Image-Guided & Functionally Instructed Tumor Therapies Cluster of Excellence

Visualizing and Targeting Cancer Stress

issue 02 | July 2022

WELCOME

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LOOKING BACK

DEAR MEMBERS OF THE IFIT COE. DEAR COLLEAGUES.

A nother year has passed as fast and challenging as the previous ones. The iFIT CoE is now in its fourth year, counts a total of 139 members and we are proud to have on board - so far - 33 PhD students with projects within the iFIT scope.

Our internationally competitive research resulted in 115 publications in 2021, and included papers in top raking journals such as Nature, Cancer Discovery, Nature Immunology. Our media presence was further improved by launching the iFIT social media channels (Twitter and LinkedIn) and by creating a new web presence.

A major focus in the past year was the completion of our new iFIT building. By now new research groups have moved in and started their exciting work. Despite the Covid pandemic we were able to have our iFIT Scientific Retreat in October 2021 and all participants enjoyed a day of fruitful scientific discussions within the poster exhibition. Another highlight in 2021 was the many efforts put into our equal opportunities program, now offering better conditions for scientists with family.

As outlined in greater detail in this newsletter, changes were made in the iFIT FlexFunding program. There won't be rigid deadlines and applications will be accepted at any time. Promising projects will be invited for a presentation to the iFIT Executive Board.

We would like to thank all members for the great contributions to the iFIT CoE and look forward to working with you in 2022.

> Lars Zender Hans-Georg Rammensee Bernd Pichler



Visualizing and Targeting Cancer Stress



iFIT Structure



iFIT General Assembly & Elections of iFIT Representatives

The annual iFIT General Assembly took place on December 15th, 2021. Main research developments were presented and the iFIT members elected the representatives of the iFIT Executive Board and Steering Committee:

THE IFIT EXECUTIVE BOARD

iFIT Cluster Spokespersons Lars Zender Hans-Georg Rammensee Bernd Pichler



Lars Zender



Hans-Georg Rammensee

Coordinator for Equal Opportunities and Early Career Researchers Juliane Walz Authorized Spokesperson Lars Zender



Bernd Pichler



Juliane Walz

THE IFIT STEERING COMMITTEE -

Elected Representatives per area: **Female PI-Representatives** Birgit Schittek Ghazaleh Tabatabai

PI-Representative of nonuniversity research institution Matthias Schwab

PI-Representatives (general) Stefan Laufer Katja Schenke-Layland Christian la Fougère

Senior Professorship Alfred Nordheim

Early Career Josef Leibold Andreas Maurer (deputy) **Equal Opportunities** Bettina Weigelin Annika Nelde (deputy)

Core Units Sven Nahnsen Julia Mannheim (deputy)

Associate Investigators Saskia Biskup André Martins (deputy)

Animal Use & Care Carsten Calaminus Sandra Beer-Hammer (deputy)

Flex Fund Project Leaders Klaus Schulze-Osthoff Christian Seitz (deputy)



THE IFIT SCIENTIFIC ADVISORY BOARD

The iFIT CoE is honoured to be able to count on the scientific advice and expertise of the members of its outstanding **Scientific Advisory Board (SAB)** in the years to come. Many thanks to all SAB members for their support of the cluster:





















René Bernards

Professor at the Netherlands Cancer Institute. Research focus on genome-wide functional genetic approaches, drug resistance and senescence for cancer therapy.

Zaver M. Bhujwalla

Director of Cancer Imaging Research and Professor of Radiology and Radiological Science. Research focus on molecular and functional imaging to understand and target cancer and the tumor microenvironment.

Kevin Brindle

Professor & Group Leader at Cancer Research UK Cambridge Institute. Research focus on development of MRI and MRS methods for the noninvasive detection of tumor cell death *in vivo*.

Madiha Derouazi

Founder & CEO of Amal Therapeutics SA. Research focus on cancer immunotherapy & advanced therapeutic cancer vaccines (from KISIMA).

Olivera J. Finn

Distinguished Professor at the University of Pittsburgh. Research focus on the identification of specific mechanisms of human anti-tumor immunity and cancer immunosurveillance.

Detlef Mennerich

Head of Boehringer Ingelheim Research Beyond Border (RBB). RBB explores emerging science and technologies by taking an agnostic approach to therapeutic area and modality.

Pamela Ohashi

Professor at the University of Toronto. Research focus on understanding the mechanisms that regulate T-cell activation and function.

