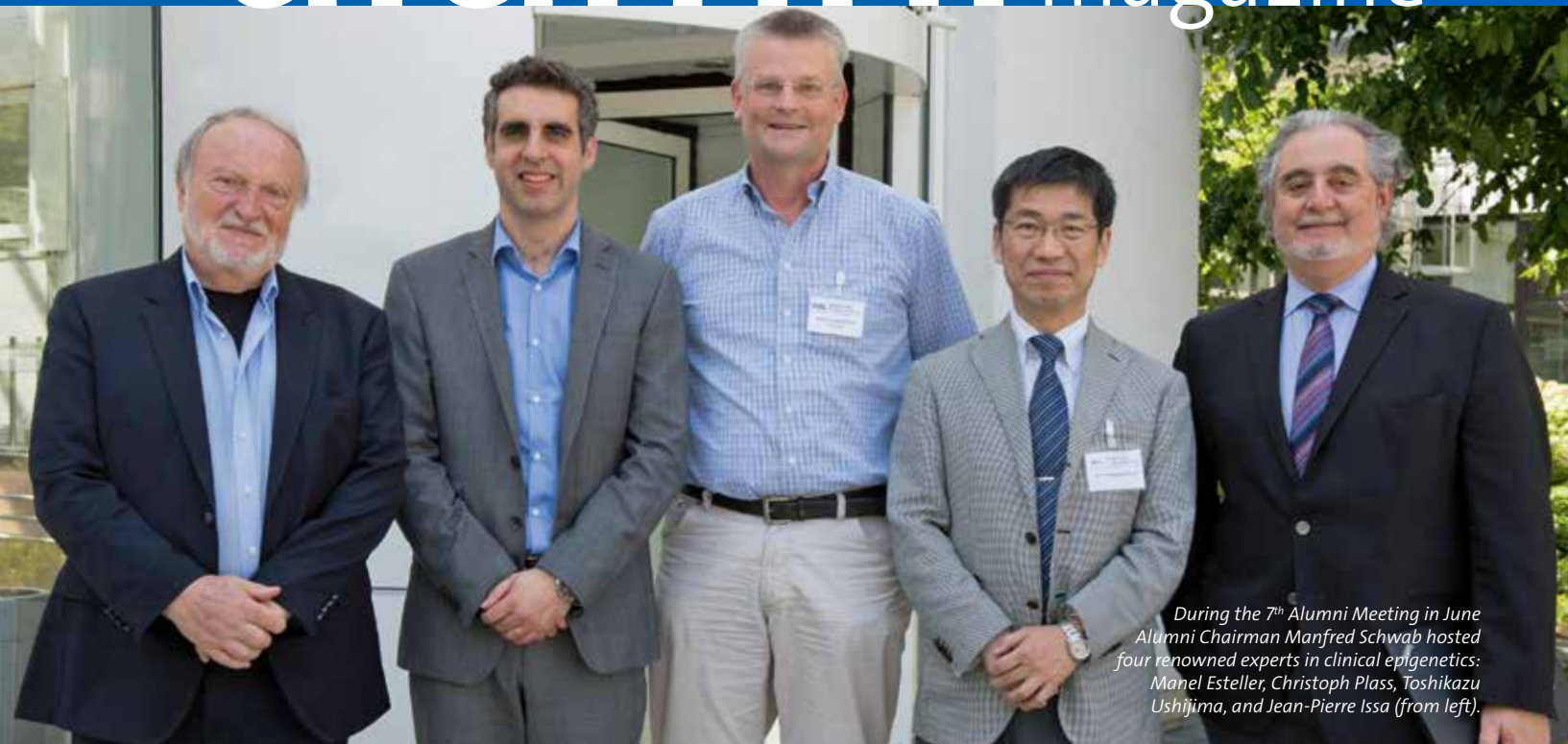


alumni magazine

2/2016



During the 7th Alumni Meeting in June Alumni Chairman Manfred Schwab hosted four renowned experts in clinical epigenetics: Manel Esteller, Christoph Plass, Toshikazu Ushijima, and Jean-Pierre Issa (from left).

Epigenetic profilers

Clinical epigenetics is one of the fastest growing areas in cancer research and promises better and more precise diagnostics as well as new therapeutic targets. On the occasion of the 7th Alumni Meeting experts put a focus on the accuracy of tumor classification and emphasized the demand for better biomarkers as well as the improvement of DNA methylation profiling techniques. Several approaches have already proved to enhance cancer risk prediction which is vital for clinical decision-making.

3

Complex data management

The new Division of Medical Informatics in Translational Oncology (MITRO) has extensive experience in the development of innovative IT tools and concepts that bring together findings from prevention, diagnostics, therapy, follow-up care, and research. Acting as an IT communication hub for scientists and clinicians within the DKFZ as well as external research, industrial and business partners, the Division contributes significantly to the improvement of the research landscape.

5

New Scientific Director

In November Prof. Michael Baumann became the new Chairman and Scientific Director of the DKFZ. Over the past years, the radiooncologist has proven to be a successful physician, cancer researcher and science manager. In an interview Baumann talks about his new task and the challenges of personalized oncology. From his point of view the DKFZ will strongly rely on partnerships with national institutions and international networking in order to further develop individualized cancer medicine.

8

editorial

TABLE OF CONTENTS

- 1 Strong bonds despite a farewell
- 2 Alumni Meeting: The challenges of career promotion
- 3 Alumni Meeting: Novel promises from clinical epigenetics
- 4 A day out with Art nouveau and German Gemütlichkeit
- 5 A visionary platform for complex data management
- 6 A new chapter in the book of worldwide networking
- 6 Membership in a nutshell
- 7 New Alumni members
- 8 Successful clinician scientist and science manager takes the lead
- 10 Awards
- 12 High school students benefit from a unique stay in Israel
- 13 First-hand impressions of high-end imaging technology
- 14 A concerted "Go" for the new Children's Tumor Center

IMAGE CREDITS

Front cover, p. 1, top, p. 2, 3, 4, top, p. 12, top, left: DFKZ/Yan de Andres; p. 1, bottom: adapted from a Freepik design; p. 4 bottom, middle column: Horace Chan; p. 4, bottom left column; p. 6: Thomas Chen; p. 5: Frank Ückert; p. 7, 8: DFKZ/Jutta Jung; p. 15, left column: DFKZ/Tobias Schwerdt, middle column: Arbeitsgemeinschaft Internistische Onkologie (AIO), right column, top: private; bottom: DFKZ/Brigitte Engelhardt; p. 11, left column, top: DFKZ/Tobias Schwerdt, bottom: Friederike Hentschel; middle column, top: DFKZ/Yan de Andres, bottom: DFKZ/Tobias Schwerdt, right column: DFKZ/Jutta Jung; p. 12, top, right, and bottom: private; p. 13: www.siemens.com/presse; p. 14: Heidelberg University Medical Center.

Dear Alumni, Colleagues, and Friends,

As the year 2016 is coming to an end, we can look back on a successful and productive period of the Alumni Association. Three events organised by the Alumni Association in the past twelve months deserve special mentioning. The New Year's Reception for international scientists "A Journey through India" in February was a wonderful event for a large audience that very much enjoyed enchanting musical presentations and spectacular Indian dances (*Alumni Magazine 1-2016*; www.dkfz.de/en/alumni/).

The traditional Alumni/DKFZ Reception during the meeting of the American Association for Cancer Research (AACR) in New Orleans took place on April 18. As Chairman of the Alumni Association I reported on its activities, and Michael Boutros presented new developments at the DKFZ. Afterwards, the approximately 100 participants went into lively discussions, all felt this has been an enjoyable event.

