BIH Digital Health Accelerator - Demo Day 2023 -

May 31, 2023

BIH Berlin Institute of Health @Charité

BIH CHARITÉ DIGITAL HEALTH ACCELERATOR

CHARITÉ UNIVERSITÄTSMEDIZIN BERLIN

Welcome to BIH Digital Health Accelerator Demo Day 2023!

The mission of the BIH is medical translation. The BIH translates findings from biomedical research into novel approaches for personalized prediction, prevention, diagnostics and therapy. Conversely, it utilizes clinical findings to help researchers in developing novel approaches. The aim is to deliver relevant medical benefits for patients – turning research into health.

As the translational research unit of Charité – Universitätsmedizin Berlin, the BIH is building a translational ecosystem, promoting a systemic view of health and disease, and driving change in biomedical research culture.

The BIH was founded in 2013 and is funded 90 percent by the German Federal Ministry of Education and Research (BMBF) and 10 percent by the State of Berlin. In 2021, the BIH was partly integrated into Charité, maintaining close ties with the Max Delbrück Center for Molecular Medicine in the Helmholtz Association as a privileged partner.

It supports innovators from clinical practice and clinical research at Charité and BIH in turning their ideas, concepts and inventions based on artificial intelligence or machine learning, augmented or virtual reality, robotics and sensors into digital health products, i.e., software-based medical devices or health technology solutions, for transfer to the healthcare market and into medical application.

Key elements of the BIH DHA program include: A robust framework for developing digital health solutions; project funding including protected time from clinical obligations; mentoring by subject matter experts in collaboration with the German Accelerator Life Science, ESMT Creative Destruction Lab and other ecosystem partners, access to networks of talents, industry and investors, and a dedicated co-working space close to Charité Campus Mitte.

To date, 44 projects have been supported in the BIH DHA program, 13 projects are currently in the program, ten former projects have already created spin-off companies and one spin-off has already been acquired. It is fair to say that since its pilot in 2017, the BIH DHA has taken root as a go-to program for clinical digital health innovation.

Considering its scope, elements and results, the BIH DHA is a unique program in the German and broader European university hospital landscape.

Please join us in celebrating this success and especially in thanking specifically those clinicians and researchers who are developing highly innovative digital health solutions in addition to their daily work advancing medical science and delivering world-class medical care.

For the future, BIH DHA is open to share its know-how and experience of structures, processes and systems for developing high-impact digital health solutions with other academic hospitals to scale medical translation in digital health in Germany to benefit of patients and society.

In addition, BIH aims to further expand the DHA network by further deepening collaborations with other academic institutions and corporate partners.

Thank you for joining and we hope you enjoy the BIH DHA Demo Day 2023!

Sincerely yours,

Prof. Dr. Christopher Baum
Chairman of the Board of Directors, BIH, and Chief Translational Research Officer, Charité

Dr. Michael Frieser
Administrative Director, BIH

BIH Digital Health Accelerator Program

2023 marks the sixth year for the BIH Digital Health Accelerator. We once again look back at the program's beginnings and venture a glimpse into the future.

Based on the vision of BIH leadership to tackle the missing link between medical research and medical application – product development – and supported by dedicated federal funding, the BIH Digital Health Accelerator was conceptualized in late 2016.

The DHA team piloted the program right away embracing the principle: Building the plane as we fly. What may seem haphazard at first in fact applied sound guidance for any innovation unit: Gather senior leadership support around a clear vision and success metrics, activate the resources needed to get going, and learn by doing: Don't be afraid to make mistakes, but if you do, make new ones.

Pilot Phase

In 2017, an external committee selected four projects to form the pilot DHA cohort. All projects considered either the heart or the brain with their product development ideas; in hindsight maybe no coincidence.

Based on best practices in product development, the core elements of the program were implemented that are still valid today: Co-working in an interdisciplinary work environment away from daily routine; mentoring by subject matter experts and seasoned professionals; and iterative product development to ensure future solution-need or product-market fit.

At the first Demo Day, the four projects presented their prototypes and the program received the green light from BIH leadership and political decision makers to take root.

Proof of Concept Phase

Between 2018 and 2023, the program grew steadily, from six new teams in 2018 to eight in 2019 to ten new teams in 2020. The program diversified in medical fields, research domains, and digital technology areas. 2021 caused the program to slow down temporarily due to the acute clinical duties of project teams and clinical study prioritizations.

