



Alumni Monthly Issue 23 November

Welcome to the November edition of Alumni Monthly!

Enjoy reading the news and please also consider our job openings, either for yourself, or for a talented colleague.

All members of the Alumni Association are cordially invited to join the Extraordinary General Assembly on December 19th, 11:00 - approx. 12:30. To register please send an email to susanne.schunk@dkfz.de

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News from the Press Office

Double evidence of prostate cancer awarded



Ann-Christin Baranski © Walter Mier

This year's Helmholtz PhD Award in the field of health goes to Ann-Christin Baranski. During her PhD in the group of Klaus Kopka, Ann-Christin developed a radiopharmaceutical that makes prostate cancer visible in two different ways: its radioactive labeling allows the tumor or its metastases to be detected noninvasively in the body. In parallel, a coupled fluorescent dye helps the surgeon recognize and safely remove the cancerous tissue during surgery. read more in German

Excellent health prevention

The European Commission has awarded the first "EU Health Prize" for outstanding initiatives that promote tobacco prevention and thus public health. From among more than one hundred projects across Europe, Titus Brinker of the DKFZ, the National Center for Tumor Diseases (NCT) Heidelberg and the University Hospital of Heidelberg (UKHD) received the second prize of € 15,000 for work through the multi-national network "Education Against Tobacco (EAT)", which he founded in 2012. read more in German



European Commissioner for Health and Food Safety, Vytenis Andriukaitis, presented the award to Titus Brinker, chairman and founder of Education Against Tobacco (EAT). © Titus Brinker / DKFZ

ERC Synergy Grants for Heidelberg Researchers



Prof. Dr. Jan Lohmann

Scientists of Heidelberg University are key participants in two research teams, each of which has obtained an ERC Synergy Grant, a highly-endowed grant from the European Research Council. In the DECODE project, Prof. Dr Jan Lohmann and colleagues at the DKFZ and the European Molecular Biology Laboratory (EMBL) in Heidelberg are attempting to unveil the genetic underpinnings of tissue development. The IndiGene project explores the genetics of individuality that lead to different phenotypes in organisms. Prof. Dr Joachim Wittbrodt is working with researchers from the European Bioinformatics Institute at the EMBL on the study. The two projects will receive a total of approximately 16.9 million Euros in funding.

Members of the DECODE team include Prof. Lohmann and Prof. Dr Michael Boutros (DKFZ/Heidelberg University), Dr Wolfgang Huber (EMBL) and Dr Oliver Stegle (EMBL/DKFZ). Funding of approximately 10.6 million Euros is available for the project. read more

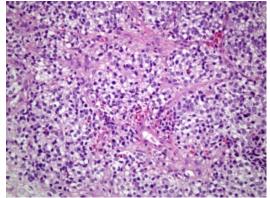
Defective DNA damage repair leads to chaos in the genome

Scientists at the DKFZ have now found a cause for the frequent catastrophic events in the genetic material of cancer cells that have only been known for a few years: If an important DNA repair system of the cells has failed, this promotes fragmentation and defective assembly of the genetic material. Cancer cells with such a repair defect can now possibly be treated by a specific group of drugs. read more



© EMBL / P. Riedinger

Mayer Foundation provides €1.5 million for research on Ewing sarcoma in children



Ewing sarcoma cells are small, round and undifferentiated. Without using molecular analysis technologies, it is hard to differentiate them from other tumor cells, which often complicates and delays diagnosis. © Grünewald/LMU München

In a new research consortium, scientists from the "Hopp Children's Cancer Center Heidelberg" (KiTZ), together with working groups from Ludwig Maximilian University of Munich and the West German Cancer Centre of Essen University, have teamed up to advance research on Ewing sarcoma and derive approaches for novel diagnosis and therapy methods on this basis. The Gert und Susanna Mayer Stiftung will support the project by providing funds of €1.5 million over a five-year period.

