Universität Basel

Department Biomedizin

Newsletter
September 2022

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Basel

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Dear Reader,

Let me start by congratulating the new professors appointed at the University of Basel who will have the DBM as their scientific «home»: Carolyn King, Mascha Binder and Mattia Zampieri! They will all set up their labs in the Mattenstrasse building and you will hear more about them in the upcoming editions of this newsletter.

In this issue, you will have the chance to become more familiar with the work and the teams around Clémentine Le Magnen and Raphael Guzman, as well as to peruse some personal notes by Amanda Ochoa from Beat Kaufmann's group. Don't forget to read «What is very special and unique about the DBM Microscopy Facility» and to reflect on kindness at work. Do you have feedback? Five boxes at the different DBM locations are ready to receive comments letting us know «what's on your mind.»

Summer was packed with exciting events... It was fun for me to sort through the pictures presented here. Finally, one question for you:
Who is playing cards at the Kraftwerkinsel?

I wish you a pleasant and productive fall season!

Ivan Martin
Director of the Department of Biomedicine

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Kindness is essential to a healthy work environment. A commitment to be kind can bring major benefits. Being kind means that you can make hard decisions and stand up to difficult situations, but still being respectful and empathetic towards your colleagues.

Here are 6 proposed ways to implement a culture of kindness towards others, in your daily work:

1. Listen more. Learn to listen with the intent to understand. Don't just dismiss or ridicule others' viewpoints. Listening shows that you care.

2. Offer help and support to team members who are struggling, even if this will unlikely lead to a co-authorship.

3. Show appreciation. Give more vocal praise and acknowledge the contribution and efforts of others.

4. Treat everyone with the same level of respect, whether they are trainees or Research Group Leaders.

5. Be considerate. For example holding the door or keeping the elevator door open to the person behind you.

6. Mind your manners. Say «Good morning» or «Hi» to colleagues more often and possibly offer them a smiling face.

How we treat others shows our values and true character. In the end, each one of us makes the DBM successful and can be an example of great teamwork. Being kind contributes to create a healthy and enjoyable place to work and is fully compatible with remaining ambitious and competitive. Join in and make a difference!

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DBM Feedback Box

Honest feedback is a gift, since it allows us to improve. Feedback is essential for learning and growth, and we can all benefit from receiving productive advice. Feedback comes in two primary forms: negative and positive. Both are helpful and valuable. What's on your mind?

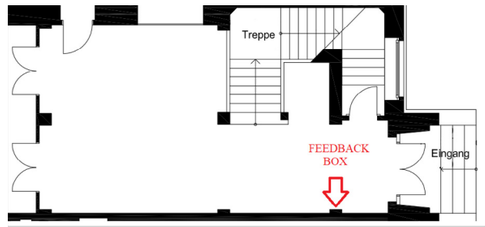
We encourage you to take advantage of this new instrument at the DBM. Share your thoughts and feelings with us – your point of view is welcome! You will now find a DBM feedback mailbox in each of our five houses. You are welcome to download the form and drop it into one of the mailboxes, either anonymously or with your name. Rest assured that every single concern and criticism, but also every acknowledgement, will be seriously considered and treated confidentially. Stay tuned for the next issue of our newsletter, where we will discuss some feedbacks.

Placement of the Boxes

Hebelstrasse
Second floor, next to the elevator

Mattenstrasse
Next to the entrance EG

Pestalozzistrasse
Next to the entrance



Klingelbergstrasse
Next to the mailboxes

Petersplatz
UG common room

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Amanda Ochoa

Discovering a unique research environment at the DBM

Basel… Honestly, as a bachelor's student in biology in Mexico City, I had never heard of this science hub in the middle of Europe. Later on, however, while doing my PhD at New York University in NYC, I began to hear rumors about this hidden research «oasis.» As it turns out, the work I was doing on the regulation of gene expression in the early Drosophila embryo had its roots in research performed in none other than the Biozentrum here in Basel. As I continued my studies in New York, we hosted seminars by several scientists from the University of Basel, who spoke about diverse topics ranging from immunology to cell biology to mathematical modelling. The common denominator in all these seminars was the quality of the findings, the profound expertise, and a seemingly effortless ability to collaborate… So, I decided to come to Basel for my postdoc.

When I started work here in Basel, I realized that this place is truly unique in its mixture of basic, translational, and applied research institutions, in addition to world-leading pharma companies and numerous startups… And when I need a break from science or some inspiration, it is also the place to be for arts and culture.

This realization has sunk in more deeply since I joined the DBM in 2015, as a scientist at the Kaufmann Cardiovascular Molecular Imaging Laboratory. Here, we develop tools for the early detection of cardiovascular diseases, as well as studying inflammatory aspects of heart disease.

The work we do in the lab is directly influenced by the needs that are observed in the cardiology clinic, where doctors often treat patients with advanced cardiovascular problems. Wouldn't it make more sense to diagnose these diseases before they reach a dangerous point and take action? This is what we try to do in our lab. Cardiovascular diseases remain silent for years before causing an event. During this silent period, there are small changes at the cellular endothelium level, which cannot be detected using conventional imaging methods. What we do in our lab, in a nutshell, is to develop contrast agents, in our case lipid shell microbubbles coated with antibodies or other small binders that recognize molecules that are early markers of disease. Upon injection, these functionalized microbubbles accumulate on the vascular endothelium expressing a particular marker in diseased tissue. They can then be imaged non-invasively via ultrasound. At the moment, we are testing our contrast agents in mouse models of cardiovascular disease. However, being close to the clinic has also allowed us to test some of our agents in human endarterectomy specimens taken from hospital patients.