BIH Digital Health Accelerator Program

The program evolved into the two stages: Stage 1 to validate the medical need and the core technology, to prototype and iterate rapidly, and to get a basic understanding of

By the Numbers

44 **Projects** funded to date

25 **Fields** of medicine, research

13 **Projects** currently in program (Stage 1: 7, Stage 2: 6)

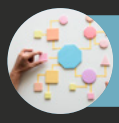
10 **Spin-offs** graduated

1 **Exit** by acquisition

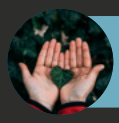
120+ **Jobs** created by spin-offs

regulatory, business, and reimbursement matters. Stage 2 to develop regulated, clinically validated digital medical products for diagnosis or therapy, digital platform solutions, or digital tools to improve drug development. In this stage, teams around clinicians and researchers grow in size and entrepreneurship knowledge, and prepare to bring their products to the healthcare market and medical application, e.g., via licensure or spinoff formation.

Over time, the following key success factors manifested themselves. One critically important success factor is the breadth and depth of knowledge and guidance by mentors, which is kindly supported by the German Accelerator Life Sciences, and other networks.



Structured Process
for digital health/
medical product development



Funding
including up to 50 % protected time
from clinical obligations

Mentoring
by subject matter experts, industry
professionals and seasoned founders

Community
of digital health innovation peers and
access to talent pool

Network
of potential transfer partners in industry
and (corporate) venture capital

Co-Working Space
for interdisciplinary work at
BIH Digital Labs

Equally important and somewhat unique to working at a university hospital turned out to be team completion: Finding, matching, and supporting new team members with needed skills sets, e.g., in product development, regulatory affairs, and new venture development.

In 2020, through the emergence of the first set of digital health spinoffs from the DHA program, tangible proof of concept was achieved.

To date, ten spinoffs have emerged from the DHA program. Having developed and launched their medical products and digital health solutions, they have created over 100 jobs in the region. Thirteen new solutions are currently under development.

Outlook: Growth Phase and Broader Opportunity

By 2023, the BIH DHA program has developed standardized structures and processes, a program curriculum around a robust digital health product development framework, and knowhow that could support the translational ecosystem at Charité and BIH permanently by fueling the development and transfer of digital health innovations. In addition, the BIH DHA program is also exploring ways to cooperate with additional university hospitals and corporate partners to foster digital health innovation at scale for the benefit of patients and society.

Agenda

6:30 – 6:35 pm ..... **Welcome BIH Digital Health Accelerator**

6:35 – 6:45 pm ..... **Introduction**

Andrew Bourke
Managing Partner, Fyr Hub, Bioinnovate Fellow, Moderator

6:45 – 6:50 pm ..... **Opening Remarks**

Prof. Dr. Christopher Baum
Chairman of the Board of Directors of BIH, and Chief Translational Research Officer of Charité – Universitätsmedizin Berlin

6:50 – 7:05 pm ..... **Keynote**

Future of Healthcare: Towards a Partner Ecosystem
Carina Snijder
VP, Head of Research Program and Clinical Research Board, Philips

7:05 – 7:20 pm ..... **Impulse Lecure**

Institutional Mismatch and Lessons for Building Digital Health Businesses
Dr. Ariel Dora Stern
Poronui Associate Professor of BA in Technology and Operations Management, Harvard Business School, Faculty Member Harvard - MIT Center for Regulatory Science, Angel Investor

Agenda

7:20 – 8:35 pm ····· **BIH Digital Health Accelerator Pitch Session**

METIS: An AI-Powered PoC Solution for Verifying the Antibiotic Need
Noa Galtung
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motus med: Transforming Early Age Epilepsy Diagnosis Via Accessible & Intelligent Movement Analysis
PD Dr. med. Christian Meisel
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IDA: Enabling Streamlined, Personalized Breast Cancer Care
PD Dr. med. Maria Margarete Karsten, Dr. Therese Pross
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MoveFx: Bone Fracture Simulation Tool for Orthogeriatrics
Dr. Mark Heyland
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myne: A Personalized Treatment Support Tool for MCI
David Haslacher, M.Sc. Orestis Rakitzis, M.Sc.
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UroMe.ai: An AI-Based Tool for Personalized Treatment in Urological Cancers
Dr. Annika Fendler
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dotPD: A Customizable Platform for Data-Driven Medicine
Andrea Kreichgauer
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8:35 – 8:40 pm ····· **Thank You & Closing**

