



Alumni Monthly Issue 15 January I

Welcome to the January edition of Alumni Monthly

The highlight in January was definitely the center-wide review that is being carried out this year for all Helmholtz Centers within the Helmholtz Association's program-oriented funding framework (POF). Thirty international reviewers assessed the scientific achievements of the center.

The reviewers were extremely impressed with our center, which they considered to be one of the leading centers for cancer research in the world. Overall, they evaluated the DKFZ as "outstanding", the highest possible score.

The highlight for the Alumni Association is the planning of the Alumni Association New Year's Reception on February 20th.

Everyone is invited. We are looking forward to seeing you there! Program and registration

Content

- » News from the Press Office
- » Highlight publications
- » New research group
- » Upcoming events
- » Job openings
- » Alumni matters
- » Stay connected

News from the Press Office

Kristian Pajtler received \$100,000 award for brain cancer research



Kristian Pajtler received \$100,000 CERN award for brain cancer research @ Philipp Benjamin, KiTZ

Kristian Pajtler, a pediatric oncologist from the "Hopp Children's Cancer Center at the NCT Heidelberg" (KiTZ), received the 2018 CERN Scientific Fellowship Award with a monetary prize of 100,000 US dollars. Pajtler has been awarded the distinction for his work on ependymoma, a rare type of brain cancer. The "Hopp Children's Cancer Center at the NCT Heidelberg" (KiTZ) is a joint initiative of Heidelberg University Hospital and the German Cancer Research Center (DKFZ).

read more

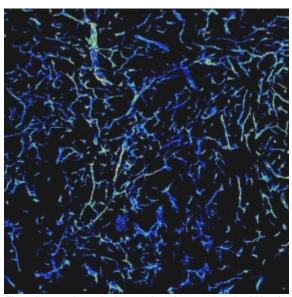
A shower of awards at the DKFZ

Six young cancer researchers received science awards on Tuesday, December 19, 2017. The Waltraud Lewenz Award, the Walther and Christine Richtzenhain Award, the Andreas Zimprich Award and the Nicola Werner Research Award for young scientists was be presented by the German Cancer Research Center (DKFZ) at a festive ceremony. The Bayer Foundation awarded the Bayer Early Excellence in Science Award at the same occasion. read more



From left to right: Christoph Geisenberger (Andreas Zimprich-Award); Elham Pishali (Richtzenhain-Award); Daniel Hasche (Nicola Werner Award); Theresa Bunse (Bayer Early Excellence in Science Award); David Brocks (Waltraud-Lewenz-Award). © Uwe Ansbach/DKFZ

Starving Tumors: New Target Discovered

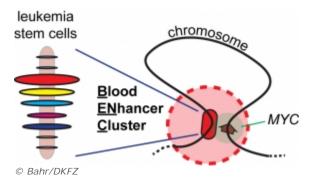


The microscopic analysis reveals a dense network of blood vessels in a growing tumor. © La Porta, DKFZ

Actively growing tumors have a high demand for oxygen and nutrients. Therefore, they stimulate the growth of blood vessels. This process is called angiogenesis. If tumorassociated angiogenesis is suppressed, this may limit tumor growth. Scientists from the DKFZ and the European Center for Angioscience at Heidelberg University have now discovered a new target for antiangiogenic tumor therapy. They show that the deletion of a signaling molecule in mice leads to the formation of less blood vessels in late-stage tumors. This delays their growth and limits the formation of metastases. read more

Modular gene enhancer promotes leukemia and regulates effectiveness of chemotherapy

Every day, billions of new blood cells are generated in the bone marrow. The gene Myc is known to play an important role in this process, and is also known to play a role in cancer. Scientists from the DKFZ and the Heidelberg Institute for Stem Cell Technology and Experimental Medicine (HI-STEM) have now found that just how big a role Myc plays is determined by a distant section of DNA that contains a cluster of gene enhancers. In



certain blood cancer cells, this cluster has been altered, which affects Myc activity and thereby accelerates cancer growth and affects how the cancer responds to chemotherapy. This cluster of enhancers might therefore be a suitable target in the treatment of blood cancer. The findings are published in Nature in collaboration with the European Molecular Biology Laboratory (EMBL) and colleagues from Canada. read more