When I get a chance to hear about the research of several DBM groups all at once, during the DBM research day and symposium, I see even more clearly how the science in our institute is a symbiosis of basic and clinical research. Personally, I never cease to be amazed by the collaborations between the tissue engineers at our institute and the reconstructive surgery teams at the hospital, not to mention how different groups take advantage of the access to patient samples in order to develop potentially personalized therapies and diagnostics.

My work at the DBM is also made easier by the willingness of all my colleagues at the department to share their knowledge, time, and reagents. I don't know how many times I have walked into one of the immunology labs on the third floor and borrowed some antibodies or got some help with flow cytometry—which brings me to the DBM technological core facilities that, over the years, have grown to become an indispensable resource for all researchers at the DBM.

Being walking or biking distance from other top research centers in Basel also doesn't hurt. Whether in the form of seminar series and conferences, access to technological facilities, or ongoing scientific collaborations, the DBM cultivates close relationships with the Biozentrum, the Department of Biosystems Science and Engineering (DBSSE, ETH), and the Friedrich Miescher Institute (FMI), among others. I never hesitate to contact scientists from these institutes for support. Moreover, thanks to this openness, our lab has been able to start a very rewarding collaboration with a Biozentrum group to study autoimmune aspects of myocarditis.

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Of equal importance to our scientific findings, in my opinion, are the people who do the work and their support network. This support system includes the DBM Postdoc and PhD clubs, where students and postdocs can find help navigating their professional life at our institute, as well as their future career opportunities, whether in academia or in the flourishing Basel pharma sector. Currently I am excited about the Athena lectures at the institute, which highlight the careers of women scientists at the DBM.

I am glad to have had the chance to write about my personal experiences working at the DBM, because it allowed me to take a fresh look at what our institute has to offer. It also made me think about how I can improve my own work experience. Personally, I often do not find the time to attend the institute's lectures or events. However, I know that in addition to my own research, it is also very rewarding to get in touch with other scientist in the hallway, in seminars, and in symposiums in order to learn more about different biomedicine topics. This is something I will try to do more often... Hasta pronto!

Amanda
Scientist Cardiovascular Molecular Imaging Laboratory

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Brain Ischemia and Regeneration (Guzman Lab)

A Quick Overview of Our Research:

Oxygen deprivation is the most common cause of brain damage in the newborn babies. Medically, this is referred to as neonatal Hypoxic (*interruption in oxygen supply*) Ischemic (*reduction in blood flow*) Encephalopathy, or HIE. It is often the result of birth complications. In developed countries, HIE occurs in 1.5/1,000 live term births. It is a very serious type of brain injury that can cause infant death or lead to lifelong disabilities in surviving infants, including motor impairments, known as «cerebral palsy» (CP) and associated neurological sequela. There is no cure for neonatal HIE or CP, meaning that current treatments consist mainly of supportive care. Stem-cell-based therapy represents a promising approach, as preclinical research and clinical trials show modest, yet significant therapeutic benefits.

Our research aims at understanding the mechanisms of brain repair and examining those mechanisms that are implicated in stem cell therapy-associated clinical benefits. Our hypothesis is that neurogenesis and neuroinflammation critically interact to foster brain repair after neonatal HIE. Neurogenesis is the complex process that leads to the generation of neurons, astrocytes and oligodendrocytes from neural stem cells (NSCs). After birth, it is principally retained in the two neurogenic niches, namely the subventricular zone (SVZ) and the hippocampal dentate gyrus (DG). Neonatal HI stimulates neurogenesis, albeit insufficiently to promote the full recovery of the brain. The neuroinflammatory response after HI is mainly characterized by the activation of microglia, the most abundant immune cells in the brain. Until recently, neuroinflammation was mostly perceived as detrimental. Nevertheless, a more complex picture has now emerged, one which actually implicates microglia in neurogenesis.

Hightlights, Breakthroughs or Current Projects:

We use in vivo and in vitro models of neonatal HI to investigate the role of microglia in brain repair. Using a rat model of neonatal HI, we recently demonstrated that microglia in the SVZ displayed a distinct phenotype from that in other non-neurogenic areas, like the cortex. Overall, our data showed that the SVZ microglia in the HI-injured hemisphere adopted a pro-neurogenic phenotype (Fisch et al., 2020).

We are now investigating how stem cell treatment in HI-exposed rat neonates impacts microglia in the neurogenic niches, and whether it promotes neurogenesis. We selected human Wharton's Jelly-derived Mesenchymal stromal cells (WJ-MSCs) as a source of stem cells. These pose no ethical concerns and present significant clinical advantages, notably ease of access, large expansion potential, and hypo-immunogenicity. In parallel, we are studying via in vitro experiments whether the extracellular vesicles secreted by these cells may contribute to their therapeutic benefit.

