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LAYING OF THE FOUNDATION STONE

Centre for Synthetic Life Sciences Düsseldorf

Photo: Christian Wever

Rendering: Schneider + Sendelbach Architektengesellschaft

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Photo: Hanne Horn

Dear Reader

It's time again and I am very pleased to be able to present to you the third issue of our HHU Magazine with exciting reports on current projects and developments at Heinrich Heine University. In addition, I would also like to tell you about some key topics with which I myself as Vice-President for International Relations am currently particularly busy.

Since the beginning of October, an audit ("Internationalisation of Universities") has been underway at Heinrich Heine University which we successfully acquired under competitive conditions and which is being implemented by the German Rectors' Conference. By the end of January, my office, in cooperation with twelve colleagues from the faculties, university administration and the Student Union, will have compiled on the basis of pre-set parameters a self-evaluation report on the status of internationalisation at HHU. This self-evaluation report will be assessed by a team of consultants, who will then hold further discussions with various players at HHU in April and subsequently make recommendations for internationalisation measures at our University.

Another topic which has occupied us to a major degree recently is the refugees and their integration in our society. Like many other universities in Germany, we want to help asylum seekers interested in studying to prepare for studies at a German higher education institution through participation in courses and German language classes.

We have successfully arranged for asylum seekers interested in studying to attend about 40 courses and two special language programmes, starting in the 2015/2016 winter semester. In addition, a weekly advice session for doctoral researchers and young post-doctoral fellows was recently launched, which is run by the Heine Research Academies together with doctoral researchers as volunteers. We will continue both initiatives in the coming semesters and also develop further measures to integrate researchers from amongst the asylum seekers.

Finally, I would like to report briefly on my visit to Japan as an official member of the delegation of Svenja Schulze (Minister for Innovation, Science and Research of the State of North Rhine-Westphalia), which took place from the 7th to the 13th of November. In addition to myself, representatives from RWTH Aachen University, the University of Bonn, Duisburg-Essen University and the University of Bielefeld also participated. We all signed cooperation agreements with various partners during our stay and many discussions were held with researchers, organisations and enterprises in Japan with the aim of fostering German-Japanese cooperation. For Heinrich Heine University, the focus here was on a partnership with Chiba University near Tokyo. The visit was very interesting, highly profitable for Heinrich Heine University and gave me many insights into the academic exchange between Germany and Japan.

I hope you find the latest issue of the HHU Magazine entertaining and wish us all a peaceful New Year with continued productive cooperation at international level!

Yours sincerely

Professor Andrea von Hülsen-Esch
Vice-President for International Relations

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From medicinal plant of the American Indians to reproducible raw material

Botanists in Düsseldorf launch research project on the cup plant

The Plains Indians of North America smoked it, took extracts from it and chewed it like chewing gum: Silphium perfoliatum L., the "cup plant", as it is known by amateur gardeners. Barely acknowledged in its native country, German researchers are now discovering this plant anew as a real all-rounder.

Illustration: Alessio Capponi from The Noun Project

BY ARNE CLAUSSEN

They not only want to use it as an energy crop for biogas production, but also as insulating material and a substitute for peat. And the cup plant is also a supplier of flavonoids, an important raw material for pharmaceuticals. Pioneering work is being performed in this area by researchers in Düsseldorf together with their colleagues in Aachen and Bonn.

"When I heard for the first time how useful the cup plant can be I was completely overwhelmed", enthuses Dr. Elena Pestsova, plant researcher in Düsseldorf. The biologist and Christian Wever, her colleague at the Chair of Developmental and Molecular Biology of Plants led by Professor Peter Westhoff, were fascinated by the cup plant, a flowering plant related to the sunflower. Together with colleagues from Aachen and Bonn, they applied to the Bioeconomy Science Center (in short BioSC; see box) for a three-year research project in the framework of which they want to examine the cup plant in depth. Topics range from characterization of ecotypes of various origins to cultivation and material use to extraction of flavonoids. SPREAD (Evaluation and development of energy plant Silphium perfoliatum L. as a source of renewable raw materials) is a cooperative project funded by BioSC to the sum of about € 660.000.