8:40 – 10:30 pm ····· **Networking Reception and Meet the Teams**

METIS: An AI-Powered PoC Solution for Verifying the Antibiotic Need

According to the Centers for Disease Control and Prevention, about one-third of antibiotic use occurs in situations when it is unnecessary or not the appropriate treatment. This overuse of antibiotics drives an increase in antibiotic-resistant bacteria, which the WHO classifies among the top ten threats to global health. In addition, the EMEA is currently reporting antibiotic shortages for adults and children alike in nearly all European countries. However, if physicians do not prescribe antibiotics to patients with a genuine need quickly, then there is an increased risk of severe infection, sepsis, and even death.

Currently, the majority of general practitioners (GPs), and pediatricians (PEDs) send samples to an external lab for analysis – a process that can take hours or even days. This leaves physicians faced with a difficult, time-sensitive decision. On the one hand, they want to ration antibiotic use to only those patients who genuinely need and benefit from them. On the other hand, they do not want to risk delaying antibiotics to patients who genuinely require them. Unfortunately, this means doctors must often either make this decision without adequate information or delay their decision while waiting for test results.

To tackle these issues the team invented **METIS**, an AI-powered PoC solution for identifying the antibiotic need right away at GPs or PEDs offices.

METIS measures multiple key proteins to gain insight into how the patient's immune system is responding to an infection with a simple test device, similar to lateral flow tests that we are all familiar with from COVID-19 testing. As **METIS** pools multiple sources of information, the test result itself is not human-readable, but a quick picture with the related smartphone app enables our AI-algorithms to process the results and provide GPs and PEDs with a simple antibiotic recommendation. Importantly, all this takes place within five minutes and does not require sending samples offsite. Furthermore, **METIS** does not require any specialized hardware, making it perfect for every outpatient setting.

The interdisciplinary team from emergency and laboratory medicine has spent years evaluating current and next-generation infection tests clinically and in patient settings, concluding none meets the requirements of GPs and PEDs. They have built up a biobank and database of samples AI expertise, so the team is perfectly positioned to bring infectious disease diagnostics to the next level.

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metis

KEYWORDS
PoC Solution, Antibiotic Resistance, Adults, Children, AI, GPs, PEDs, Diagnostics

ASK

- Co-operation with national and international partners for expanding the biobank
- Partnerships with health insurance companies for feasibility study, e.g. Innofond
- Co-operations with GPs and PEDs for user testing
- Team members: regulatory, medical engineering, business with PoC expertise

motus med: Transforming Early Age Epilepsy Diagnosis Via Accessible & Intelligent Movement Analysis

During their first two years of life about 10% of all toddlers exhibit unusual or “strange” movements at some point in time. Infantile spasms (IS) are the most common epilepsy syndrome in this age group with an incidence of 1:2500.

Diagnosing (IS) is crucial for immediate treatment and preventing long-term cognitive impairment and recurrent seizures in toddlers. Prompt differentiation of IS from other movements is challenging, as these seizures can be subtle, brief, may resemble normal behavior, and rarely occur during a typical pediatric visit or in emergency rooms. As a result, diagnostic delays are common, leading to severe consequences for the affected children, their families, and society due to high medical costs and loss of productivity.

Smartphone videos taken at home have proven to be an effective tool for faster and more accurate recognition of IS seizures when in the hands of clinical experts. The team’s solution, called **motus med**, utilizes the power of Ai-technology, and smartphone-based videos to speed up the timeline of the IS diagnosis.

The **motus med** provides a diagnosis support tool for PEDs and ERs – two groups confronted daily with concerned parents. It empowers parents to document any strange movements of their toddlers immediately, to quickly determine if the movement is, in fact, a seizure, and to connect them with an effective healthcare provider. The seizure detection technology has been developed using large-scale, expert-labeled datasets, has been proven to work with videos recorded from smartphones, and benefits further from previous validation in a multi-center trial that was previously led by the team (G-BA Innovationsfonds). **motus med’s** aim is to shorten the time to diagnosis for infants and toddlers with suspected seizures, and thus reduce the chance of life-long impairments and costs.