The major event in 2016 was the 7th General Alumni Meeting in June, with a scientific symposium discussing "Clinical Epigenetics" (p. 3). From presentations of a highly attractive international faculty it became clear that the treatment of cancer patients by targeting epigenetic signaling appears to be a promising way to go. A particularly important element of the meeting was the mentoring session (p. 2) when speakers provided young investigators with valuable advice and first-hand experience to promote their individual career. At the General Assembly, the Association gave a cordial farewell to long-time Board Member and Secretary Elfriede Mang who retired in September (p.1). She will be succeeded by newly elected Board Member Susanne Schunk, a talented organizer. A special event was the reception where the DKFZ Alumni Award for International Scientists was presented to Harriett Wikmann-Kocher from Hamburg. The award, worth 5,000 Euro, has been sponsored by the journal *Cancer Letters* (IF 5.992) published by Elsevier, we were honored by the presence of publishing director Dr. Anne Lloyd.

Additionally, seven poster awards each worth 500 Euro (five of which were sponsored by Merck) were handed out to young investigators after a competitive poster session. Finally, the Alumni Associations prize was given to Maximilian Kass allowing him to attend a summer school at the Weizmann Institute in Rehovot, Israel (p. 11).

A promising step forward to promote the Alumni Association has also been the recent establishment of an Alumni chapter in China (p. 5), which could be a role model for similar structures in other countries.

A gratifying result of all these activities has been the high increase of the number of new members of the Alumni Association (p. 7). An important aspect here seems to be that young DKFZ scientists viewed as "prospective Alumni" are proactively encouraged to become members of the Association, and that the Association is of course also open to members from the non-academic DKFZ community.

The traditional New Year's Reception for International Scientists is an upcoming event planned for February 16 under the motto "Italian Journey". Planning is underway in collaboration with the PhD Student Council and the PostDoc Network (PDN).

What is left is to thank you all for your continued support of the Alumni Association. Particular thanks goes to Susanne Schunk for her tireless efforts to promote the Alumni Association, and to Dagmar Anders for her talent to make reading every issue of the Alumni Magazine an enjoyable experience. Particularly, the strong support of the Alumni Association by the DKFZ Management Board has been encouraging. I wish each of you a Merry Christmas and a Happy and Prosperous New Year. May at least some of your dreams become true in 2017.

With fond regards,

Harfried Mang

passing on the baton

Strong bonds despite a farewell after 33 years

On September 1st Elfriede Mang re-tired after more than three decades at the DKFZ, managing the DKFZ-MOST Cooperation and the Alumni Association. Now, as an alumna herself she is committed to keep in touch with the DKFZ.

Elfriede Mang was the “good soul” in the office of the Alumni Association for many years and supported the three successive chairmen, Profs. Peter Banasch, Dietrich Keppler and Manfred Schwab. She also managed the Israel Cooperation with much circumspection, heart and diligence. Now she finally is able to enjoy some extra well deserved time for family, friends and hobbies, but as an alumna, Elfriede Mang will also remain connected to the DKFZ and participate in future events of Alumni Heidelberg, as she promised at her farewell party. She wishes her successor, Susanne Schunk, all the best and at least as



Elfriede Mang (left) and her successor Susanne Schunk

much enjoyment in the position as she had during her term. After 19 years as a project manager at the Executive Office for Cancer Prevention and WHO Collaborating Center for Tobacco Control,

Susanne Schunk joins the offices of the Israel Cooperation and the Alumni Association and looks forward to the new and exciting tasks ahead.



Italian Journey

Alumni New Year's Reception for international DKFZ scientists

With the upcoming event on Thursday, February 16, 2017, at 16:30 hours we will follow a tradition of honoring the contribution of international scientists to research at the DKFZ. The New Year's Reception will be organized by DKFZ researchers from Italy in a strategic alliance with the PhD Student Council and the PostDoc Network. All DKFZ members are welcome.

**SAVE
THE DATE:
February 16,
2017**

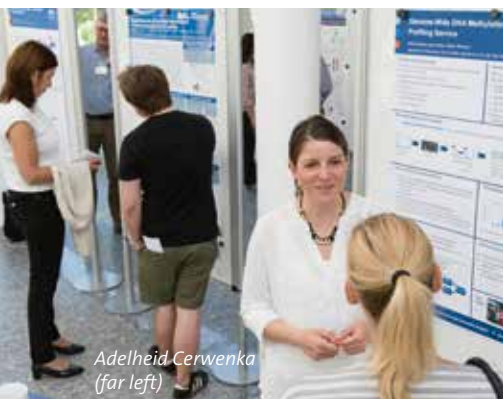
alumni meeting

Connections, insights and joviality. These words aptly describes the 7th edition of the General Alumni Meeting, one of the major highlights of the DKFZ Alumni Association. Held from June 9th – 11th, 2016, the event encapsulated three days of activities that was not only enriching in perspectives, but also highlighted the reputation and close community spirit of DKFZ.

Practical guidance to meet the challenges of career promotion

by Horace Chan

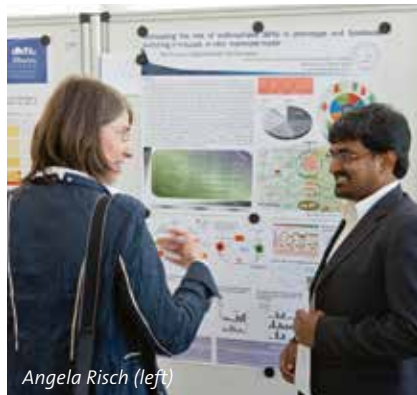
Exemplary lectures on career opportunities and mentoring issues awaited the participants on the first day of the 2016 Alumni Meeting. The speakers addressed especially young investigators and provided them with valuable advice and first-hand experience.



Adelheid Cerwenka
(far left)

The event was kicked off by the Chairman of the Alumni Association, Prof. Manfred Schwab, at the Communications Center. After a warm welcome, he introduced to the Association and provided an overview of its activities. Then, Dr. Barbara Janssens, head of the Career Service, presented the values of mentorship in career planning. She also took this opportunity to officially launch “DKFZ Connect”, a new online platform that promises better networking and mentoring opportunities for all DKFZ members, whether past or present. The response was immediate, with many of the audience signing up for the website. The theme of mentoring was further strengthened in four subsequent talks about different scientific careers. The first lecture was given by PD Dr. Adelheid Cerwenka, head of the Boveri Junior Research Group Innate Immunity. In a lively way she shared with the audience her career path from being a medical student in Vienna, adding postdoc experience in the USA, and industrial know-how, finally leading her to her current position.

Amongst this she noted the benefits of gaining international exposure, and the part that ‘luck’ could play, as evidenced by her amusing anecdote of joining a laboratory due to an ability to play the violin. In addition, she listed some of the attractions and challenges working in academia as a lifelong career.



Angela Risch (left)

The second speaker was Dr. Susanne Weg-Remers, head of the DKFZ Cancer Information Service. She introduced in detail the German scientific landscape and research funding agencies, which are of great relevance to any early-career scientists. This knowledge ties in closely to her career starting as a science manager, where she not only introduced this career path, but also provided useful tips on transitioning to this position from the bench, including the competencies needed.

Dr. Haikun Liu added an international and light-hearted perspective to the talks by tracing his route from a Chinese village to his current status as head of the DKFZ Division Molecular Neurogenetics. Through his experience, he advised PhD students to take time to develop a personal scientific interest and to acquire project management and planning skills when pursuing an academic career. Nonetheless, he also stressed that in the end, ‘only science matters’.