New research project on age-related diseases

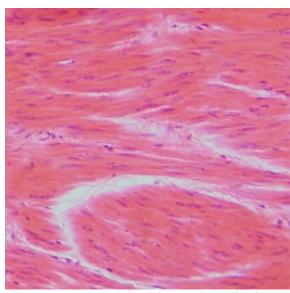


© Karen Beate Nøsterud - norden.org, Wikipedia

The DKFZ and the Helmholtz Zentrum München will be coordinating a project called "Aging and Metabolic Programming", or AMPro for short, over the next three years. All centers of the Helmholtz Health Research Section will be involved with the aim of exploring innovative prevention and treatment approaches to age-related diseases. Of the total funding of six million euros, around 1.5 million euros will remain at the DKFZ. read more

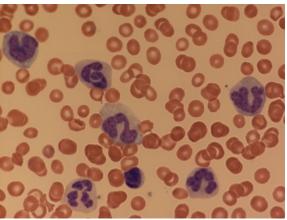
Genetic defect makes malignant smooth muscle tumors vulnerable

A research team under the leadership of scientists from the DKFZ and the National Center for Tumor Diseases (NCT) Heidelberg have conducted the first comprehensive analysis of the genome of malignant smooth muscle tumors. In a high percentage of tumors, they discovered a weak spot in the genome of the cancer cells that may serve as a therapy target in the future. read more



Leiomyosarcoma is a cancer of the smooth muscles © Polarlys / Wikipedia

Levels of DNA tags characterize rare type of blood cancer



The peripheral blood of JMML patients contains far too many immature myeloid and monocytic cells. © Universitätsklinikum Freiburg

Not only genetic changes but also certain DNA tags play a role in the development of cancer. Scientists at the DKFZ have discovered that leukemia of a specific type is extremely difficult to treat if the cancer cells contain very high levels of a certain type of DNA tag. In these cases, patients have an increased rate of relapsing after initial treatment and the disease takes a more unfavorable course. Analyzing the DNA tags might help to better adjust therapy to the individual situation in the future. read more

Molecular super enhancers: A new key for targeted therapy of brain cancer in children

Ependymoma refers to a heterogeneous group of cancers that can occur at any age and is one of the most common types of brain cancer in children. The genetic causes for its development are largely unknown and there are no targeted treatments to date. Scientists from the "Hopp Children's Cancer Center at the NCT Heidelberg" (KiTZ), in collaboration with colleagues from the U.S.A. and Canada, have now developed a molecular approach that opens new treatment prospects.

The Hopp Children's Cancer Center at the NCT Heidelberg (KiTZ) is a joint initiative of Heidelberg University Hospital and the DKFZ. read more

In addition to magnetic resonance imaging (MRI, see photo), molecular genetic analyses play an increasingly important role in the characterization of childhood brain tumors. © Fotolia/Sudok1

Altern und Krebs - die neue Ausgabe des einblick ist erschienen Aging and Cancer - new edition of einblick (in German)

Altern und Krebs

© dkfz.de

Jeder Mensch altert. Die Leistungsfähigkeit lässt nach und der Körper wird anfälliger für Krankheiten. Doch wovon hängt es ab, wie fit man mit 70 noch ist? Und warum steigt im Laufe des Lebens das Risiko, an Krebs zu erkranken? Die aktuelle Ausgabe des einblick widmet sich dem Altern. Im Deutschen Krebsforschungszentrum (DKFZ) untersuchen Wissenschaftler, wie sich alternde Zellen verändern, sie suchen nach Faktoren, die das biologische Alter beeinflussen, und stellen sich auch die Frage, wie eine Krebstherapie älteren Patienten und ihren speziellen Bedürfnissen gerecht werden kann. read more

link to App, e-paper and PDF

Highlight publications

Selected by the Research Program Coordinators

A Myc enhancer cluster regulates normal and leukaemic haematopoietic stem cell hierarchies.