The vision is to scale the technology and become an integral part of epilepsy management and care, such as monitoring treatment response. Our long-term vision is to become a medical video-based diagnostic platform not only for epilepsy, but also for other neurological conditions.

The team consists of experienced neurologists and data scientists from Charité and BIH with long-standing international and award-winning expertise in AI applications across the epilepsy diagnostic pathway, and an extensive network with leading academic centers, insurance providers, as well as patient support groups.

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motus med

ASK

- Team members: project manager, senior machine learning specialist, regulatory manager
- Co-development with industry partners with focus on early childcare and video usage
- Co-operations with outpatient PEDs and hospitals with pediatric emergency rooms for feasibility study
- Individuals and patient groups for product iterations

KEYWORDS
Neurology, Epilepsy, Pediatrics, Seizure, AI, Video Analysis, Diagnosis Support

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IDA: Enabling Streamlined, Personalized Breast Cancer Care

According to the WHO, every 14 seconds a woman somewhere in the world was diagnosed with breast cancer in 2020. This number is alarming, but due to significant progress in breast cancer diagnosis and treatment over the last decades, survival rates have increased from 70% in 1990 to almost 90% today. At the same time, advancements in the use of diagnostic tools, such as mammography, ultrasound, and MRI, have succeeded in improving the early detection of breast cancer, while an expanding range of treatment options has played a vital role in achieving personalized and effective care for breast cancer patients today.

However, with an increasing number of concurrent breast cancer patients, the challenge for the physicians and care teams lies in integrating all the relevant information and treatment options to select the optimal care pathway for each individual in time. This selection requires a time-intensive comprehensive assessment, access to up-to-date information, and a multidisciplinary approach, which strains the already pressured healthcare system.

IDA address this challenge head-on by offering an innovative and interoperable platform solution for physicians and healthcare teams treating breast cancer. **IDA** aims to improve breast cancer care by supporting clinicians in generating and tracking a personalized care pathway for each patient. To achieve this, **IDA** integrates relevant information such as standardized reporting systems, electronic medical records, tumor board data, patient-specific data, treatment guidelines, and research evidence into a single, organized, and accessible location. This organization, coupled with the integration of real-time data, allows physicians and patients to make informed decisions about the patient's next step in the care path, based on their unique circumstances. Thus, **IDA** has the potential to identify complications early and facilitate timely interventions, leading to better health outcomes and lower treatment costs. Additionally, the shift from appointment-based care to continuous patient-centered care fosters a more holistic and proactive approach to breast cancer management.

The collaboration between breast cancer specialists from Charité, digital health enthusiasts, and specialized healthcare designers highlights the multidisciplinary and patient-centered nature of **IDA.** By streamling and providing transparent key real-time information about the patient, **IDA** has the potential to make a significant impact in improving breast cancer care, enhancing patient experiences, and optimizing treatment outcomes.

KEYWORDS
Oncology, Breast Cancer, ILB,
Patient-Centered Care,
Personalized Treatment,
Integrated Care, DMP

ASK
- Team members: project manager, product manager, software developers, regulatory affairs, business and market access, content manager
- Partnerships with insurance companies to run pilot study
- Co-operation with outpatient breatcancer centers, patient support groups for user design testing

MoveFx: Bone Fracture Simulation Tool for Orthogeriatrics

Bone fractures are more common among the elderly, and the healing process can be more complex and critical in this population. The inability to promptly mobilize geriatric patients after a fracture can led to further deterioration of their overall health, especially if they have pre-existing co-morbidities. This can have dire consequences, with patients at risk of losing their autonomy and requiring relocation to nursing homes or facing significantly longer hospital stays.

In managing fractures, each injury calls for personalized strategies to determine safe movements and facilitate healing. To avoid complications like implant failure, re-fracturing, or delayed healing, it is crucial to recognize the complexities of each case. The challenge lies in finding a delicate balance between promoting mobility and avoiding excessive strain that could jeopardize the surgical implant or increase the risk of falls.

The **MoveFx** team recognizes the significance of movement in life, and their goal is to enable the geriatric aftercare teams and caregivers to mobilize patients to their pre-operative activity level as safely and early as possible. Based on the patient's prior activity level, the X-ray images, and patient anatomy, and combined with detailed knowledge of activity-dependent loading, **MoveFx** helps after-care physicians to adapt and schedule post-operative activity to help the individual regain their activity level by analyzing each patient's fracture and predicting the range of tolerable forces throughout the healing process.