The final speaker was Dr. Christian Tidona, bioentrepreneur and managing direc-

tor of the BioMed X Innovation Center. In an energetic presentation, Dr. Tidona started by outlining his beliefs on what nurtures innovation – talent density, diversity and conduciveness of the local environment. With this he introduced BioMed X, and also shared his entrepreneur journey since his PhD completion.



Along the way, he affirmed the values of learning from a good mentor, and provided three insights gained: focus on one’s own outstanding performance; never get carried away by success; and be responsible and aware of one’s own power. The four speakers were subsequently joined by Dr. Janssens for a panel discussion. Audience questions on various career or personal development aspects were readily answered, such as the benefits of making mistakes, management tips (both in the lab or office), motivation skills etc. Afterwards during a poster session in the foyer current students briefly introduced to their research; in parallel, a happy hour organized by the PhD Council gave the opportunity to socialize and make new connections.

This jovial environment was extended further into the evening, whereby registered guests enjoyed a delicious dinner in the cosy environment of Kulturbrauerei, a traditional German restaurant right at the heart of Heidelberg’s old town. It was a good way to cap off the first day of the Alumni Meeting.

Novel promises from clinical epigenetics

by Horace Chan

The second day of the General Alumni Meeting came along with the major highlight of all sessions: a series of scientific lectures given by renowned experts in clinical epigenetics. It is one of the fastest growing areas in cancer research and promises better and more precise diagnostics as well as new therapeutic targets.

Chaired by Prof. Angela Risch (DKFZ alumna and currently at the University of Salzburg), the first talk was given by Prof. Olaf Witt, head of the Clinical Coopera-



Manel Esteller, Christoph Plass, Toshikazu Ushijima, and Michel Boutros (from left)

tion Unit Pediatric Oncology. In his talk, the clinician scientist pointed out the inadequate efficacies of histone deacetylases (HDACs, a class of epigenetic drug) in clinical trials against many types of tumors. This bottleneck might be due to improper selection of patients for the trials. By characterizing tissue from childhood tumors, his group found that few patients actually show the same epigenetic target. This emphasizes the need for better biomarkers in order to identify the right cohort of patients for clinical trials. He concluded the talk by presenting new findings from two HDAC members with potential as a druggable target, or as an improved biomarker.

The next talk was given by Dr. Kristian Pajtler, a member of the Division Pediatric Neurooncology headed by Prof. Stefan Pfister. Classification of central nervous system tumors based solely on histological analysis is often insufficient. In his work Dr. Pajtler employed DNA methylation profiling techniques to show that this approach greatly enhanced the accuracy of tumor classification. He also

identified new tumor entities. This finding improves diagnostic precision and thereby assists clinical decision-making. Dr. Toshikazu Ushijima (National Cancer Center, Japan), the first of the three invited international speakers, gave an interesting talk on the correlations between gastric cancer risk and aberrant DNA methylation induced by *Helicobacter pylori* chronic inflammation. In addition to this, he also explained a novel sequencing technique that differentiated aberrant characteristics between different



Jean-Pierre Issa

cancer tissues and may enhance cancer risk prediction.

The afternoon session was chaired by Prof. Christoph Plass, head of the Division Epigenomics, who introduced Prof. Jean-Pierre Issa of USA's Fox Chase Cancer Center. Known as one of the pioneers of epigenetic therapy he discussed strategies to enhance the efficacy of DNA methyltransferase inhibitors, another kind of epigenetic drug. Using these new strategies, he found that calcium signaling is also a targetable pathway for killing cancer cells, and that arsenic trioxide improves the response of patients undergoing chemotherapeutic treatment with the epigenetic drug decitabine.

The possible contribution of epigenetic profiling and its clinical value for diagnosis, prognosis and prediction of therapy response was finally discussed by Dr. Manel Esteller. The scientist from Barcelona's Bellvitge Biomedical Research Institute also called for applying this knowledge in clinical practice and gave an example of the EpiCup initiative, an epigenetic diagnostic test that helps

oncologists to use DNA methylation profiles to identify patient tumors that otherwise have an unclear origin.

The rewarding scientific lectures were complemented with a diversified Reception, starting with a presentation by Prof. Michael Boutros. The interim Scientific Director of the DKFZ Management Board updated the audience with recent key developments at the DKFZ. Afterwards, the Collegium Musicum of the Heidelberg University Brass Orchestra showed a great performance. In the following



Harriet Wikman-Kocher (left) and Anne Lloyd (right)

awarding ceremony the DKFZ Alumni/Cancer Letters Award for International Scientists was conferred to Dr. Harriet Wikman-Kocher. The alumna who did her PhD at the DKFZ and currently heads a research group at the Department of Tumor Biology of the University of Hamburg presented her work on the identification and functional characterization of metastasis-associated genes in breast and lung cancer.

The final hour of the second day belonged to a string of presentations and

General Assembly

A general assembly amongst members of the DKFZ Alumni Association opened the second day. In the assembly, Prof. Schwab reported on the Association's activities, followed by updates on its financial budget by treasurer Dr. Axel Wiest and auditors. Finally, changes in the board members and auditors were elected and passed through.

alumni meeting



awards. Dr. Anne Lloyd of Elsevier Publishing took the opportunity to update new initiatives of the publishing house. Keeping to the nature of ‘alumni’, Marius Schwabenland, an alumnus of the Heidelberg Life-Science Lab e.V., presented the organization’s activities, role and future plans in promoting youth research, and encouraged further collaboration and support of it. For the awards, the poster sessions concluded with the conferment of seven Merck Poster Prizes (500 Euros each by courtesy of Merck) to outstanding presentations.

As the events of the day wind up, it made for a befitting setting to say goodbye to Elfriede Mang, who stepped down as secretary in the DKFZ Alumni As-

sociation. As acknowledgement for her energy and commitment in supporting the Association’s activities (not least the latest impressive efforts of coordinating the 2016 General Alumni Meeting), she, together with Prof. Otmar Wiestler, former Chairman and Scientific Director, will become new honorary members of the Association. Elfriede Mang presented a short farewell speech, and conducted a simple transitioning ceremony to Susanne Schunk, who will become the new secretary of the Association (*see also page 1*).

Finally, the sound of brass instruments by the Collegium Musicum concluded the second day, as guests retreated to enjoy a buffet dinner in the foyer.



A day out with Art nouveau and German *Gemütlichkeit*

by Horace Chan

The final day of the 2016 Alumni Meeting provided a light-hearted and relaxing occasion for the 50-odd registered Alumni members: an excursion to landmarks outside of Heidelberg.

Leaving from the DKFZ Main Building at 9 o’clock in the morning, the participants took a bus to Darmstadt, in order to visit the world-renowned Mathildenhöhe. The site was part of a former artist enclave, which was set up in the early 20th century, during the peak of the Jugendstil movement. During the visit, the participants were led by local tour guides and spent a morning strolling through the houses and buildings of the Mathildenhöhe, admiring the pervasive Art Nouveau architecture. This was then followed by a short stay in the Darmstadt Artists’ Colony Museum, where the

participants learnt further about the life and artwork of these artists. After this, the group had lunch at the Hotel Restaurant Bockhaus. This restaurant presented a rustic, German *Gemütlichkeit* setting – completely understandable as Bockhaus also happens to have a long history of 215 years! Traditional fare was served, notably some Hessian special-



Heppenheim Marketplace

ties such as green sauce. Refreshed after lunch, the group made its way by bus to Heppenheim.