Ralf Rambach | Patient representative

Owen Sansom

Director at Cancer Research UK Beatson Institute. Research focus on molecular changes in bowel cells and bowel cancer.

James Williams

Head of Siemens Healthineers. Focuses on bringing breakthrough innovations to market and being at the center of clinical decisionmaking treatment pathways.



iFIT Research

Progress

Area A | FIMT – Functionally Instructed Molecular Therapies

New methodology developed to better predict the likelihood success of immunotherapies for lung cancer this study led to a publication in Nature Communications: Hinterleitner, C., Strähle, J., Malenke, E. et al. Platelet PD-L1 reflects collective intratumoral PD-L1 expression and predicts immunotherapy response in non-small cell lung cancer. Nat Commun 12, 7005 (2021). Follow the link and check the new video.

HepaRegeniX - a start-up founded by Lars Zender and Stefan Laufer - finished a phase I HepaRegeniX clinical trial testing the newly developed MKK4 small molecule inhibitor in healthy volunteers. The trial revealed excellent pharmacokinetic properties and no adverse effects



were observed. Several phase II trials are now in preparation and will test MKK4 inhibitors for the treatment of liver diseases and therapy resistant tumors such as lung cancer and colorectal cancer.

Upgrade of iFIT Screening Unit - the iFIT Screening unit was upgraded with new genome scale sets (mouse and human) of shRNAs and and sgRNAs, which will be available to iFIT members within 2022.

Area B | ImmT – Immunotherapy

Immunopeptidome analyses using next generation iFIT Mass spectrometers enabled:

- identification of naturally presented uORF-derived HLA-presented peptides (as part of the so called "cryptic neoepitopes") in an extensive dataset of primary malignant and benign tissue samples. Nelde et al., Cellular Molecular Life Science, 2022.
- identification of neoepitopes from the DNAJB1-PRKACA fusion transcript and first evidence for efficacy in immunotherapy approaches in a FL-HCC patient.

Peptide vaccine studies with the novel adjuvant XS15: four clinical peptide vaccine studies with the new adjuvant XS15 were implemented in 2021.

- The first-in-human study evaluating a peptide vaccine (CoVac-1) adjuvanted by XS15 in healthy volunteers (Safety and immunogenicity trial of multi-peptide vaccination to prevent COVID-19 infection in adults (pVAC), was completed in 2021. The outstanding results were published in Nature (Heitmann et al., Nature 2021). Based on these promising results further peptide-based vaccine trial adjuvanted with XS15 were initiated in cancer patients:
- Phase I/II clinical study of CoVac-1 in the high-risk population of cancer patients with congenital or acquired B-cell or antibody deficiency, who are unable to mount humoral immune responses after natural SARS-CoV-2 infection or upon vaccination
- Phase 1 study iVAC-XS15-CLL01evaluating for the first time a personalized peptide -vaccine adjuvanted with XS15 based on our sophisticated warehouse concept in CLL patients receiving standard treatment with a BTK inhibitor. Study was initiated in December 2020, so far 14 of 20 patient recruited.
- Phase 1 study (GLIO-XS15) evaluates a multi peptide vaccination with XS15 in glioblastoma patients. Study started June 2021, first three patients are vaccinated.



Area C | MFMI – Molecular and Functional Multiparametric Imaging

Joint co-supervision PhD scholarship "Translational Metabolic Cancer Imaging - from Organisms to Cells". This project combines non-invasive metabolic imaging and co-detection by indexing (CODEX) to study the diversity of the tumor/immune microenvironment. The supervisors are: André F. Martins (iFIT AI) and Christian M. Schürch (professor for advanced tissue imaging and digital pathology at the Department of Pathology)

Photon counting CT / Ultralong XL-PET CT (Biograph Vision Quadra[®] Siemens Healthineers), a 8 Million Euro scanner, installed and first patients scanned in September 2021. This equipment combines several advantages by offering fully digital data acquisition, improving image resolution and having a much lower radiation dose than conventional CT devices. Advancing the digitization of the medical sector is the declared goal of the "PC3 Konsortium" - funded by the Ministry



of Economic Affairs - and consists in the installation of three photon counting CT devices in the university hospitals in Tübingen, Freiburg and Mannheim. The networking of the three devices will enable the exchange of complex data and thus further digitize the medical sector in Baden-Württemberg. Artificial intelligence is expected to play a key role in processing the large amounts of data.