MoveFx's vision is to bring the benefits of individualized, quantitative analysis of the interaction between physical and mechanical factors directly into the care path. Thus **MoveFx** aims to provide a more personalized and effective approach to support patients, healthcare professionals, and caregivers throughout the healing process.

MoveFx relies on an interdisciplinary team of engineers, software developers from BIH, and the Julius Wolff Institute, Charité embedded in a broad network of international clinical and research partners spanning world-leading networks in fracture treatment and globally leading industry partners in the fracture fixation field.

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ASK
- Partnerships/Co-operation with national and international orthogeriatric centers for solution testing
- Partnership with industry (e.g. implant manufacturers)
- Team members: product owner, software, physiotherapist, geriatric care specialists

KEYWORDS
Orthopedics, Geriatrics, Surgery, Bone Fractures, Simulation, Implants, Rehabilitation

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myne – A Personalized Treatment Support Tool for MCI

Up to 20% of people above the age of 65 years suffer from an abnormal decline in memory and related brain functions. This condition, mild cognitive impairment (MCI), substantially decreases the quality of life of the affected and presents an emotional and financial burden to their loved ones, who typically perform informal care. Unfortunately, MCI currently has no approved treatment.

With **myne**, we aim to put the latest advances in personalized neuromodulation directly into the hands of users suffering from MCI. After initially obtaining the frequency of brainwaves using behavioral input alone, **myne** can then deliver personalized brain stimulation. This is achieved by playing sequences of sounds, heard simply through a conventional pair of headphones, without requiring any additional devices. State-of-the-art research shows that personalized electric brain stimulation can, using expensive laboratory equipment and trained experts, improve memory performance. With **myne**, we want to make these benefits available to users from the comfort of their own homes and using just their smartphones.

While the unique technology underlying the personalization in **myne** is currently undergoing validation, our team has already shown the critical importance of personalizing the neuromodulation to improve the memory of healthy individuals. Within the next year, we expect to significantly improve the speed of personalization, demonstrate the clinical feasibility of this novel neuromodulation approach in the MCI population and develop an initial minimum viable product for usability testing.

myne is being built by experts in brain stimulation and psychiatry working at the interface between research and clinical practice. In the future, myne aims to become a platform for deviceless, personalized auditory neuromodulation and thereby enable the benefits of personalized neuromodulation to leave the lab and become scalable and accessible solutions that benefit patients with brain disorders.

KEYWORDS
Neurology, Psychiatry, Aging, Memory, MCI, Early Dementia, Treatment Support, Audio, Deep Brain Simulation

ASK
- Partnerships with insurance companies and long-term care insurances to run a feasibility study
- Co-operations with individuals, care takers, patient groups for product iterations
- Team members: product manager, business, market access, UX/UI Design

UroMe.ai: An AI-Based Tool for Personalized Treatment in Urological Cancers

Bladder cancer is the fifth most common cancer in Europe and accounts for 5% of the total European healthcare cancer costs. The high recurrence rates and poor survival outcomes for advanced tumors highlight the need for improved management strategies, including better prediction of therapy response rates. While current prediction methods primarily rely on clinical characteristics, the integration of additional molecular predictive markers holds promise for enhancing treatment outcomes.

UroMe.ai aims to improve personalized treatment prediction for patients with bladder cancer. The integration of AI-powered tools, molecular data from omics sequencing, and patient-derived organoids provides valuable insights into treatment response and helps guide treatment decisions. By accurately predicting response to, e. g. for neoadjuvant chemotherapy, **UroMe.ai** can assist clinicians and tumor boards in making informed decisions regarding this treatment modality and benefits the therapy outcomes and quality of life for patients with bladder cancer.

Through **UroMe.ai's** unique process, they are training an AI algorithm that can deliver the predictive benefits of growing personalized organoids utilizing only molecular data. This information provides critical insight into likely treatment success for a specific patient from a range of different clinically approved drugs early in the treatment at an early stage of the care path, enabling physicians to make the best decisions without delays. In the current phase of development, the team are focusing on predicting outcomes of neoadjuvant chemotherapy. In the future, **UroMe.ai** aims to be the standard of care tool used in all clinically approved oncological treatments of bladder cancer as well as in other urological cancers.

