



THE JOINT TECHNOLOGY TRANSFER OF
THE BERLIN INSTITUTE OF HEALTH AND
CHARITÉ – UNIVERSITÄTSMEDIZIN BERLIN



TECHNOLOGY BROCHURE

www.berlinhealthinnovations.com

“We aim to accelerate and catalyze the transformation of new discoveries and inventions into medical products, therapeutics and services that improve outcomes and benefit patients and society”

Bringing new ideas, products and services to reach patients is the toughest challenge in biomedical research.

At **Berlin Health Innovations (BHI)**, the joint technology transfer unit of the Berlin Institute of Health (BIH) and Charité – Universitätsmedizin Berlin, we are deeply committed to making a difference in translational medicine.

We recognize that applying our profound expertise in the areas of pharmaceuticals, diagnostics and medical technologies alone may not be enough to enable our innovators out of BIH and Charité to create the future of medicine.

That is why we also focus on digital health – the convergence of new, digital technologies with biomedicine and healthcare – which allows us to add substantial value to innovations that improve patients' lives today and tomorrow.

Together with industry partners worldwide, and by leveraging our advanced instruments for technology transfer and highly collaborative working style, we drive translation.

Diagnostics / Devices

Title of Invention	Reference No.	Lead Inventor	Technology Manager	Developmental Status
Manual Elisa based on hnRNP A3 related Peptides for Early Diagnosis of Rheumatoid Arthritis	CH370	Karl Skriner	Bettina Büttner	patient data
Noval Peptides for Celiac Disease Diagnosis	CH462	Karl Skriner	Bettina Büttner	patient data
Set of hnRNP Antigens for Improved Diagnosis of Rheumatoid Arthritis	CH414	Karl Skriner	Bettina Büttner	patient data
N-Acetyl- Glucosamine as Biomarker of Multiple Sclerosis Disease Course	CH731	Alexander Brandt	Bettina Büttner	patient data
Cell-Based Urinary Biomarkers for Differentiation Prediction of Renal Transplantation Rejection	CH846	Philipp Enghard	Bettina Büttner	patient data
Cell-Based Markers for Predicting the Probability of Having or Developing a Non-Union Before Undergoing a Spinal Fusion Surgery	CH820	Simon Reinke	Bettina Büttner	patient data
Methods for Determining Dermatophytes	CH859	Yvonne Gräser / Christiane Kupsch	Julia Eschenbrenner	patient data
CortBS –Ultrasound Osteoporosis Dx	CH847	Kay Raum	Julia Eschenbrenner	patient data
Non-invasive Cardiac Pressure Determination	CH855	Titus Kühne	Thilo Förster	patient data
Non-invasive measurement of myocardial power	CH875	Titus Kühne	Thilo Förster	patient data

Medical Devices / MedTech

Title of Invention	Reference No.	Lead Inventor	Technology Manager	Developmental Status
Indwelling Transfusion Catheter, Transfusion Cannula Kit and Method for Testing a Transfusion System	CH422	Michael Notter	Julia Eschenbrenner	prototype
Device and Method for ready-prepared Surgical Knots	CH711	Panagiotis Fikatas	Bettina Büttner	prototype
Novel Stapler for Cutting and Clamping Solid Organs	CH722	Panagiotis Fikatas	Bettina Büttner	concept
Packaging article for a prepared surgical knot	CH876	Panagiotis Fikatas	Bettina Büttner	prototype
Adapter for Inserting Dental Implant	CH841	Andreas Schwitalla	Thilo Förster	prototype
Method and Arrangement for Identification and Correction of Optical Aberrations	CH783	Benjmin Judkewitz	Thilo Förster	proof-of-concept
Method (& Device) for preserving urinary cells	CH899	Philipp Enghard	Sigrun Szepanski	Concept
Application for Infusion Syringe Pump for Improvement of Hygiene and for Avoiding Blood Stream Infections	N/A	Clemens Hoffmann	Bettina Büttner	concept
CortBS –Ultrasound Osteoporosis Dx	CH847	Kay Raum	Julia Eschenbrenner	Ex vivo data