Establishment of the collaboration project "BioDev Center" - a collaboration between Bernd Pichler (WSIC) and Ulrich Rothbauer (NMI Reutlingen) that aims at producing, testing and quickly bringing into use of so-called biologicals (biotechnologically produced nanobodies).



Cooperation with ImaginAb in the field of cancer immunotherapy has officially started and Tübingen was in 2021 the first center in Europe to perform the first PET scans with the radiolabeled CD8 minibody. The radiopharmacy in Tübingen is the only center in Europe who has the authorization to produce radiolabeled CD8 and ship it to clinical trial centers in Europe.

Intravital multiphoton and light-sheet microscope, a 1.2 Million € setup, have been installed in 2021 and are ready to be used for monitoring immune cell behaviour in live tissue or whole organs to understand tissue-specific mechanisms of immunotherapy success or failure.

Area A/C | FIMT/MFMI

SenPET project approved. The first part (healthy volunteers) of a clinical trial testing our novel and proprietary PET tracer for senescence visualization was completed. Collectively, our data show that i) [18F]FPyGal can robustly detect intratumoral senescence in preclinical cancer mouse models and ii) that the use of [18F]FPyGal was safe and well-tolerated in the described human study population. Radiation exposure was low and comparable to other clinically available 18F-labelled PET-tracers. In a second stage of our phase I/II trial, we are currently correlating [18F]FPyGal PET signals with histopathological senescence markers in human cancer patients.

Area B/C | ImmT/MFMI

Studies with bispecific PSMAxCD3 antibody CC-1: considering the favorable safety profile of CC-1 documented during the dose escalation part of our trial in CRPC and the encouraging preliminary results in terms of efficacy, it will take place the evaluation of the safety and efficacy of CC-1 in patients with biochemical relapse of prostate carcinoma in two sequential trials. In course is also the project ImmProCure, a Phase II study with three arms evaluating CC-1 and personalized multi-peptide vaccination alone and in combination. Novel imaging protocols are included to guide the therapy.



iFIT InSight Awards & Successfull Grant Applications

In 2021, more than 40 external grants and several awards were received by iFIT members. Many more to come!





Award: Friedmund Neumann Preis 2021 - for her contributions to the development and use of T-cell therapies to improve clinical care for tumor diseasess Amount: 10.000€





Matthias Gehringer Award: Young Investigator Award from the German Pharmaceutical Society (DPhG) Amount: 5.000€

Katja Schenke-Layland Award: Hilde Mangold Award from the German Stem Cell Network (GSCN)) Amount: 1.500€

Successfull Grant Applications

Juliane Walz and Helmut Salih

Institution: GSK / 213342 Project title: BeliVeR, A phase II trial of belimumab in combination with rituximab and venetoclax in patients with refractory or relapsed chronic lymphocytic leukemia Amount: 3.343.646 €

Konstantin Nikolaou together with Marius Horger

Institution: BW Ministerium für Wirtschaft, Arbeit und Wohnungsbau Project Title: Photon-Counting CT konsortium: Etablierung der digitalen nächsten Generation der Computertomographie in Baden-Württemberg (PC3) Amount: 1.819.000 €

Judith Feucht

Institution: Baden-Württemberg Stiftung GmbH Project Title: Investigating the role of the gut microbiome in modulating efficacy and toxicity of CD19-targeted CAR T cell therapy against hematologic malignancies Amount: 669.600 €

Daniel Dauch

Institution: Deutsche Forschungsgemeinschaft DFG Project Title: LXRα induced lipotoxicity for cancer treatment Amount: 485.372 €



Successfull Grant Applications Klaus Scheffler Institution: Collabora Project Title: Comput

Institution: Collaborative Research in Computational Neuroscience (CRCNS) Project Title: Computational neuroimaging and modeling of microvascular effects in cerebral cortical laminar fMRI Amount: 449.245 €

Andreas Schmid

Institution: Deutsche Forschungsgemeinschaft DFG ProjectTitle: *In vivo* staging of alcoholic and non-alcoholic fatty liver disease Amount: 394.900 €

Birgit Schittek

Institution: Deutsche Forschungsgemeinschaft DFG Project Title: Inflammation-induced niche remodelling in controlling melanoma dormancy Amount: 382.100 €

