMed-Graz lives visibly in the form of the many interdisciplinary event- and networking-formats, which creates an inspiring environment for researchers and young scientists. It goes without saying that the science and education location Graz significantly benefits from BioTechMed-Graz. So do the regional industry and economy in the field of health and life sciences.

I would like to thank all colleagues from the participating specialist and organizational areas as well as the university management for the good cooperation and the vibrant exchange. I am delighted with how great the enthusiasm for research for the benefit of mankind is on all sides. My best wishes for the future development of BioTechMed-Graz!



Peter RIEDLER

United for the future



Dr. **Peter Riedler**
Rector of the University of Graz
BioTechMed-Graz Steering Committee
Member
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We are celebrating the 10th anniversary of BioTechMed-Graz. Congratulations! This unique cooperation across university borders is a clear story of success that strengthens our international standing. The different specializations of the three universities create an extraordinarily wide range of research topics and thus strong visibility.

We at the University of Graz benefit from the cooperation because our entire field of excellence in the molecular biosciences is integrated into an even larger framework. The prerequisite for this successful union is the will of all the universities – above all the scientists, but also the management – to collaborate closely and to provide the necessary financial resources for this.

Thanks to BioTechMed-Graz, our teams have been able to achieve outstanding scientific output and internationally renowned research results. With the foundation of the Carl and Gerty Cori Institute of Molecular and Computational Metabolism this past October, another important milestone has been set. This makes us extremely

confident that we will celebrate further successes very soon.

As a science center, we can only stand our ground in the competitive international community if we aim for ever closer links and joint action. BioTechMed-Graz is a good sign that we are on the right track. It is a model for the future of our universities and our common scientific goals.



REFLECTIONS AND PERSPECTIVES



10 Years BioTechMed-Graz
2013–2023

Karin SCHAUPP

10 Years BioTechMed-Graz – what a story of success



Univ.-Prof. Dr. **Karin Schaupp**
Graz University of Technology
BioTechMed-Graz Steering Committee
Member (2013–2018, 2020–2023)
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In August 2012, the University of Graz, the Graz University of Technology and the Medical University of Graz announced the founding of BioTechMed-Graz, and created an unprecedented initiative of interuniversity and interdisciplinary cooperation. By bundling the existing competences of 14 institutes into the 4 common research areas – Molecular Biomedicine; Neurosciences; Pharmaceutical and Medical Technology including Biotechnology; as well as Quantitative Biomedicine and Modeling – into joint research for health, a remarkable holistic approach to address highly complex biomedical topics through basic research via technological development up to final application was born. The challenge of finding solutions for future health care will only be achieved by interdisciplinary approaches and cooperation models like BioTechMed-Graz serve as a blueprint (Figure 1).

Besides the unanimously agreed upon dedication to excellence, a clear and transparent governance structure, as well as highly demanding competitive rules for interdisciplinary funding have proven to be a reliable framework for success.

Within this open and excellent research community the major focus lies on the development and nurturing of talented young people. The support offered in program events like science breakfasts, faculty club meetings and inspiring lectures by invited Nobel laureates has created a special community spirit for mutual interchange and mentoring of young scientists. As a member of the steering committee from the very beginning it has been an absolutely exciting experience to see so many young scientists grow into internationally acknowledged researchers publishing high impact papers and receiving invitations to lecture at highly ranked conferences. Thanks to a marvelous team of directors and the splendid engagement of internationally renowned scientific and strategic advisory board members BioTechMed-Graz has gained international



Figure 1:
Symposium 2014
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acknowledgement as a cutting-edge research platform and contributed to the international visibility of Graz as a university center.

The establishment of the new Carl and Gerty Cori Institute of Molecular and Computational Metabolism of the Austrian Academy of Sciences in cooperation with the BioTechMed-Graz founder universities marked a further highlight in the scientific achievements of BioTechMed-Graz. In this Institute the long-term commitment of the three universities to research activities on metabolic disorders will be incorporated and move towards further milestones to provide urgently needed solutions for metabolic diseases.

With full respect I would like to extend my hearty congratulation upon these impressive achievements within the last 10 years to the whole BioTechMed-Graz community and hope that this exceptional spirit of cooperation, creativity and open-mindedness will foster further surprising scientific highlights for the benefit of health care.



Hans SÜNKEL

BioTechMed-Graz – An idea has come true

Two large academic institutions, the University of Graz and the Graz University of Technology developed their own profile over the course of two centuries, and during this time they lived side by side rather than in close cooperation. But soon after the University Law 2002 was implemented, ideas of cooperation were born at both universities, ultimately resulting in the large cooperation project NAWI Graz. From the very beginning the idea behind NAWI Graz was to replace duplicate, but isolated structures in science and education by shared quality-driven undertakings. And the calculation worked out successfully. NAWI Graz developed further over the years and is now considered to be a role model for successful university cooperation.

Stimulated by the NAWI Graz experience, and recognizing the increasing demand for excellence in human technology, medicine, psychology und pharmacy, and considering the individual competences in R&D at the University of Graz, the newly founded Medical University of Graz (the former Faculty of Medicine of the University of Graz), and the Graz University of Technology, the university rectors – A. Gutschelhofer, J. Smolle and H. Sünkel – decided to establish a platform for interdisciplinary, yet supplementary interuniversity cooperation:



Em.Univ.-Prof. Dr. **Hans Sünkel**
Rector of the Graz University of
Technology (2003–2011)
BioTechMed-Graz Steering Committee
Member (2018–2023)
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BioTechMed-Graz. Just one day before Gutschelhofer's and Sünkel's terms as rectors ended, their letter of intent was signed. Two years later (2013) BioTechMed-Graz was established.

After a very successful decade, BioTechMed-Graz focuses on four grand research topics: Molecular Biomedicine, Neurosciences, Pharmaceutical and Medical Technology including Biotechnology, Quantitative Biomedicine and Modelling. And the three universities have committed themselves to provide their individual scientific strengths and technological infrastructure in these research areas, to closely cooperate in their coordinated programs, to make BioTechMed-Graz a common and central part in their individual performance agreements with the Ministry of Science, and to implement competition at the highest level, defined by the Austrian Science Fund FWF.

This commitment to excellence triggered a strong interest in researchers from the very beginning and has led to the top-level Flagship Program, Young Researcher Groups, and to the unique Lab Rotation Programs.



Figure 2:
University representatives at the Nobel Lecture 2019
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In the selection procedure, project proposals are submitted by researchers to BioTechMed-Graz, international reviewers are nominated by the FWF, and the proposed research projects are then evaluated by a committee. The committee's recommendation is based on the assessment of the international reviewers, the project presentations and discussion with the project applicants in public hearings. And the BioTechMed-Graz Executive Committee follows without restriction the funding recommendation of the review committee.

A crystal-clear governance is provided by R. Zechner and R. Krause as the scientifically very strong directors, an executive board, a steering committee, and a Scientific Advisory Board. Together these make up the strategic and administrative foundation of BioTechMed-Graz. BioTechMed-Graz supporting Members and Partners strengthen its strategic and financial foundation.

BioTechMed-Graz's strong appeal is represented by the high attendance of researchers at numerous academic events, the Faculty Club, and the Science Breakfasts. The yearly Nobel Lecture is a particularly attractive event of BioTechMed-Graz (Figure 2).

BioTechMed-Graz receives substantial funding from the Ministry of Science through the performance agreements with the three universities, however BioTechMed-Graz researchers are also extraordinarily successful in acquiring research funds from both national and international research organizations. And BioTechMed-Graz is also remarkably successful in its publication record in refereed international journals and in the submission and approval of patents.

A particular success of BioTechMed-Graz was the recent approval of the foundation of the Carl and Gerty Cori Institute of Molecular and Computational Metabolism, which is about to become a new institute of the Austrian Academy of Sciences as the lead organization and the three universities with BioTechMed-Graz as cooperating partners.

The performance of BioTechMed-Graz over the last 10 years is not just remarkable – it is extraordinary. As such its foundation 10 years ago confirms a statement by Victor Hugo: "Nothing is more powerful than an idea whose time has come."

My sincere congratulations and good luck for the coming decades!



Alfred GUTSCHELHOFER

BioTechMed-Graz – 140 Months from LOI to Today's Developments



Univ.-Prof. Dr. **Alfred Gutschelhofer**
Rector of the University of Graz
(2003–2011)
BioTechMed-Graz Steering Committee
Member
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In 2004, new legislation governing Austrian universities called the Universities Act (UG 2002) became effective and required a number of organizational steps to be taken. The public universities in Vienna, Innsbruck and Graz were induced to spin off the medical faculties to allow them to become established as independent universities while taking steps to ensure a smooth organizational transition.

Subsequently, the universities were also encouraged to use their autonomy to form strategic partnerships. A paradox or a new opportunity?

The University of Graz spun off the Medical University of Graz in a well-structured process and has thus been able to ensure a high-level of cooperation right from the start.

A culture of cooperation was also developed with the Graz University of Technology, made possible by their newfound autonomy. The rectorates at that time were highly willing to engage in meaningful regional cooperation and NAWI Graz became a central focal point for all universities in Graz.

If you look at Graz as a university and college location, these educational institutions can be seen as a communicating and complementary ensemble in the areas of research, teaching, and infrastructure.

Outside of Vienna, only Graz offers such a portfolio.

Supported by the UG 2002, the universities in Graz consistently benefit from the advantages offered by strong consolidation of this location's activities. With NAWI Graz, the first steps were taken that were able to reinforce meaningful cooperation leading to further successes. Subsequently, it was recognized that the spin-off of the Medical University of Graz could develop significant potential in many areas, but particularly in collaboration within basic medical subjects such as pharmacy and medical technology. Subsequently, it provided promising potential for basic research in molecular biology.

Towards the end of the rectorate period of 2011, the rectors Josef Smolle for the Medical University of Graz, Hans Sünkel for the Graz University of Technology and Alfred Gutschelhofer for the University of Graz signed a letter of intent on the cooperation within the framework of BioTechMed-Graz.

The following points have been outlined here:

The three universities have expressed their interest in jointly establishing the interuniversity platform BioTechMed-Graz. By creating the joint cooperative platform BioTechMed-Graz, the three universities want to bundle their expertise in relevant areas such as human technology, medicine, psychology, and pharmacy.

In particular, BioTechMed-Graz is intended to support interdisciplinary and interuniversity scientific cooperation in joint research projects through the interaction between science, business and industry in Styria, Austria and beyond, thus making promising future research approaches, but also entirely new scientific questions accessible and thereby enabling innovations of an interdisciplinary nature.

The universities decide autonomously whether and in what way the planned coordination will be carried out. The intention is to intensify cooperation in research and teaching.

Now, almost 12 years later, a number of steps have been taken and, with the concrete implementation of the Carl and Gerty Cori Institute of Molecular and Computational Metabolism, the first joint infrastructure opportunities are also being leveraged. The research results and the cooperation possibilities that were developed during this time speak for themselves.

Due to skilled management, the BioTechMed-Graz initiative developed into a focused, high-quality program.

Keeping in mind the importance of Graz as a site for higher education, there is no need to worry about the future. BioTechMed-Graz, particularly after a pandemic, has a high acceptance rate. Together with the new additional university infrastructure and resources, this idea, born 12 years ago and supported by numerous actors, can live on into the future.

With this in mind, all the best for the future and thank you very much for the continuous implementation of this – originally somewhat vague – idea.



Christa NEUPER

An interview with one of the BioTechMed-Graz founding rectors



Univ.-Prof. Dr. **Christa Neuper**
Rector, University of Graz
(2011–2019)
BioTechMed-Graz Steering Committee
Member
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Dear Prof. Neuper, as a founding rector and committed BioTechMed-Graz steering committee chair for many years, you have contributed significantly to the success of BioTechMed-Graz. How did the idea of founding such a cooperation come about?

“Several factors were certainly decisive. From my point of view, the crucial factor for success was that the interuniversity cooperation project was developed both ‘bottom-up’, as an initiative of some researchers from the participating universities, and ‘top-down’ at the level of the university leadership.

Personally, I had experienced the enormous potential of interdisciplinary collaboration in brain-computer interface research when I worked at both the Psychology Department of the University of Graz and the Biomedical Engineering Department of Graz University of Technology. Additionally, the foundation of the INGE St. platform in 2005, established close collaborations with colleagues at the Medical University of Graz in the field of brain research. Also in the other research areas, which still form

the nucleus of BioTechMed-Graz today, there have been very successful cross-disciplinary research projects over many years. A common request of the various working groups was to facilitate cooperation across the organizational boundaries of the Graz universities and to improve scientific exchange. The main aim was to break down barriers and provide uncomplicated access to research equipment, laboratory space or literature at the respective other universities. In addition, NAWI Graz provided a role model that impressively demonstrated how institutionalized cooperation between universities can provide leverage for additional funding and investment in infrastructure. The rectorates at the time, led by Alfred Gutschelhofer, Hans Sünkel and Josef Smolle, also recognized great potential in pooling the existing strengths in the field of biomedical research in Graz and signed a Letter of Intent for a strategic core project of the three universities at the end of September 2011.”