Heppenheim is a small, charming town that not only boasts a long history, but also happens to be the birthplace of Sebastian Vettel, the former Formula 1 champion. Unfortunately, Vettel was nowhere to be seen, so the DKFZ Alumni members constituted the biggest group of visitors that afternoon. The 1.5 hours

there provided ample time for group pictures at the market square and a city tour through its old church and its cobble alleyways, led by local guides. Afterwards, the participants travelled for coffee and cake at the Starkenburg Castle, which sits on a small hill above Heppenheim. Half way up the bus could not continue further due to the narrow roads, so everyone took the opportunity to do a 20 minute hike up to the hill top. At the top, the participants enjoyed the picturesque views of Heppenheim and its lush, woody surroundings. The weather remained overcast but it did not dampen spirits, because delicious cakes and coffee were served to each table, and participants took the opportunity to further socialize with each other. With this the day was approaching an end, but there was still time for a tiny drama on the way down from Starkenburg Castle: due to an influx of traffic uphill, the narrow road became even narrower. Nonetheless, the bus driver skillfully navigated through this challenge and was deservedly applauded as the bus finally made its way back onto the road network. On reaching Heidelberg, the sun broke out, marking a warm and satisfying end to the 2016 Alumni Meeting.



Mathildenhöhe

new division

A visionary platform for complex data management

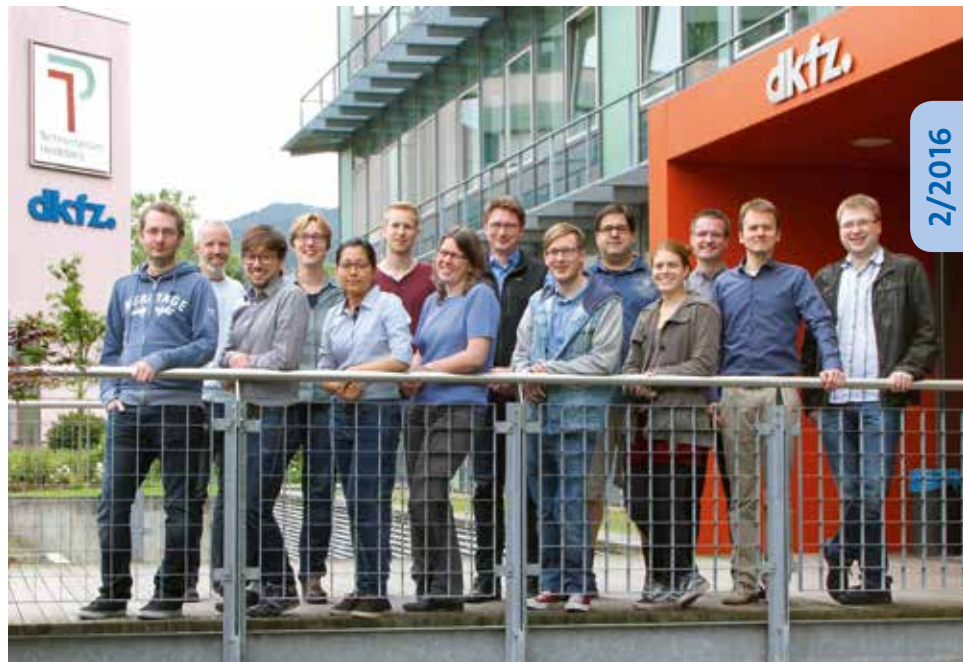
by Frank Ückert

The Division of Medical Informatics in Translational Oncology (MITRO) has extensive experience in the development of innovative IT tools and concepts that bring together findings from prevention, diagnostics, therapy, follow-up care, and research. Acting as an IT communication hub for scientists and clinicians within the DKFZ as well as external research, industrial, and business partners, the Division contributes significantly to the improvement of the research landscape.

MITRO investigates semantics as a prerequisite for data interoperability and integration. The team puts much effort in the management of study participants, identity management, and data protection. Another focus lies on databases and registries, especially federated approaches. Besides the management of electronic data quality, data warehousing together with data extraction play an important role in MITRO's research scope.

Particularly in individualized oncology, an extensive pool of data gathered by such integrative solutions is indispensable for generating hypotheses. In addition, the Division offers a range of other options including identifying successful therapies, developing and optimizing guidelines, support in the recruitment of participants in clinical trials, identifying risk factors, and many more.

In the future, the Division's work on the targeted development, improvement and integration of efficient shared and distributed (federated) IT infrastructures based on local systems shall further facilitate the analysis and evaluation of research and clinical data. Thus, there are plans to expand the existing DKFZ research network internally and externally and hence the pool of available research and treatment data shall be further increased. As part of this strategy, a "DataThereHouse" is currently being established as a platform for the integration of data from participating institutions. Its vision is to make all heterogeneous clinical and research data on a particular patient available via an innovative data system. A specific goal is to integrate existing data to create a lively "DataThereHouse".



With the "DataThere House" project Frank Ückert (back row, 4th from left) and his team want to help researchers and health professionals generate elaborate studies with little effort and identify important information and contexts with only a few clicks.

The development of the platform with specific medical methods and tools shall give access to and optimal exploitation of the data. Medical research projects comprising pilot applications, generation and review of hypotheses, automated analyses, virtual preliminary studies, etc. shall benefit from the Division's support. Last, but not least,

MITRO envisions the quick creation of added value for all participants even while the infrastructure is still in development. Generating and continuously improving such an innovative, modern infrastructure will underpin the position of the DKFZ as a place of state-of-the-art oncology research and treatment today and in the future.

***Frank Ückert** studied Mathematics and Medicine in Muenster and finally graduated with a study on an electronic health record to improve communication with and understanding of citizens. During various projects at the University Muenster, Muenster University Hospital and the University Erlangen-Nuernberg the researcher pursued IT issues dealing with clinical data processing. In 2005, Ückert became Junior Professor of Medical Informatics at the University Muenster before he was appointed Full Professor in this field at the University Medi-*

cal Center Mainz. The researcher left this DKTK partner site to take up the position as Division Head at the DKFZ at the beginning of 2016. His research currently focuses on decentralized search algorithms that maintain the data sovereignty of a partner. Ückert also deals with the development of clinical documentation systems and strives at establishing interoperability on the data and process levels. Among many other projects he puts a lot of effort in data protection issues.

alumni affairs

A new chapter in the book of worldwide networking

by Manfred Schwab



On November 12, a short ceremony was held in Hangzhou on the occasion of the inauguration of the DKFZ Alumni China Chapter, coordinated by Tianhui (Thomas) Chen. As I was on a lecture visit in China I took the opportunity to attend this event and in the role of the Chairman of the Alumni Association underpinned the value of this new section for the ever-growing network of DKFZ Alumni.

After working at the DKFZ for a number of years, Thomas Chen has accepted a professorship at the Institute of Occupational Diseases of the Zhejiang Academy of Medical Sciences in Hangzhou (see also interview below). The Chinese researcher had recently become a member of the Board of the DKFZ Alumni Association and is a dedicated supporter of the Association. At this point, the China Chapter has more

than 100 members, but Thomas Chen is convinced that there are far more former DKFZ Associates in China that he will identify. A more detailed report about the status of the China Chapter, future activities and plans will be included in a forthcoming issue of the Alumni Magazine.

Contact:

Tianhui (Thomas) Chen, MD & PhD
Professor, Group Head
Group of Molecular Epidemiology & Cancer Precision Prevention (GMECPP)
Institute of Occupational Diseases
Zhejiang Academy of Medical Sciences (ZJAMS)
Tianmushan Road 182
310013, Hangzhou, China
Tel: +86-571- 88215566
Fax: +86-571- 88085911
E-mail: t.chen@zjams.com.cn

Membership in a nutshell by Dagmar Anders

To many current DKFZ members and alumni Tianhui (Thomas) Chen may not only be known as an ambitious researcher, but also as a passionate promoter of the Alumni Association's aims. The Alumni Board therefore invited him to state his point of view on the Association's development and to suggest further ideas for its advancement.