Sabrina Hoffmann and André Martins

Institution: Dr. K. H. Eberle Stiftung Project Title: Mikroskopie des Stoffwechsels Amount: 250.000 €

Alexander Weber

Institution: DFG ProjectTitle: STAPHEX-dissecting staphylococcus aureus macrophage exit Amount: 250.000 €

Bernd Pichler, Stefan Laufer, Katja Schenke-Layland, Sven Nahnsen Institution: BMBF

Project Title: Innovationen für Prävention, Diagnose und Therapie - TheranosticValleySTR Amount: 202.683 €

Athene Programme (by the University of Tübingen) An iFIT Collaboration on Equal Opportunities Funding

This annual program aims at providing support for scientific work, individual career planning and acquisition of interdisciplinary skills to female scientists in their post doc/ habilitation phase. The collaboration has guaranteed iFIT two positions. We would like to thank for all applications received and to congratulate the two awardees: **Annika Nelde** – postdoctoral researcher at the Department of Medicine, Clinical Collaboration Unit Translational Immunology and **Heike Niessner** – postdoctoral researcher at the Department of Dermatology, Section for Dermatological Oncology.



"I am very delighted to receive this award and look forward to meet the other Athene scientists. The award will allow me to attend congresses giving me

the opportunity to discuss my research and to establish new collaborations. I am also very much excited to participate in the various trainings provided within the Athene program to improve my personal interdisciplinary skills and to receive help with professional and strategic career planning." **Annika Nelde**



"Within the Athene program, I hope to connect with women in science in similar positions and stages of life and learn

from their personal and research experience. It will allow me to advance my career in an independent position by having the opportunity to participate in career planning coaching and future workshops."

Heike Niessner



iFIT FlexFunding New Guidelines!

In order to provide you with a better support for your research, the guidelines of the iFIT FlexFunding program have been updated. iFIT members can now apply for this funding at any time during the year without any deadline. Just contact the iFIT Office

for further information and request the official template. Funding will be granted to innovative ideas with potential for subsequent publications and external funding. Congratulations to Lukas Mager for the approved project "Identification of new checkpoint | cific

blockade inhibitors through an unbiased, novel screening platform", and to Helmut Salih and Boris Klimovich for their recently approved project "Antitumor MHC fusion proteins to mobilize SARS-CoV2-spe-T-cells against tumors".

iFIT Retreat 2021 & Early Career Research



This scientific gathering took place on 18 October 2021. iFIT research was shared and discussed with a focus on the work of the early career researchers. One highlight was the visit to the newly renovated iFIT building. During a dedicated poster session, our scientists were available to present and discuss their research. Three posters were awarded:

Clemens Hinterleitner

Platelet PD L1 reflects collective intratumoralPDL1 expression and predicts therapy response to immune checkpoint inhibition in NSCLC. Awarded with 15.000€

Martina Giampetraglia

Mapping functional subregions of immunotherapy response in prostate cancer bone metastasis. Awarded with 10.000€

Björn Tränkle

Single-domain antibodies for targeting, detection and in vivo imaging of human CD4+ cells. Awarded with 10.000€



A special thank you to all who participated



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in the poster session:



Anaïs Choffart, Anna Ohmayer, Anna Schöllhorn, Athina Moschopoulou, Daniel Dauch, Dimitri Stowbur, Elias Einiq, Friederike Hanssen, Gina Dunkel, Gregory Bowden, Iaroslav Sautkin, Jonathan Cotton, Jorge Macedo, Julia Marzi, Lisa Marie Fröhlich, Luana D'Artista, Lucas Becker, Marta Vuozzo, Martina Rausch, Melanie Henning, Oliver Hihn, Philip Bucher, Remy Chiaffarelli, Sabrina Hoffmann, Teresa Wagner, Tobias Sinnberg, Vera Jörke, Yashaswini Mysuru Udaya Kumar, Zexi Hu.



iFIT People

New Professorships

Josef Leibold

W1-Junior Professorship for Functional Immunogenomics University Children's Hospital Tübingen

André Martins

W3-Professorship for Advanced Preclinical Metabolic Imaging and Cell Engineering, WSIC, University Hospital Tübingen

Sven Nahnsen W3-Professorship for Biomedical Data Science QBiC, University of Tübingen