The **UroMe.ai** team combines the expertise of internationally recognized senior researchers and clinicians from the Charité in the field of urology and patient-derived experimental models alongside technical experts in machine learning.

Expanding **UroMe.ai** to encompass all clinically approved oncological treatments for bladder cancer and other urological cancers demonstrates a broad vision for improving cancer care. By providing a standardized tool for treatment prediction across different treatment modalities, **UroMe.ai** aims to optimize treatment outcomes and contribute to better patient management for urological cancers.

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UroMe.ai

ASK

- Co-operations with national and international partners for data sharing and development (e. g other hospitals, biobanks, cancer centers)
- Co-development with industry partners to explore further use cases
- Team members: product manager, senior machine learning specialist, business advisor from the cancer field, biomedical engineer experienced in cancer and interested in regulatory and product

KEYWORDS
Urology, Urogyn, Cancer, Bladder, AI, Organoids, Chemotherapy, Treatment, Malignant, Decision Support

dotPD: A Customizable Platform For Data-Driven Medicine

Despite new digital health solutions being invented almost every day, very few solutions actually arrive in real-world healthcare. Hospitals need to balance considerations of backend standardization, interoperability, security, and vendor lock-in, while simultaneously empowering individual clinics to create and/or use uniquely tailored solutions catering to the specific needs of healthcare professionals and their patients. Healthcare professionals, in turn, are exposed to a barrage of new options, each with different UI and UX requirements, increasing their adoption time.

Deeply rooted in clinical practice and health IT, the dotPD team came together over two years ago and built an interoperable documentation and remote patient monitoring solution for patients with Parkinson's Disease and deep brain stimulation therapy. The team went on to further develop and deploy the emerging platform dotbase in a set of reference centers at Charité.

Today, the solution dotbase provides a unique workspace for anyone to not only build but also operate, countless digital health solutions efficiently and effectively. New customized dashboards or patient applications can be easily assembled using its modular and interoperable design with best-in-class features and no-code/low-code adjustability. Its modules already power a wide range of applications, including comprehensive remote patient monitoring platforms, integrated multi-centric clinical trials, and entire hospital outpatient clinics.

The dotPD team aims to revolutionize the digital health, landscape by making it faster, more reliable, and cost-effective for everyone to build and run regulated digital health solutions. For the future, the team seeks to not only empower hospitals and healthcare providers, but also companies that want to augment the patient journey. With their modular workflow and emphasis on addressing the needs of clinicians, they help to sidestep redundant development costs and ensure smooth integration directly into clinical workflows, providing a fast track to real-world engagement. dotPD is a growing team of proficient software engineers, physicians, UI/UX designers, and health economic specialists, driven by the belief that the digitalization of healthcare has to be rapid, adaptive, and universally accessible. Their solution is up and running at Charité, thus demonstrating the scalability of its technology and content modules.

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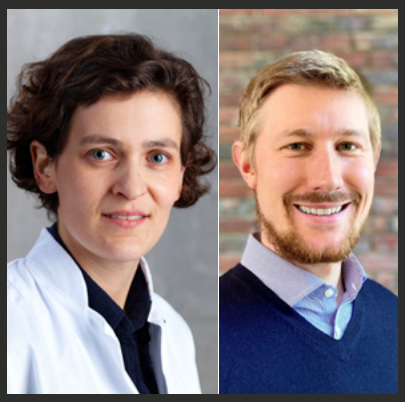
KEYWORDS
Healthcare IT, Open Platform, HIS, Data-Driven Medicine, Customizable Health Reporting, No-Code/Low-Code

ASK
- Partnership with hospital CTOs, CIOs and management
- Co-operation with Pharma & Medtech companies
- Co-operation with data-driven Digital Health Scale-ups
- Co-development with CROs
- Team members: regulatory, DevOps, cloud engineering

Interested to Catch Up with Our Stage 2 Teams? Get in Touch during Our Network Session

Gyde: Patient-Centered Therapy Solution for Sexual Distress in Women
Selina Marie Kronthaler
Dr. Laura Hatzler



MatchGraft.AI: Donor-Patient Matching Tool for Stem Cell Transplantations and Beyond
PD Dr. Lena Oevermann
Dr. Jonathan Groß
Dr. Madlen Reschke