The KiTZ is a joint institution of the DKFZ, Heidelberg University Hospital and Heidelberg University. <u>read more</u>

A faster lane towards effective therapies of childhood brain cancer

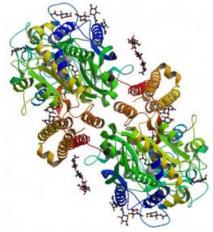
Scientists of the "Hopp Children's Cancer Center at the NCT Heidelberg" (KiTZ), the German Cancer Consortium (DKTK) and the DKFZ, in collaboration with colleagues from Seattle, U.S.A., have built a collection of tumor models that can be used to test anticancer drugs for treating childhood brain cancer. The biobank and database can be accessed by scientists worldwide and is an important resource for cancer research. Children suffering from brain cancer may benefit from this. The researchers have now published their results in NATURE MEDICINE.



Molecular analyses can deliver valuable additional information about the exact type and biological behavior of tumors. © KITZ

The "Hopp Children's Cancer Center at the NCT Heidelberg" (KiTZ) is a joint institution of the Heidelberg University Hospital and the DKFZ. <u>read more</u>

DKFZ invention is worth 2.1 billion US dollars to Novartis



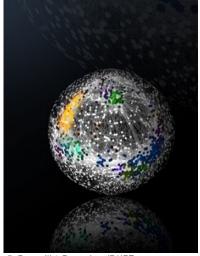
The prostate-specific membrane antigen (PSMA) is the target molecule for the drug 177-lutetium-PSMA-617 developed at the DKFZ © PDB, Wikimedia Commons

177-Lutetium PSMA-617 is an advanced prostate cancer drug developed at the DKFZ and Heidelberg University Hospital. At the DKFZ Michael Eisenhut, Matthias Eder and Klaus Kopkawere involved, together with Uwe Haberkorn at the University Hospital Heidelberg.

Now, Novartis, one of the world's largest pharmaceutical companies, has announced its bid to acquire Endocyte for \$ 2.1 billion. The Swiss pharmaceutical predicts that the drug, which will come on the market in 2021 at the earliest, will bring more than a billion US dollars in annual revenue. read more in German

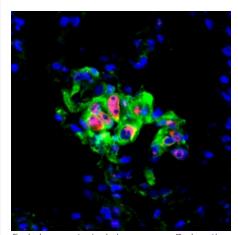
Understanding the "wiring diagrams" of genes in complex tissues

How is the activity of all genes in cells of higher organisms interconnected? And how are the genetic "wiring diagrams" of the cells in complex tissues coordinated with each other? Scientists from the German Cancer Research Center, the European Molecular Biology Laboratory and the University of Heidelberg are now planning to investigate this in two model organisms, Drosophila and Arabidopsis. The European Research Council (ERC) is funding the "DECODE" project with a Synergy Grant. read more



© Benedikt Rauscher/DKFZ

Breast cancer: Stress signaling promotes metastasis and therapy resistance



Early lung metastasis in a mouse: Red: active JNK signaling cells; green: cancer cells; blue: cell nuclei. © Tsunaki Hongu/DKFZ

Scientists from the DKFZ and the Heidelberg Institute for Stem Cell Technology and Experimental Medicine (HI-STEM gGmbH) have identified a central switch protein in breast cancer that promotes tumor metastasis in response to cellular stress. The switch triggers a stem cell program in the cancer cells that promotes the aggressive spread of the tumor. Chemotherapeutics also activate the switch, and this undermines therapeutic efficacy. By identifying the molecular players involved in the stress-induced spread of breast cancer, the researchers have identified previously unknown possible target structures that could be useful for the development of future therapies. read more

Patient Participation in Cancer Research - kick-off meeting of the Patient Advisory Council in the German Cancer Research Center

Around half a million people in Germany suffer from cancer every year and the number of cancer cases worldwide is rising rapidly. In order to be better able to help those affected, intensive research efforts are necessary. Patients themselves can also make a decisive contribution to successful research by advising upon framework conditions. In the DKFZ's Patient Advisory Committee, patient representatives will actively contribute to research processes in the future. read more in German