Nature volume 553, pages 515-520 (25 January 2018) doi:10.1038/nature25193 Bahr C, von Paleske L, Uslu V, Remeseiro S, Takayama N, Ng SW, Murison A, Langenfeld K, Petretich M, Scognamiglio R., Zeisberger P, Benk A S, Zandstra P W, Lupien M, Dick J E, Trumpp A, Spitz F.

link to article

Integrative genomic and transcriptomic analysis of leiomyosarcoma.

Nat Commun. 2018 Jan 10; 9(1):144. doi: 10.1038/s41467-017-02602-0.

Chudasama P, Mughal SS, Sanders MA, Hübschmann D, Chung I, Deeg KI, Wong SH, Rabe S, Hlevnjak M, Zapatka M, Ernst A, Kleinheinz K, Schlesner M, Sieverling L, Klink B, Schröck E, Hoogenboezem RM, Kasper B, Heilig CE, Egerer G, Wolf S, von Kalle C, Eils R, Stenzinger A, Weichert W, Glimm H, Gröschel S, Kopp HG, Omlor G, Lehner B, Bauer S, Schimmack S, Ulrich A, Mechtersheimer G, Rippe K, Brors B, Hutter B, Renner M, Hohenberger P, Scholl C, Fröhling S.

link to article

Endothelial Tie1-mediated angiogenesis and vascular abnormalization promote tumor progression and metastasis.

J Clin Invest. 2018 Jan 22. pii: 94674. doi: 10.1172/JCI94674. [Epub ahead of print] La Porta S, Roth L, Singhal M, Mogler C, Spegg C, Schieb B, Qu X, Adams RH, Baldwin HS, Savant S, Augustin HG.

link to article

A role for 2-Cys peroxiredoxins in facilitating cytosolic protein thiol oxidation.

Nat Chem Biol. 2018 Feb; 14(2): 148-155. doi: 10.1038/nchembio.2536. Epub 2017 Dec 18. Stöcker S, Maurer M, Ruppert T, Dick TP.

link to article

New research group

CHS Junior Research Group Neuronal Signaling and Morphogenesis

Dr. Annarita Patrizi



© Annarita Patrizi

Human brain development is a protracted process that arguably extents throughout the whole lifespan. It is therefore fundamental to understand how the external environment can affect brain development and the acquisition of adult function. Any developmental insults to these processes can result in the onset of neurodevelopmental disorders or the formation of brain neoplasms. Our laboratory focuses on understanding how intrinsic and extrinsic factors mediate the development and refinement of brain circuits. One important source of

extrinsic signals is the choroid plexus (CP), an unique interface between blood and cerebrospinal fluid (CFS). $\underline{\text{read more}}$

Upcoming events

REGISTER NOW: Alumni Association New Year's Reception Tuesday February 20th, 2018



Dear DKFZ colleagues and alumni,

This New Year's Reception "Alaturka" is being organized by our Turkish colleagues. Enjoy with us the Whirling Dervishes, Turkish classical music, folk dances and poems followed by a Turkish buffet and a demonstration of water-marbling art.

Program

Participation is free of charge. Everyone is invited. Please register here

35. Heidelberger Frühjahrssymposium (in German)

February 3, 2018, 09:00-13:30

Link to program and registration

Frühjahrssymposium
Nationales Centrum für Tumorerkrankungen (NCT) Heidelberg

Aktuelle Entwicklungen der Diagnostik und Therapie gastrointestinaler Tumoren

Distinguished Lecturer: Jeffrey Rathmell "Fueling T Cells in Immunity and Cancer"



February 11, 2018 14:00 - 15:00

Dr. Jeffrey C Rathmell, Vanderbilt University Medical Center / Pathology, Microbiology and Immunology

Dr. Jeffrey Rathmell studies mechanisms by which extracellular cues influence lymphocyte death and differentiation in efforts to control inflammatory diseases and leukemia. Following undergraduate studies on Biology at the University of Northern Iowa, his earned a PhD in Immunology

on B cell tolerance and death mechanisms at Stanford University. In postdoctoral studies at the University of Chicago and University of Pennsylvania, he showed that lymphocyte metabolism was dynamically regulated by growth factors and controls apoptotic mechanisms. He began at Duke University in 2003 in the departments of Pharmacology and Cancer Biology and Immunology, as well as a member of the Duke Molecular Physiology Institute. Dr. Rathmell's group showed that the metabolism of T cells is highly dynamic and that specific metabolic programs are essential for each functional T cell subsets. These fundamental metabolic distinctions may now allow modulation of selective populations of lymphocytes in inflammatory diseases and anti-tumor immunity. read more