Another goal of our research is to identify in vivo biomarkers of neurogenesis in the cerebrospinal fluid (CSF). Currently, neurogenesis is detected and measurable only in postmortem brain specimens. Given its potential importance in brain repair, it would be invaluable to measure it in living beings. In the rat model of neonatal HI, we showed that the CSF concentration of doublecortin, a neurodevelopmental protein, reflected in part HI-induced endogenous neurogenesis (Brégère et al., 2017). We are pursuing this research further by quantifying doublecortin and other candidate markers of neurogenesis in the CSF from human pediatric patients.

Our Vision for the Future:

Through both our basic and translational investigations, we aim to improve our understanding of brain repair and regeneration in infants diagnosed with neonatal HIE or CP. The knowledge gained from this could help to initiate clinical trials for stem-cell-based therapies. Overall, more in-depth knowledge of the molecular and cellular determinants of neurogenesis will help us to better understand early postnatal brain development and offer new perspectives on potential therapies for neonatal and pediatric brain injuries.

Team Spirit – Who We Are:

We are a team of neurobiologists and clinicians who are passionate about the neuroimmune interactions. We also love to go beyond our field, and collaborate with scientists from different disciplines, within and outside the DBM.

We are:

Raphael Guzman, Research Group Leader
Catherine Brégère, Project Leader
Pia Bustos, Lab Manager/Technician
Nilabh Ghosh, Postdoctoral Fellow
Christoph Häfelfinger, Master Student
Alois Hopf, Graduate Student
Boris Radanovic, Neurosurgery Resident
Attill Saemann, Neurosurgery Resident
Bernd Schwendele, Postdoctoral Fellow

Our Collaborators and Neighbors:

Dragos Inta, Research Group Leader
Ilia Smolenskii, Postdoctoral Fellow
Kilian Zajac-Bakri, Lab Manager/Technician

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Translational Genitourinary Cancer Research (Le Magnen Lab)

A Quick Overview of Our Research:

Relying on a strong connection with the clinic, our laboratory combines both basic and translational research, with the long-term goal of impacting the management and treatment of urological cancers. Our research particularly focuses on prostate cancer (PCa) and bladder cancer (BC), diseases significantly impacting the quality of life and the mortality of both men and women worldwide. One important focus of our laboratory is the generation of clinically relevant models as a tool to study mechanisms driving tumor progression and treatment resistance in PCa and BC. To address these challenges, our research exploits clinical samples and patient-derived organoids, integrating a combination of technologies, such as tissue microarrays, single-cell RNA sequencing, and multiplexed immunofluorescence imaging, as well as various molecular and cellular assays.

Hightlights, Breakthroughs or Current Projects:

«PCa patient-derived organoids: addressing challenges while exploiting opportunities»

Patient-derived organoids (PDOs) represent promising experimental models, yet it has proven challenging to establish them in the context of PCa. In our laboratory, we have adopted an approach to testing different experimental strategies and identifying factors that may dictate the success or failure of organoid generation (Servant et al. 2021). This has led to the generation of novel organoid models that recapitulate specific PCa molecular subtypes and respond to clinically relevant drugs. PCa PDOs can further be expanded as xenografts in vivo, thereby providing additional opportunities for mechanistic and translational studies. This initial organoid work also highlighted the need to improve these model systems to achieve greater efficiency, a challenge that we are addressing in an ongoing project funded by the Swiss Cancer Research Foundation.

«Investigating PCa cellular heterogeneity and treatment response at single-cell level»

While most patients with advanced PCa initially respond to androgen-deprivation therapy, the majority of them will eventually develop castration-resistant prostate cancer (CRPC), for which therapeutic options are not curative. In the context of a project co-funded by KLbB and SNSF, we are exploiting single-cell based approaches (scRNA-seq, CODEX), organoid models, and longitudinal cohorts of clinical samples to investigate cellular dynamics underlying response to androgen-targeted therapies. We envision that this study will lead to the identification of refined prognostic and predictive markers, as well as novel therapeutic targets for advanced PCa.

«BC PDOs as tools to study non-genetic mechanisms of plasticity and tumor progression»

In the context of BC, we have generated a panel of organoid lines that recapitulate common molecular subtypes, such as basal and luminal urothelial carcinoma subtypes, as well as rare mesenchymal-like variants. We are exploiting these organoid models in combination with clinical samples and molecular strategies to decipher microenvironmental cues driving the switch from one phenotype to another (i.e. plasticity). We anticipate that we will uncover key factors representing potential therapeutic vulnerabilities.

Our Vision for the Future:

Our current studies are laying the basis for future projects aimed at deciphering the basic mechanisms governing cellular plasticity and treatment resistance in the context of urological tumors. The availability of novel, fully characterized models recapitulating the spectrum of molecular subtypes observed in patients is a stepping stone for projects of this kind.

At a more translational level, we are excited to test the value of our PDO models for predicting treatment response observed in patients. In this context, we will soon implement an organoid-based co-clinical pilot trial for metastatic PCa patients. This project was recently funded by the Swiss Cancer Research Foundation and is the fruit of a multidisciplinary effort driven by our clinical colleagues in the Department of Urology.