Metatron: A Wearable Sensor Platform for the Early Detection of Peripheral Artery Disease
PD Dr. Federico Collettini
PD. Dr. Timo Auer

Mucoaid: AI-Powered Solution to Detect Oral Mucosal Lesions Early to Fight Oral Cancer
Prof. Dr. Tabea Viktoria Flügge

RadioEye: The Autopilot in Diagnosing Misleading Radiology Cases Correctly
PD Dr. med. Katharina Erb-Eigner

VirtuCueR: A VR-Based Treatment to Reduce Relapse & Craving For Alcohol-Dependent Patients
Dr. Nikolaos Tsamitros
Dr. Stefan Gutwinski

Notes

Notes

Supported Projects from 2017 - 2022

Cohort 2017

- **Exploration of Heart Disease and Cancer Using Fractal Analysis Technology**
  Dr. Florian Michallek, Institute of Radiology, Charité

- **Heart Disease Risk App and Automated CT Analysis**
  Prof. Dr. Marc Dewey, Institute of Radiology, Charité

- **Predicting Stroke Risk with Artificial Intelligence**
  Dr. Dietmar Frey/Dr. Vince Madai, Neuro Surgery, Predictive Modeling in Medicine, Charité

- **Prediction of Post-operative Complications in the Intensive Care Unit (Spin-off X-Cardiac)**
  Dr. Alexander Meyer/Prof. Dr. Volkmar Falk, Department of Cardiothoracic and Vascular Surgery, Charité & DHZB

Cohort 2018

- **BodyTime: A New Diagnostic Assay to Assess the Internal Clock (Spin-off BodyClock)**
  Prof. Dr. Achim Kramer, Institute for Medical Immunology – Chronobiology, Charité

- **Cardio Prime: Diagnosis and Therapy Planning Platform for Patients with Cardiovascular Diseases**
  Prof. Dr. Titus Kühne/Kai Brosien, Institute for Imaging Science & Computational Modelling in Cardiovascular Medicine, Charité

- **Computational Pathology (Spin-off AIgnostics)**
  Prof. Dr. Frederick Klauschen, Institute for Pathology – Clinical Pathology, Working Group System Pathology, Charité

- **DentalXr.AI: Deep Learning for Dental Image Diagnostics (Spin-Off: DentalXr.ai)**
  Prof. Dr. Falk Schwendicke/Departement of Restorative and Preventive Dentistry, Charité

- **LingPed: An Innovative Monitoring Platform for Post-Surgical Rehabilitation**
  PD Dr. Serafeim Tsitsilonis/Kaya Nevda, Center for Musculoskeletal Surgery, Charité

- **mTOMADY: A Transaction Platform for Accessible and Affordable Healthcare (Spin-off mTOMADY)**
  Dr. Julius Emmrich/Dr. Samuel Knauss, Departement of Neurology and Experimental Neurology, Charité

Cohort 2019

- **3D Histopath: Bringing Histopathology from 2D to 3D**
  (Spin-off Limaa Technologies)
  Dr. René Hägerling, Institute of Medical Genetics and Human Genetics, Charité

- **ARCAS: AI for Life Sciences. Best Treatment Possible for Every Cancer Patient**
  Dr. Altuna Akalin, Institute for Medical Systems Biology (BIMSB), Max-Delbrück Center for Molecular Medicine (MDC)

- **Nephrolytix: Clinical Decision Support System to Identify Acute Kidney Injury**
  (Spin-off Nephrolyx)
  Prof. Prof. hc. Dr. Markus van der Giet, Department of Nephrology and Medical Intensive Care, Charité

- **Diagnosis and Therapy Optimization in Implant Infections**
  PD Dr. Andrej Trampuz, Center for Musculoskeletal Surgery, Charité

- **Open.IU: A Diagnosis and Therapy Solution for Adolescents with Internet Gaming Disorder**
  PD Dr. Olga Geisel/Prof. Dr. Christoph Correll, Department of Child and Adolescent Psychiatry, Psychosomatic Medicine and Psychotherapy, Charité

- **PREFREE: For Reducing Uncertainty in Pregnancy – A Decision Support Tool and Home Monitoring Solution**
  (in Spin-Off Process)
  Prof. Dr. Stefan Verlohren, Department of Obestrics Maternal-Fetal Medicine, Charité