Therapeutics

Title of Invention	Reference No.	Lead Inventor	Technology Manager	Developmental Status
Fentanyl Derivatives as pH-Dependent Opioid Receptor Agonist	CH544	Christoph Stein	Frank Stief	Data in vivo (animal data)
Novel Iron Oxide Based Nanoparticles for Treating Hyperphosphatemia	CH557 CH741	Susanne Wagner	Bettina Büttner	Data in vivo (animal data)
S-Oxprenolol for Treating Amyotrophic Lateral Sclerosis (ALS)	CH589	Jochen Springer	Bettina Büttner	Data in vivo (animal data)
Cytokine-Loaded Microparticles in Hyaluronic Acid for the Treatment of Osteoarthritis	CH519	Kristin Andreas	Bettina Büttner	Data in vitro
Novel Medical Use of TN- α - and γ -IFN Inhibitors for the Treatment of Delayed Bone Fracture Healing	CH592	Simon Reinke	Bettina Büttner	Data in vivo & in vitro
Novel Treatment Options for Non-Union after Spinal Bone Fusion Surgery	CH820	Simon Reinke	Bettina Büttner	Data in vitro
Use of Immunomodulatory Compounds for Treating a Musculoskeletal Injury or Preventing Delayed Bone Healing	CH833	Katharina Schmidt-Bleek	Bettina Büttner	Data in vivo (animal data)

Therapeutics

Title of Invention	Reference No.	Lead Inventor	Technology Manager	Developmental Status
Linear Ang1-7 Derived Peptide as Angiotensin 2-Receptor Agonist for the Treatment of Acute Respiratory Distress Syndrom	CH387	Thomas Walther	Bettina Büttner	Data in vitro
Preventing Vascular Calcification in Chronic Kidney Disease	CH845	Jakob Vökl	Ansgar Santel	In vivo model data
Novel method for Expansion of human satellite and muscle regeneration	CH721	Simone Spuler	Michael Karle	In vivo model data
Neuropeptide Expressing Gene Therapy Vector for the Treatment of Temporal Lobe Epilepsy	CH744	Regine Heilbronn	Bettina Büttner	Data in vivo (animal data)
Novel Peptide-Based Approach for Treating an Ocular Wound and/or Fibrosis	CH895	Tobias Brockmann	Bettina Büttner	Data in vivo (animal data)

Research Tools / Lab Tools

Title of Invention	Reference No.	Lead Inventor	Technology Manager	Developmental Status
Anti-Human Glutathione-Peroxidase-Monoclonal Antibody-Producing Hybridoma Cell clone	CH832	Hartmut Kühn	Bettina Büttner	lab
MACC1 Genetically Modified Mice	CH691	Ulrike Stein	Anette Schröder	lab
Anti-human MACC1 antibodies, human MACC1 peptides and MACC1 oligonucleotides for research uses	CH100	Ulrike Stein	Bettina Büttner	lab, patient data
Head of Femur, human, thermo-desinfected	N/A	Institute for Transfusion Medicine; Tissuebank	Sigrun Szepanski / K. Fleischhauer, Charité Tissuebank	Ready-to-use tissue sample, human

Technology Managers



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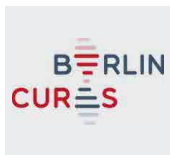
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* The Charité is cooperating with Ascenion GmbH in the field of Life Science technology transfer.

Therapy

Berlin Cures AG

Berlin Cures Holding AG was founded in September 2014 as a spin-off of the Charité University Medicine Berlin and the Max Delbrück Center (MDC). Researchers of MDC and Charité have found an aptamer that is able to neutralize autoantibodies against G-protein coupled receptors which occur in dilatative cardiomyopathy and other autoimmune diseases. Berlin Cures currently develops the lead candidate BC007 in phase 1 in the indication dilatative cardiomyopathy and plans to expand the field of indications to other diseases associated with pathogenic autoantibodies.