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Translational Genitourinary Cancer Research (Le Magnen Lab)

Team Spirit – Who We Are:

We are a young and newly established international team of scientists who enjoy life's small pleasures both inside and outside the lab. Just a few words about ourselves and what motivates us:

Clémentine Le Magnen, Research Group Leader: Passionate about prostate cancer research, committed to bridging the gap between the lab and the clinic, rarely declines an apéro or a skiing session.

Romuald Parmentier, Postdoctoral Scientist: Enthusiastic about diving into the complexity of cell populations, enjoys exploring creative ways to address challenges, always tries to keep it simple.

Raphaelle Servant, PhD Student: Focused on developing models of advanced prostate cancer, always mesmerized by cool images of organoids, official keeper of the office's chocolate box.

Michele Garioni, PhD Student: Investigating bladder cancer plasticity and its crosstalk with the tumor microenvironment, driven by curiosity and the chance to learning something new, always up for pizza.

Jing Wang, LabTechnician: Joined the lab in August 2022, enjoys staring into microscopes (electron or light) searching for patterns and structures in life, loves cooking Chinese food for family and friends.

Recent alumni: David Mueller, Postdoctoral Scientist/Urology Resident – now postdoctoral Scientist at Vancouver Prostate Centre, Canada; Mariam Manawi, Master Student – now postgraduate at Novartis

In addition to researchers, we are very privileged to work in close collaboration with committed clinicians
Prof. Bubendorf
Prof. Seifert
Prof. Rentsch
Dr. Vlajnic
Dr. Mortezavi

Our PhD students in professional mode during congress...

...and relax mode post-congress!

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Core Facility at a Glance Microscopy

A Quick Overview of Your Facility:

The Microscopy Core Facility is a centralized platform that provides cutting-edge microscopes and expert support to all DBM researchers and collaborators. The DBM currently maintains two microscopy facilities located in Hebelstrasse and Mattenstrasse respectively. Both facilities can be used free of charge, and there are more than 25 microscopes of various types available.

The facility trains and advises researchers throughout the entire microscopy process, from initial idea to publication. Support often begins with a conversation about biology and leads to a robust microscopy experimental design that includes sample preparation, microscope selection, software for image visualization, and strategy for analysis. Researchers are then trained to work independently at the appropriate microscopes and computers.

The core facility is also a founder of the Microscopy Network Basel (MNB) and very well connected with other facilities in Basel and Europe. This opens access to an even broader pool of high-end devices, knowledge and to jointly organized courses.
https://microscopynetwork.unibas.ch/

Hightlights, Breakthroughs or Current Projects:

The DBM Microscopy Core Facility has recently been selected to become a **Nikon Center of Excellence** for translational research. This is the first and only Center of Excellence in Switzerland, and it is a great honor for us to be listed alongside other world-class institutions. The partnership with Nikon will provide us with many benefits, such as early access to new technologies or extended support.

The DBM Microscopy Core Facility was chosen not only for its state-of-the-art microscopes and excellent staff, but also for its tremendous expertise in JOBS. JOBS is Nikon's programming interface that allows systems to be controlled at a very advanced level, thus enabling us to put together complex experiments that can even include the control of external devices.

https://www.microscope.healthcare.nikon.com/en_EU/bioimaging-centers#nic-cofe

In addition, the facility is currently working on a project to set up a high-throughput multiplexing device. In collaboration with Life Imaging Services, a customized multi-valve device is being developed that can be controlled by Nikon software. This will make it possible to run complex multiplexing experiments at a higher throughput than with commercially available systems.

Furthermore, the facility is actively participating in an international initiative (QUAREP-LiMi) to establish standards for quality assessments and quality control in light microscopy. Various workgroups define standards and protocols on topics such as illumination power, metadata, chromatic aberration, uniformity of field-flatness, and many more. Several articles have been published recently.
https://quarep.org/

What is very special and unique about the DBM Microscopy facility:

The DBM Microscopy Core Facility was the first facility which has been created at the DBM. In 2007, the Microscopy Core Facility was established at Mattenstrasse by pooling several existing systems. Over the years, new high-end equipment has been acquired, and in 2012 the facility was expanded to Hebelstrasse. In the meantime, the facility has been able to grow and also hire new specialists covering a wide range of expertise.

Over the past 15 years, the facility developed from a small pool of systems into an internationally recognized facility with a professional organization and numerous high-end microscopes. The facility is scientifically guided by its steering committee and helps researchers at the DBM in set up cutting-edge experiments in order to conduct competitive research.

The facility currently accommodates about 270 users, generating about 40,000 booking hours a year. The quality of the facility is ensured through regular evaluations by the advisory board, as well as annual user meetings and surveys. All of this feedback is key for further improvements, and users have the opportunity to help determine the direction of future investments.

Supporting our users and being able to see the progress of their projects and their success is our daily motivation.