DKFZ CONFERENCE on Preventive Oncology

February 15 - 16, 2018

Primary Prevention:

Risk factor research aiming for practical interventions

- Novel interventional concepts, chemoprevention
- · Epidemiology, personal risk, prediction
- Genetic predisposition, familial cancer

Secondary Prevention:

Pushing the limits by earlier detection

- · Tumor evolution, novel biomarkers
- Minimal invasive diagnosis, radiomics
- Systems approaches

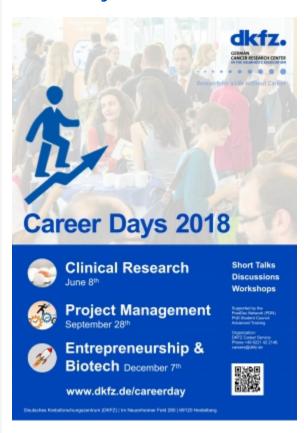
Tertiary Prevention:

Improving life with cancer Prognosis, personalized prevention

registration and program



Career Days 2018



June 8th, Clinical Research

September 28th, Project Management

December 7th, **Entrepreneurship & Biotech**

Career Days are an initiative of the DKFZ PostDoc Network (PDN) supported by the Career Service. The aim is to provide scientists at our institute with insights on different career paths in specific fields (see below). We invite alumni and other (postdoctoral) researchers to briefly share their personal career paths. Afterwards participants have ample time to join round table Q&A sessions. read more

Job openings

Scientific jobs

- 018/2018 Postdoc position in computational systems genetics Signaling and Functional Genomics
- 015/2018 Research Software Engineer Medizinische Bildverarbeitung
- 013/2018 Postdoc Partner site Dresden of the National Center for Tumor Diseases (NCT)
- 011/2018 Junior Research Group leader positions at the DKFZ
- 009/2018 Wissenschaftliche/r Mitarbeiter/in im Bereich Labormanagement Chronische Entzündung und Krebs
- 007/2018 Assistenzarzt/ärztin Dermatologie KKE Dermatoonkologie
- 006/2018 Postdoc on Wnt Signaling and Aging Signaling and Functional Genomics
- 004/2018 Postdoc in Protein Crystallography Structural Biology of Infection and Immunity
- 349/2017 Bioinformatician NCT Molecular Pathology Core
- 319/2017 Postdoctoral Fellow in Molecular Biology / Cancer Genetics / RNA Biology German Cancer Consortium (DKTK) Freiburg
- 291/2017 Wissenschaftliche/r Mitarbeiter/in im Bereich Medizinische Informatik/ Informatiker/in - Medizinische Informatik in der Translationalen Onkologie

PhD studentships

- PhD Positions in Cancer Research within the International PhD Program
- 012/2018 Naturwissenschaftler/in / Ingenieur/in der/die an einer Promotion auf dem Gebiet der Computertomographie (CT) interessiert ist Röntgenbildgebung und Computertomographie (CT)

Laboratory / Engineering department

• 014/2018 Technische/r Assistent/in (BTA/MTLA) - Signaltransduktion und Stoffwechsel der Zelle

- 010/2018 Technische/r Assistent/in in Teilzeit 19,75 Std./Woche Heidelberger Zentrum für Personalisierte Onkologie
- \bullet 351/2017 Bioingenieur/in / Technische/r Assistent/in (MTLA/BTA) Signalwege und Funktionelle Genomik
- 350/2017 Technische/r Assistent/in (MTLA/BTA) in Teilzeit 19,75 Std./Woche Signalwege und Funktionelle Genomik

Administration

- 005/2018 Mitarbeiter/in im Betrieblichen Gesundheitsmanagement (BGM) in Teilzeit 50% -Personalabteilung
- 001/2018 Projektkoordinator/in (Elternzeitvertretung) Medizinische Informatik in der Translationalen Onkologie