<https://berlincures.de/>

TauRX

TauRx is a group of life science companies focused on the development of novel treatments and diagnostics for Alzheimer's disease and other neurodegenerative diseases. The company, established in 2002 in Singapore, where the commercial headquarter is based. The key drivers in the foundation process were the late Dr. K.M. Seng, Singapore, and Prof. Claude Wischik, Aberdeen, Scotland. Its research headquarter is in Aberdeen, Scotland, with additional research activities at the Charite - Universitaetsmedizin Berlin, and Warsaw, Poland. Prof. Franz Theuring from the Institute of Pharmacology of the Charite joined the activities of Prof. Claude Wischik in 1998 and together with the Charité acted as co-founder of TauRx.



The company's novel tau aggregation inhibitors (TAIs) target the formation (aggregation) of tau protein 'tangles' in the brain. The spread of tau tangles – the main driver in Alzheimer's disease – is strongly correlated with dementia. TAIs work by dissolving existing tau aggregates and preventing the further aggregation of tau protein from forming new tangles. The lead compound, LMTX®, inhibits aggregation of tau, synuclein, TPD-43 and huntingtin proteins and is now in Phase 3 clinical trials.

<http://taurx.com>

Medtech

MagForce Nanotechnologies AG

MagForce AG, listed in the Scale segment of the Frankfurt Stock Exchange, together with its subsidiary MagForce USA, Inc. is a leading medical device company in the field of nanomedicine focused on oncology. The Group's proprietary NanoTherm® therapy enables the targeted treatment of solid tumors through the intratumoral generation of heat via activation of superparamagnetic nanoparticles



<http://www.magforce.com>

Humedics GmbH

In 2005 a young surgeon from Charité medical center developed a new kind of liver function test and named it LiMAX test. This concept led to the foundation of Humedics GmbH (a spin-off of Charité and the Free University, Berlin). Nowadays the LiMAX test has become an indispensable tool for surgeons and hepatologists to improve treatment of patients with liver cancer.



www.humedics.eu/
www.limaxtest.com

InnoRa GmbH

InnoRa GmbH was founded by employees of the Charité in late 2001. Its primary purpose was to support research of the Department of Radiology. A focus on new medical devices for minimally invasive image-guided radiological and cardiological therapeutic procedures was successfully developed. The company was granted public funds for selected projects but was mostly financed by providing research services and conducting its own projects. InnoRa's know-how comprises specialized areas of pharmaceutical research, chemical analysis, experimental preclinical research, clinical trials, and regulatory aspects. Patent applications by InnoRa, granted patents and contracts safeguard the company's future activities.



<http://www.innora.de>

Dolosys GmbH

Dolosys GmbH is an innovative med-tech company focused on the development and manufacturing of easy to use electrophysiological medical devices for the ICU and the pain therapist.



<http://www.dolosys.de>

Medtech

Scopis GmbH

Scopis medical develops and markets extremely precise laser based endoscopic and microscopic measuring und navigation systems for minimal invasive surgery.

Scopis is a leader in medical augmented reality (AR) and Hybrid Navigation®, creating innovative solutions for the healthcare market, including technology for surgical education, and planning and navigation systems for otorhinolaryngology (ENT), craniomaxillofacial (CMF), spine and neurosurgery.

<https://navigation.scopis.com>



SCOPIS
medical

VMscope GmbH

VMscope GmbH was founded in 2014 as spin-off from the institute of pathology, Charité Berlin.

VMscope develops and distributes digital pathology software solutions, products are virtual microscopy e-learning and teleconferencing web portals, tumor marker imaging applications and pathology system integration. The key benefits of VMscope software are its high compatibility to all slide scanner formats and its flexible interfaces for easy system integration and fast adoption to customer needs.

VMscope' s customers are mainly research institutes, universities and pathology institutes.

<http://www.vmscope.de/>



Diagnostics

Provitro AG

Provitro combines more than ten years of experiences in commercialisation of cell culture technologies, tissue micro arrays and immunohistochemical analyses with the scientific expertise of the Pathological Institute of the Charité, Berlin. Based on a quality management system according to ISO 9001 and ISO 13485, Provitro may provide their customers not only with high-quality products, CE marked in-vitro diagnostic controls and state-of-the-art services but also with individual solutions for their specific requests on target validation.