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Core Facility at a Glance Microscopy

Equipment

Site Hebelstrasse:
Confocal:
Nikon AxRrrrrrgh
Nikon Crest V3 - Cresty
Confocal, Nikon A1R Nala
Spinning Disc, Nikon Ti CSU-W1 and plateloader
2-photon, Nikon A1 Jedi
Widefield:
Nikon Ti Juerg
Nikon Ti2 Twin Lefty
Nikon Ti2 Twin Righty
Nikon Ti2 2.3.PO
Olympus IX81 Sally
Other:
SlideScanner
Imaging PC:
Nikon Imaris
Data Processing PC
SlideScan Analysis
Zen Imaris

Site Mattenstrasse:
Confocal:
Confocal, Leica Stellaris8, Falcon
Confocal, Leica SP5
Spinning Disk, Nikon Ti CSU-W1, Visitron
Widefield:
Leica DMI 4000
Leica DMi8
Leica Live Imaging Microscope DMi8
Leica DMi8 Codex Multiplexing
Nikon Eclipse E600
Zeiss Axio Imager Z2 Scanning Microscope
Zeiss Axio Imager Z1, ApoTome.2
Stereo:
Nikon SMZ25 Stereomicroscope
Nikon SMZ1500 Stereomicroscope
Leica MZ16FA Stereomicroscope
High content screening:
Operetta HCS Microscope
Other:
Zeiss Laser Capture Microscope
Imaging PC:
Imaging PC 1
Imaging PC Stereoinvestigator/ Neurolucida

For further details on the systems, manuals or how to articles please log in to our internal wiki page.
https://biomedizin.unibas.ch/mic-wiki

Team Members

Heads:
Pascal Lorentz

Michael Abanto

Intern:
Jaap van Krugten

Staff:
Ewelina Bartoszek

Thomas Bürglin

Loïc Sauteur

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All publications we have received and have been published in the period between April 22 and August 22. The publications are listed by impact factor.

IL-20 subfamily cytokines impair the oesophageal epithelial barrier by diminishing filaggrin in eosinophilic oesophagitis. Kaymak T, Kaya B, Wuggenig P, Nuciforo S, Göldi A; Swiss EoE Cohort Study Group (SEECS), Oswald F, Roux J, Noti M, Melhem H, Hruz P, Niess JH. Gut. 2022 May 25:gutjnl-2022-327166. doi: 10.1136/gutjnl-2022-327166. IF 31.840

Stimulatory MAIT cell antigens reach the circulation and are efficiently metabolised and presented by human liver cells. Lett MJ, Mehta H, Keogh A, Jaeger T, Jacquet M, Powell K, Meier MA, Fofana I, Melhem H, Vosbeck J, Cathomas G, Heigl A, Heim MH, Burri E, Mertz KD, Niess JH, Kollmar O, Zech CJ, Ivanek R, Duthaler U, Klenerman P, Stroka D, Filipowicz Sinnreich M. Gut. 2022 Jan 20;gutjnl-2021-324478. doi: 10.1136/gutjnl-2021-324478. IF 31.840

The cephalic phase of insulin release is modulated by IL-1ß. Wiedemann SJ, Trimigliozzi K, Dror E, Meier DT, Molina-Tijeras JA, Rachid L, Le Foll C, Magnan C, Schulze F, Stawiski M, Häuselmann SP, Méreau H, Böni-Schnetzler M, Donath MY. Cell Metabolism. 2022 Jul 5;34(7):991-1003.e6. doi: 10.1016/j.cmet.2022.06.001. IF 31.373

Targeted proteoform mapping uncovers specific Neurexin-3 variants required for dendritic inhibition. Hauser D, Behr K, Konno K, Schreiner D, Schmidt A, Watanabe M, Bischofberger J, Scheiffele P. Neuron. 2022 Jul 6;110(13):2094-2109.e10. doi: 10.1016/j.neuron.2022.04.017. Epub 2022 May 11. IF 18.688

Alterations in homologous recombination repair genes in prostate cancer brain metastases. Rodriguez-Calero A, Gallon J, Akhoundova D, Maletti S, Ferguson A, Cyrta J, Amstutz U, Garofoli A, Paradiso V, Tomlins SA, Hewer E, Genitsch V, Fleischmann A, Vassella E, Rushing EJ, Grobholz R, Fischer I, Jochum W, Cathomas G, Osunkoya AO, Bubendorf L, Moch H, Thalmann G, Ng CKY, Gillessen S, Piscuoglio S, Rubin MA. Nature Communications. 2022 May 3;13(1):2400. doi: 10.1038/s41467-022-30003-5. IF 17.694

Integrative proteogenomic characterization of hepatocellular carcinoma across etiologies and stages. Ng CKY, Dazert E, Boldanova T, Coto-Llerena M, Nuciforo S, Ercan C, Suslov A, Meier MA, Bock T, Schmidt A, Ketterer S, Wang X, Wieland S, Matter MS, Colombi M, Piscuoglio S, Terracciano LM, Hall MN, Heim MH. Nat Commun. 2022 May 4;13(1):2436. doi: 10.1038/s41467-022-29960-8. IF 17.694

Prohormone convertase 1/3 deficiency causes obesity due to impaired proinsulin processing. Meier DT, Rachid L, Wiedemann SJ, Traub S, Trimigliozzi K, Stawiski M, Sauteur L, Winter DV, Le Foll C, Brégère C, Guzman R, Odermatt A, Böni-Schnetzler M, Donath MY. Nature Communications. 2022 Aug 13;13(1):4761. doi: 10.1038/s41467-022-32509-4. IF 17.694