Figure 3:
MRI Lab Opening in 2012 with Former Rector Smolle,
Former Rector Neuper, Rector Kainz,
Former Regional Minister Edlinger-Ploder,
Former Federal Minister Töchterle
(from left to right)
© BioTechMed-Graz



Figure 4:
Signing of the BioTechMed-Graz framework
agreement with Former Federal Minister Töchterle,
Former Rector Neuper, Former Regional Minister
Edlinger-Ploder, Rector Kainz and Former
Rector Smolle
(from left to right)
© BioTechMed-Graz

When did BioTechMed-Graz take concrete shape from your perspective?

“A first visible result of the efforts was the opening of the joint MRI Lab in April 2012 with the implementation of a 3 Tesla magnetic resonance tomograph, which has since then been entirely available for research purposes. The MR device, worth 1.6 million €, was acquired by the University of Graz as part of a university infrastructure call by the federal government, installed in specially adapted premises at Graz University of Technology and also used by the Medical University of Graz as part of BioTechMed-Graz. This investment was thus a milestone both for brain research in Graz and for cooperation between the universities (Figure 3).

Finally, in August 2012, a framework agreement was signed, regulating the cooperation between the three partner universities in the fields of Molecular Biomedicine, Neuroscience, Pharmaceutical and Medical Technology, and Quantitative Biomedicine & Modeling. The integration of the Austrian Academy of Sciences Institute of Biophysics and Nanosystems Research into the three universities provided BioTechMed-Graz with personnel resources as well as additional impulses in the start-up phase (Figure 4).

With the beginning of the new performance agreement period in 2013, the responsible Federal Ministry provided the universities with budget for BioTechMed-Graz for the first time, which made it possible to implement the first funding programs.”

Which project in the initial phase of BioTechMed-Graz was particularly important to you?

“When it comes to deepening cooperation in the long term and building bridges between research groups, young scientists with an interdisciplinary orientation and good networks play an important role. Therefore, in addition to the establishment of BioTechMed-Graz professorships at the three partner universities, the development of a Postdoc Pool was particularly close to my heart. For this purpose, researchers from at least two of the three partner universities could submit cooperative research projects at the interface of the BioTechMed-Graz research areas to fill a postdoc position for two years. The feedback from the participating researchers on this program was very good and the overall performance of the funded postdocs was remarkable.”

How has BioTechMed-Graz changed over the course of the first 10 years?

“In the first years, the focus was put on building up the research alliance, especially since there are many challenges in cooperations across disciplinary and institutional boundaries. In many meetings, the BioTechMed-Graz coordinators Rudolf Stollberger, Harald Mangge and Markus Steppan succeeded in bringing together the participating research groups but also administrative departments of the three universities. In this way, they created a fundamentally positive and solution-oriented basis for communication. After the successful implementation of various projects in this initial phase, the BioTechMed-Graz committees worked out ideas for the further development of the research alliance in the course of numerous workshops. The main added value of the cooperation was seen in the fact that highly complex issues could be addressed through the interaction of the different disciplines and that the existing methods and infrastructures could be used efficiently. The interdisciplinary research approach should open up new fields and drive forward important investments at the research location Graz. Another goal was to bring the results of basic research into application in the shortest possible time. As a result of the strategy process, which should ultimately lead to increased visibility in national and international competition, the organizational structure of BioTechMed-

Graz was redesigned. An international scientific advisory board was appointed to obtain an outside perspective on planned measures and project ideas. With the assurance of continued funding from the federal government, we agreed to establish a powerful board of directors to develop and quickly implement new ideas for funding programs for researchers. The positions of Director and Co-Director were advertised and we were very pleased to be able to recruit two high-caliber and internationally renowned researchers, biochemist Rudolf Zechner and pharmacologist Peter Holzer. After Peter Holzer stepped down the BioTechMed-Graz board of directors successfully continued its work with a recognized expert in infectious diseases, Robert Krause, as Co-Director.

Under the leadership of the board of directors, BioTechMed-Graz has clearly gained momentum. Through a highly competitive allocation of research funds, those research projects that can achieve high international visibility should be identified and supported. The funded flagship projects were selected through a multi-stage process with international peer review. With their follow-up third-party funded projects, they contribute very successfully to the visibility of Graz as a location for biomedical research. I am personally very pleased that through various measures, the level of awareness of the BioTechMed-Graz brand has increased enormously in recent years, a fact that is also reflected in the steadily growing membership figures.”

How do you perceive BioTechMed-Graz today?

“The cooperation of the three universities in the BioTechMed-Graz alliance has significantly improved research conditions as well as the infrastructure at the science location Graz. Further, the first steps towards a well-networked, internationally visible research community in the field of biomedicine have been effective. Last year, this dynamic development reached a new peak on the initiative and commitment of the long-time BioTechMed-Graz Director Rudolf Zechner: The foundation of the Carl and Gerty Cori Institute of Molecular and Computational Metabolism in cooperation with the Austrian Academy of Sciences sets a course for novel initiatives and at the same time ensures the sustainability of the research alliance in the future.”



Josef SMOLLE

BioTechMed-Graz Universities fit for successful international competition



Univ.-Prof. Dr. **Josef Smolle**
Rector of the Medical University
of Graz (2008–2016)
BioTechMed-Graz Steering Committee
Member (2012–2016)
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The new university legislation implemented in 2004 was a breakthrough for Austrian Universities. Henceforth, the universities were not directly dependent on the Federal Ministry of Science but gained autonomy with full responsibility for their scientific strategies as well as for their financial and economic development. In the course of university reorganization, the traditional Medical Faculties became independent universities, offering the opportunity for closer cooperation with the respective university hospitals.

There was some concern that the independent medical universities would no longer cooperate with institutes or faculties of their previous institutions. However, the opposite turned out to be true. Since 2004, cooperation across disciplines and across institutions has become an even more pronounced hallmark of Styrian universities.

NAWI Graz, a joint effort of University of Graz and Graz University of Technology, was the forerunner. The two universities step by step combined their study programs in natural sciences. Since several disciplines like

physics, biochemistry and molecular biology were represented in the Medical University of Graz as well, the concept of BioTechMed-Graz was born. This project aimed at the cooperation of all three universities, with the addition of clinical sciences by the Medical University of Graz, technical developments by the Graz University of Technology, and other aspects, as, for example, zoology, microbiology, philosophy, and ethics, by the University of Graz. Thus, the acronym “BioTechMed” stands for “biology” – mainly provided by University of Graz, “technology” provided by the Graz University of Technology, and “medicine”, contributed by the Medical University of Graz. BioTechMed-Graz is based on a contract between these three universities and comprises a straightforward governance structure for the development of strategic goals, coordination of professorship appointments and joint utilization of research facilities.

There are three main reasons why this unique cooperation was implemented particularly in Graz. First, Graz universities were always aware that on the international scale, they are small institutions, and that



Figure 5:
Signing of the BioTechMed-Graz detail agreements with
Former Rector Smolle, Former Federal Minister Mitterlehner,
Former Rector Neuper and Rector Kainz
in March 2014
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therefore combining resources and efforts would be mandatory. Secondly, Graz and Styria have a long tradition of cooperation between academia on one hand, and industry and small and medium enterprises on the other, resulting in an outstanding research and development quota exceeding 5% of the regional domestic product. Thirdly, our universities immediately recognized the opportunities of the newly acquired status of autonomy provided by Austrian legislation. Since then, the Austrian federal government invested more than 1 billion in the university infrastructure in Graz, both contributing to and honoring the success of the joint efforts of intensified cooperation. Even more importantly, BioTechMed-Graz had a significant impact on the acquisition of third-party funding, scientific output, and on the international ranking of the three universities.

In addition to the three universities sharing their research endeavors in BioTechMed-Graz, Styria hosts the University of Music and Performing Arts, the Montanuniversität Leoben, two Universities of Applied Sciences and two Colleges of Education, adding up

to nine institutions of tertiary education and research. These institutions constitute the so-called Science Space Styria, which again fosters transdisciplinary cooperation on a comprehensive level, covering science, humanities and arts and thereby creating a comprehensive “universitas” in its actual meaning.

BioTechMed-Graz as a nucleus of this spirit of cooperation has prospered now for 10 years and has shown a remarkable scientific development. As rector of the Medical University at the time of the establishment of BioTechMed-Graz, I would like to thank my former colleagues from University of Graz and from the Graz University of Technology for their confidence and mutual trust, which was an indispensable prerequisite for starting this unique BioTechMed-Graz cooperation. May it thrive successfully for the next decade (Figure 5)!



Edward VIGMOND

A decade of cross-disciplinary biomedical research already



Prof. **Edward Vigmond**, PhD
LIRYC and University of Bordeaux,
France
Chair of the International Scientific
Advisory Board of BioTechMed-Graz
(ISAB)
on behalf of the ISAB
© LIRYC

When I was put forward to be a member of the international scientific advisory board (ISAB) for BioTechMed-Graz over 10 years ago, I had no idea that I would still be involved today, nor what a great success the research alliance would turn out to be.

Indeed, it seems so distant as I was in another country at another position at the time.

Similar to BioTechMed-Graz, I was involved in the establishing of the multidisciplinary institute at which I work, and I am happy to see that both have succeeded.

I became the first, and only, chair of the ISAB, probably because everyone else was afraid of more work, but it is a role which I am proud to have assumed. The core of the ISAB has remained since its inception, which I think is a testament to the enthusiasm of its members to see BioTechMed-Graz succeed. The ISAB has also grown to better accommodate the broad interests of the BioTechMed-Graz community.

I like to think that the BioTechMed-Graz program has benefitted from the enthusiastic efforts of the ISAB. Its members have shown strong commitment, from offering suggestions on how to run and implement the initiative, as well as evaluating proposals. We, the members of the ISAB, have all enjoyed our time visiting Graz, due to viewing first-hand the positive evolution of the initiative, seeing the excellent science being performed, and, not least, the gracious reception always extended to us. I know that I speak for the ISAB when I say that we are impressed with the growth of the research initiative. BioTechMed-Graz has many reasons to be proud one of which is the quality of the people involved at all levels. Furthermore, the research proposed and performed has been cutting edge, with articles in many top journals (Figure 6).



Figure 6:
ISAB Members Prof. Villringer, Prof. Kübler, Prof. Vigmond
(left to right)
© BioTechMed-Graz

The opportunity afforded by this funding is quite remarkable. Researchers in Graz should appreciate the opportunities made available by this initiative. I must admit that I am a bit envious of this targeted call. BioTechMed-Graz has worked hard to distribute the resources in a way to maximize impact, offering several programs of which it should be proud. It is strong in its targeting of young talent to help promote the continuance of excellence in Graz. It demands interdisciplinary collaborative work which is vital for progress in this domain. While this aspect seems obvious, it is not always easily achieved. BioTechMed-Graz actively tries to arrive at having proper gender balance. The Lab Rotation, funding for graduate students to establish themselves, and the call for flagship proposals represent a wide spectrum of funding.

BioTechMed-Graz is more than one person's vision. We have seen a change of administration and leadership, at the University level with the Rectors, and at the initiative level with the directors, with no diminution of enthusiasm or support. It is great to see the cooperation between the universities, allowing for research of a broader scope to explore problems concerning health with more tools, more approaches, and more diverse expertise. It is heartening to see BioTechMed-Graz actively promoting this community through its cross-institutional events.

It has been a privilege to serve so long on the board and I hope for its continued success, no matter my future level of involvement.



Caroline SCHOBER

BioTechMed-Graz – A success

When it comes to what Graz is famous for, it does not end with the Schlossberg, green pumpkin seed oil and the “Friendly Alien”. Like no other place I know, Graz has this intriguing culture of full and open collaboration - especially among universities. Some highly successful and visible alliances and innumerable informal networks are living proof. Maybe the secret to this is the size of Graz and its institutions: large enough to have a differentiated and attractive portfolio, but small enough to easily acknowledge you still need each other to be visible beyond the county of Styria. Small enough to know and value each other, to have people move back and forth between institutions, move abroad and love coming back. The general personality of people certainly has a large share, too: having settled in Graz from all over the Habsburg empire for hundreds of years, being able to collaborate and integrate were key skills for the region to prosper. Maybe it is the sunny weather that makes people friendlier and more open than they are North of the Alps. Maybe it is the vicinity to Southern Europe



Mag. **Caroline Schober**
Vice-Rector for Research and International Affairs, Medical University of Graz
Chair of the BioTechMed-Graz Executive Committee
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that makes people more pragmatic and hands-on. The seed hence fell on very futile soil when BioTechMed-Graz was founded 10 years ago.

The clear framing as a research alliance and its distinct focus on the interface of basic biomedical science, technological developments and clinical applications was certainly a smart move: distinct enough to be anything but arbitrary, yet inclusive enough to draw a critical mass of researchers. It is especially noticeable that after just a few years of getting to know each other and testing possible forms of collaboration, a few highly successful cooperation formats were established and still prosper. This also illustrates the faith of the universities' leadership in BioTechMed-Graz, since substantial funds from the individual universities were put into the common pot for Flagship projects, Young Researcher Group Grants and others. Notably, despite the contributions made from each side, the awarded funding is often redistributed unevenly among the universities, strictly based on the scientific quality of the proposals judged by



Figure 7:
Former BioTechMed-Graz Co-Director Holzer,
Vice-Rector Bischof and Vice-Rector Schober
© BioTechMed-Graz



Figure 8:
Former Co-Director Holzer, Vice-Rector Bischof,
Former Rector Neuper, Vice-Rector Schober
and Director Zechner
© BioTechMed-Graz

international peer review. I am convinced that this intentional lack of direct university influence, mutual trust and belief in the idea of BioTechMed-Graz, paired with the strongest support from university leadership for the common framework and instruments was and is the main secret for success.