How did you first become involved with the DKFZ?

My first term working at the DKFZ was from August 2008 to September 2011. Initially I worked at the Division of Cancer Epidemiology headed by Prof. Rudolf Kaaks, and subsequently transferred to the Division of Clinical Epidemiology and Aging Research under Prof. Hermann Brenner. After three years in Heidelberg, I got a job offer from China in 2011. By the time I had my second child I – together with my family – moved back to China and joined Zhejiang University as a senior researcher. One year later in September 2012 I started my second stay at the DKFZ. Prof. Brenner recommended me to join Prof. Kari Hemminki' group where I

worked in a collaborated project until my recent departure in January 2016.

What have you been doing over the years since you first came into contact with the DKFZ?

Since August 2008, I have been working in the field of cancer epidemiology both at the DKFZ and Zhejiang University in China. I recently joined Zhejiang Academy of Medical Sciences (ZJAMS) as a Professor. My work mainly focuses on early detection and screening of high-risk population for common cancers. Using data from population-based cancer registries my aim is to assess long-term survival of cancer patients, familial risks of cancer, and risk of second primary cancers.

What made you become a member of the Alumni Association?

I first met Prof. Schwab, the Chairman of the DKFZ Alumni Association, during one of its excursions in 2013. Afterwards, I regularly participated in such site visits and other Alumni events. It was due to those experiences that I became a member of the Alumni Association

and got more and more involved with its activities as leader (from Chinese side) of the Organizing Committee for the "Chinese Spring Festival Elements" 2014 of the Alumni New Year's Reception. Our organizing committee contributed deeply to the success of the event held in January 2014. Subsequently, I initiated the founding of a Chinese Chapter of the DKFZ Alumni Association with more than 100 members and was appointed Chairman before I finally left the Cancer Research Center.

What do you like about the Alumni Association already and what are you looking forward to in the future?

The Alumni Association already made great efforts to improve the contact between the members and regularly informs them about recent and ongoing activities and events of the DKFZ. Though having moved back to China, I am still interested in Heidelberg and the development of the Center, particularly in the new results of my former division. I maintain close scientific and personal contacts with many former colleagues.

membership

Hopefully those activities and contacts might stimulate further collaborations on cancer research.

Are there additional benefits the Alumni Association should provide to members?

Maybe additional meetings of current DKFZ staff and Alumni members in all places of the world, such as far eastern China, could further strengthen the ties. Hopefully, the Alumni Association will be able to continuously offer travel grants for those members lacking financial support for participation in DKFZ Alumni meetings.

What can Alumni members do who want to get more involved into the Association's activities?

Finding new ways like WeChat (a combination of LinkedIn and WhatsApp) not only offers the opportunity to connect to other Alumni members, but helps to attract new ones. This is crucial and valuable for the Chinese Chapter. Additionally, I highly esteem the local "Stammtische" in places like Heidelberg. Therefore, I plan to organize such kind of events in Hangzhou as well, though budgets for these events are lacking. Of course, funds and donations will be highly appreciated.

How do you rate the achievements of the Alumni Association in the past and what do you suggest for the future?

In my opinion, the Alumni Association has deeply contributed to the good reputation and future development of the Cancer Research Center. My suggestion for the future is that more spiritual and financial supports from the DKFZ Management Board and Alumni Board will help invigorate further collaborations and networking between Alumni members and even between China and Germany.

Dr Chen, thank you very much!

New Members of the Alumni Management Board

Dr. Tianhui (Thomas) Chen, Hangzhou, China /// **Susanne Schunk**, DKFZ, Heidelberg

New Honorary Alumni Members

Elfriede Mang, DKFZ, Heidelberg /// **Prof. Otmar D. Wiestler**, Berlin

New Alumni Members

Alia Abukiwan, DKFZ, Heidelberg /// **Dr. Gordian Adam**, Abingdon, UK /// **Dr. Tom Christian Holm Adamsen**, Bergen, Norway /// **Enoch Antwi**, DKFZ, Heidelberg /// **Hoda Anwar**, DKFZ, Heidelberg /// **Dr. Marzoq Aseel**, DKFZ, Heidelberg /// **Felix Bärenz**, DKFZ, Heidelberg /// **Frederik Bartels**, DKTK site Berlin /// **Jürgen Berger**, DKFZ, Heidelberg /// **Simone Borgoni**, DKFZ, Heidelberg /// **Johannes Breitling**, DKFZ, Heidelberg /// **Horace Ho Laam Chan**, Hong Kong /// **Hongda Chen**, DKFZ, Heidelberg /// **Dr. Marco Raffaele Cosenza**, DKFZ, Heidelberg /// **Dr. Sonam Dhamija**, DKFZ, Heidelberg /// **Bernhard Englinger**, Vienna, Austria /// **Rana Fetit**, DKFZ, Heidelberg /// **Raya Gallas**, Braunschweig /// **Xu Gao**, DKFZ, Heidelberg /// **Prof. Mathias Heikenwälder**, DKFZ, Heidelberg /// **Katharina Heilmann**, DKFZ, Heidelberg /// **Xiaoying Hu**, DKFZ, Heidelberg /// **Lei Huang**, DKFZ, Heidelberg /// **Rama Kiblawi**, DKFZ, Heidelberg /// **Umut Kilik**, DKFZ, Heidelberg /// **Katharina Isabelle Kober**, DKFZ, Heidelberg /// **Anne-Sophie Kratz**, DKFZ, Heidelberg /// **Dr. Thomas Krüwel**, Solingen /// **Dr. Verena Lang**, London, UK /// **Dr. Maria Llamazares Prada**, DKFZ, Heidelberg /// **Dr. Haifa Maalmi**, DKFZ, Heidelberg /// **Philip Mann**, DKFZ, Heidelberg /// **Paula Andrea Marin Zapata**, DKFZ, Heidelberg /// **Jan-Eric Meißner**, DKFZ, Heidelberg /// **Dr. Tuba Mizani**, DKFZ, Heidelberg /// **Sara Najafi**, DKFZ, Heidelberg /// **Sebastian Niesporek**, DKFZ, Heidelberg /// **Dr. Ekaterina Nikitina**, DKFZ, Heidelberg /// **Dr. Daniel Pastor-Flores**, DKFZ, Heidelberg /// **Dr. Asim Pervaiz**, Lahore, Pakistan /// **Gemma Pidelaserra Marti**, DKFZ, Heidelberg /// **Tanja Platt**, DKFZ, Heidelberg /// **Manasi Ratnaparkhe**, DKFZ, Heidelberg /// **Christian Rink**, DKFZ, Heidelberg /// **Dr. Maria Rohm**, Oxford, UK /// **Christin Schmidt**, DKFZ, Heidelberg /// **Simon Schmidt**, DKFZ, Heidelberg /// **Rolf Schmitt**, DKFZ, Heidelberg /// **Marius Schwabenland**, Freiburg /// **Dr. Huriye Seker-Cin**, Eberbach /// **Ahmad Zia Shams**, DKFZ, Heidelberg /// **Adriana Spalwiz**, DKFZ, Heidelberg /// **Benjamin Stottmeier**, DKFZ, Heidelberg /// **Dr. Harald Surowy**, Düsseldorf /// **Tamara Sutus Temovski**, DKFZ, Heidelberg /// **Prof. Andreas Trumpp**, DKFZ, Heidelberg /// **Katharina Urban**, DKFZ, Heidelberg /// **Dr. Lisa von Paleske**, Hamburg /// **Dr. Armin Weinzierl-Hinum**, Weil am Rhein /// **Felix Wertek**, DKFZ, Heidelberg /// **Dr. Wolf Ruprecht Wiedemeyer**, Torrance, USA /// **Qianchao Wu**, DKFZ, Heidelberg /// **Peer Wünsche**, DKFZ, Heidelberg /// **Jing Yang**, DKFZ, Heidelberg /// **Dr. Yan Zhang**, DKFZ, Heidelberg ///

alumni interview

Successful clinician scientist and science manager takes the lead

In November Michael Baumann became the new Chairman and Scientific Director of the German Cancer Research Center. In this interview the cancer specialist and radiooncologist talks about his new task and the challenges of personalized oncology.