Developmental dynamics of the neural crest–mesenchymal axis in creating the thymic microenvironment. Handel AE, Cheuk S, Dhalla F, Maio S, Hübscher T, Rota I, Deadman ME, Ekwall O, Lütolf M, Weinberg K, Holländer G. Sci Adv. 2022 May 13;8(19):eabm9844. doi: 10.1126/sciadv.abm9844. IF 14.972

Immunotherapy of glioblastoma explants induces interferon-γ responses and spatial immune cell rearrangements in tumor center, but not periphery. Shekarian T, Zinner CP, Bartoszek EM, Duchemin W, Wachnowicz AT, Hogan S, Etter MM, Flammer J, Paganetti C, Martins TA, Schmassmann P, Zanganeh S, Le Goff F, Muraro MG, Ritz MF, Phillips D, Bhate SS, Barlow GL, Nolan GP, Schürch CM, Hutter G. SCIENCE ADVANCES. 2022 Jul;8(26):eabn9440. doi: 10.1126/sciadv.abn9440. Epub 2022 Jul 1. IF 14.972

Normal B-cell ranges in infants: A systematic review and meta-analysis. Borriello F, Pasquarelli N, Law L, Rand K, Raposo C, Wei W, Craveiro L, Derfuss T. Journal of Allergy and Clinical Immunology. 2022 Jun 18;S0091-6749(22)00835-1. doi: 10.1016/j.jaci.2022.06.006. IF 14.290

Interferon-γ resistance and immune evasion in glioma develop via Notch-regulated coevolution of malignant and immune cells. Parmigiani E, Ivanek R, Rolando C, Hafen K, Turchinovich G, Lehmann FM, Gerber A, Brkic S, Frank S, Meyer SC, Wakimoto H, Günel M, Louvi A, Mariani L, Finke D, Holländer G, Hutter G, Tussiwand R, Taylor V, Giachino C. Developmental Cell. August 8, 2022 a 2022 The Authors. Published by Elsevier Inc. https://doi.org/10.1016/j.devcel.2022.06.006. IF 13.417

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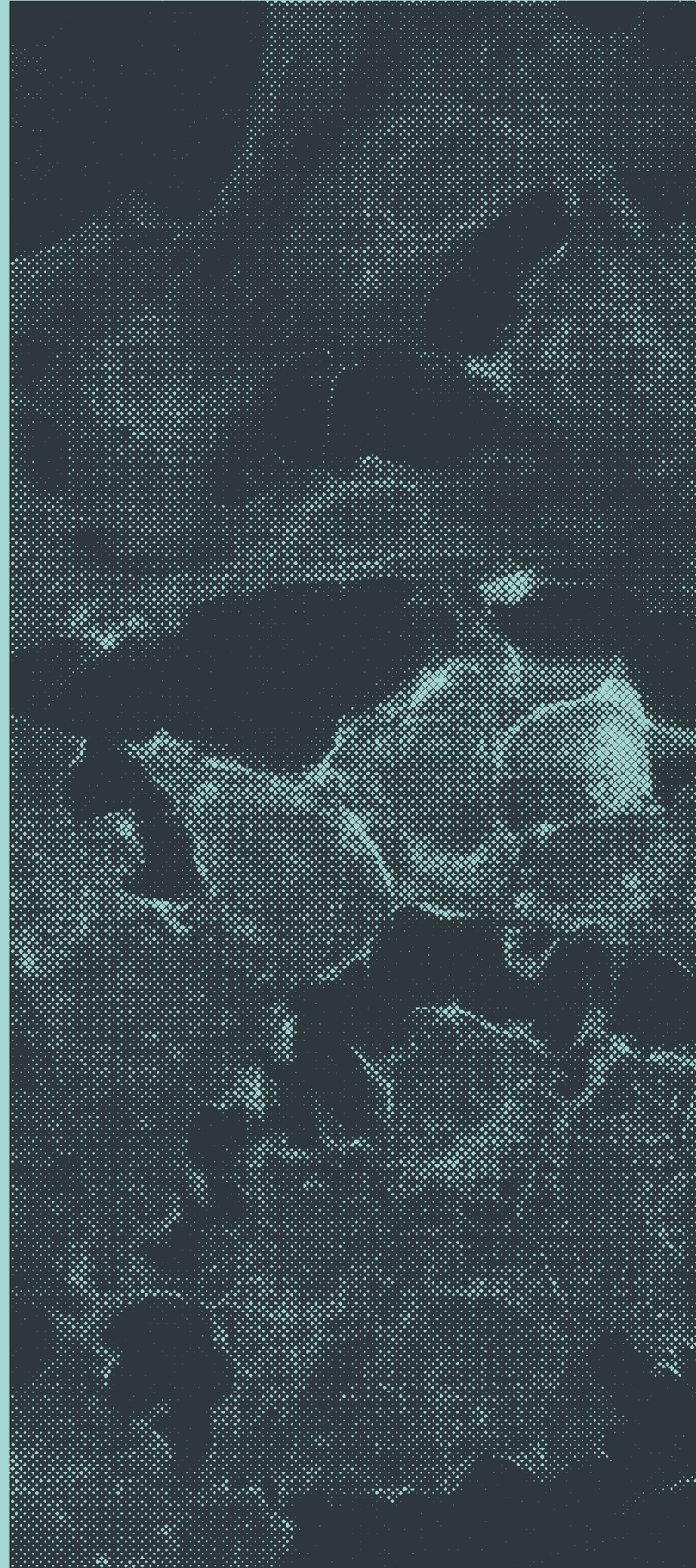

The DBM congratulates

Awards and Prizes since May 22

Dr. med. Katharina Timper received in June the Alumni Award of the Medical Faculty Basel.