Would it have been possible to achieve what BioTechMed-Graz has without this alliance being formally installed? I very much doubt it for a variety of reasons:

Although you know each other in Graz, you only know the researchers in your field or close to it, those you meet by chance or who you were referred to. Interdisciplinarity is one of the hardest things to actually establish, even though it is very fashionable to ask for it. But who really has the time to stray around looking for the one you have not been looking for because you didn't know what you needed? Hence, the scope of BioTechMed-Graz was so very wisely chosen to meet the right people from other yet not too distant fields of expertise.

There is a lack of funding for collaborative project consortia with new ideas but not yet in the scope for an SFB. BioTechMed-Graz has been a key instrument to bring them up to the level of competitiveness for such program project grants. And will hopefully be a rocket to boost independent careers of young researchers, which is the most critical career stage of all in a scientist's life.

BioTechMed-Graz has clearly improved the visibility for Graz in the field of biomedical research to an extent that no one university would have been able to. Although not all university leaders might like to hear it: it is not a negative if the Graz universities blur when looked at from further away. What is important for scientists all over the world is to know that the small city of Graz is a research hot spot in certain fields. What is important is that they are thrilled to be invited for a talk or conference – and that they love to keep coming back because of the great research that is done, the wonderful people you meet here, the hospitality and the picturesque landscape. And most of all its enormous potential and willingness to sincerely, openly and reliably cooperate.



Harald MANGGE,
Markus STEPPAN,
Rudolf STOLLBERGER

The start-up phase – Three perspectives

Harald MANGGE

From the perspective of the Medical University, the foundation phase of BioTechMed-Graz was challenging. On the one hand, the benefit of a scientific cooperation between the University of Graz, Medical University of Graz and Graz University of Technology promised advantages such as stimulated fundraising and joint use of infrastructure and brainpower. However, a clear concept was missing in the very first starting phase, and the potential to become a competitive threat to other projects (NAWI Graz) as well as the issue of competence when multiple universities are involved stood against a straightforward development of BioTechMed-Graz.

It was my commitment to establish a productive basis for a successful integration of the Medical University Graz into the BioTechMed-Graz idea during these first years of development. The positioning of medical science required a well-balanced mixture between impulses for pre-clinical basic research, and stimulation of translational projects with future clinical potential.



Univ.-Prof. Dr. **Harald Mangge**
Medical University of Graz
BioTechMed-Graz Coordinator
(2012–2015)
© Medical University of Graz

A main effort of the developmental work until 2016 was to track research groups/ activities where the benefit of shared infrastructure and medically relevant projects of all three universities will come together in promising medical joint projects. By this, we provided an effective environment for young scientists and one Medical University of Graz BioTechMed-Graz professorship.



Figure 9:
BioTechMed-Graz Workshop in 2013
© BioTechMed-Graz



Ao.Univ.-Prof. Dr. **Markus Steppan**
University of Graz BioTechMed-Graz
Coordinator (2012–2015)
© Tzivanopoulos

Markus STEPPAN

The establishment of the BioTechMed-Graz cooperation was a challenge for the coordinator team, as the different cultures of the participating universities had to be brought to a common denominator. The regular intensive exchange between the researchers and the coordinator team of all three universities, which created a common basis of trust, characterized by respect and appreciation, laid the foundation for the successful and prosperous development of BioTechMed-Graz. In the three fields of action - organization and implementation of research projects, coordinated promotion of young scientists and joint acquisition and use of infrastructure - the BioTechMed-Graz cooperation should set standards for university cooperation not only at the Graz site, but in Austria. The joint research and training initiatives and infrastructure investments in the fields of bioimaging, data management, electron microscopy and neuroimaging are examples of this.



Univ.-Prof.i.R. Dr. **Rudolf Stollberger**
Graz University of Technology
BioTechMed-Graz Coordinator
(2012–2015)
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Rudolf STOLLBERGER

My first contact with the idea of BioTechMed-Graz was in 2011 when I was asked by Graz University of Technology to contribute on a first draft of a networking initiative of the Graz universities in this field. I was immediately very motivated, because inter- and transdisciplinarity is in the genes of the field of biomedical engineering and there was also a great need for competitive infrastructures in our field. Moreover, at that time, similar networking initiatives between engineering or natural sciences and medicine had already been established at most renowned university locations.

The initial goals were to strengthen existing research units in the relevant disciplines to make them internationally competitive, to stimulate new research directions, and to promote the translational transition from bench to bedside. During the implementation phase, in addition to great expectations, certain concerns of established structures and units arose, which ultimately led to a strong engagement of the bio-molecular field of the natural sciences. Regardless of the diverse expectations and challenges, the project was able to

achieve significant goals and successes in the first period. The organizational structure created allowed for balancing the interests of the universities and for valuable feedback from the international advisory board, which came from the research environment of the participating research units. The research landscape was sustainably strengthened by a BioTechMed-Graz professorship in the field of the human microbiome, a “Young Investigators Program” was established to support young researchers in the postdoc phase, and various infrastructure projects substantially improved the interdisciplinary research conditions. Creating a competitive research environment without administrative complications is, in my view, one of the central tasks in promoting interdisciplinary research. Another way via special project lines, which try to achieve interdisciplinarity through preferably heterogeneous consortia, promotes the creativity of the applicants when creating the consortium and can be easily presented at review boards. However, it is not certain whether excellent research ideas can be improved by such and other additional conditions. An important original goal, bench-to-bedside research deserves greater focus in the future. In summary: BioTechMed-Graz is a must!



BIOTECHMED-GRAZ IN PRACTICE



10 Years BioTechMed-Graz
2013–2023

Christine MOISSEL-EICHINGER

Congratulations, dear BioTechMed-Graz family!



Univ.-Prof. Dr. **Christine Moissl-Eichinger**
Medical University of Graz
BioTechMed-Graz Professor
© Medical University of Graz

It is a great honor for me to contribute a small text to BioTechMed-Graz's 10th anniversary. From the bottom of my heart I congratulate the whole BioTechMed-Graz family with the members and associated members at all three universities. A special congratulations goes to the founders, the former and the current board of directors, who have, with their vision, created a unique research alliance, substantially shaping health research in Graz!

In 2014, after a competitive selection process, I was offered one of the three BioTechMed-Graz professorships that were established to further strengthen the cooperation between the three universities. My field of research, the microbiome, was particularly suitable for this purpose, as the focus area was already represented in various research groups at Graz University of Technology, University of Graz and the Medical University of Graz. In the summer of 2014, I moved my lab from Regensburg to Graz, where I started to build up my collaborations beyond the Medical University of Graz with all BioTechMed-Graz microbiologists and non-microbiologists.

New, also very interdisciplinary projects were started and led to numerous, highly active collaborations, which currently form the basis of our work - to understand microbiomes in health and disease. One of these collaborations resulted in the "Best collaborative BioTechMed-Graz Paper Award" 2020.

Together with Veronika Schöpf, another BioTechMed-Graz professor, we invented the "BioTechMed-Graz Science Breakfast" to bring people from the BioTechMed-Graz environment together to discuss science-related topics over great food, from proposal writing to science communication. We have really enjoyed hosting these events, which became one of the basic anchors of BioTechMed-Graz.



Figure 10:
Prof. Moissl-Eichinger at the
BioTechMed-Graz Symposium 2014
© BioTechMed-Graz

Now, almost ten years after my arrival at the Medical University of Graz, I have fully established myself personally and scientifically in beautiful Styria. My research group grew from initially two PhD students to meanwhile about 20 persons (including all students), I am strongly involved in teaching (e.g. coordinator of the extension study “Medical Research”), grew internationally (e.g. as deputy speaker of the Microbiome Fachgruppe at the Association for General and Applied Microbiology, or as member of the European Academy of Sciences and Arts), and evolved in science (e.g., by numerous funded projects and published articles, or as a speaker of the research area “Microbiome and Infection” at the Medical University of Graz). Now I have the great opportunity to advance science itself as deputy leader of a newly established FWF Cluster of Excellence “Microbiomes drive Planetary Health”.

BioTechMed-Graz enabled me to settle down as a researcher, establish myself and eventually obtain a permanent position as a university professor here in Graz. I am very grateful for the great opportunity and the unwavering support, trust and open ears I received from the BioTechMed-Graz family. It has been a great endeavor to grow together and establish the BioTechMed-Graz spirit. I am very grateful for the vision of BioTechMed-Graz, and I am convinced of the future opportunities and possibilities, as Graz is the perfect place to do science together. Many thanks to all the supporters during the years, I am looking forward towards the next >10 years of BioTechMed-Graz!



Brigitte PERTSCHY

How the BioTechMed-Graz Flagship grant changed my life as a researcher



Dr. **Brigitte Pertschy**
University of Graz
Flagship Project Leader since 2019
© Lunghammer

At the time when I applied for a BioTechMed-Graz Flagship grant in 2019, I was facing the challenges of being a self-funded project leader, struggling to stably maintain my own position as well as my small research group through FWF grants. While I had several fruitful collaborations with outstanding international research groups, I lacked strong connections within the biomedical research community in Graz.

Since being awarded the BioTechMed-Graz Flagship grant, my life as a researcher has undergone several changes.

Let me begin by highlighting the scientific gains made possible by embarking on a cooperative research project focused on the cellular function of arginine methylation. This topic captivated not only me, but also my three co-PIs in the project, Tobias Madl, Ulrich Stelzl, and Birgit Wiltschi. Working together in our interdisciplinary team enabled us to address scientific questions that would have been insurmountable individually. For instance, the global arginine methylation quantification method developed in Tobias Madl's lab significantly

enhanced our understanding of the cellular conditions that lead to upregulation of arginine methylation. Beyond these direct scientific benefits, collaborating with researchers from diverse disciplines enriched my perspective and empowered me to approach scientific challenges from multiple angles.

Next, I want to emphasize the expansion of my scientific network. Naturally, collaborating on a joint financed project deepened existing partnerships within the project. However, the impact went beyond that. The BioTechMed-Graz-Flagship project served as the foundation for an SFB grant application, which, though ultimately unsuccessful, intensified my interactions with other BioTechMed-Graz researchers during the application phase. This experience opened doors to potential future collaborations.



Figure 11:
Dr. Brigitte Pertschy at the Flagship Project
Hearing 2019
© BioTechMed-Graz

Thirdly, and perhaps most significantly, the BioTechMed-Graz Flagship grant has propelled my university career forward. Through the success of securing this grant, my research and achievements gained recognition in Graz, particularly within my home university. Previously, despite my accomplishments such as high-ranking publications and successful grant acquisitions, there was little recognition of my achievements. The BioTechMed-Graz Flagship grant dramatically increased my visibility as researcher within my home institution, laying the foundation for my subsequent achievement of a permanent university position. The impact of this milestone cannot be overstated, especially for someone who has struggled for years to establish themselves as a scientist in academia. Since then, my research group expanded, and, with a long-term perspective, I could now contemplate larger scientific goals.

Based on all these positive experiences I made, I would like to propose a suggestion for the future. While the primary target group for the BioTechMed-Graz Flagship funding scheme consists of advanced career-stage researchers, my own experience demonstrates that this grant can make a tangible difference for scientists at a

mid-career stage. These researchers have already established independent research groups and thus fall beyond the scope of the BioTechMed-Graz “Young Researcher Group” program. It may be worth introducing a third BioTechMed-Graz grant scheme specifically tailored to mid-career researchers or alternatively, revisiting the current program for advanced researchers to primarily accommodate mid-career scientists.

In conclusion, I am profoundly grateful to BioTechMed-Graz for the impact it has had on my research career. In addition to the personal benefits I have received, I would like to underscore that the diverse programs introduced by BioTechMed-Graz, including the BioTechMed-Graz Flagship program, the Young Researcher Group funding, the Lab Rotation program, and the various networking events, have collectively reshaped the life science landscape in Graz. My only wish to the three participating universities is to further increase their financial support for BioTechMed-Graz, enabling BioTechMed-Graz to further expand their excellent programs.