Juliane Walz

W3-Professor for Peptide-based Immunotherapy Robert-Bosch-Center for Tumor Diseases (RBCT), Department of Immunology, Institute for Cell Biology, KKE Translationale Immunologie, German Cancer Consortium (DKTK)

Bettina Weigelin

W2-Professor for Preclinical Imaging of the Immune System WSIC, University Hospital Tübingen

New appointed Associate Professor



Gerald Reischl WSIC, University Hospital Tübingen

New Senior Professorship

Development and Function", with a focus on the molecular genetics of organ function/dysfunction and cancer biology. At the same time, he has assumed responsibilities as Director of the Leibniz Institute on Aging - Fritz Lipmann Institute (FLI)



We are happy and privileged to count on his support, advice and scientific contribution within the iFIT CoE.

Alfred Nordheim

Prof. Nordheim, iFIT PI for area A and Chair of the Department of Molecular Biology, Interfaculty Institute for Cell Biology at the University of Tübingen, has accepted to represent our Cluster as iFIT Senior Professor. He maintains his research interests in "Vertebrate Organ | in Jena, Germany.



iFIT Office

The iFIT Office aims at providing you with as much support and guidance as possible. We are dedicated to the iFIT Cluster of Excellence and happy to assist and support its members concerning all related administrative and organizational subjects such as human resources, funding and finances, workshops and events. Just reach out to us!

The Team: Eva Enzinger - Managing Director | Inês Paixão - Assistant to the Executive Board | Christine Günther - Head of Accounting & Controlling | Steven Patrick Pohl - Press & Public Relations Coordinator

Where to find & how to reach us:

Röntgenweg 11 | 72076 Tübingen 2nd floor, Door 312, Office 107 & 108 Tel.: +49 07071-29 83625; Fax: +49 07071-29 25358 Email: ifitoffice@med.uni-tuebingen.de



Members temporarily abroad

Clemens Hinterleitner member of area A -

has accepted a position as postdoctoral research fellow, Scott Lowe Lab, Cancer Biology and Genetics Program, Memorial Sloan Kettering Cancer Center (MSKCC), New York, USA

Johannes Schwenck member of area C -

has accepted a position as postdoctoral research fellow at the Immunometabolism and Cancer Immunology Lab, University of Lausanne, Switzerland.

Former iFIT Members



With all our best wishes for their future and thanks for the work and dedication for the iFIT Cluster of Excellence, we say goodbye to:

Daniela Kramer former iFIT AI for area A - accepted a position at the Johannes Gutenberg-Universität Mainz.

Rupert Handgretinger former coordinator PI for iFIT area B has accepted a position as Head of Adoptive Cells Transfer Section and Head of Pediatric Service at Abu Dhabi Bone Marrow Transplant Programme, ADSCC, Dubai, UAE.

Sabrina Hoffmann former member for area C - has accepted a new position in the industry.

Stefan Stevanović former iFIT AI for area B - is now enjoying a fulfilling retirement.

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iFIT Events & Announcements Upcoming Events – all events take place in presence!



Lunch & Learn 2022

11July - Peter Scott, University of Michigan, USA

iFIT International Conference 2023

21-23 March

Seminar Series 2022

19 September - Anna Obenauf, Research Institute of Molecular Pathology, Austria

10 October - Sarah Bohndiek, Cancer Research UK Cambridge, University of Cambridge, UK

7 November - Masashi Narita, Cancer Research UK Cambridge Institute, UK

CIVIS Summer School II

18-22 July 2022

Theme: Bioinformatics for non-bioinformaticians | Computational analyses in health and life sciences. The Summer School organized by iFIT member André Martins aims to address a learning gap in life sciences about interpreting and analyzing data. Towards this goal, the program includes lectures and hands-on workshops on next-generation sequencing platforms that produce a massive volume of data. Learn more here

iFIT goes Social Media

In the last decade, science communication has been part of a comprehensive digitalization process. Through the World Wide Web and social media, science has become increasingly accessible to society. To introduce cancer research to a wider audience, iFIT has established

its social media presence, starting with <u>Twitter @CoE_iFIT</u>. Since May 2021, our Twitter account has been growing steadily and informs about news from our Cluster of Excellence such as new publications, new members or the presentation of our laboratories. You can also find and follow us on LinkedIn and check our website. We encourage all iFIT members to set up a Google Scholar account as a way to increase worldwide visibility. Let's spread the word about Germany's only Cluster of Excellence in Oncology!

iFIT Building @ RöWe 11

The renovation work on the iFIT building was completed in November 2021. The research groups of **Judith Feucht** and **Josef Leibold** have already moved into the second floor, and you can find the groups of **André Martins**, **Andreas Maurer** and **Bettina Weigelin** on the third floor.