Popular with beekeepers in the GDR

"In the former GDR", recounts Christian Wever, "the cup plant was very popular with beekeepers, since it is very hardy and has a long flowering season".

"WHEN I HEARD FOR THE FIRST TIME HOW USEFUL THE CUP PLANT CAN BE I WAS COMPLETELY OVERWHELMED."

Dr. Elena Pestsova, Plant Researcher

Photos: Christian Wever

1: Cup plant in full bloom. The plants can also be admired in the "Energy Crops" area of the Botanical Garden of Heinrich Heine University Düsseldorf.

2: In the course of several years, the already known ecotypes of Silphium perfoliatum produce remarkable quantities of biomass. Bushes can reach as high as three metres.

3: Silphium perfoliatum is familiarly known as the cup plant. It owes its name to the way it collects rainwater with the help of opposite leaves which grow very closely together.

4: In the first year, Silphium perfoliatum develops just one not particularly competitive leaf rosette near the ground.

Other than that, a few farms grow it as fodder and silage. The fact that bees like it and that it makes excellent fodder are, however, just two of its many positive features.

In the first year, the cup plant is rather inconspicuous: it forms just a leaf rosette near the ground and therefore competes with wild herbs which threaten to overgrow it. These have to be removed by hand, which is very costly. Nor does the cup plant deliver any yield in the first year. But from the second year onwards, it shoots up and then produces large quantities of biomass for over ten years, from which methane can be extracted by means of fermentation: First trials have already taken place in Thuringia. But in fact the biomass recovered from the cup plant is too valuable for this. The objective of the SPREAD project is to develop new varieties of cup plant and application scenarios.

Application scenarios in the planning

The square-shaped stem is interesting as a building material: If you cut it open, you find spongy, non-lignified tissue. When dried, the stem provides a very light, airy and fine-pored material, which as a result displays a high thermal insulation value and is also interesting as a fibrous additive for use in construction materials. The Plains Indians use the cup plant as a medicinal plant, amongst others to dress and heal wounds. A particular ingredient is held partly responsible for its medical effect: Flavonoids. Amongst these flavonoids are a large part of the flower pigments of plants. They are attributed, amongst others, with antioxidant characteristics. In addition, anti-allergenic, anti-inflammatory, anti-bacterial and cancer-inhibiting effects have been proven.

The cup plant is a very undemanding plant. It is at home in temperate climes,

capable of growing in poor soil too and comparatively resistant to aridity due to its long roots which reach several metres deep into the ground. It can also survive harsh winters with temperatures as low as -30 °C. As it is a perennial plant it requires – in comparison to annual plants – only small quantities of fertilizer and is better able to bind nutrients in the soil. For this reason, the cup plant can also be used to regenerate leached soil.

Despite its large range of positive characteristics, no great notice was paid by researchers to the cup plant, not even in the USA, its native country. Now the plant biologists in Düsseldorf together with their colleagues in Aachen and Bonn want to change this. Whilst the researchers in Bonn will take care above all of field trials as well as material use, the biotechnologists in Aachen will concentrate on a biorefinery in a cascade process: First of all the flavonoids will be extracted and then the remaining biomass will be fed into the biorefinery and then, for example, fermented to methane.

At Heinrich Heine University Düsseldorf, the focus lies on the plant itself and its different ecotypes. "In fact, in Europe we only know just a few cultivated sources of the cup plant", says Dr. Petsova, explaining the very limited possibilities for hybridization as a result. Christian Wever wants to increase diversity and will therefore set off in the autumn of 2016 for the prairies of North America. Following in the footsteps of the indigenous Indians, he wants to find new wild varieties of the cup plant in its native country and collect its seeds: "Back in Düsseldorf we will sow these seeds and perform microbiological trials to examine the different types with regard to their characteristics." Apart from growth behaviour and gene expression analysis, the researchers will investigate, amongst others, the distribution of the flavonoids in various parts of the plant as well as gene activity in the flavonoid metabolism. And the aim is to find ecotypes which already grow faster in the first year and thus require less care and make cultivation cheaper. This collection of various wild varieties will form the basis for new cultivation approaches on the basis of different plant characteristics.