Anita EMMERSTORFER-AUGUSTIN

Becoming a research group leader



Dr. Anita Emmerstorfer-Augustin
Graz University of Technology
Young Researcher Group Leader since
2019
© Schärfl

In 2018, when I returned from UC Berkeley to the Graz University of Technology for my 12-month FWF Erwin-Schrödinger Return Fellowship, I wasn't really sure, what the future would hold for me. The only thing I knew was that I wanted to do research more desperately than ever. Right on time, I learned about the fantastic opportunity to apply for a BioTechMed-Graz Young Researcher Group. The program seemed like a perfect fit for me and the proposal guidelines read like a personal calling. Thanks to my stay abroad, I felt scientifically inspired and easily found a project idea to convert into a proposal draft. Already at this stage, I was in contact with some of my most important future BioTechMed-Graz collaborators (e.g. Heimo Wolinski, Günther Zellnig, Gerald Rechberger and Ruth Birner-Grünberger), who gave valuable experimental advice and helped me to critically revise the proposal draft. When I learned that I would be invited to the hearing in September 2019, I was incredibly excited. At that time, my first-born daughter was only 2 months old, and I already felt like the luckiest person on this planet. I'll never forget the day of the hearing: Even though

I was extremely nervous, standing and presenting in front of such a big audience, I also felt very strong and confident. The hearing went smoothly. The experts and the audience asked some really good questions, and the atmosphere was relaxed and friendly. When I got the call that my project would be funded, I almost fainted. From that point on, things developed at breakneck speed. I suddenly found myself in a very different position: I was the one looking for staff, instruments and space, and officially invited to our Institute's weekly group leader meetings.



Figure 12:
Dr. Emmerstorfer-Augustin receives the YRG Grant
at the General Meeting 2019
© BioTechMed-Graz

Even though starting my own group was very exciting and fun, it wasn't always easy: Corona hit us as a young, motivated research group at the worst possible time. Freshly started PhD students had to stay home for lockdowns and work in shifts. Experiments didn't work as planned. Project proposals and papers got rejected. However, my own, personal learning curve was extremely steep and every experience made me stronger and wiser. None of this would have been possible without this incredible funding opportunity. Now, 3 ½ years later, I am an independent, young research group leader at the Graz University of Technology. On top of all, I am extremely happy in my personal life. I have a wonderful husband and I am a proud mom of two healthy and lovely kids. I recently got funding for an FFG Bridge project, several papers emerged from this project or are currently under revision. New project proposals are in the making and many new, exciting collaborations developed.

I am also very grateful for the fantastic BioTechMed-Graz network, which has been tremendously helpful, particularly at this early stage of my career. When I applied for the Young Researcher Group Fellowship, I was already aware of the scientific and networking opportunities offered by BioTechMed-Graz. However, now that time has passed, I can confidently say that it is so much more. Being a member of BioTechMed-Graz makes me feel like I am part of something greater — a community of like-minded individuals who share a love for science, thrive in their work, and are passionate about what they do. Lastly, but certainly not least, BioTechMed-Graz has enabled me to achieve something incredible: the crucial and challenging step of becoming an independent group leader.



Marilena WILDING

My Lab Rotation experience



Marilena Wilding, MSc
University of Graz
Lab Rotation Fellow 2019
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Towards the end of my studies in Neuropsychology at the University of Graz I realized that I could no longer ignore the voice in my head, telling me to decide what to do after graduation. The voice became more urgent as the weeks passed and made it hard to be ignored. It's not that I wanted to, it's just that giving the voice space meant making decisions which would shape the foreseeable future. From doing my master's thesis I knew that I liked working in an academic environment, doing neuroscientific research. But would I like it enough to pursue a doctor's degree or would working outside of academia make me happier in the long run? After finishing my master's thesis, I was looking for a trial run in actually working in the field but was well aware that trial runs are not intended in academia. That's why I was surprised when I heard about a BioTechMed-Graz program which was to start soon, allowing graduates from all BioTechMed-Graz- fields to get a first taste of working in academia in one of their partner labs. I was thrilled at this perspective of joining a new lab for four months and having a 'practice'- period after all! This would not only allow me to properly prepare to make a

decision concerning my future but also to do so without any financial pressure due to the generous compensation BioTechMed-Graz would provide.

It was clear to me that I wanted to stay in Neuroscience but get to know different fields and approaches. So, I applied for a position at the Brain-Computer-Interface lab at the Graz University of Technology, which would enable me to expand my neuroscientific horizon and develop new skills along the way. I was accepted and a few weeks after my graduation, in November 2019, I started my four-months adventure at the BCI lab of Dr. Müller-Putz.

On my first day, I was welcomed warmly by the whole team. I didn't have any expectations as to what I'd be doing but was delighted when I was informed that a colleague and I would be working on a new EEG project. This was more than I had hoped for and for the next four months I spent my days first preparing our study, which included not only the technical side but also going to the hardware store and building and painting our own pieces for testing. Then the



Figure 13:
Flyer Lab Rotation Program
© BioTechMed-Graz

testing started and for the first time I was given the responsibility to test participants fully on my own. I loved it and was grateful for the opportunity, which strengthened my professional self-esteem. But next to work-related aspects, I further had the chance to get impressions of what working as a PhD or a postdoc really meant in terms of effort and responsibility. I experienced what working in a lab with colleagues was about, how lunch/coffee routines formed, why frequent exchange with colleagues was so important – not only professionally but also personally, and how rubber ducks can avert professional crises. During my time at the BCI lab I was also invited to all doctoral examinations that took place during my stay and had a chance to see what defending a PhD thesis meant.

Looking back, this program has prepared me for my ensuing path in multiple ways. Not only did I get first hand insights into the scientific process from the conceptualization of a study to eventually publishing it. At the same time, I acquired new skills such as programming, scientific writing, using various toolboxes, and gained self-confidence about my skills as I was being

trusted to manage things on my own. I became aware that working in academia can mean stress and pressure but also an amazing diversity in tasks and high flexibility. And most importantly, I was finally able to address my inner voice, which had backed off a little after starting the program but became increasingly demanding as it reached its end. I was convinced that continuing an academic path would be the right decision. Not long after that, I applied for a position at the Neurovision lab at the University of Graz and was accepted as a PhD candidate. On my last day, the BCI-team equipped me with one of the most valuable things I would need for my new life chapter: a rubber duck to talk to when feeling stuck in my academic endeavors. Although thinking of it as a joke back then, it has never failed me since and will watch me graduate from the first row.



ACTIVITIES AND ACHIEVEMENTS



10 Years BioTechMed-Graz
2013–2023

BIOTECHMED-GRAZ – AN EXCITING JOURNEY OVER 10 YEARS

Aims

BioTechMed-Graz is a research alliance of the University of Graz, the Medical University of Graz, and the Graz University of Technology that merges research activities at the interface of basic Biomedical science, Technological developments and Medical/clinical applications. The alliance was originally founded in the awareness that international competitiveness in the fields of biosciences and medicine can only be achieved through interuniversity cooperation. Combining the strengths of all three relevant universities would create the critical mass in biomedical science in Graz necessary to foster its international recognition.

The main goals of the close cooperation among the institutions were intended to promote the career of young scientists, to enable and finance excellent cooperative research projects and to facilitate the acquisition of shared infrastructure. In addition, attractive networking formats for scientists at all career stages were established to support the interdisciplinary exchange in the main research areas of BioTechMed-Graz.

Organization

BioTechMed-Graz is headed by a steering committee composed of the rectors, the vice-rectors for research, and a university council member from all three partner universities. The current chair of the steering committee is Rector Hellmut Samonigg with Vice-Rector Horst Bischof acting as deputy chair. The steering committee is responsible for the long-term development and strategic focus of BioTechMed-Graz. It meets twice a year to supervise and consult with the directors (Figure 14).

The executive committee, consisting of three members of the steering committee (currently the three vice-rectors for research of the three universities), meets more regularly and receives and discusses the reports from the directors concerning current activities and future developments. BioTechMed-Graz is directed by Prof. Rudolf Zechner (director) and Prof. Robert Krause (co-director). They are responsible for the development of all BioTechMed-Graz funding programs and event formats.

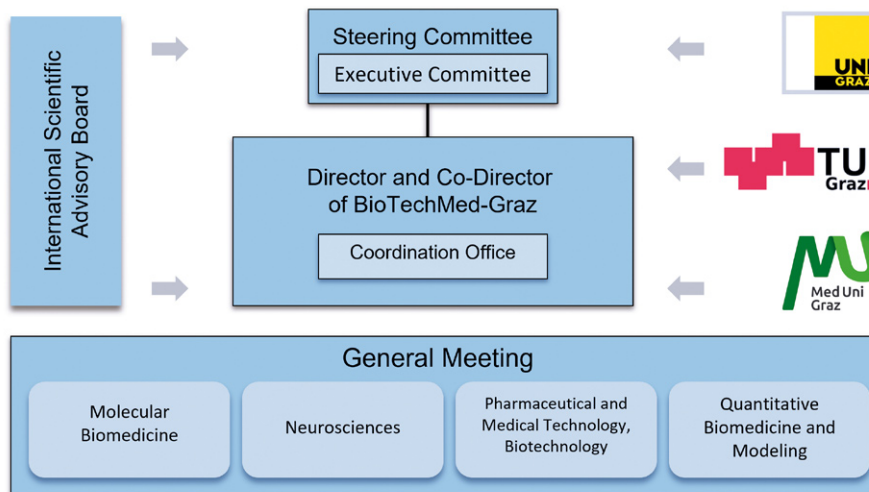


Figure 14: Organization of BioTechMed-Graz since 2016

The BioTechMed-Graz coordination office helps to implement the various BioTechMed-Graz activities.

Additionally, BioTechMed-Graz is strengthened by the expertise of international and local advisors. The international scientific advisory board (ISAB) comprises eight international leaders of the field who help BioTechMed-Graz to carry out an attractive program of high international impact. Prof. Edward Vigmond (University of Bordeaux, France) is the current chair of the ISAB.

The internal advisory board is composed of researchers from the three partner universities of BioTechMed-Graz and advises the directors regarding strategic goals and the implementation of various program formats.



Figure 15: Steering Committee 2016

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Figure 16: Executive Committee 2019

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Implementation of BioTechMed-Graz

In September 2011 the three partner universities signed a letter of intent to establish the interuniversity cooperation of BioTechMed-Graz. In August 2012 a framework agreement for cooperation was signed and as of 2013, the Federal Ministry of Science provided an additional budget for the newly founded cooperation.

During the initial phase of BioTechMed-Graz the three BioTechMed-Graz coordinators Prof. Mangge, Prof. Steppan and Prof. Stollberger implemented several successful projects including the appointment of three BioTechMed-Graz professorships, the funding of 13 BioTechMed-Graz postdoc positions, and organization of symposia.

The BioTechMed-Graz steering committee applied a comprehensive strategic process between 2014 and 2015 to refocus the organization and the aims of BioTechMed-Graz to further improve its visibility and impact.

The installment of a board of directors enabled highly creative flexibility and resulted in the introduction of funding formats for young researchers (e.g. Lab Rotation Program, Young Researcher Group projects) as well as established scientists (e.g. Flagship projects).

Research Areas of BioTechMed-Graz

The interuniversity research cooperation BioTechMed-Graz bundles the competences of the three universities in four research areas: Molecular Biomedicine, Neurosciences, Pharmaceutical and Medical Technology including Biotechnology, as well as Quantitative Biomedicine and Modeling.

Molecular Biomedicine

The research area Molecular Biomedicine includes a large number of laboratories and clinics, which are positioned in all three universities. Among others, these research fields include molecular aging, molecular metabolism and cell biology, structural biology, infection biology and the development of novel antibiotics, microbiome and genome research or tumor biology.



Neurosciences

The research area Neurosciences combines new technologies of brain research, such as functional magnet resonance tomography (fMRT) and MRI with innovative simulation devices, behavioral measurement and observation methods. The goal is to achieve a more comprehensive understanding of the interconnections between cognitive, physiological processes and nerve cells, and their interconnection. Strong research groups in neurosciences exist in all three partner universities.

Pharmaceutical and Medical Technology, Biotechnology

The research area Pharmaceutical and Medical Technology, Biotechnology primarily focuses on drug targeting. The development and research of future-oriented drugs represents a major challenge for the scientists involved. Today, it is only possible to effectively approach such complex tasks by cross-linking various relevant areas of expertise. For example, the integration of biocatalysis and “green chemistry” into the research area of “technologies” advances the use of enzymes in the chemical synthesis of potential drugs and represents an important addition to BioTechMed-Graz.

Quantitative Biomedicine and Modeling

Quantitative methods, advanced imaging technologies and innovative biomarkers are important in biomedicine to diagnose diseases accurately, to devise appropriate therapies and to gain new insights into disease mechanisms. The current trend towards stratified and personalized medicine further reinforces the importance of quantitative analyses. In addition, the amount of biomedical data generated has virtually exploded in some areas (omics data, post-genomic biology) and therefore can no longer be interpreted using traditional analytical approaches. This is where procedures and methods of quantitative biomedicine are indispensable. Similarly, new developments in imaging methodology currently revolutionize basic research and clinical translation in medicine and ask for increased cooperation of computer scientists, mathematicians, engineers, biologists and clinicians, spanning disciplinary and university borders.



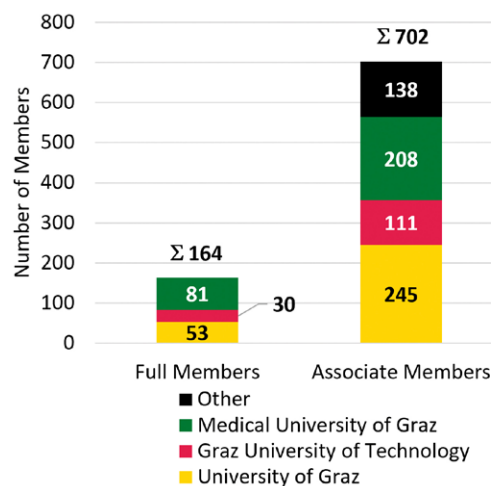


Figure 17: BioTechMed-Graz Members as of May 2023

Performance Report

Budget

The total budget of BioTechMed-Graz in the period 2013-2024 amounts to 21 Mio € (Table 1).