But there are not only labs in this newly renovated building. We have a conference



room for iFIT members with up to 25 seats, equipped with a beamer, flipchart, portable screen and sound system. The modern and cosy lounge area can also be used as an informal meeting room, and there is also a family room for your comfort. To use and reserve these facilities, please contact the iFIT office.



iFIT on Wheels

iFIT received five E-bikes which are In the near future the iFIT available to all members of the Cluster. The bikes are currently located at the Röntgenweg 11 - just come to the iFIT Office to get the keys and easily pedal to your next meeting!

plans on getting more E-bikes and have them located at the Kliniken Berg - we will keep you posted!



Back @ 2021/22 Lookin iFIT Talks Stefan Pfister | Hopp-Kindertumorzentrum Heidelberg "Utilizing epigenetic fingerprints for tumor classification and patient stratification: status quo and future perspectives" **Seminar Series** Martin Eilers | Theodor-Boveri-Institute, Biocenter, University of Würzburg "Oncogenic Functions of MYC" Rakesh Jain | Harvard Medical School & Massachusetts General Hospital "Normalizing the Tumor Microenvironment to Improve Cancer Treatment: Bench to Bedside" Edward Graves | Stanford University USA "Biological and physical questions for combined radiotherapy and immunotherapy." **Christian Trautwein** | University Hospital Aachen "Functional Mechanism" within the Gut-Liver-Axis" Lunch & Learn The iFIT Lunch & Learn Sessions 2021 and through the first half of 2022 took place fully and we want to send out a special thank you to the speakers: Sessions Sven Nahnsen | QBiC at the University of Tübingen "The importance of scalability and reproducibility in computational cancer research" Saskia Biskup | CeGat GmbH "Precision diagnostics for precision medicine - the dream data set" Markus Löffler | IFIZ and Dept. of General, Visceral and Transplant Surgery & Dept. of Clinical Pharmacology "Each patient his own drug - Can immunotherapy deliver on the promise of individualized cancer treatments?" **Christoph Trautwein** | Dept. of Preclinical Imaging and Radiopharmacy within the Dept. of Radiology at the University Hospital of Tübingen "Beyond genes and transcripts: how metabolomics helps to understand, treat and monitor health and diseases" Juliane Walz | Robert Bosch Center for Tumor Diseases and KKE Translational Immunology "Peptide-based immunotherapy - antigens, combinations and translation" Daniel Dauch | Department of Medical Oncology and Pneumology at the University Hospital Tübingen "Establishing new therapeutic strategies to overcome therapy

resistance in gastrointestinal cancer"

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Lunch & Learn Sessions

Gerald Reischl | Dept. of Preclinical Imaging and Radiopharmacy within the Dept. of Radiology at the University Hospital of Tübingen "The fabulous world of radiopharmaceutical sciences - general aspects of tracer development"

Josef Leibold | Dept. of Medicine, Medical Oncology and Pulmonology, University Hospital Tübingen

"Dissecting tumor immune cell interactions using innovative preclinical models"

Alexander Weber | Interfaculty Institute for Cell Biology, Department of Immunology, University of Tübingen

"Oncogenic MyD88 mutations in Non-Hodgkin-Lymphoma"

Anne Nies | Dr. Margarete Fischer-Bosch Institute of Clinical Pharmacology, Stuttgart and University of Tübingen "Ins and outs of membrane drug transporters"

Judith Feucht | University Children's Hospital Tübingen "Novel approaches and therapeutic applications with chimeric antigen receptors"

iFIT Visits & Events 2021/2022

Science Day of the University of Tübingen | 2 July 2021

This event focused primarily on excellent research, therefore all three Clusters of Excellence provided insights into their day-to-day projects. The iFIT cluster was represented by:

Bettina Weigelin who talked about killer cells in the fight against cancer and how success requires teamwork ("Killerzellen im Kampf gegen den Krebs - Erfolg erfordert Teamwork")



to Fight Cancer ("Living Drugs: Wie man das körpereigene Immunsystem für den Kampf gegen Krebs stärkt")

Josef Leibold talked about how to convert the strengths of tumor cells into their weaknesses ("Die Achillesferse des Krebs - wie man die Stärken der Tumorzellen in ihre Schwächen umwandelt")



Anja Karliczek, Federal Minister of Education and Research. Rector Prof. Dr. Bernd Engler and Annette Widmann-Mauz, Minister of State.