(from left to right) Uli Roth, Michael Roth, Renate Haidinger and Karin Arndt, members of the DKFZ Cancer Advisory Board, in conversation with Dr. med. Peter Horak from the NCT Heidelberg © Uwe Anspach, DKFZ

Big Data und Krebs – neue Ausgabe des einblick



Big Data and Cancer - new issue of einblick (in German)

Röntgenbilder, Messwerte, DNA-Sequenzen: Bei jeder Therapie und jedem Laborexperiment entstehen Daten. Computer und Algorithmen können dabei helfen, die darin verborgenen Informationen noch besser zu nutzen. Beispielsweise, indem sie das komplexe Muster der Veränderungen in einer Krebszelle offenlegen und den Ärzten dadurch neue Optionen für eine Behandlung aufzeigen. In der neuen Ausgabe des einblick zeigen wir, wie Big Data die Krebsforschung beschleunigt und schon heute die Grundlage für neue Therapien bildet.

X-ray images, measured values, DNA sequences: data is generated for every therapy and every laboratory experiment. Computers and algorithms can help to make better use of hidden information. For example, visualising the complex pattern of changes in a cancer cell may

reveal new options for treatment to physicians. In the new issue, we show how Big Data accelerates cancer research and is already the basis for new therapies today. <u>link to the magazine</u>

Helmholtz opened an International Office in Israel

Germany's largest research organization is stepping up its cooperation with Israel with the opening of the Helmholtz Association's new international office in Tel Aviv. By taking this step, the Association is aiming to expand its long-term collaborations with outstanding partners in academia and business – and to establish new ones as well.

The new Helmholtz Office will be the research association's fourth international office and was officially opened in Tel Aviv as part of the Germany embassy's celebrations commemorating the



Otmar D. Wiestler, Helmholtz-President, Billy Shapira, Head of Helmholtz-Office in Israel © Helmholtz

Day of German Unity. "We are very pleased that the Helmholtz Association wants to play an even more prominent role in Israel in the future," says German Ambassador Susanne Wasum-Rainer. "Productive scientific cooperation between the two countries forms an essential basis for our unique ties with one another." read more

Physical exercise in cancer therapy – the more individualized, the better



Cancer patient during resistance training © University Hospital, Media Center Heidelberg

Regular exercise not only reduces the risk of cancer. Physical training can also support the therapy of a tumor disease. An international consortium of researchers, including scientists from the DKFZ and the NCT Heidelberg, has discovered: Patients who exercise regularly not only feel physically fitter and stronger, they also rate their own quality of life as better and suffer less frequently from chronic fatigue syndrome. However, some patient groups seem to benefit more than others. read more

Highlight publications

High precision FRET studies reveal reversible transitions in nucleosomes between microseconds and minutes.

Nat Commun. 2018 Nov 6;9(1):4628. doi: 10.1038/s41467-018-06758-1.

Alexander Gansen, Suren Felekyan, Ralf Kühnemuth, Kathrin Lehmann, Katalin Tóth, Claus A. M. Seidel & Jörg Langowski

link to article

Specific Nutritional Infections Early in Life as Risk Factors for Human Colon and Breast Cancers Several Decades Later.

Int J Cancer. 2018 Sep 24. doi: 10.1002/ijc.31882. [Epub ahead of print] Zur Hausen H, Bund T, de Villiers EM.

link to article

Differentiation-based model of hematopoietic stem cell functions and lineage pathways.

Blood. 2018 Sep 13;132(11):1106-1113. doi: 10.1182/blood-2018-03-791517. Epub 2018 Jul 24.

Höfer T, Rodewald HR.

link to article

Stress signaling in breast cancer cells induces matrix components that promote chemoresistant metastasis.

EMBO Mol Med. 2018 Oct; 10(10). pii: e9003. doi: 10.15252/emmm.201809003. Insua-Rodríguez J, Pein M, Hongu T, Meier J, Descot A, Lowy CM, De Braekeleer E, Sinn HP, Spaich S, Sütterlin M, Schneeweiss A, Oskarsson T.

link to article

Ccdc61 controls centrosomal localization of Cep170 and is required for spindle assembly and symmetry.