Performance Agreement Period	Total Budget
2013–2015	4.8 Mio €
2016–2018	5.4 Mio €
2019–2021	5.4 Mio €
2022–2024	5.4 Mio €
2013–2024	21.0 Mio €

Table 1: BioTechMed-Graz Budget 2013–2024

Membership

To define BioTechMed-Graz as a research affiliation, the board of directors introduced BioTechMed-Graz memberships in 2016. The criteria to become full members of BioTechMed-Graz are those scientists who lead a successful research team, have significant publication records, confirmed collaboration with partner universities in Graz and have competitive research funding. Full members can apply for BioTechMed-Graz funds such as Flagship projects that are granted on a competitive basis. Alternatively, persons with an interest in BioTechMed-Graz but who are not eligible for full membership can register as associate members of BioTechMed-Graz. Associate members are invited to many BioTechMed-Graz events and eligible to apply to some funding programs.

The number of members has grown steadily and currently comprises 164 full members and 702 associate members (Figures 17–19).

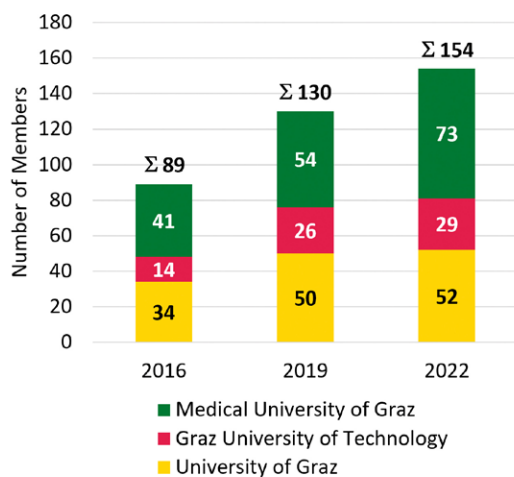


Figure 18: Development of BioTechMed-Graz full members 2016–2022

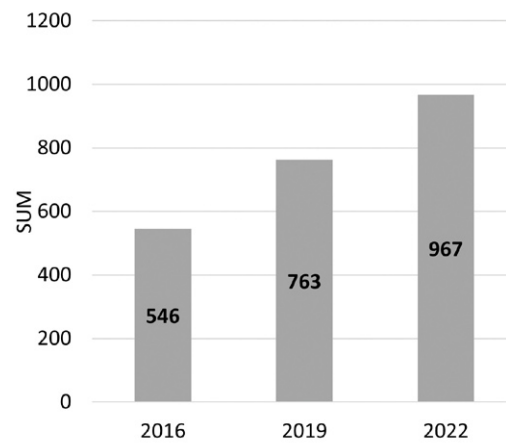


Figure 21: Development of publication output of BioTechMed-Graz full members

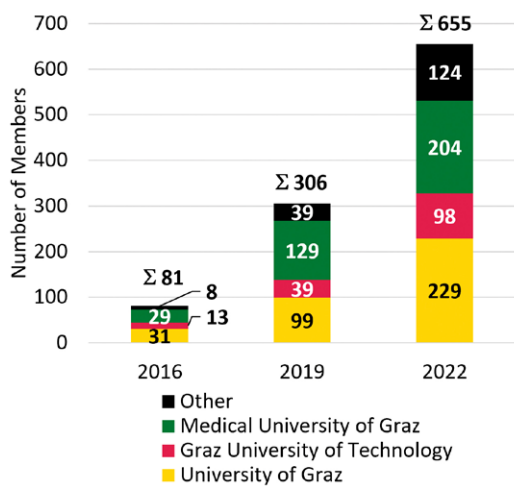


Figure 19: Development of BioTechMed-Graz associate members 2016–2022

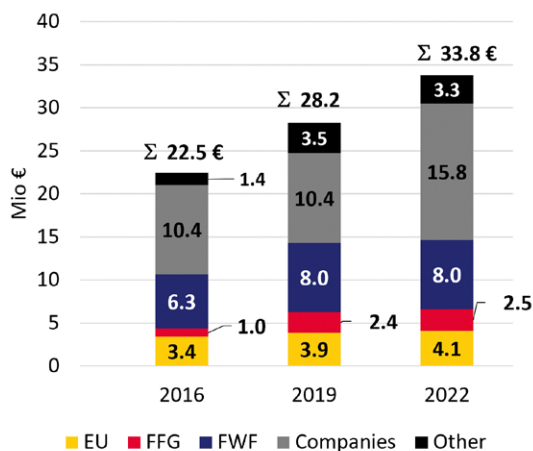


Figure 20: Development of third-party revenues from projects of BioTechMed-Graz full members in Mio €

Competitive Funding & Publications

Over the course of the last 8 years, BioTechMed-Graz members were highly successful in acquiring competitive research funding from national (e.g. Austrian Science Fund FWF, Austrian Research Promotion Agency (FFG)) or international organizations (e.g. EU) as well as industry support (Figure 20). In 2022, BioTechMed-Graz full members were awarded 33.3 Mio € in total revenues. This corresponds to 19 % of all research funding across the three partner universities.

Similarly, the publication output of BioTechMed-Graz members with close to 1000 publications in 2022 is impressive (Figure 21) and highlights the productivity of the BioTechMed-Graz research areas within the university landscape in Graz.

BIOTECHMED-GRAZ PROGRAMS

BioTechMed-Graz Professorships

In 2013, the three partner universities coordinated a joint recruitment process for 99 professorships. During a hearing in November 2013, selected applicants had the opportunity to present their research plans to a broad audience. An interuniversity appointment commission worked together with the International Advisory Board to provide a ranked candidate list to the rectors for the final recruitment decision.

In 2014, three professors were appointed:

- Univ.-Prof. Dr. **Veronika Schöpf**
Neuroimaging, University of Graz
 - Univ.-Prof. Dr. **Mario Albrecht**
Bioinformatics, Graz University of Technology
 - Univ.-Prof. Dr. **Christine Moissl-Eichinger**
Interactive Microbiome Research, Medical University of Graz
- (Figures 22, 23)



Figure 22: Vice-Rector Bischof,
Prof. Moissl-Eichinger, Former Rector Neuper,
Prof. Albrecht, Former Rector Smolle
© BioTechMed-Graz



Figure 23: Prof. Schöpf
and Prof. Moissl-Eichinger
© BioTechMed-Graz



Figure 24: Prof. Schatz and former Rector Kenner at the Symposium 2014

© BioTechMed-Graz

Postdoc Pool

During its initial phase, BioTechMed-Graz funded a postdoc program for cooperative research projects. Of the 44 project applications that were received, 13 postdoc positions were funded for two years.

Table 2 summarizes the scientific achievements of the BioTechMed-Graz postdocs between 2014 and 2017.

Postdoc Pool: Scientific achievements	
Papers	70
Poster Presentations	20
Abstracts	17
Proceedings / Conference Papers	15
Oral Presentations	30
Awards	5

Table 2: BioTechMed-Graz Postdoc Pool: Scientific achievements of the 13 postdocs financed by BioTechMed-Graz

BioTechMed-Graz Symposia

In 2014 BioTechMed-Graz organized a symposium with a keynote lecture by Prof. Gottfried Schatz and the inaugural lectures of the newly appointed BioTechMed-Graz professors. At the BioTechMed-Graz Symposium 2015 the postdocs funded by the BioTechMed-Graz postdoc pool program presented their work. A highlight was Prof. Arno Villringer's keynote lecture. (Figures 24–27)



Figure 25: Audience at the Symposium 2014

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Future Space



Figure 26: Symposium 2015
© BioTechMed-Graz



Figure 27: Prof. Villringer at the Symposium 2015
© BioTechMed-Graz

“Future Space” was an innovation workshop for more than 100 researchers from different areas and disciplines. The underlying idea of the “Future Space” program was to develop new research ideas and innovative experimental approaches within interdisciplinary discussion groups. This “brain storming” activity resulted in a number of potential research proposals, of which three drafts received 10,000 € in seed funding to enable their further elaboration into competitive research projects for potential FWF or FFG funding (Figure 28).



Figure 28: Future Space
© BioTechMed-Graz

Flagship Projects

Flagship projects are intended to support excellent cooperative research projects in one or more of the research areas of BioTechMed-Graz. Projects in basic science, technical applications or clinical translational areas of research are eligible for funding. The ambition of flagship projects is top-notch research bringing high international visibility. Flagship projects are expected to build the basis for follow-up FWF-funded or EU-funded network projects.

The evaluation involves a two-step process. In the first step the board of directors, the executive committee and the international scientific advisory board assess whether the proposals fulfill the required formal criteria and meet a minimum standard of competitiveness. Those successful proposals then move forward in a second step to an in-depth evaluation by reviewers nominated by the Austrian Science Fund (FWF). The evaluation process includes a public presentation of the project plan. The final funding decision is reached on the basis of the recommendation of the review panel which consists of members of the international scientific advisory board and international experts.

To date, three Calls for proposals (2016, 2019, 2022) were announced and 7 projects were funded with a total of 4.15 Mio €.

Flagship Projects 2016

The first call for flagship projects in 2016 resulted in a record number of 37 project proposals. Four flagship projects were funded (Figures 29, 30).



Figure 29: Hearing 2016
© BioTechMed-Graz



Figure 30: Flagship Project Leaders 2016 and the Board of Directors
© BioTechMed-Graz

**EPIAge:
Healthy Aging through
Intermittent Fasting**

Coordinator:

Univ.-Prof. Dr. **Frank Madeo**
Institute of Molecular Biosciences,
University of Graz
(Figure 31)

Funding Amount: 749,000 €

Participating Universities:

Medical University of Graz,
Graz University of Technology,
University of Graz

Project summary and outcome:

Reduction of calories improves health in various conditions such as metabolic syndrome and diabetes, neurodegeneration, even cancer. Intermittent fasting is characterized by periods of complete calorie restriction followed by periods of unlimited calorie intake usually in 24 hour intervals. The cooperative flagship project EPIAge investigated blood samples of patients undergoing such a regime of 24 hour intermittent fasting. Previous studies have already demonstrated that intermittent fasting exhibits life-prolonging and beneficial health effects in several animal models, but the underlying mechanisms remain elusive. EPIAge identified and investigated key players and mechanisms underlying the health effects of intermittent fasting.

Key publication:

Stekovic S et al. [...], Pieber TR, Madeo F (2019). Alternate Day Fasting Improves Physiological and Molecular Markers of Aging in Healthy, Non-obese Humans. *Cell Metabolism*. 30(3): 462-476.e6.



**ILearnHeart:
Image-based Learning in
Predictive Personalized Models
of Total Heart Function**

Coordinator:

Univ.-Prof. Dr. **Gernot Plank**
Gottfried Schatz Research Center
Division of Medical Physics and
Biophysics, Medical University of Graz
(Figure 32)

Funding Amount: 426,870 €

Participating Universities:

Medical University of Graz,
Graz University of Technology,
University of Graz

Project summary and outcome:

ILearnheart has initiated new collaborations through which we have been able to develop fundamental new methods for generating digital heart twins. These are anatomically and physiologically detailed computer models derived from clinical images and measurement data that functionally and biophysically accurately reproduce the patient's heart. The development of these new technologies has led to follow-up projects and international collaborations such as with the Alan Turing Institute for Digital Medicine Cambridge. It also resulted in the foundation of a spin-off that uses the developed technologies in joint industrial projects with leading medical device companies (Medtronic, Abbott, Biosense Webster) to develop new cardiac therapies.

Key publication:

Gillette K, Gsell MAF, Prassl AJ, Karabelas E, Reiter U, Reiter G, Grandits T, Payer C, Štern D, Urschler M, Bayer JD, Augustin CM, Neic A, Pock T, Vigmond EJ, Plank G (2021). A Framework for the generation of digital twins of cardiac electrophysiology from clinical 12-leads ECGs. *Med Image Anal*. 71:102080. Epub 2021 Apr 22.





Figure 31: EPIAge Principal Investigator (PI) Prof. Madeo and Director Zechner



Figure 32: ILearnHeart PI Prof. Plank
© BioTechMed-Graz



Figure 33: Lipases PI Prof. Kratky
© BioTechMed-Graz



Figure 34: Secretome PI Prof. Schild and Prof. E. Zechner
© BioTechMed-Graz

Lipases and Lipid Signaling in Health and Disease

Coordinator:

Univ.-Prof. Dr. **Dagmar Kratky**
Gottfried Schatz Research Center
Division of Molecular Biology and Biochemistry
Medical University of Graz
(Figure 33)

Funding Amount: 749,576 €

Participating Universities:

Medical University of Graz,
University of Graz

Project summary and outcome: Lipases and Lipid Signaling focused on the function of lipid hydrolases in the production and degradation of bioactive lipids. Our studies targeted the lysosomal lipolytic proteome as well as neutral cytoplasmic lipases. We aimed to understand the role of specific lipolytic enzymes in the human placenta and in various inflammatory diseases such as atherosclerosis, colitis, and airway diseases. The flagship project built the foundation of a successful SFB application. Thus, our flagship project is directly linked to the acquisition of the FWF-funded SFB Lipid Hydrolysis, which was recently extended until 2027.