On the trail of the Plains Indians

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BioSC – Bioeconomy Science Center


Photo: private

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In 2010, the universities of Aachen, Bonn and Düsseldorf together with Jülich Research Centre (Forschungszentrum Jülich) founded the Bioeconomy Science Center (BioSC), a centre of excellence for sustainable bioeconomy. In the framework of the BioSC research alliance, numerous interdisciplinary partnerships between scientists at the four facilities have already evolved which were devoted to bioeconomic topics. In order to implement innovative and interdisciplinary research approaches generated in the BioSC by these partnerships, project funding can be obtained from North Rhine-Westphalia's BioSC Strategy Project. Since 2013, the Ministry of Innovation, Science and Research of North Rhine-Westphalia is supporting the BioSC with € 5.8 million each year for a period of at least ten years. In addition, the aim is to attract bioeconomic research projects from other third-party sources on the basis of first results from this collaboration.

Over 30 projects at the BioSC are currently being funded. BioSC projects are conditional – apart from scientific quality and relevance – on cooperation between at least two of the facilities and a focus on at least two of the BioSC's four research priorities:

- Sustainable plant bioproduction and resource stewardship
- Microbial and molecular transformation of resources into materials
- Process engineering technologies for renewable resources
- Economy and social implications of bioeconomy

The 14 HHU chairs currently involved in the BioSC are very successful in the acquisition of projects. HHU is involved in nine of the eleven BioSC projects approved so far in 2015.

Central coordination of the BioSC is the responsibility of the BioSC Office which is located at Jülich Research Centre. Additionally, offices were installed in 2014 at the three partner universities as a contact point for researchers. The Scientific and Administrative Coordinator at the BioSC Office in Düsseldorf is Dr. Sira Groscurth.

The Prince of the Yiddish Ballad

Efrat Gal-Ed has written a very unusual biography

BY VICTORIA MEINSCHÄFER

Not an artist's trick but instead a scientific method: The book "Niemandssprache. Itzik Manger – ein europäischer Dichter" is written "with two voices", as Dr. Efrat Gal-Ed, Yiddish Studies expert, calls it. The book, which has about 800 pages and will appear in January, is a revised and extended version of her post-doctoral thesis – and in fact two books at the same time.

Itzik Manger, born on the 30th of May 1901, is one of those Yiddish poets who today is almost completely forgotten. During his lifetime, he was regarded as the "prince of the Yiddish ballad" and was acclaimed as a hero of Yiddish literature when he visited Israel in 1958. But not just Manger himself is nowadays known only to experts in the field, the world in which his poetry and prose came into being is also lost: Born in Chernivtsi, the capital of Bukovina, he lived there and in Warsaw alternately up until his emigration.

Manger decided early on to write in Yiddish, in a language which around 1935 was spoken by about 11 million people. "It is his home, the intimate, undeniable sound, familiar idiom and dependable picture, the mother tongue which means culture and way of life, a world which he experienced as a child in Chernivtsi and where he was part of a German, Romanian and Ukrainian environment," writes Gal-Ed in the biography.

Republic of words – "Yiddish Land"

She explains: "From the second half of the 19th century onwards, Yiddish was a language of culture, which was used not only in everyday life but also for political agitation, scientific essays, educational activities, theatre and poetry." And thus she speaks of 'Yiddish Land', a republic of words which united speakers of Yiddish worldwide, a cosmopolitan concept, the modernity of which appears breathtaking in view of today's modernization."