Mol Biol Cell. 2018 Oct 24:mbcE18020115. doi: 10.1091/mbc.E18-02-0115. [Epub ahead of print]

Bärenz F, Kschonsak YT, Meyer A, Jafarpour A, Lorenz H, Hoffmann I.

link to article

Correlation between genomic index lesions and mpMRI and 68Ga-PSMA-PET/CT imaging features in primary prostate cancer.

Sci Rep. 2018 Nov 12;8(1):16708. doi: 10.1038/s41598-018-35058-3.

Kesch C, Radtke JP, Wintsche A, Wiesenfarth M, Luttje M, Gasch C, Dieffenbacher S, Pecqueux C, Teber D, Hatiboglu G, Nyarangi-Dix J, Simpfendörfer T, Schönberg G, Dimitrakopoulou-Strauss A, Freitag M, Duensing A, Grüllich C, Jäger D, Götz M, Grabe N, Schweiger MR, Pahernik S, Perner S, Herpel E, Roth W, Wieczorek K, Maier-Hein K, Debus J, Haberkorn U, Giesel F, Galle J, Hadaschik B, Schlemmer HP, Hohenfellner M, Bonekamp D, Sültmann H, Duensing S.

link to article

Upcoming events

CAREER DAY Entrepreneurship & (Bio)Tech



December 7, 2018

DKFZ Communication Center

One day, one place, 3 EVENTS

Have a look at the <u>program</u> and <u>register</u> as soon as possible to benefit from the reduced fee for the Food Trucks.

Career Talks and Lectures

Listen not only to people who founded a startup but also to experts who work every day in supporting entrepreneurship. Don't miss this unique opportunity to know more about how to initiate a startup, where to find the money, how to build a business model and how to deliver your idea. Don't miss the Speakers Lounge during lunch!

Startup Fair

The startup fair is open for everyone. 20 Startup companies are available for discussions. Interested <u>startups can still register here</u> last minute for a stand at the fair.

Innovator's Pitch

Do you think that you have an idea with business value?

From 38 submissions, five have been selected for presentation and will have the chance to win prizes and mentorship support from Heidelberg Startup Partners. The finalists will deliver their 5-minute elevator pitch to the Career Day participants and a jury of industry and funding body representatives. To attend and benefit from reduced fees for the Food Trucks (also in the evening) during the Happy Hour please register here.

more information here

Using Biomarkers to Understand Breast Cancer Etiology, Prevention, and Risk Prediction

Dr. A. Heather Eliassen, Harvard School of Public Health, Boston, MA, USA

December 5, 2018, 15:00

DKFZ, TP4, 4th floor

Dr. Heather Eliassen is an Associate Professor of Medicine and Epidemiology at Harvard Medical School and the Harvard T.H. Chan School of Public Health. Her research focuses on the etiology of breast cancer, examining associations between lifestyle factors, biomarkers of lifestyle and hormones, and breast cancer risk. Much of her work has been conducted within the Nurses' Health Studies, and she serves as co-PI of the Nurses' Health Study II, founded in 1989 by Dr. Walter Willett, that follows over 116,000 women. She also serves as Director of the BWH/Harvard Cohort Biorepository, which houses more than three million biospecimens from 200,000 cohort participants, and as co-lead of the Cancer Epidemiology Program at the Dana Farber/Harvard Cancer Center.



Dr. Eliassen is actively involved in the teaching and mentoring of graduate students at the Harvard T.H. Chan School of Public Health, and mentoring of postdoctoral fellows and junior faculty members at Harvard and Brigham and Women's Hospital.

no registration necessary

Lectures of Nobel Laureate Prof. Dr. Harald zur Hausen in San Diego and Seattle





Heidelberg University Association and the American Council on Germany cordially invite you to the

HEIDELBERG LECTURE

With
Nobel Laureate Prof. Dr. HARALD ZUR HAUSEN

NUTRITIONAL EFFECTS OF INFECTIONS EARLY IN LIFE WITH CONSEQUENCES SEVERAL DECADES LATER

Monday, December 10, 2018, 5:30 p.m.