We are pleased to announce that **Dr. Jelena Markovic Djuric** was promoted to head of the DBM Flow Core Facility as of September 22.

Please join our congratulations and wish Jelena the best of luck in her new role.

Congratulations to **Prof. Dr. Carolyn King** on her appointment as Professor of Infection Immunology as of 1st of October 2022, to **Prof. Mattia Zampieri** on his appointment as the new Professor of Biochemistry as of 1st of January 2023 and to **Prof. Dr. Mascha Binder** on her appointment as Professor of Medical Oncology as of 1st of April 2023.

Dr. Jonas Lötscher received the DBM Research Prize 2021/2022 for his work published in the journal Cell. Title of paper: «Magnesium sensing via LFA-1 regulates CD8+ T cell effector function»

Lina Acevedo Rua received the best paper award in the the category clinically-oriented research at the Annual Meeting 2022 of the Basel Stem Cell Network in Basel, September 2022.
Engineered nasal cartilage for the repair of osteoarthritic knee cartilage defects. 13, eaaz4499, Sci Transl Med (2021).

Prof. Dr. med. Anne-Katrin Pröbstel received the Sobek Young Investigator Award 2022.

Patrick Lipps received the Scholarship for doctoral studies from the Goldschmidt-Jacobson Foundation.

Dr. med. Tradite Neziraj Medical dissertation, summa cum laude, Ludwig-Maximilian-University München.

Dr. Lena Siewert received the SSAI Travel Grant for World Immune Regulation Meeting 2022.

Congratulation to **Prof. Dr. Gregor Hutter** for a fascinating lecture on his habilitation.

PhD Defenses since May 22

Medical-Biological Research	Cécile Cumin	12.05.2022
Clinical Research	Gideon Hönger	03.06.2022
Genetics	Baptiste Hamelin	23.06.2022
Medical-Biological Research	Axel de Baat	30.06.2022
Medical-Biological Research	Priska Auf der Maur	22.09.2022

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For Radek Skoda's handover in the DBM direction

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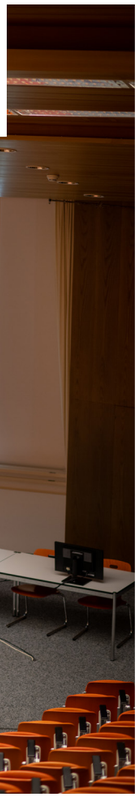
DBM Summer Symposium

1 keynote, 14 short talks, 3 pitches and 1 well-deserved research award. This summer symposium showcased the diverse biomedical interests at our Department with insightful talks. The lively scientific exchange gave useful feedback to all the presenters… has it also inspired collaborations and novel scientific questions?



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DBM Barbecue

A tradition worth keeping, taking place at the Kraftwerkinsel, this year BBQ following the research symposium was a blast. The scientific exchange continued and colleagues from different groups had the chance to talk in a relaxed setting with food, drinks, ice-cream and a cool photo boot. The night evolved into a formidable dance party and we all went back home tired but satisfied...

Past Events
MD-PhD Congress

July 22

From Tanay Kaymak
President SMPA - on behalf of the Swiss MD-PhD Association

Our 10th MD-PhD Congress at the Hotel Rigi Kaltbad on the topic of «Regenerative Medicine' was a great success and only possible due to the generous support of the DBM. In the various lectures given by the participants, we were able to gain an insight into diverse research conducted by MD-PhDs in Switzerland.

In the four keynote lectures we learned from the forefront of preclinical and clinical research in regenerative medicine. We also want to specifically thank, Ivan Martin, for his great and enriching presentation. In the panel discussion with the heads of the MD-PhD programs of the Swiss universities, we were able to discuss existing challenges and how we can improve the MD-PhD curricula.

Last but not least, these and many other interesting topics were discussed in personal encounters. We would like to thank the DBM for their generous support and hope to be able to count on them in the future.