Further job offers

- 019/2018 Studentische Hilfskraft in Teilzeit 40 Std./Monat Medizinische Physik in der Radiologie
- 003/2018 Softwareentwickler/in Medizinische Informatik in der Translationalen Onkologie
- 352/2017 Bioinformatiker/in / Systemadministrator/in (FH) Signalwege und Funktionelle Genomik

Link to job openings

Alumni matters

DKFZ Alumni Get-Together in Boston Sunday 25th February, 2018

The next get-together for DKFZ Alumni in the Greater Boston Area will take place on Sunday 25th February starting at 19:00 in Boston's North End. !! Please note: The date of this get-together has changed from Friday to Sunday to avoid clashing with events linked to the European Career Fair !!



If you are interested in joining the get-together (informal dinner), please let us know **by 15th February** by sending an email to meet-alumni@dkfz.de and we'll provide you with further information. You can also let other alumni know that you'll be attending by joining the event on www.dkfz-connect.de. If you know of other former DKFZ members who are working in the area but who may not already be a member of the DKFZ Alumni Association, please pass on this information and encourage them to join us.

You might also be interested in attending the European Career Fair, taking place on 24th February at MIT, at which the DKFZ will be represented with a stand. For more info, visit https://ecf.fairsey.com.

Gesellschaft für Biochemie und Molekularbiologie GBM Gründung eines Arbeitskreises "Senior Experts in the GBM"



Einladung an Emiritierte/Pensionierte Mitglieder. Das erste Treffen der "Senior Experts" findet am 22. März 2018, um 14:45 im Rahmen des <u>Mosbacher Kolloquiums</u> statt.

Wenn Sie planen zu dem Treffen in Mosbach zu kommen, so bitten wir um eine kurze Mitteilung an Anke Lischeid (<u>lischeid@gbm-online.de</u>).

Vorstand und Beirat der GBM haben zudem beschlossen, bei GBM-Tagungen zukünftig (ab 2019) die Tagungsgebühr für Ruheständler deutlich zu senken.

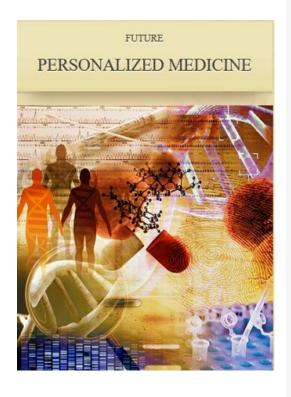
Application open for the Dan David Prize in personalized medicine

The Dan David Prize is an international prize which annually awards three prizes of US\$ 1 million each for outstanding scientific, technological, cultural, and social achievements having an impact on our world. Each year fields are chosen within the three Time Dimensions - Past, Present, and Future.

The 2018 Dan David Prize for the Future Time Dimension will be awarded to an outstanding individual or organization who has made pioneering and ground-breaking discoveries in the field of personalized medicine.

Application Deadline: MARCH 10, 2018

read more and apply here



DKFZ Summer Internship in Cancer Research 2018



The DKFZ Summer Internship is an 8-week program for outstanding and ambitious master's students who are interested in gaining laboratory research experience. Students of the Summer Internship spend two months working in a laboratory at the DKFZ where they participate in cutting-edge, cancer-related research and interact with leading scientists in the field as well as with fellow students from around the world.

We would be very grateful if you would share this information with potential candidates.

Application Deadline: 1st March 2018 read more

Starting Your Career - German-English publication for graduates

This brochure from the TU Berlin is intended to provide international students and the new generation of scientists, researchers and scholars at our university looking to enter the German labor market with advice on making the transition to their professional lives. TU alumni also offer reflections on their experiences

of starting out on their careers.

download the brochure here



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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

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



Join DKFZ Connect

Join more than 2318 colleagues on DKFZ Connect, the online platform for networking and mentoring between former and current employees, including events and job postings. You can register per email or easily sync your profile with social media on www.dkfz-connect.de

Imprint

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GERMAN CANCER RESEARCH CENTER IN THE HELMHOLTZ ASSOCIATION

Research for a Life without Cancer

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