Today, about 1.5 million people worldwide still speak Yiddish. New York, Jerusalem and Antwerp are the cities in which the most speakers of Yiddish are found. Yet unlike the Yiddish Land in Manger's days, which was a secular cultural area, Yiddish is today spoken almost exclusively by orthodox Jews.

It was also the Yiddish secular culture today unknown to most readers which inspired Gal-Ed to write her "book with two voices". It became clear to the authoress during the course of her research work that she could not just write a biographical story, simply because a lot of background information about cultural history was needed which could not have been accommodated in footnotes. But she did not want all these explanations to interrupt the story of

"JUST IMAGINE. HE IS SITTING IN WARSAW AND WRITING ARTICLES IN YIDDISH AGAINST THE NAZIS."

Dr. Efrat Gal-Ed, author of "Niemandssprache."

Photos: Efrat Gal-Ed

Two undated portraits of Itzik Manger, painted by Arthur Kolnik who was a friend of Manger. Kolnik was born in 1890 in Stanisławów, Galicia. From 1919 to 1931 he lived in Chernivitsi. He was an important protagonist of the Yiddish cultural movement. Kolnik died in Paris in 1972.

Manger's life and as a result "two books were basically necessary: One about Manger and another about Yiddish cultural history," she explains. A work has now evolved of which the structure is reminiscent of the Talmud. Typeset in two columns with different typefaces, the inner column tells the story of Manger's life in the present tense, often illustrated with the pictures described in great detail at the beginning of each section. The respective outer column contains explanations, yet is not just a commentary but instead an independent second voice which narrates the cultural history. Since both columns have footnotes and Yiddish quotations are given first in Hebrew script then in the German translation, the overall appearance of the text is highly complex. But there is also the opportunity to concentrate on one column or the other. The reader can decide when he reads what, whether he concentrates on the biography or wants first to read about cultural history.

Reminiscent of the Talmud

From 1928 onwards, Manger lived in Warsaw and it was, according to Gal-Ed, the happiest time of his life. Manger, who until then had led a restless life on the road, felt at home for the first time in Warsaw. "In 1931, a fifth of all Jewry lived in Poland and formed the second largest Jewish community worldwide. Most lived in Warsaw, the city was regarded as a Jewish metropolis, as the Yiddish cultural metropolis par excellence", writes Gal-Ed. Manger, who was no longer solely a poet but also working in journalism, moved into his own apartment for the first time in 1932 – together with Rochl Auerbach, his partner. As a journalist, he begins writing articles at the end of April 1933 for daily newspapers including "Der Moment". The news from Germany appals him, he takes a stand against Goebbels and his culture policy, composes essays on literature and the theatre. "Just imagine. He is sitting in Warsaw and writing articles in Yiddish against the Nazis", says Gal-Ed. "There were, at that time, daily Yiddish newspapers which were circulated throughout 'Yiddish Land' and in which important articles appeared which had been translated into Yiddish from other languages. For example, if Heinrich Mann wrote an important article then this could be read in Yiddish just a few days later throughout half of Europe."

Up until his final deportation in 1938, Warsaw remained Manger's home, as he himself wrote in retrospect: "The vibrant Jewish life in Warsaw thrilled and inspired me. Warsaw became my home. I became fond of Poland's cities and towns as something special and familiar. I had the feeling that I had been born in Romania by mistake. It was with great annoyance and even greater homesickness that I left Warsaw in 1938."

Restless years begin. After a period in Paris, Manger tries to go to Palestine, but is cheated during the crossing, lands in Algiers and after several detours finally arrives in London. It is here, in

"THE ARTIST MUST THINK IN HUMAN CATEGORIES, HE MUST NOT JUST SYMPATHIZE WITH THE VICTIM, BUT UNDERSTAND THE MURDERER IN HUMAN CATEGORIES, HIS MOTIVES, HIS PATHOLOGY, HIS ENTIRE NERVOUS SYSTEM."