Key publication:

Grabner GF, Fawzy N, Schreiber R, Pusch LM, Bulfon D, Koefeler H, Eichmann TO, Lass A, Schweiger M, Marsche G, Schoiswohl G, Taschler U, Zimmermann R (2020) Metabolic regulation of the lysosomal cofactor bis(monoacylglycerol)phosphate in mice. *J Lipid Res.* 61, 995-1003.



Secretome:

**Crosstalk between Bacteria and Host Cells
in the Gastrointestinal Tract**

Coordinator:

Univ.-Prof. Dr. **Stefan Schild**
Institute of Molecular Biosciences
University of Graz
(Figure 34)

Funding Amount: 429,481 €

Participating Universities:

Medical University of Graz,
Graz University of Technology,
University of Graz

Project summary and outcome:

The human gastrointestinal (GI) tract houses a microbial community with more than 100 trillion members. Microbial crosstalk with host cells involves secreted bacterial effectors with an immense range of potential bioactivities, which may even act systemically. In this project we investigated two structural classes of bacterial effectors. Importantly, each effector type exhibits a dual capacity for pathological effects as well as great therapeutic promise, which strengthens the perspective for exciting discoveries. We aimed to gain a molecular understanding of the (patho)physiological effects of the effectors and move from a descriptive to a mechanistic understanding of the human microbiota. Molecular insights into the microbial crosstalk that occurs in the GI tract are critical to appreciate the impact of these organisms on host health and to harness this knowledge to treat disease.

Key publication:

Kienesberger S, Cosic A, Kitsera M, Raffl S, Hiesinger M, Leitner E, Halwachs B, Gorkiewicz G, Glabonjat RA, Raber G, Lembacher-Fadum C, Breinbauer R, Schild S, Zechner EL (2022) Enterotoxin tilimycin from gut-resident *Klebsiella* promotes mutational evolution and antibiotic resistance in mice. *Nat Microbiol.* 7(11):1834-1848.

Flagship Projects 2019 & 2022

In 2019 two projects of five project applications were selected for funding with a total amount of 1.19 Mio €. In 2022 the evaluation committee recommended one flagship project out of 11 proposals submitted for funding.
(Figures 35, 36)



Figure 35: Flagship Projects and YRG Hearing 2019
© BioTechMed-Graz



Figure 36: Audience at the Hearing 2019
© BioTechMed-Graz

Dynamics of subcellular partitioning through protein modification (DYNIMO)

Coordinator:

Dr. **Brigitte Pertschy**

Institute of Molecular Biosciences

University of Graz

(Figure 37)

Funding Amount: 599,848 €

Participating Universities:

Med University of Graz,

Graz University of Technology,

University of Graz

Project summary and outcome: The objective of DYNIMO was to elucidate the mechanisms by which posttranslational modifications determine the intra-cellular localization of proteins. Specifically, we asked how arginine methylation regulates nuclear import and compartmentalization of RNA-binding proteins.

The BioTechMed-Graz Flagship grant has provided the unique opportunity to collaboratively address an exciting research question within an interdisciplinary team. This has not only deepened scientific collaborations within the project's research groups but also fostered the career development of DYNIMO researchers.

Key publication:

Zhang F, Kerbl-Knapp J, Rodriguez Colman MJ, Meinitzer A, Macher T, Vujić N, Fasching S, Jany-Luig E, Korbelius M, Kuentzel KB, Mack M, Akhmetshina A, Pirchheim A, Paar M, Rinner B, Hörl G, Steyrer E, Stelzl U, Burgering B, Eisenberg T, Pertschy B, Kratky D, Madl T (2021). Global analysis of protein arginine methylation. *Cell Rep Methods* 1:100016.



Figure 37: Vice-Rector Schober, DYNIMO Consortium and Co-Director Krause

© BioTechMed-Graz



Figure 38: Vice-Rector Schober, MIDAS Consortium and Co-Director Krause

© BioTechMed-Graz

Inflammatory Mechanisms in Diabetes Uncovered by Tissue Imaging and Machine Learning (MIDAS)

Coordinator:

Univ.-Prof. Dr. **Thomas Pieber**
Division of Endocrinology and Metabolism
Department of Internal Medicine
Medical University of Graz
(Figure 38)

Funding Amount: 599,220 €

Participating Universities:

Medical University of Graz,
Graz University of Technology,
University of Graz

Project summary and outcome:

MIDAS deciphered the time-dependent mechanisms for β -cells decline in type 1 diabetes. We combined advanced imaging and machine learning techniques to analyze the timing and nature of immune system and β -cell interactions at different stages of type 1 diabetes. The concept of BioTechMed-Graz was a unique opportunity for us to reach out to research groups in other universities. Working together created new ideas and research concepts, which led to increased international recognition and new resources, e.g. a project funded by JDRF in the US. BioTechMed-Graz is an important initiative to foster research in our region.

Key publication:

Karacay C, Prietl B, Harer C, Ehall B, Haudum CW, Bounab K, Franz J, Eisenberg T, Madeo F, Kolb D, Hingerl K, Hausl M, Magnes C, Mautner SI, Kotzbeck P, Pieber TR (2022) The effect of spermidine on autoimmunity and beta cell function in NOD mice. *Scientific Reports*. 12, 4502.

Integrating exercise and NAD+ to reduce cardiometabolic risk (INTERACD+)

Coordinator:

Assoc. Prof. Dr. **Simon Sedej**
Division of Cardiology
Medical University of Graz
(Figures 39, 40)

Funding Amount: 599,930 €

Participating Universities:

Medical University of Graz,
Graz University of Technology,
University of Graz

Project summary and outcome:

BioTechMed-Graz invested in the expanding field of metabolism in exercise science and the emerging field of exosome research by generously supporting the INTERACD+ consortium. The focus of the 3 PhD students on both translational basic research and interventional studies is unique, and is expected to promote important discoveries and stimulate state-of-the-art graduate and post-graduate training programs in Graz.



Figure 39: Director Zechner, PI Sedej, Co-Director Krause

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Young Researcher Groups



Figure 40: Vice-Rector Bischof, INTERACD+ Consortium and Board of Directors
© Lunghammer

The objective of the Young Researcher Group (YRG) program of BioTechMed-Graz is to support the most exceptional and promising postdoctoral fellows within BioTechMed-Graz to launch an independent research group. The program thus aims to bridge a common career gap between the postdoctoral stage and scientific independence. Successful YRG Principal Investigator (PI) are expected to become competitive candidates for national and international tenure track positions in academia. The program should also enable YRG PIs to acquire additional competitive research grants. The evaluation process is identical to the one for the evaluation of flagship projects.



Figure 41: YRG PIs 2019
© BioTechMed-Graz

Young Researcher Groups 2019 & 2022

The first call for Young Researcher Groups was announced in 2019. Out of 14 project proposals received, three Young Researcher Groups were selected and funded. In 2022, 16 project proposals were received and five young researcher group projects were selected for funding (Figures 41, 42).



Figure 42: Board of Directors and YRG PIs 2022
© Lunghammer

How membrane lipids cross-talk with the cell wall: A study using sterol modified *Pichia pastoris*

Dr. Anita Emmerstorfer-Augustin
Institute of Molecular Biotechnology
Graz University of Technology
(Figure 43)
Funding Amount: 633,600 €

Personal statement:

"BioTechMed-Graz offers great opportunities for scientific collaborations, not only in terms of expertise, but also in terms of instrumentation and core facilities. In my YRG-group project, we have access to high-resolution microscopy at the University of Graz, state-of-the-art mass spectrometers at the Medical University of Graz, and all different kinds of research equipment at Graz University of Technology. Regular social events additionally support a highly active, flourishing collaborative network."

Key publication:

Lehmayer L, Bernauer L, Emmerstorfer-Augustin A (2022) Applying the auxin-based degron system for the inducible, reversible and complete protein degradation in *Komagataella phaffii*. *iScience*. 25, 104888.



Figure 43: YRG PI Emmerstorfer-Augustin
© Neuwersch

Targeting Excitation-Transcription Coupling for Managing Hypertensive Cardiomyopathy

Ass.-Prof. Senka Holzer, PhD
Division of Cardiology
Medical University of Graz
(Figure 44)
Funding Amount: 657,000 €

Personal statement:

"Winning the BioTechMed-Graz YRG has not only allowed us to push forward on major research questions in cardiology but has also fueled new alliances within the partner universities of BioTechMed-Graz. Some of the newly established collaborations already arose during the hearing procedure, where we identified strong common interests of our research goals with those of DYNIMO. Furthermore, the YRG funding has increased our scientific output in terms of publications and allowed us to train many PhD, master's, and diploma students."

Key publication:

Ljubojevic-Holzer S, Herren AW, Djalilic N, Voglhuber J, Morotti S, Holzer M, Wood BM, Abdellatif M, Matzer I, Sacherer M, Radulovic S, Wallner M, Ivanov M, Wagner S, Sossalla S, von Lewinski D, Pieske B, Brown JH, Sedej S, Bossuyt J, Bers DM (2020). CaMKII δ C Drives Early Adaptive Ca²⁺ Change and Late Eccentric Cardiac Hypertrophy. *Circulation Research*. 127, 1159-1178.

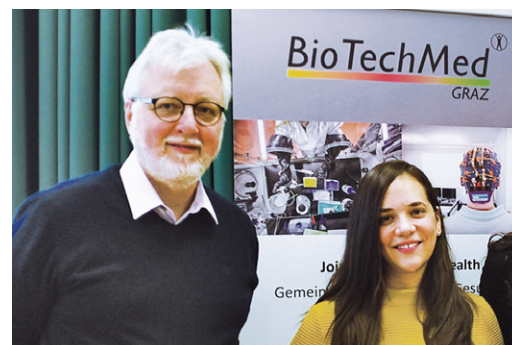


Figure 44: Director Zechner and YRG PI Holzer
© BioTechMed

Neural basis of subjective visual experience

Dr. Natalia Zaretskaya

Institute of Psychology

University of Graz

(Figure 45)

Funding Amount: 657,653 €

Personal statement:

“My project studies brain activities related to the perception of visual illusions. The work will help to understand how the brain represents subjective visual experience that is not produced by sensory input, and what commonalities and differences exist between normal and pathological (hallucinatory) subjective experience. The BioTechMed-Graz Young Researcher Group Program provided me with freedom and resources to pursue and achieve my scientific aspirations.”

Key publication:

Arsenovic A, Ischebeck A, Zaretskaya N (2022) Dissociation between Attention-Dependent and Spatially Specific Illusory Shape Responses within the Topographic Areas of the Posterior Parietal Cortex. *Journal of Neuroscience*. 42 (43), 8125-8135.



Figure 45: YRG PI Zaretskaya and Nobel Laureate Beutler
© Lunghammer

Targeting mitochondria-autophagy circuits in heart failure

Mahmoud Abdellatif, PhD

Division of Cardiology

Medical University of Graz

(Figure 46)

Funding Amount: 659,940 €

Personal statement:

“Receiving the BioTechMed-Graz YRG funding provided me with the opportunity to build my own research team, to conduct cutting-edge research and compete for Tenure-Track positions. In doing so, the funding received has also created new collaborations and strengthened already existing ones within the network of BioTechMed-Graz, which will have a long-lasting impact on my career beyond the funding period. Therefore, I could not emphasize more the role BioTechMed-Graz played in the lives of several early-career researchers over the past decade.”



Figure 46: YRG PI Abdellatif
© Lunghammer

Computational Inference of Pressure Fields from Non-Invasively Measured Flow Patterns

Dr. Elias Karabelas

Institute of Mathematics and Scientific Computing
University of Graz
(Figure 47)

Funding Amount: 522,350 €

Personal statement:

"I am very grateful to be the recipient of the BioTechMed-Graz Young Investigator Grant. This grant has enabled me to take a step up and be responsible for creating my own little research group. I am now on a path towards establishing our work within the academic environment in Graz and beyond. My collaborations within BioTechMed-Graz have increased considerably since being awarded the YRG grant. For example, together with my two new PhD students, I have established strong links to the Medical University of Graz (Prof. Plank), the Graz University of Technology (Prof. Pock) and within my own department (Prof. Martin Holler)."



Figure 47: YRG PI Karabelas
© Lunghammer

Infection-related Redox Systems in Pathogenic Bacteria

Daniel Kracher, PhD

Institute of Molecular Biotechnology
Graz University of Technology
(Figure 48)

Funding Amount: 616,260 €

Personal statement:

"The BioTechMed-Graz Young Researcher Group project allows me to establish my own research team and to follow my own research ideas. Being part of this collaborative community has provided me, as a trained biochemist, with the opportunity to pursue a challenging research topic with direct medical relevance. The collaborations within BioTechMed-Graz have enabled me to tackle new exciting challenges."