Professor Baumann, welcome to the DKFZ.

Thank you very much!

Needless to say, everyone at DKFZ is excited about the new Scientific Director. What are your plans for your first one hundred days in office?



I have planned to use the first one hundred days to get to know the DKFZ, its employees and the Heidelberg site.

Professor Baumann, you held many positions in Dresden, as director of Radiation Therapy at the University Hospital, of the OncoRay Center as well as of the Dresden NCT location. You were one of two co-directors at the Institute for Radiooncology at the Helmholtz Center Dresden-Rossendorf (HZDR) and speaker of the partner site Dresden in the German Cancer Consortium (DKTK). What was it about Heidelberg that attracted you?

The DKFZ is one of the top places in the world with a much broader base than for example Dresden at the moment. Working together with the terrific colleagues here in Heidelberg on advancing cancer research further, meaning both basic research, as well as preclinical and clinical research, promises to be an exciting challenge. An offer like this comes but once in a lifetime, and it really attracted me. I look forward to my task with a great deal of excitement.

Will you be conducting your own research as well?

Yes, I will be investigating in the field of personalized radiooncology, preclinically as well as based on clinical data. Obviously, I will have to find a right hand person to work with me in this division because there will be such high demands on my time in my new position.

Could you explain in a little more detail how you envisage developing personalized radiooncology?

This will happen mainly in the area of biomarker research. In the same way as we are looking to develop specific drugs that are only given if a particular biomarker or a specific constellation of biomarkers is present the same is true for radiooncology. Here, we ask whether a patient should receive radiotherapy, what type of



“The DKFZ is one of the top places in the world. An offer like this comes but once in a lifetime.”



Which patients will that be?

At the moment it is mainly children but also patients with tumors that are located close to critical structures like the skull base, and who require high-dosed treatment. However, I believe that proton therapy still has to prove itself in cases where beside the tumor large volumes of healthy tissue are exposed to the irradiation, and where a high dose is indicated. And heavy ion therapy with its higher biological efficiency will have to show its impact especially in radioresistant tumors.

The DKFZ is in a strong position, the cooperation in Heidelberg is fantastic. But it remains important to join forces in the battle against cancer. How much do you rely on the German Cancer Consortium and on Cancer Core Europe?

Very much. I believe that the DKFZ needs to work closely together with national institutions, which has been happening very intensively in recent years, and also with international players. If we really want to develop personalized oncology, we clearly depend on partnerships, because even in big centers only a limited number of patients will be treated per year with a specific tumor entity. And this challenge can only be met through larger networks.

Thank you for this interview.

This interview was conducted by Stefanie Seltmann.

rays should be used, as part of which combination therapy etc. We already know from our own investigations that some tumors are particularly sensitive to radiation and it would be good to be able to identify these in advance. In especially radio-resistant tumors, a more intensive or combined therapy may be indicated.

Will proton or heavy ion therapy, as administered at the HIT in Heidelberg, be replacing conventional radiation therapy in the future?

No, I don't think so, because conventional radiation therapy is in many cases still the best option. But I think that about 10 to 15 percent of cancer patients can benefit long-term from a particle therapy.

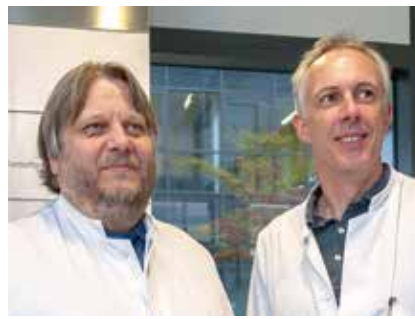
Awards people



An outstanding event was celebrated this autumn: **Prof. Ralf Bartenschlager**, virologist and cancer researcher at the Heidelberg University Hospital and head of the DKFZ Division Virus-associated Carcinogenesis has received the Lasker-DeBakey Medical Research Award endowed with 250,000 Dollar. This prize, which is awarded annually in three categories by the Lasker Foundation in New York, is the highest distinction for medical science in the USA. Many prize winners have later gone on to receive the Nobel Prize.

The Management Board invited all DKFZ employees to celebrate this outstanding success together with Ralf Bartenschlager on October 5th. On this reception, the DKFZ Directors Prof. Michael Boutros and Prof. Josef Puchta additionally honored the virologist for his outstanding contributions to infection research and presented him a grant certificate endowed with further funding of 260,000 Euro. The sum is dedicated for his research activities to be spent within the next three years.

Bartenschlager and his group were the first to propagate the hepatitis C virus in the lab. This has made it possible to develop targeted therapies against the virus that can lead to chronic infection and cirrhosis or cancer of the liver (see also *Alumni monthly*, issue 1).



Two scientists of the German Cancer Consortium (DKTK) have been awarded with the highest distinctions of the „Arbeitsgemeinschaft Internistische Onkologie“ (AIO, consortium for non-surgical oncology) of the German Cancer Aid. The two physician scientists **Dr. Wilfried Eberhardt** (above, left) and **Prof. Jens Siveke** (above, right) of the partner site Essen/Düsseldorf received the awards for the “best scientific publication” and the “best clinical trials” targeting issues of lung and pancreatic cancers. Together with partners from Stanford University a research team headed by Prof. Jens Siveke developed a novel epigenetic approach to treat pancreatic tumors. Using the CRISPR/CAS9 system and specific inhibitors tumor cells were reprogrammed thereby restoring their responsiveness to therapeutic drugs. The results in the field of preclinical/experimental cancer research were published in “Nature Medicine”. The award for the best publication in clinical cancer research was presented for the second time to Dr. Wilfried Eberhardt. By combined application of an intensified chemotherapy with a chemo-irradiation and surgery the investigator achieved a longtime disease-free survival of more than 40 percent of the patients. Together with three other research colleagues from Heidelberg, Oldenburg and Frankfurt, Wilfried Eberhardt also received the award for the “most innovative clinical study in solid oncology”.



For the development of a vaccine against glioma, the Bayer Foundation honored **Dr. Theresa Bunse** with the Bayer Early Excellence in Science Award 2016 that comes with 10,000 Euro. The molecular biologist of the Clinical Cooperation Unit of Neuroimmunology and Brain Tumor Immunology, investigates how the immune system can help in the defense against rare brain tumors. The therapeutic vaccine specifically targets a protein (IDH1) modified in tumor cells without harming healthy cells. Theresa Bunse has already published her findings in high-ranking journals like Nature. Her results now form the basis of a clinical study.