University of San Diego

RSVP by December 6 by clicking <u>here_Registration</u> is required. Seating is limited. Reception to follow.

Wednesday, December 12, 2018, 5:30 p.m.

Seattle Children's Hospital Research Institute

RSVP by December 7 by clicking <u>here</u> Registration is required. Seating is limited. Reception to follow

IIC Christmas Symposium 2018

'Infection, Inflammation and Cancer'

Friday, December 14th 2018

DKFZ Communication Center

Speakers:

Alan Parker Development of adenovirus based precision virotherapies

Andrea Thoma-Kreß Molecular insights into HTLV-1 transmission and cell-cell transport

George Kassiotis Shaping of immunity by endogenous retroelements



suggests repeated waves of retroviral infection

Kristian Pietras Microenvironmental control of malignant phenotypes in breast cancer **Alex Mentzer** Using genetic associations with antibody responses to understand susceptibility to infection

Ueli Schibler Daily Oscillations in the Liver

Jonathan Jeschke Novel organisms: a journey through time and concepts **no registration necessary**



Modified from Brgfx /Freepik

Research Symposium Honoring the Scientific Achievements of Prof. Ingrid Grummt



Tuesday, January 15, 2019 14:00-18:00

DKFZ Communication Center, K1/K2

Molecular Mechanisms Regulating Gene Expression

no registration necessary

Childhood Cancer Predisposition Symposium January 23, 2019 AND

2nd KiTZ-Symposium on Pediatric Oncology and Hematology January 24-25, 2019







DKFZ Communication Center

Confirmed Speakers:

Suzanne Baker, St. Jude Children's Research Hospital, USA, Pratiti (Mimi) Bandopadhayay, Dana-Faber/Harvard Cancer Center, USA, Hans Clevers, Hubrecht Institute, Netherlands, Michael Cox, Loxo oncology, USA, Mariella Filbin, Dana-Faber/Harvard Cancer Centre, USA, Delphine Heenen, KickCancer, Brussels, Nada Jabado, Montreal Children's Hospital, USA, Alex Kentsis, Memorial Sloan Kettering Cancer Center, USA, Peter Lichter, German Cancer Research Center, Germany, Richard Lock, Children's Cancer Institute; Australia, Holger Lode, Universität Greifswald, Germany, Thomas Look, Dana-Farber Cancer Institute, Boston, USA, David Malkin, SickKids-Hospital, Canada, John Maris, Children's Hospital of Philadelphia, USA, Yael Mosse, Children's Hospital of Philadelphia, USA, Joshua Schiffman, Huntsmann Cancer Institute, University of Utah, USA, Martin Schrappe, Universität Kiel, Germany, Julia Schueler, Charles River Discovery Research Services Germany, Germany, Kevin Shannon, UCSF/ Helen Diller Family Comprehensive Cancer Center, USA, Clinton Stewart, St. Jude Children's Research Hospital, USA, Mario Suva, Dana-Faber/Harvard Cancer Center, USA, Bill Weiss, UCSF/ Helen Diller Family Comprehensive Cancer Center, USAmore information here

1st German Cancer Research Congress



February 4-5, 2019

link to video invitation by Prof. Baumann <u>here</u>

more information here

1st Immunology & Inflammation (I & I) Conference

in Berlin

February 24-26, 2019

The 1st Immunology & Inflammation (I & I)
Conference aims to serve as an international and interactive platform for exchange of ideas and scientific discussion on the latest ground-breaking discoveries in the field.



The DKFZ is an active part

of this "Helmholtz-future-topic" with several research groups/scientists involved.

The program comprises four sessions covering the key new developments, their impact on Life Science, and implications for modern medicine. Each session will feature the world-renowned experts who have contributed to the breakthroughs that fuelled these new areas of investigation:

- · Keynote: Dan Littman
- Session I Lineage determination in the hematopoietic system: David Kent, Hans-Reimer Rodewald,

Sten Linnarsson

- Session II Antibody diversification: Frederick Alt, David Schatz, Michael Reth, Gabriel Victora
- Session III Neuroinflammation: Oleg Butovsky, Joseph El-Khoury, Bente Finsen, Marco Prinz,

Carla Shatz

• Session IV - Somatic gene therapy: Christopher Garcia, Carl June, Cliona M. Rooney

Young scientists will also be given the opportunity to present their work through short talks and a poster session.