- **Siloa: Solution for Digital Early Detection of Alzheimer's Disease**
  Dr. Herlind Megges/Dr. Silka Dawn Freiesleben, Department of Psychiatry, Geriatric Medicine – Memory Clinic, Charité

- **SUMUS: A Trustable Psychotherapy Guide for Patients Affected by Muscle Diseases**
  Prof. Dr. Simone Spuler/Dr. Elisabetta Gazzerro, Clinic for Muscular Disorders, Charité/MDC

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- **Aurelia: Monitoring Brain Perfusion During Anesthesia and Improving Perioperative Outcomes**
  Dr. Michael Nordine/Prof. Dr. Sascha Treskatsch Clinic for Anesthesiology and Intensive Care Medicine, Charité

- **DAGI: Keeping Your Child With Congenital Heart Disease Safe at Home**
  Prof. Dr. med. Katharina Schmitt/Dr. Florian Gross, Department of Pediatric Cardiology and Congenital Heart Disease, Charité/DHZB

- **MetaboKin: A Virtual Cell for Modeling Liver Metabolism**
  (Spin-off Doppelganger Biosystems)
  PD Dr. Nikolaus Berndt/Dr. Johannes Eckstein, Laboratory Computational Systems – Biochemistry, Charité

- **MutationSearch: A Full-Service Platform Solution for Whole Exome Sequencing**
  Prof. Dr. Dominik Seelow, Bioinformatics and Translational Genetics, BIH

- **MyaLink: A Monitoring Platform Solution for Oprhan Diseases in Neurology**
  Dr. Sophie Lehnerer/Dr. Lea Gerischer, Department of Neurology and Experimental Neurology, Charité

- **PerMitrA: Optimization Tool for Heart Valve Surgery**
  PD. Dr. Simon Sündermann, Clinic for Cardiovascular Surgery, Charité

- **rAIdiance: AI-Based Radiology Solutions to Improve ICU Care**
  Dr. Keno Bressem/PD. Dr. Dr. Stefan Niehues, Clinic for Radiology, Charité

- **Recovery Cat: Keeping Patients With Chronic Mental Disorders Safe (Spin-Off RecoveryCAT)**
  Dr. Jakob Kaminski, Department of Psychiatry and Neurscience, Charité

- **TimeTeller: Circadian Clock Profiling for Cancer Treatment Timing (Spin-off TimeTeller)**
  Prof. Dr. Angela Relogio, Institute for Theoretical Biology, Charité

- **WePath: A Platform-Based Global Network for Pathology Expertise**
  Prof. Dr. Peter Hufnagl, Digital Pathology IT, Institute of Pathology, Charité

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- **Gyde: Patient-Centered Therapy Solution for Sexual Distress in Women (STAGE 2)**
  Dr. Laura Hatzler/Selina Marie Kronthaler, Institute of Sexology and Sexual Medicine, Department of Gynecology, Charité

- **MatchGraft.AI: Donor-Patient Matching Tool for Stem Cell Transplantations and Beyond (STAGE 2)**
  PD Dr. Lena Oevermann/Dr. Jonathan Groß, Department of Pediatric Oncology and Hematology, Charité

- **Metatron: A Wearable Sensor Platform for the Early Detection of Peripheral Artery Disease (STAGE 2)**
  PD Dr. Federico Collettini/PD Dr. Timo Auer, Clinic for Radiology, Charité

- **Mucoaid: AI-Powered Solution to Detect Oral Mucosal Lesions Early to Fight Oral Cancer (STAGE 2)**
  Prof. Dr. Tabea Viktoria Flügge, Clinic for Oral and Maxillofacial Surgery, Charité

- **RadioEye: The Autopilot in Diagnosing Misleading Radiology Cases Correctly (STAGE 2)**
  PD Dr. med. Katharina Erb-Eigner, Department of Radiology MVZ, Charité

- **SangoRT: Making A Change for Clinical Trials in Oncology**
  Iris Wing To Lam, Department of Infectious Diseases and Pulmonary Medicine, Charité

- **VirtuCueR: A VR-Based Treatment to Reduce Relapse & Craving For Alcohol-Dependent Patients (STAGE 2)**
  PD Dr. Stefan Gutwinski/Dr. Miriam Sebold/Dr. Nikolaos Tsamitros, Department of Psychiatry and Neurosciences, Charité

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