FEBS Anniversary Prizes of the Gesellschaft für Biochemie und Molekularbiologie of 2,000 Euro are awarded each year for outstanding achievements in the field of Biochemistry and Molecular Biology or related sciences to researchers under 40 years of age. Among this year's awardees is **Prof. Sven Diederichs** who leads the DKFZ Division of RNA Biology and Cancer and a division at the University of Freiburg. His work focuses on the characterization of long non-coding RNAs (lncRNAs) as well as their interacting proteins in cancer. Importantly, he discovered MALAT1 as one of the first lncRNAs linked to cancer and proved its active role as epigenetic regulator in the development of lung cancer metastases.

people



The German Association of Gastroenterology, Digestive and Metabolic Diseases (“Deutsche Gesellschaft für Gastroenterologie, Verdauungs- und Stoffwechselkrankheiten”, DGVS) honored **Prof. Werner Franke**, head of the Helmholtz Professorship Cell Biology, with the Thannhauser-Medal. It acknowledged his essential findings on the molecular features and function of the cytoskeleton and cell junctions. Based on these primary results it is meanwhile possible to characterize and trace back metastases to their cell origin. Franke’s investigations have greatly contributed to the development of approaches in diagnostics and customized treatment.



Prof. Lutz Gissmann has been honored with the 2016 Maurice Hilleman Award, which comprises 20,000 US Dollar donated by Merck & Co. The distinction acknowledges his seminal contributions to the development of a vaccine against human papillomaviruses (HPV). Gissmann, who was head of the Division Genome Modifications and Carcinogenesis until 2015, took a major part in the discovery of the two most common cancer-causing HPV types. In addition, he developed a method to produce a preventive vaccine from viral proteins. The Maurice Hilleman Award is given to scientists who have made outstanding contributions to the development or implementation of new vaccines.



For his outstanding research achievements, **Prof. Dietrich Keppler**, head of the Division Tumor Biochemistry until 2007 and former Chairman of the Alumni Association, has been conferred the 2016 international Adolf Windaus Award. The biochemist has made seminal contributions towards unraveling the molecular mechanisms of how substances are transported into the liver and from the liver into the bile. The Windaus Award has been given by the Falk Foundation since 1980 for significant achievements in the field of bile acid research. The award comprises 15,000 Euro.



Prof. Stefan Pfister from the DKFZ and the Heidelberg University Hospital and **Prof. Michael Taylor** from the University of Toronto and The Hospital for Sick Children have contributed to crucial improvements in the diagnosis and treatment of brain tumors. The scientists showed that medulloblastoma, the most common type of malignant brain tumor in children, can be divided into four types which must be treated individually. This makes it possible to adopt a targeted approach to the treatment of these forms of cancer for the first time. In recognition of their achievements, the two researchers have been awarded the K. J. Zülch Prize by the Gertrud Reemtsma Foundation which comes with a prize fund of 50,000 Euro.



Prof. Hans-Reimer Rodewald, head of the Division of Cellular Immunology, has been elected to join the European Molecular Biology Organization (EMBO) in recognition of his research achievements in immunology. The more than 1,700 EMBO Members are internationally leading scientists in their fields. With his team, Rodewald is studying how immune cells and immunological organs develop and which defects in this process lead to diseases. Using mouse models, the researchers investigate, among other things, how hematopoietic stem cells in the bone marrow work, how T cells mature in the thymus gland, how macrophages develop, and which functions mast cells have. For his groundbreaking research, Hans-Reimer Rodewald has also been honored by the German Society for Immunology (DGfI) with the 2016 German Immunology Award (see also *Alumni monthly*, issue 1). The prize comes with a budget of 10,000 Euro.

summer school

High school graduates benefit from a unique stay in Israel

by Nanina Föhr and Maximilian Kass

Sending talented high school graduates to the “Dr. Bessie F. International Summer Science Institute”, a summer school in Rehovot, Israel, has a long tradition among the extracurricular opportunities the Life-Science Lab offers. In 2016, the Alumni Associations’ Prize (founded by Alumni DKFZ Heidelberg and Alumni of the Heidelberg Life-Science Lab) was awarded to Maximilian Kass enabling him to take part in this program.



During the 7th General Alumni Meeting: Marius Schwabenland (far left), Chairman of the Alumni of the Heidelberg Life-Science Lab, and Alumni Chairman Prof. Manfred Schwab, award the Alumni Associations’ Prize to Maximilian Kass (second left and far right). At the Weizmann Institute the young high school student together with his Dutch lab partner analyzed the molecular structure of retinal.

Last summer, high school graduates from 16 countries had the unique opportunity to work at the Weizmann Institute of Science in Israel. Based upon my experiences at the Heidelberg Life-Science Lab of the DKFZ, I was able to make the most out of the cutting-edge research I conducted at the Summer Science Institute.

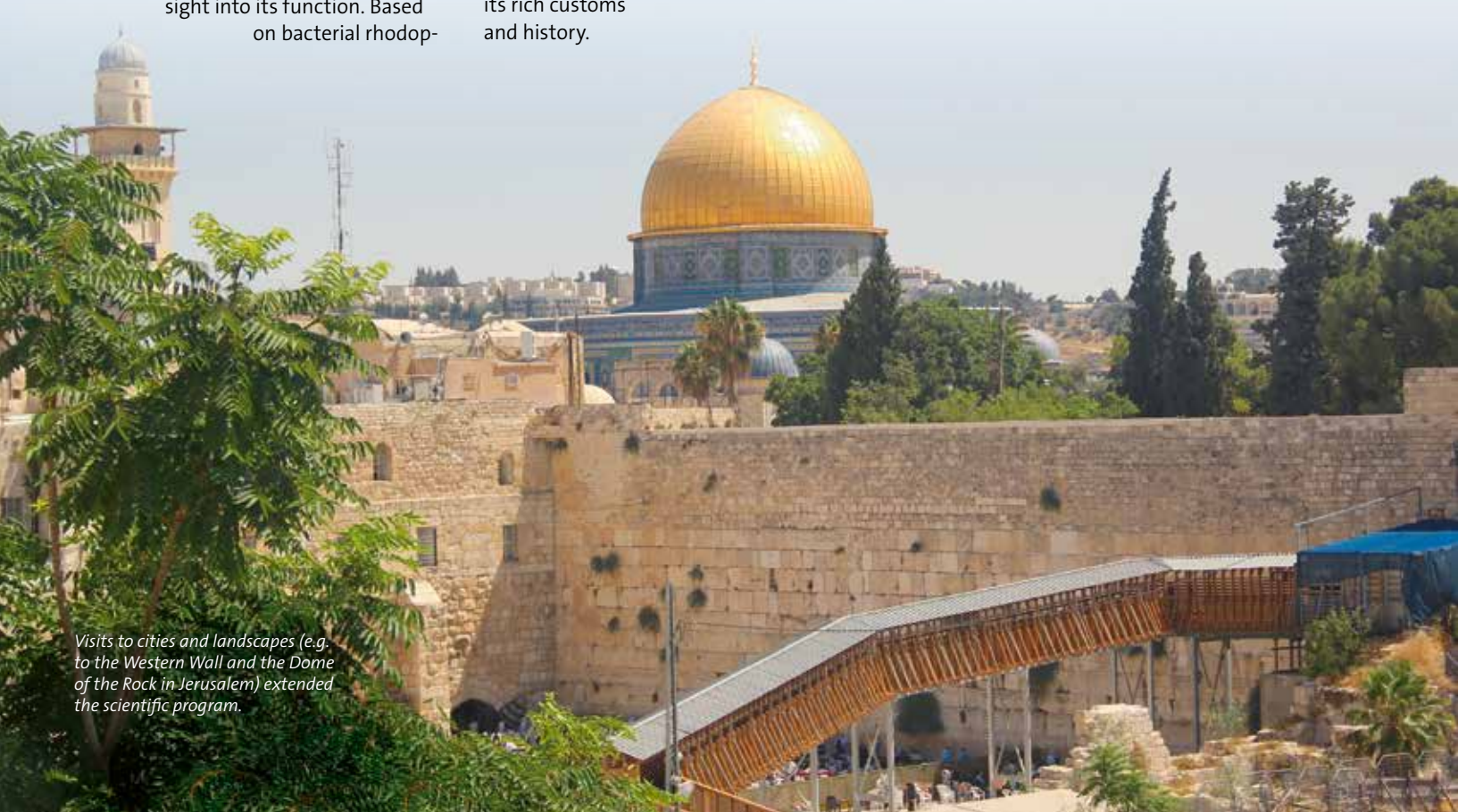
Together with my Dutch lab partner, I analyzed how the molecular structure of retinal, a vitamin A aldehyde, affects the retina’s ability to absorb photons and interact with the amino acid opsin to form rhodopsin. Because retinal is extremely small, replacing one or two atoms could alter its effect and possibly leads to insight into its function. Based on bacterial rhodop-