Itzik Manger, author (1901 – 1969)

Whitechapel, that Manger again finds independent Jewish culture. It seems as if "all the cantors in the world have descended on London. They come from Poland, Lithuania, Romania, the Land of Israel, from Holland". Yet no Jewish culture comes into being here like he had known in Warsaw. The Yiddish language is lost. People speak a language which the Jews think is English and the English think is Yiddish. With the help of a friend, he manages to survive in London until the end of the war, but never feels at home there. "I was born in Chernivtsi, shaped by Warsaw and in London I sank", summarized Manger later. Nevertheless, Manger stayed there until 1951 before moving to New York via Montreal. It is from this point onwards that Gal-Ed slowly silences the second voice in her book, "as there was less to explain". Although the period described is not contemporary, it is nevertheless more accessible to us.

During a trip to Israel in 1958, Manger meets his sister Schejndl again for the first time. She is the only surviving member of the family. Together they travel through the country and Manger is given an enthusiastic welcome. His lectures attract large crowds. But he causes a sensation when he describes his poetology after the Shoah in an Israeli newspaper: "Now we hate the Germans, Lithuanians, Polish and all those involved in the mass murder too much to be capable of artistic objectivity. [...] The artist must think in human categories, he must not just sympathize with the victim, but understand the murderer in human categories, his motives, his pathology, his entire nervous system."

Ceremonious funeral in Israel

Highly revered and perniciously insulted, Manger returns to New York, but travels to Israel on several further occasions and always remains restless. He dies in Israel on the 20th of February 1969. His burial is like a state funeral.

Dr. Efrat Gal-Ed has been interested in Itzik Manger for many years and as a feature writer wrote about him in the 1990s before she completed her doctorate in 2009 with a thesis on his early work. At 7:30 p.m. on the 21st of January 2016, she will present her book at a book launch at University House together with actor, author and publisher Hanns Zischler.

- **Efrat Gal-Ed: "Niemandssprache. Itzik Manger – ein europäischer Dichter"**, Jüdischer Verlag im Suhrkamp Verlag, Berlin, will appear on the 11th of January 2016

What we need is eleven male models ...

Study: The influence of attractiveness on footballers' market value

BY VICTORIA MEINSCHÄFER

Photo: istockphoto.com – efks

That attractive people have it easier in life is a well-known fact. They earn more money, have better chances when looking for love and get off more lightly if they commit a crime. But does attractiveness also pay off for footballers? Are the more attractive ones picked for the team more often? Do coaches have greater confidence in their performance? Are they more popular with the fans?

Together with colleagues from the universities of Cologne and Hanover, Professor Ulrich Rosar, sociologist at Heinrich Heine University, examined the question of "Does attractiveness raise a player's market value?" and arrived at surprising results.

Attractiveness has concrete advantages

Even in a type of sport where the athlete's performance is measured and recorded with the utmost precision, his facial and bodily attractiveness have an enormous impact on his market value: The more attractive a player is, the better his earning potential – even if someone else scores more goals. Professor Rosar summarizes the results of his study as follows: "With an increase in bodily attractiveness of one point on the scale, market value rises by on average € 220.000. And for each point on the scale by which facial attractiveness increases, market value rises by on average € 150.000."

In general, the following applies: The more attractive a person is, the more attention he or she attracts. For footballers this has – like for all other professions – concrete advantages: "An attractive face has a positive effect for a footballer for a start: Because they agree on attractiveness, fans, reporters, coaches and managers arrive at very similar judgements regarding players' physical appeal. Because such players attract their attention, they notice attractive players sooner, more and to a greater extent, which is likely to mean that these players and their performance are remembered better", explains Professor Ulrich Rosar, head of the study group. "In addition, an attractive player is assumed to be capable of a greater performance and to fit better in the team".