Visit of the Federal Research Minister Anja Karliczek | 28 June 2021

The University of Tübingen received **Anja Karliczek**, Federal Minister of Education and Research. During her visit, she was informed about the progress of the Excellence Strategy at the University of Tübingen and

each of the three Clusters of Excellence provided insights into their research. The iFIT Cluster of Excellence provided information on the topic of "Medical image and data analysis in the fight against cancer".





Virtual AACR 2021 9-14 April

iFIT marked again its presence at this annual meeting. You could find us represented at the exhibitor booth "Cancer Research in Germany", or maybe hear our scientists presenting their latest scientific findings in the poster sessions. For example

On 31 May our scientific symposium took place, an internal event with talks from 25 speakers. Excellent presentations in the fields of immunotherapies, molecular therapies, imaging science and artificial intelligence led to exciting discussions about cancer research. After four intensive & exceptional

iFIT has marked its presence at the American Association for Cancer Research AACR meeting 2021 by joining the virtual exhibition as part of the "Cancer Research Germany"-booth (organized in by the DFG) where visitors could contact "Research in Germany"

representatives at any time via the virtual conference-wide networking tool.

Our cluster was represented at the online seminar "Career Opportunities in Cancer Research in Germany" by Marissa Dubbelar and André Martins.

In-presence AACR 2022 | 8-13 April

Juliane Walz and Claudia Tandler gave interviews and scientific talks regarding the study on CoVac-1. During the "Meet the Scientist" event, Bernd Pichler, Lars Zender and Marissa Dubbelaar provided insights into our Cluster of Excellence.





iFIT Scientific Symposium | 31 May 2022

talk sessions, the day ended with a gathering at the roof terrace of the event location with a wonderful view over Tübingen. Our special thank you to all speakers, and to the invited iFIT external guest speakers:

Mathias Heikenwälder | Deutschen Krebsforschungszentrum in Heidelberg Claudia Lengerke | Medical Director Internal Medicine II, University Hospital Tübingen

Yulia Skokowa | Professor for Translational Oncology and group leader, University Hospital Tübingen

Thorsten Stafforst | Professor for Nucleic Acid Biochemistry, University of Tübingen Lukas Flatz | Medical Director of the Section for Dermato-Oncology, University Hospital Tübingen Manfred Claassen | Clinical **Bioinformatics & Machine Learning** in Translational Single-Cell Biology, University Hospital Tübingen

iFIT Workshops

Excellence Workshop | 2021/22

by Paul Charlton

"Joining this workshop was an amazing experience. I received excellent guidance to improve my presentation skills such as effective narrative, data organization, managing stress, handling questions, facing different audiences and time restrictions which I strongly appreciated for my present and future career. Furthermore, we worked in areas in that I have never been trained as a scientist and have a strong value and impact in our lives like having tips to improve our work-life balance and how to successfully sell our science.

Finally, I would like to highlight that Paul Charlton is a brilliant coach always available to work with us individually, giving us feedback to further improve our personal projects and goals."

Ana Tapia-Abellán (iFIT Al through FlexFunding, Postdoc at Immunology Department, IFIZ)



Advanced Scientific Writing Workshop | July 2021

by Derek Handley

"Derek Handley is whom you would call a "language grand master" - if such a word existed. His eye for detail and his communication skills are extraordinary. Equipped with this skillset he is able to facilitate a view behind the scenes of scientific writing and effective communication. This enables course participants to understand and consciously address their intended target audience, simultaneously enhancing their abilities in scientific writing through finding their own voice and gaining additional confidence. Highly recommended for anyone aiming to find new tools and insights for increasing their science communication skills."