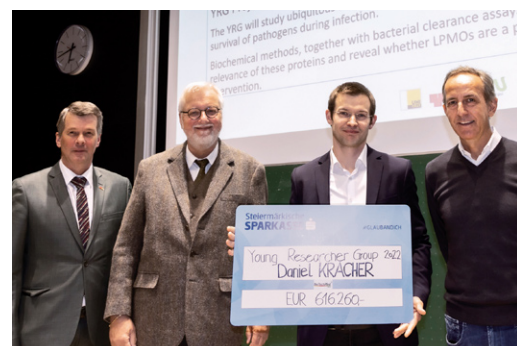


Figure 48: Vice-Rector Bischof, Director Zechner, YRG PI Kracher, Co-Director Krause
© Lunghammer

Active site transfer to generate new enzymes

Dr. Horst Lechner

Institute of Biochemistry
Graz University of Technology
(Figure 49)

Funding Amount: 642,450 €

Personal statement:

“The funding of my BioTechMed-Graz Young Researcher Group laid the foundation to start my own group and enabled me to use the networking opportunities within the BioTechMed-Graz community.”



Figure 49: YRG PI Lechner
© Lunghammer

ELPHI: Bioelectronic Implants for Tunable Chemoimmunotherapy

Linda Waldherr, PhD

Division of Medical Physics and Biophysics
Gottfried Schatz Research Center
Medical University of Graz
(Figure 50)

Funding Amount: 658,400 €

Personal statement:

“The BioTechMed-Graz Young Researcher Groups grant inspired me to expand my research on local chemotherapy implants towards the fields of immunotherapy and cachexia. In Graz, I found wonderful collaborators and experts in both disciplines: Julia Kargl (Medical University of Graz) and Martina Schweiger (University of Graz). BioTechMed-Graz funding enabled me to start my own research group and together we investigate effects of local and controllable chemotherapy on pre-cachexia, and how a combined treatment with immunotherapy affects tumor growth.”



Figure 50: YRG PI Waldherr
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Lab Rotation Program

The Lab Rotation program (LRP) provides potential doctoral students with the opportunity to broaden their scientific interests beyond the topic of their master's thesis before they decide on applications for specific doctoral programs. Candidates can apply to the program and select a research field that is either not directly related to the topic of their master's thesis, or to continue in that area. The duration of the research-stay in the laboratory or working group of a BioTechMed-Graz full member lasts for four months. An evaluation committee consisting of young researchers from the four

BioTechMed-Graz research areas evaluates the applications. The board of directors and the executive committee decide on funding, based on the recommendation of the evaluation committee. Lab Rotation fellows receive 8,000 € for their personal use. Additionally, BioTechMed-Graz supports the host institution with 4,000 € for consumables.

The first Lab Rotation call was announced in 2019. Since then, BioTechMed-Graz has funded 54 Lab Rotations (see Table 3-6 for details).

Number of Applications Received				
2019	2020	2021	2022	SUM
23	22	23	36	104

Table 3: Lab Rotation Applications

Number of Lab Rotations Funded				
2019	2020	2021	2022	SUM
12	11	14	17	54

Table 4: Lab Rotations Funded

Nationality of the Lab Rotation Fellows					
Origin/Year	2019	2020	2021	2022	SUM
Non-EU country	1	3	1	4	9
EU	4	3	4	7	18
Domestic	7	5	9	6	27

Table 5: Nationality of the Lab Rotation Fellows

Gender Distribution					
Gender/Year	2019	2020	2021	2022	SUM
female	9	7	12	14	42
male	3	4	2	3	12

Table 6: Lab Rotation Program – Gender Distribution

The feedback of both rotation students and mentors was overwhelmingly positive (see Figures 51–55).

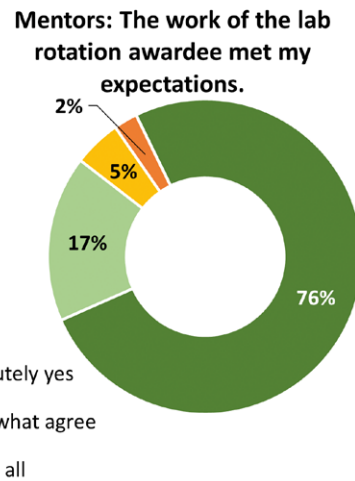


Figure 51: Feedback of the Lab Rotation Mentors

Mentors: The Lab Rotation Program was useful to be able to judge the skills of the lab rotation awardee.

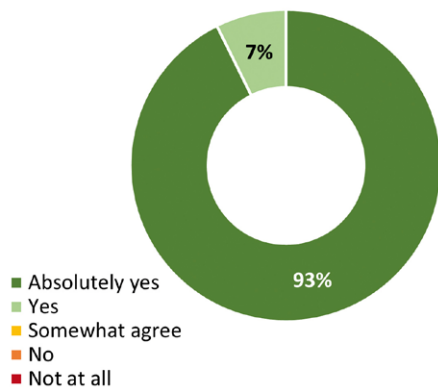


Figure 52: Feedback of Lab Rotation Mentors 2019–2022

Mentors: I am satisfied with the organization of the lab rotation by the BioTechMed-Graz coordination office.

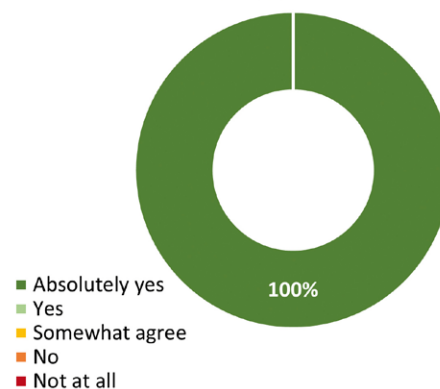


Figure 53: Feedback of Lab Rotation Mentors 2019–2022

Fellows: The Lab Rotation Program broadened my scientific interests beyond the topic of my master thesis.

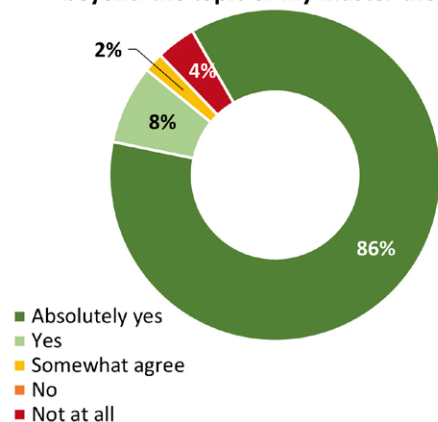


Figure 54: Feedback of Lab Rotation Fellows 2019–2022

Fellows: The Lab Rotation Program helped me to decide on my next career steps.

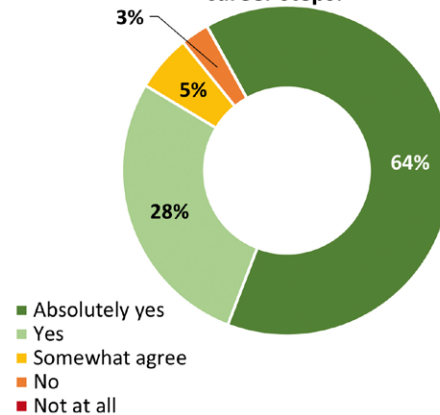


Figure 55: Feedback of Lab Rotation Fellows 2019–2022



Figure 56: Vice-Rector Schober, LRP Fellows 2019, Co-Director Krause
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Figure 57: Vice-Rector Bischof, LRP Fellows 2022, Board of Directors
© Lunghammer

Here are some representative statements from Lab Rotation fellows:

“During my Lab Rotation, I had the opportunity to learn about many topics and working techniques that were completely new to me and that I have never heard of before in my studies. My supervisor encouraged me to talk to the PhD students and scientists in the working group to learn about their research topics too.”

“This Lab Rotation in general was exactly what I needed to actually decide my scientific career path. For me, experiments with actual patient-derived specimens felt a lot more substantial and of higher significance, which subsequently made me decide to continue my path in this field.”

“For me, working with clinical data in general was very enlightening as it was completely new to me and I loved the challenge of being immersed into a new lab environment, where I had the chance to learn so much and form connections with other scientists.”

Here are some representative statements from Lab Rotation mentors:

“Very good opportunity to get to know and recruit in particular international students/ PhD candidates that are unknown to the PI or other lab members. Gives the chance to get to know each other and improves chances of students for further PhD applications even outside the host lab.”

“The Lab Rotation fellow introduced additionally skills and expertise to my research group, mutual benefit given. Student definitely received additional and complementary skills.”

“New team member with a fresh look at the research topic; tackled the tasks with an alternative scientific perspective from which we all benefitted in the group.”

Best Collaborative BioTechMed-Graz Paper

The Best Collaborative BioTechMed-Graz Paper is an annual award to authors to recognize an outstanding collaborative scientific publication. To be considered a collaborative BioTechMed-Graz paper, at least two full members of BioTechMed-Graz of at least two partner universities must be authors of the work.

The international scientific advisory board of BioTechMed-Graz proposes an award winner to the executive committee, which makes the final decision who wins the 3,000 € award.

The Best Collaborative BioTechMed-Graz Paper Award winners were Prof. Ellen Zechner (Institute of Molecular Biosciences, University of Graz) in 2019, Dr. Alexander Mahnert (Diagnostic & Research Institute of Hygiene, Microbiology and Environmental Medicine, Medical University of Graz) in 2020, Karli Gillette (Gottfried Schatz Research Center, Division of Medical Physics and Biophysics, Medical University of Graz) in 2021 and Assoc. Prof. Gerhard Sommer (Institute of Biomechanics, TU Graz) in 2022 (Figures 58, 59).



Figure 58: Vice-Rector Schober, Best Collaborative BioTechMed-Graz Paper Award Winner Prof. E. Zechner, Co-Director Krause (from left to right)
© BioTechMed-Graz



Figure 59: Best Collaborative BioTechMed-Graz Paper Award Winner Dr. Sommer
© BioTechMed-Graz

4th PhD Year

Flagship or Young Researcher Group PhD Students can apply for a 4th PhD year financed by BioTechMed-Graz. The requirement for funding is a research stay abroad for at least six months. Additionally, the thesis must be supervised by a committee comprised of members from more than one university. Since the introduction of this program in 2019, seven students have profited from this opportunity.

Here is one of the students' personal responses:

My name is Dr. Karli Gillette and I originally came to Graz, Austria to work on my PhD within a BioTechMed-Graz flagship project. My research focuses on the development of cardiac digital twins of electrophysiology, which are personalized computer models of how the heart electrically functions. The technology is useful for improving the care of patients suffering from cardiovascular disease. I am now a postdoctoral researcher pursuing an academic career to investigate how sex and race must be accounted for in these models.



Figure 60: Dr. Karli Gillette
© Gillette Private Archive

Many methodological aspects of my current work were developed during my 4th PhD year funded by BioTechMed-Graz. I spent 6 months working at a top research institute in France. My work was published in two peer-reviewed articles and the methods are now deployed at various international research institutions. My first article won two best paper awards and came in second place for the best PhD award at a biomedical conference.

Without the funding and support I received from BioTechMed-Graz, it is very probable that I would have not had the opportunity to finish my PhD, nor would I have developed the methodology that I needed to be successful. I sincerely thank BioTechMed-Graz for playing a pivotal role in my academic career (Figure 60).



INFRASTRUCTURE

BioTechMed-Graz has co-financed various infrastructure projects over the past 10 years (see Table 7).



Figure 61: Upgrade of MR-Scanner Magnetom Skyra
Co-Director Krause, Former Vice-Rector Gattringer,
Rector Kainz, Director Zechner
© Lunghammer



Figure 62: Opening of the Nikon Center of Excellence
(Project BioImaging Graz)
© Lunghammer

Initiative	Project Title	External Funding	BioTechMed-Graz Funding (cash)
Higher Educational Structural Initiative Funding (HRSM)	Omics Center Graz BioImaging Graz Upgrade of a 3 Tesla Research MRI	4,390,000 €	450,000 €
HRSM 2016	Explorative lipidomics of rare and chronic diseases ELMINet Graz – Correlative Electron Microscopy in Bioscience Center for Integrative Metabolism Research (IMCR) Integrated Data Management	4,800,000 €	120,000 €
Infrastructure 2019	Evoq Triple-Quadrupol Upgrade MR-Scanner Magnetom Skyra	- €	327,970 €
Austrian Research Promotion Agency (FFG) Call 2020	ANGSTROM – A next generation STEM for multidimensional imaging and fast dynamic spectroscopy	2,500,000 €	200,000 €
TOTAL		11,690,000 €	1,097,970 €

Table 7: BioTechMed-Graz Funding 2013–2022

BIOTECHMED-GRAZ PHD PROGRAM

The BioTechMed-Graz PhD program links BioTechMed-Graz doctoral education to already existing doctoral programs in the three partner universities. Additionally, the program offers new, interdisciplinary courses as valuable additions to the already existing doctoral training opportunities. BioTechMed-Graz PhD program includes a wide range of courses on professional and transferable skills, courses on research integrity and practical courses such as “Data Visualization in the Life Sciences”.



Figure 63: Audience at the Nobel Lecture 2019
© Lunghammer

EVENTS

To promote social gatherings, networking and informal exchange among the scientists, BioTechMed-Graz organizes approximately 25 scientific and social events every year (Figures 63–65).