<http://www.provitro.de/>



provitro 

Nocturne GmbH

Nocturne was founded in 2018 out of the NeuroCure Clinical Research Center, Charité - Universitätsmedizin Berlin. Nocturne developed technology that offers neurologists the possibility to do diagnosis, treatment decisions and disease monitoring, based on images of the retina assessed with optical coherence tomography, a cost-efficient, rapid and non-invasive technique. The caregiver can directly upload the image data to an easy-to-use web service and receive a certified retina report with all relevant parameters.

<http://nocturne.one/>



Diagnostics

MoKi GmbH

Dienstleistungen und Produkte zum Nachweis von Mikroorganismen mittels der mikroskopischen Methode der Fluoreszenz in situ Hybridisierung (FISH*) an. Mit Hilfe der FISH können mikrobielle Lebensgemeinschaften, sogenannte Biofilme, nicht nur identifiziert und quantifiziert, sondern auch deren Aktivitätszustand analysiert werden. So bietet die MoKi Analytics die Messung der Wirksamkeit von antimikrobiellen Substanzen gegen Biofilme an, zum Beispiel auf beschichteten Implantaten oder medizinischen Oberflächen.

*Technologie Fluoreszenz in situ Hybridisierung (FISH)

www.moki-analytics.com



PhantomX

PhantomX was founded in 2018 and develops phantoms for realistic simulation of patient radiation exposure in computed tomography and radiation therapy. Simulations and dosimetric investigations on these phantoms are designated to support optimization of radiation exposure, diagnostics and patient treatment.

<http://www.thephantomx.com/>



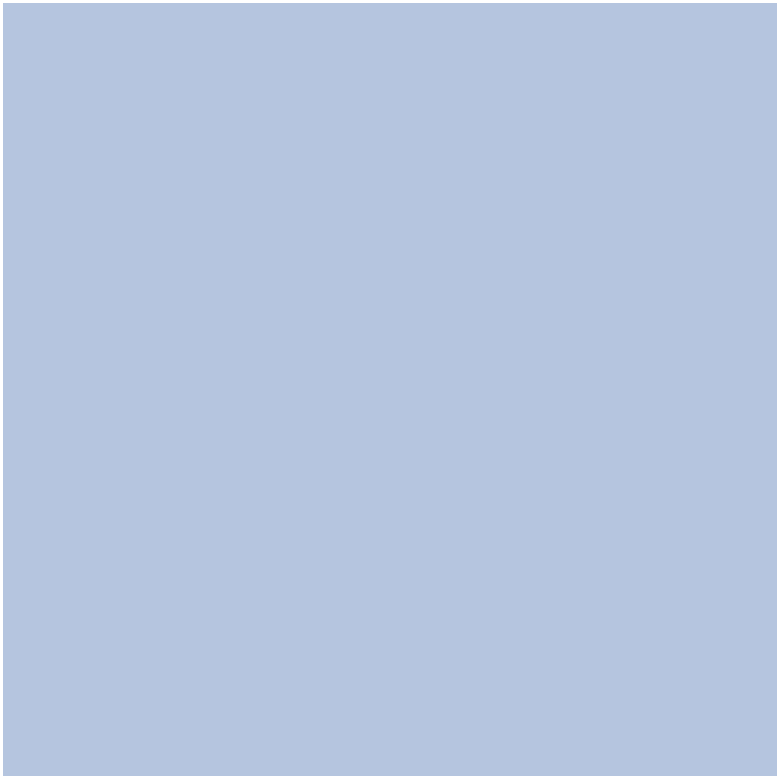
Software

Kenhub

Kenhub is a SaaS business that brings medical education into the 21st century. Kenhub provides memorisation-focused E-Learning tools using adaptive, gamified quizzes, videos, articles and atlas.

<https://www.kenhub.com>





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