sin, we replaced natural retinal with three synthetic retinals. Using UV-visible and circular dichroism spectroscopy, we found that the retinals bound to opsin with conformational changes in the rhodopsin, which resulted in differences in its absorption properties.

During our stay in Rehovot our group of high school students also attended lectures on non-scientific topics, such as the geopolitics of Israel. Excursions to major cities introduced us to this fascinating culture with its rich customs and history.

Finally, I would like to touch on one thing that gave life to my experience: the people. All the people I met impressed me with their uniqueness, not just due to their academic achievements but especially because of their diverse personalities and experiences.

I am truly grateful to all supporters including the Alumni DKFZ Heidelberg and Alumni of the Heidelberg Life-Science Lab for the chance to conduct research with people from all over the world who share my interest in science.



Visits to cities and landscapes (e.g. to the Western Wall and the Dome of the Rock in Jerusalem) extended the scientific program.

excursion

First-hand impressions of high-end imaging technology

by Horace Chan

Imaging and radiooncology research is a major strength of DKFZ's scientific excellence, and it was therefore only a matter of time that an Alumni excursion was organized to visit Siemens Healthineers, the worldwide market leader in the production of Magnetic Resonance Imaging scanners (MRIs).

A group of 51 DKFZ Alumni and guest scientists arrived at Erlangen, location of Siemens' headquarters and production plant. In the introductory lecture, the guests listened to a presentation about the company, product line, current MRI market trends and innova-

tion plans. This was followed by a rich buffet lunch within the company's cafeteria.

After lunch, our group made its way to a guided tour in the production plant nearby. It was an impressive 45 minutes, as we saw first-hand how MRI scanners are built from scratch: the initial wiring of gradient coil and cooling tubes, the facilities for resin fitting, and final installation of internal electronics, all expertly handled by dedicated personnel to ensure quality and optimization.

Finally, the group further expanded their knowledge on medical imaging by visiting the Siemens MedMuseum, a compact but hugely informative site housed within the original Siemens production plant built in 1888. The curator provided a brief overview of Siemens' history, and then showcased interesting objects in the museum, including X-ray screens for guests to play with. At the same time, the exhibits showed not only MRI or CT developments, but also presented the history and breakthroughs of medical imaging. Due to traveling delays in the morning, there was unfor-

tunately little time left to continue a detour to nearby Nürnberg. Nonetheless, the excursion was a fascinating occasion that not only opened the eyes of those uninvolved in imaging and radiooncology research, but also strengthened the understanding of professionals. Everyone was very grateful to Wolfgang Schlegel whose valuable longstanding connections to Siemens made the visit possible. Special thanks go additionally to Susanne Schunk for the marvellous organization of the trip, which once again shows that the activities of the Alumni Association are ever worthwhile.

The Siemens MedMuseum traces the development of medical engineering and witnesses stories of people with pioneering spirit like that of Werner von Siemens (see picture below), who back in 1844 for the first time applied his inventions in clinical practice.



Imprint

Alumni

Deutsches Krebsforschungszentrum
Heidelberg
Im Neuenheimer Feld 280
69120 Heidelberg, Germany
Phone: +49 (0) 6221 42-4499
Fax: +49 (0) 6221 42-4498
Internet: www.dkfz.de/alumni

Editing/Layout/Desktop Publishing:
Dagmar Anders

Chairman of the Board:
Prof. Dr. Manfred Schwab

Management:
Susanne Schunk (alumni@dkfz.de)
To unsubscribe, please, send an e-mail
to alumni@dkfz.de

Online Application for Membership:
[www.dkfz.de/en/alumni/formular/
applicationform.php](http://www.dkfz.de/en/alumni/formular/applicationform.php)

Bank Account:
Alumni DKFZ Heidelberg
Sparkasse Heidelberg,
IBAN: DE31672500201000597810
BIC/SWIFT: Solade S1 HDB

A concerted “Go” for the new Children’s Tumor Center

by Dagmar Anders

The DKFZ and the Heidelberg University Medical Center join forces in the fight against childhood cancers: A concept for a new clinical research center for pediatric oncology and hematology was officially presented in a press conference in the end of November. The major goal is to establish innovative diagnostic and therapeutic options that more precisely address the demands of pediatric tumors. For the construction of a new building the Dietmar Hopp Stiftung provides the remarkable sum of 20 million Euro. The new cancer center for children will be known as Hopp-Children’s Tumor Center at the NCT Heidelberg, or briefly: KiTZ.

At the KiTZ mutual issues of clinical application and basic research will be addressed in close collaboration to advance the efficiency of diagnosis, early detection and therapy outcome for the benefit of young cancer patients. Prof. Michael Baumann, DKFZ Chairman and Scientific Director, says: „We have to translate our internationally well recognized sci-

entific knowledge in pediatric oncology more quickly into customized diagnostic and treatment approaches.” One strong pillar of the joint project will be the comprehensive medical care for the young cancer patients. Children and adolescents with tumor diseases benefit from an individualized care in the day clinic and inpatient facilities

the molecular causes of the disease and to derive targeted diagnostic and therapeutic tools. Not only physical conditions will be addressed at the KiTZ, but also issues of the psyche will be pursued. To this end, the center will provide opportunities for recreation like physical training or sports, and will offer therapy ap-

proaches taking advantage of music and arts. KiTZ will be headed by a board of three clinician scientists: Prof. Olaf Witt who leads both the Clinical Cooperation Unit Pediatric Oncology at the DKFZ and the Section Pediatric Brain Tumors and Individualized Pediatric Oncology at the Heidelberg University Medical Center. Prof. Stefan Pfister is in charge of the DKFZ Division Pediatric Neurooncology and holds the position of a senior physician at the Heidel-

berg University Medical Center. Third partner of the board is Prof. Andreas Kulozik, Medical Director of the Heidelberg University Clinic for Pediatric Oncology, Hematology and Immunology.



Annika (front) was two when she was diagnosed with leukemia. Four years later, after intensive treatment, she is disease-free. In the near future, children suffering from cancer like her will benefit from the new Hopp-Children’s Tumor Center at the NCT Heidelberg. The projected institution will be jointly established by the DKFZ and the Heidelberg University Medical Center (here represented by Prof. Michael Baumann (3rd right) and Prof. Guido Adler (far right) respectively). The new center will be managed by three directors: Prof. Andreas Kulozik (far left), Prof. Olaf Witt (2nd left) and Prof. Stefan Pfister (2nd right). Generous financial support is provided by the Foundation of Dietmar Hopp (3rd left).

housed at the KiTZ. Another essential pillar of the new children’s tumor center will be research: To further advance the prognosis of young patients it is crucial to improve the understanding of