Figure 64: Gathering in the Rooftop Mensa after a Faculty Club
© BioTechMed-Graz



Figure 65: Nobel Lecture Audience
© Lunghammer



Figure 66: Science Breakfast Audience
© BioTechMed-Graz

Science Breakfast

This event offers talks from scientific discoveries to social issues that are relevant for scientists and takes place every first Wednesday of the month (Figure 66).

Typical presentations include titles such as: “Science2Wellbeing”, “ERC in brief: Tips for presenting your project and CV”, “Communicating with the public - Why science communication can make us better scientists”, “Global Climate Change”, “Promotion of Innovation” and many more (Figure 67).

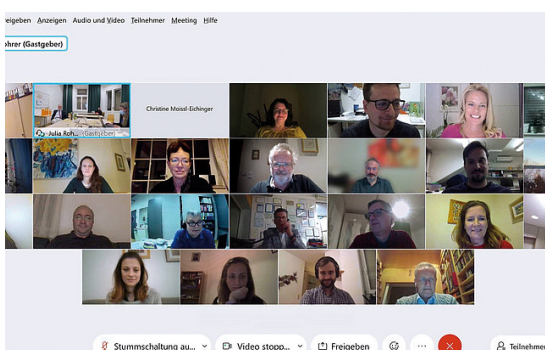


Figure 67: Online Event during the pandemic
© BioTechMed-Graz

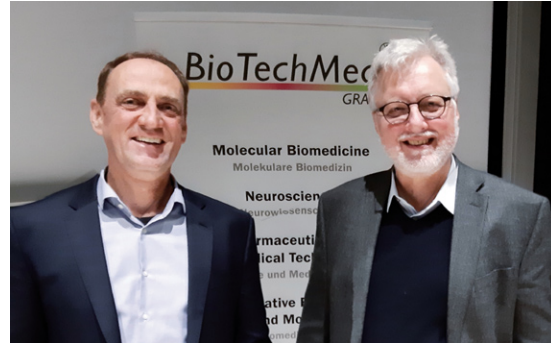


Figure 68: Prof. Brüning and Director Zechner
© BioTechMed-Graz

Faculty Club

Every third Wednesday of the month, the Faculty Club offers all BioTechMed-Graz members a communication platform for interdisciplinary exchange and networking. Faculty club meetings offer flagship lectures by prominent scientists in biomedicine or “open evenings” that provide the opportunity of informal gatherings. Internationally renowned flagship lecturers included Prof. Bäuml, UC Davies, USA; Prof. Brüning (Figure 68), MPI Cologne, Germany; Dr. Lombardi, INRIA Paris, France; Prof. Quarteroni, Politecnico di Milano, Italy; Dr. Thielscher, Copenhagen University Hospital Hvidovre, Denmark; or Prof. Ralser, Charite, Berlin, Germany and F. Crick Institute, London, England.



Figure 69: Former Rector Neuper, Prof. zur Hausen, Director Zechner
© Schweiger



Figure 70: Former Rector Polaschek, Rector Kainz, Prof. Hell, Rector Samonigg
© Lunghammer

BioTechMed-Graz Nobel Lectures

The BioTechMed-Graz Nobel Lecture celebrates the outstanding contributions of Nobel laureates in the research fields of BioTechMed-Graz. Once a year, BioTechMed-Graz invites a Nobel laureate to give a lecture in Graz. The talk is open to the interested public.

The inaugural BioTechMed-Graz Nobel Lecture started in 2019 with Nobel Laureate Prof. Harald zur Hausen, Deutsches Krebsforschungszentrum in der Helmholtz-Gemeinschaft, Heidelberg, Germany. Prof. zur Hausen talked about "Prevention of Cancer: The Perspective of Novel Cancer-Linked Infections".
(Figure 69)

Prof. Harald zur Hausen received the Nobel Prize for Physiology or Medicine for his discovery of specific human papillomavirus types and their role in cervical cancer in 2008. His research enabled the development of vaccines against one of the most frequent forms of cancer in women.



Figure 71: Director Zechner, Prof. Beutler, Rector Samonigg, Co-Director Krause
© Lunghammer

In 2019, Nobel Laureate Prof. Stefan Hell gave the BioTechMed-Graz Nobel Lecture on "Optical microscopy: the resolution revolution" at Graz University of Technology. In his inspiring lecture, Prof. Hell explained the principle of super-resolution fluorescence microscopy. In addition, he gave a fascinating and very personal insight into the development of his scientific career and numerous little and big steps that led to the discoveries rewarding him with the Nobel Prize 2014 (Figure 70).



Figure 72: Young Investigator Retreat 2018
© BioTechMed-Graz

Young Investigator Retreats

Finally, Nobel Laureate Prof. Bruce A. Beutler presented the “BioTechMed-Graz Nobel Lecture” at the Medical University of Graz on “Discovering TNF, TLRs, and other proteins with key importance in immunity”. Prof. Bruce A. Beutler is an immunologist and geneticist and was awarded the Nobel Prize in Physiology or Medicine in 2011 for discoveries concerning the activation of innate immunity. His research is considered a revolution in our understanding of the human immune system and is crucial for the development of new therapies to fight infections, autoimmune diseases, and cancer (Figure 71).

With an audience of 500 guests per event, the Nobel Lectures were a highly popular success. The feedback of the audience was overwhelmingly positive and many people from the audience took the opportunity to talk to the Nobel laureates at the subsequent get together at the buffet.

In 2016, 2018 and 2021 the PIs of the flagship projects and young researcher group projects and their PhDs and postdocs met at the “BioTechMed-Graz Young Investigator Retreat”. At this event, usually organized at a vacation resort outside of Graz, young researchers present their work and projects with the opportunity of ample discussion and exchange with researchers from different research areas. In 2021, members of the international scientific advisory board were present at the retreat, participated in the scientific discussions and were impressed by the quality of the young researchers (Figures 72–75).





Figure 73: Young Investigator Retreat 2016
© BioTechMed-Graz



Figure 74: Time Management Workshop
© BioTechMed-Graz



Figure 75: Young Investigator Retreat 2021
© BioTechMed-Graz

FUTURE DEVELOPMENTS

The term of office for the current directors ends on December 31, 2024. Since the universities envisage the continuation of BioTechMed-Graz, a new board of directors will have the opportunity to enhance and further develop the BioTechMed-Graz program in coming years. A few new developments have already been started and will certainly shape the landscape of biomedical research in Graz.

The Carl and Gerty Cori Institute of Molecular and Computational Metabolism

In October of 2022, the President and Vice-President of the Austrian Academy of Sciences (ÖAW) Werner Faßmann and Ulrike Diebold, as well as the rectors of three universities in Graz signed a cooperation agreement for the foundation of the Carl and Gerty Cori Institute of Molecular and Computational Metabolism in a ceremonial setting and in the presence of the Federal Minister for Education, Science and Research Martin Polaschek and the responsible Regional Minister for Science and Research Barbara Eibinger-Miedl as political representatives (Figures 76–78).

The Cori Institute was founded because of the topicality of the research area and the national and international recognition of metabolism research and mathematical modeling in Graz. The Cori Institute is the first ÖAW institute to be founded in more than 10 years. BioTechMed-Graz celebrates this milestone which is certain to drive the development of biomedical research in Graz and Austria for years to come.

The Cori Institute was named to honor the biochemists Carl and Gerty Cori who received the Nobel Prize for Physiology and Medicine in 1948. The Institute will break new, innovative ground in the study of metabolic processes and their role in the pathogenesis of extremely common and often life-threatening diseases. Thematically the Institute will focus on metabolic processes leading to environment- and age-related metabolic diseases such as diabetes or coronary heart disease, the role of metabolism of pathogenic microorganisms and their hosts in infectious diseases, and the relevance of metabolism in the development of cancer and cancer-associated cachexia.

Linking experimental metabolic research with mathematical modeling and simulation at the Cori Institute offers a highly innovative approach to tackle major threats to human health. It requires close collaboration of researchers from the natural sciences, medicine, formal sciences (mathematics, computer science), and technical sciences in a highly interactive spirit provided by the Cori concept.

The partner universities of BioTechMed-Graz will provide the institute building and basic infrastructure to the ÖAW, which will operate the research facility with 10-12 research groups. The proposed location of the Cori Institute is the former Allnex



Figure 76: Official Signing of the Cooperation Agreement

© Lunghammer



Figure 77: Press Conference with Minister Polaschek, Regional Minister Eibinger-Miedl, ÖAW President Faßmann and Rector Samonigg

© Lunghammer



Figure 78: ÖAW President Faßmann, ÖAW Vice-President Diebold, Director Zechner, Vice-Rector Reidl

© Lunghammer



Figure 79: “Reden wir über Wissenschaft – im Kaiserfeld”

© BioTechMed-Graz

Tackling Science Skepticism

area in Leechgasse in close vicinity to the partner universities. Although it will take some years to finish the construction work for the Cori Institute, its implementation has started already. The ÖAW appointed a search committee in spring of 2023 with the task to identify outstanding leaders that are qualified and motivated to become the inaugural director of the institute.

The foundation of the Carl and Gerty Cori Institute of Molecular and Computational Metabolism, a cooperation between all BioTechMed-Graz partner universities and the ÖAW, brings a cutting-edge research institution of high international visibility to Graz and represents a highlight in the evolution of BioTechMed-Graz.

In 2022, BioTechMed-Graz initiated a new, interactive event to bring together scientists and the general public for discussions in an attempt to tackle increasing science skepticism in our society. In this series “Reden wir über Wissenschaft – im Kaiserfeld” interested persons of all social classes meet scientists in discussion groups of 25 individuals. This format offers the opportunity to discuss critical topics and developments of concern to the public including neurotechnology, probiotics, vaccination or 5G network in telecommunication (Figure 79).



APPENDIX



10 Years BioTechMed-Graz
2013–2023

BioTechMed-Graz

Boards and Committees

Steering Committee

University Council Members

Prof. Dr. Dr. h.c. Ulrike Beisiegel (2018 – 2022)
Dr. Margit Endler (2012)
Mag. Monika Fehrer (2012)
Univ.-Prof. Dr. Alfred Gutschelhofer (2023 – today)
Dr. Cattina Leitner (2012 – 2018)
Univ.-Prof. Dr. Christa Neuper (2023 – today)
Dr. Winfried Pinggera (2013 – 2018)
Univ.-Prof. Dr. Karin Schaupp (2013 – 2018 and 2020 – 2023)
Univ.-Prof. Dr. Renée Schroeder (2018 – 2020)
Em.Univ.-Prof. Dr. Hans Sünkel (2018 – 2023)
Prof. Dr. Angelika M. Vollmar (2022 – today)

Rectors

Univ.-Prof. Dr. Dr.h.c. Harald Kainz (2012 – today)
Univ.-Prof. Dr.phil. Christa Neuper (2012 – 2019) (chair: 2012 – 2019)
Ao.Univ.-Prof. Dr. Martin Polaschek (2019 – 2021)
Dr. Peter Riedler (2022 – today)
Univ.-Prof. Dr. Hellmut Samonigg (2016 – today) (chair: 2019 – today)
Univ.-Prof. Dr. Josef Smolle (2012 – 2016)

Vice-Rectors

Univ.-Prof. Dr. Horst Bischof (2012 – today) (deputy chair: 2016 – today)
Univ.-Prof. Dr. Christof Gattringer (2019 – 2020)
Ao.Univ.-Prof. Dr. Dr.h.c. Irmgard Lippe (deputy chair: 2012 – 2016)
Univ.-Prof. Dr. Joachim Reidl (2021 – today)
Dr. Peter Riedler (2012 – 2019)
Mag. Caroline Schober (2016 – today)
Executive Committee (since 2015)
Univ.-Prof. Dr. Horst Bischof (2015 – today)
Univ.-Prof. Dr. Christof Gattringer (2019 – 2020)
Univ.-Prof. Dr. Christa Neuper (2015 – 2019) (chair: 2015 – 2019)
Univ.-Prof. Dr. Joachim Reidl (2021 – today)
Mag. Caroline Schober (2016 – today) (chair: 2019 – today)

Executive Board

Coordinators (2012-2015)

Univ.-Prof. Dr. Harald Mangge (2012 – 2015)

Ao.Univ.-Prof. Markus Steppan (2012 – 2015)

Univ.-Prof.i.R. Dr. Rudolf Stollberger (2012 – 2015)

Board of Directors (since 2016)

Director:

Em.Univ.-Prof. Dr. Rudolf Zechner (2016 – today)

Co-Directors:

Univ.-Prof. Dr. Peter Holzer (2016 – 2017)

Univ.-Prof. Dr. Robert Krause (2018 – today)

International Scientific Advisory Board

Prof. Stephanie Amiel (2018 – 2020)

Prof. Dr. Bernhard Hauer (2020 – today)

Prof. Dr. Andrea Kübler (2013 – today)

Prof. Dr. Claus-Michael Lehr (2013 – today)

Prof. Dr. Ester Lutgens (2020 – today)

Prof. Dr. Dr. h.c. Peter Maaß (2021 – today)

Prof. Dr. Stephan Sigrist (2013 – today)

Prof. Edward J. Vigmond, PhD (2013 – today)

Prof. Dr. Arno Villringer (2013 – today)



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