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Upcoming Events

Athena's Journey 13.10.2022

Plenary Assembly 16.12.2022

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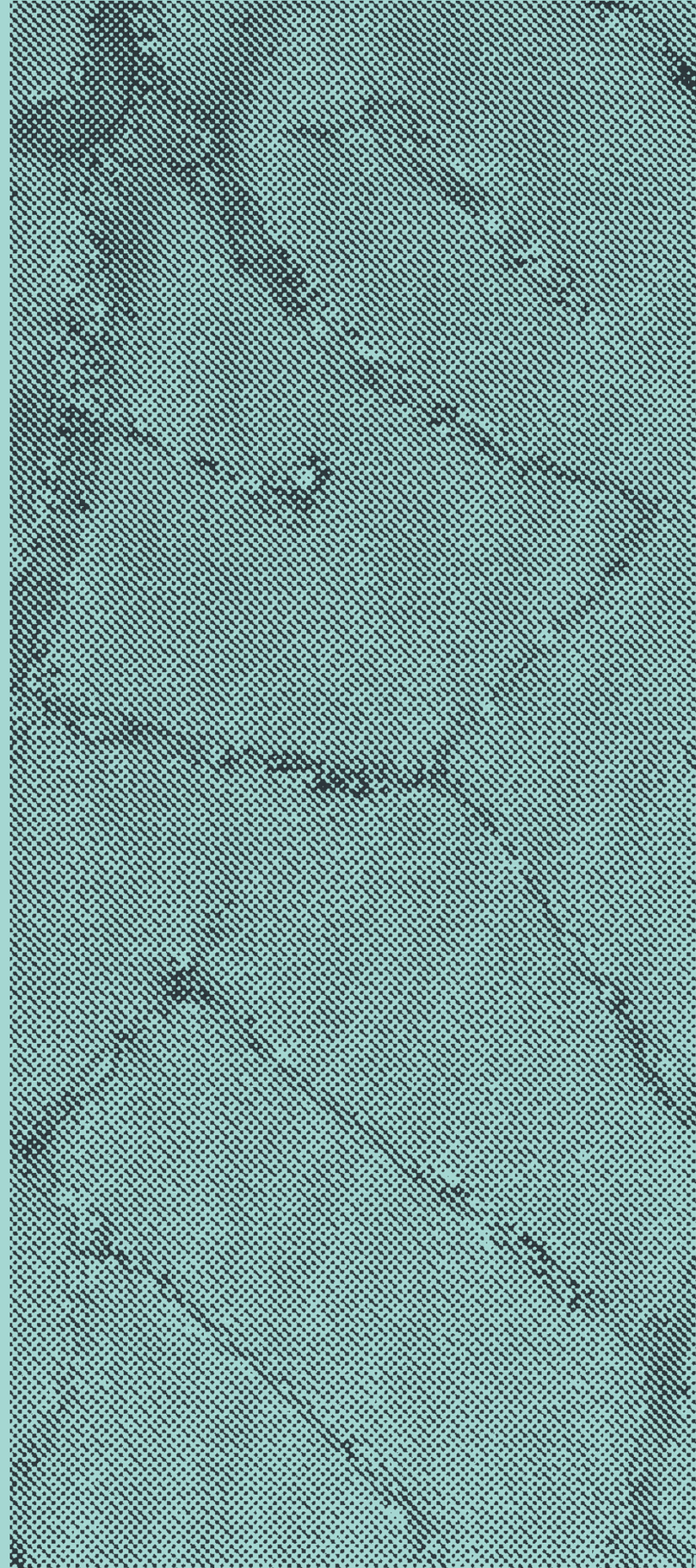

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New Colleagues from April to July

We are delighted to have you among us. We would like to express our warmest welcome and good wishes!

Aghagolzadeh Parisa	CardioBiology
Albrecht Camille	Myeloid Malignancies
Angehrn Fiorenzo	Visceral Surgery and Precision Medicine
Arunasalam Stefanie	Myeloid Malignancies
Botta Sebastian	Clinical Neuroimmunology
Brauchle Michael	DBM Lehre/Fachbereiche
Bucher Michael	Myocardial Research
Cannavacciuolo Luigi	DBM-Microscopy
Castioni Stefan	DBM-Zentrale Dienste Petersplatz
Damle Atharva	Cartilage Engineering
De Luise Monica	Tissue Engineering
Feng Huiche	Visceral Surgery and Precision Medicine
Garcia a Martin Ana Belen	Infection Biology
Gress Ulrich	Clinical Neuroimmunology
Gürtler Nicolas	Clinical Immunology
Haak Fabian	Visceral Surgery and Precision Medicine
Jaques Julia	DBM-Stab
Jorzik Paul	Translational Hepatology
Jovanovic Natasa	Brain and Sound
KnotekTomas	Molecular Neurobiology Synaptic Plasticity
Le Magnen Clémentine	Translational Genitourinary Cancer Research
Lenaerts Aurelie	Developmental Immunology
LuuThuy	Cancer Immunology
Milan Giulia	Cardiac Surgery and Engineering
Nikolaieva Olha	Cancer Immunotherapy
Orbegozo Clara	Cancer- and Immunobiology
Otto Maximilian	Experimental Neuroimmunology
Posey Jordan Campbell	Immunobiology
Robert Philippe	Translational Immunology
Schmassmann Manuel	Technical Staff
Schmid Raphael	Cartilage Engineering
Sifoniou Kleopatra	Cancer- and Immunobiology
Stöckmann Oliver	Psychopharmacology Research
Sutter Joshua	Experimental Hematology
Vinzens Sabrina	Visceral Surgery and Precision Medicine
von Arb Sarah	Childhood Leukemia
Wagner Paul	Bone Regeneration
Wettig Angéline	Experimental Neuroimmunology
Wolff Nora	Cellular Neurophysiology
Xhafa Erta	Immunobiology
Zurbrügg Sara	Infection Biology

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Thank you!

The DBM newsletter team would like to thank all the contributors for their work. We hope you enjoyed reading the newsletter, and we wish everyone a great fall season.

Please feel free to submit your ideas and input for our next issue.

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Newsletter
September 2022