Registration and abstract submission by 9 December 2018 through the website

Job openings



Please check our website here

News from the DKFZ International PhD Program



We are happy to share with you a new short film about the DKFZ PhD Initial Course. This course is a great opportunity for new PhD students to get to know the DKFZ's scientific infrastructure and resources as well as gaining useful tips and quidance to make their PhD a success.

You can view the new film on the DKFZ <u>YouTube</u> channel and <u>Facebook</u>

Application is also now open for the Winter Selection (deadline: 5th January 2019). Please advertise our PhD Program to your master students (or their PIs). More information about the program

and how to apply can be found at www.dkfz.de/phd.

Alumni matters

Extraordinary General Assembly of the Alumni Association

19 December, 2018, from 11:00 to approx. 12:30 DKFZ Communication Center (Rooms K1/K2)

The Alumni Association of the DKFZ cordially invites all members to participate in the Extraordinary General Assembly. A light lunch will be provided.

The following agenda is planned:

- 1. Approval of the Agenda
- 2. Approval of the minutes of the previous General Assembly, June 2018
- 3. Report of the Activities of the Alumni Board
- 4. Discussion on the future of the Alumni e.V.
- 5. Election of Board Members
- 6. Any other business

Please sign up for the General Assembly by contacting Susanne Schunk at susanne.schunk@dkfz.de or Tel. 06221-42 4499

Would you be willing to host an international guest for Christmas?



Who can act as a host?

Anyone: Old, young, families, singles, couples, or groups of people in shared apartments from Heidelberg and the surroundings. The only requirement is the willingness to welcome your guest as "part of the family" for Christmas.

Who are the guests?

The program is organised for foreign students, who are enrolled at the University of Heidelberg and who would like to learn more about German (or international) culture.

Would you like to participate?

If you are interested, please check the <u>website</u> for further details.

EURAXESS: GAIN at the 4th Annual Meeting of European Scientific Diasporas in Washington, D.C.

Friday, December 7, 2018 9:00 AM - 5:00 PM EST

Embassy of Austria 3524 International Court Northwest Washington, DC 20008

The event is open to all researchers in North America, this includes European researchers as well as current, previous and potential North American (Canada/US) researchers who have or would like to benefit from European research grants to further their careers. Representatives from European Embassies, North



American universities, industry & partners are also expected to attend and participate. In 2018, in partnership with the Office of Science and Technology Austria, the Annual Meeting will focus on the overarching theme: Science to Society and will welcome European diaspora members, Embassy representatives as well as non-European researchers interested in European research and innovation.

To find more information and to register, please follow the link: **ESD18**

The German research directory GERiT - now online



GERIT is an information portal on German research institutions provided by the DFG in partnership with the German Academic Exchange Service (DAAD) and the German Rectors' Conference (HRK).

GERIT is aimed at students and researchers in Germany and abroad. read more

Stay connected



Join the Alumni Association Alumni members benefit from an attractive range of activities:

- · Alumni Monthly electronic newsletter reporting on recent developments at the DKFZ
- Publication of Alumni Magazine reporting on Alumni activities
- Eligibility for a DKFZ Alumni email address your.name@alumni.dkfz.de
- Biennial General Alumni Meeting and Scientific Symposium, including travel grants
- · Invitations to social events and excursions
- one-year LinkedIn Premium for free

All current and former DKFZ colleagues are welcome to join. Please register at www.dkfz.de/en/alumni



- Current & former DKFZ
- Employees & Alumni Career Network Advice & Mentoring News & Events



Join DKFZ Connect

Join more than 2500 colleagues on DKFZ Connect, the online platform for networking and mentoring between former and current employees, including events and job postings. You can register via email or easily sync your profile with social media on www.dkfz-connect.de

Imprint

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