Markus Löffler (iFIT AI, University of Tübingen - Department of Immunology and University Hospital Tübingen -Department of General, Visceral and Transplant Surgery / Department of Clinical Pharmacology)

Managing a CAREER in Science with a FAMILY | 14 October 2021

by Paul Charlton



To address the specific difficulties of balancing family and career especially in science and academia - we have designed this unique workshop to support iFIT scientists group leader at the HNO here at the

in their efforts to balance family and career. Together with Paul Charlton, we designed a workshop where participants could discuss thorny issues on this topic and learn from the experiences of the invited speakers. The first edition took place on 14 October,

2021. Our special thank you goes to Prof. Ellen Reisinger who accepted to participate and share her experience as a mother of two children &

University Hospital Tübingen, and to Dr. Axel Kaul who has shared his experience as father of four children & scientific project manager at the University Medicine of Göttingen. And after a successful first edition, the second one didn't take long to happen. On 28 April, 2022 we were happy to welcome ten more participants. Some already parents, some thinking about becoming a parent, and some just wanted to understand the challenges that their team members (who are parents) go through every day while trying to balance work and family.

"The workshop imparted a wide range of skills and tweaks for managing a career in sciences with a family. Besides many smart hacks for time management and increasing productivity, it also provided a basic toolbox for negotiations. Paul Charlton created a very friendly and open atmosphere. He skilfully stimulated discussion and reflection of the own mindset and habits. The follow-up online meeting was a great opportunity to recapitulate the workshops content with respect to the individual setting."

Matthias Gehringer (iFIT AI, University of Tübingen - Dept. of Pharmaceutical and Medicinal Chemistry)

GraphPad Workshop | August/September 2021 & June 2022

by STATCON

"The GraphPad Prism workshop gives a first insight into the optimal usage of statistical analysis within the software. You leave the course with a how-to-manual on statistics and feel more confident about your own data analysis. I could immediately apply the gained knowledge. Definitely recommended for PhD students!"

Anna Ohmayer (iFIT PhD student)

"I fully recommend the iFIT GraphPad Prism workshop. Simone Gerle guided us through the basic and advanced features of this important software, as well as its applications. As a frequent user, I obtained a detailed overview about how to correctly analyze data and which statistical test is most reasonable in relation to a specific research question."



Fundamentals of Social Media Edition I | 1 June 2022

With this new workshop, iFIT aims | to raise awareness of the importance of **social media in science**. The workshop focused on creating a LinkedIn account, learning how to navigate and share information, and gaining a general understanding of how information spreads on this online platform.



"On 1 June a small group of scientists gathered at a workshop on "Fundamentals of Social Media" organized by the iFIT office. Following the slogan "if you don't connect you disconnect" Mathis Horlacher explained why and how to use LinkedIn for building one's professional network and reach out, participate and receive feedback from the wider community. The workshop stressed the mutual dependence of successful social media marketing and use of an unbiased content strategy towards search engine optimization for best visibility, while at the same time staying in control of the information distributed and responses provoked. For a straightforward lesson, key is the use of few but succinct hashtags."

> Hiltrud Brauch (iFIT PI, Dr. Margarete Fischer-Bosch-Institute of Clinical Pharmacology - IKP)

CIVIS Summer School Part I | 20-24 June 2022

Within the CIVIS Summer School "Basics & translational approaches in immunotherapy of cancer" over 25 international students from our European partner universities spent a week taking an in-depth look at the topic of cancer immunotherapy "made in Tübingen".

Organized by Cluster member UIrich Lauer, the students were able to gain insights into current and innovative therapeutic approaches in cancer research and had enough time to get to know the beautiful town of Tübingen.

Further information is available here



Science & Innovation Days by the University of Tübingen 30 June 2022

"Tracking down cancer" - Interactive laboratory tour through the iFIT Cluster of Excellence (lecture & guided tour)

Cancer research has changed rapidly in recent years and new forms of therapy give cause for hope. Nevertheless, the disease often finds ways to evade treatment through resistance and this is where iFIT comes in to develop new and innovative cancer therapies. Josef Leibold took the participants on an interactive laboratory tour "Tracking down cancer", gave a lecture and provided insights into the laboratories and cancer research of the iFIT Cluster of Excellence and the WSIC.

Science & Innovation Days by the University of Tübingen | 2 July 2022

Within the Children's University Researchers' Day, children between the ages of seven and twelve had the opportunity to get to know the university's institutes and to participate in workshops to do their own research. The iFIT Cluster of Excellence offered an interesting workshop named "The detective's magnifying glass is the researcher's microscope" in which the children could be detectives on the trail of our body cells. In the lab, the participants stained cells and examined them under a microscope. In the process, the children learned many exciting facts about the different cells of our bodies and the immune system.







Universitätsklinikum Tübingen