However, the sociologists wanted to find out more: For their survey they first of all determined the attractiveness of 438 professional footballers who played in the 2007/08 season. In general, a differentiation was made between facial attractiveness and bodily attractiveness: Bodily attractiveness was measured on the basis of Body Mass Index (whereby in the case of footballers a higher figure – other than with other people – stands for muscle mass and therefore increases attractiveness). To determine facial attractiveness, photographs of the players were evaluated by a small group of what are known as "raters", since in this way the attractiveness of an individual can be determined relatively unequivo-

Photo: Archive Stabsstelle Kommunikation

"AN ATTRACTIVE FACE HAS A POSITIVE EFFECT FOR A FOOTBALLER FOR A START."

Professor Ulrich Rosar, sociologist at Heinrich Heine University

cally and reliably. To measure facial attractiveness, portrait photographs of all 438 footballers who had played that season were shown to a group of 365 men of between 17 and 64 years of age. They rated the players on a seven-step scale from 0 (unattractive) to 6 (attractive). The result was attractiveness scores between 0.53 and 3.95. If facial and bodily attractiveness are now brought together with market value, the outcome is "that with each increase in Body Mass Index by one point, market value rises by on average € 220.000. And for each point by which facial attractiveness increases, market value rises by an average of € 150.000", explains Professor Rosar.

Note the "Ribery Effect"!

What is conspicuous here is the fact that the influence of facial attractiveness is relatively low – yet Rosar and his colleagues quickly found a possible explanation for this: "This marginal influence has a name: Franck Ribery". Because of the scars he sustained as a child following a car accident, the Frenchman is – by conventional standards – unattractive. Yet he always ranks right at the top in terms of market value. However, if this peculiarity is deliberately included in the calculation, i.e. if the "Ribery effect" is removed from the statistical models, it can be proven for all other players that their market value increases by an average of € 260.000 with each point on the scale that their facial attractiveness score rises.

The study was thus able to show something quite remarkable: In fact it should be assumed that in the world of professional sport a player's market value ought to be measured solely on the basis of his performance. But precisely that is not the case: Physical attractiveness has a substantial influence on players' market value in professional sport too.

Physical Attractiveness and monetary success in German Bundesliga. Prof. Dr. Ulrich Rosar, Dr. Jörg Hagenah, Prof. Dr. Markus Klein, 2014, Soccer & Society

Online Version: www.tandfonline.com/doi/abs/10.1080/14660970.2014.980742

Photos: FC Bayern München Medien / Press office Fortuna Düsseldorf 1895 e.V.

▶ Two of the most attractive players: Mario Götze of FC Bayern München (left) and Adam Bodzek of Fortuna Düsseldorf

HHU and UKD lay foundation stone for new research building

Over € 30 million for beacon project in Düsseldorf

On the 6th of November, Heinrich Heine University Düsseldorf (HHU) and Düsseldorf University Hospital (UKD) laid the foundation stone for a new research building. The new Centre for Synthetic Life Sciences Düsseldorf (Zentrum für Synthetische Lebenswissenschaften Düsseldorf (ZSL)) on the campus, which will be home to the researchers of the CEPLAS Cluster of Excellence, will cost over € 30 million. It is being financed with funds from the national government, the regional government in North Rhine-Westphalia and HHU.

BY JULIUS KOHL AND ROLF WILLHARDT

The new laboratory building for about 150 staff is being built in the middle of the University in the grounds of the University Hospital. All the researchers linked to the CEPLAS Cluster of Excellence and the Biological-Medical Research Centre (Biologisch-Medizinisches Forschungszentrum (BMFZ)), who so far have worked at different locations around the campus, will come together in the new centre, along with a number of new professors and junior research groups: Four experimental and three theory groups will work here.

"The ZSL is a beacon project of the University and Düsseldorf University Hospital which is visible nationwide: It is ultra-modern and brings together in a unique way innovative research strategies for sustainable and resource-efficient plant production and medical research. Our cutting-edge university research will find a suitable home in this exceptional building", said Professor Anja Steinbeck, HHU President, at the laying of the foundation stone.

There have been a large number of memorable events in the University's jubilee year, but sooner or later they fade from our memory. That's not the case with this new building. In her welcoming address, the President expressly thanked benefactors Professor Detlev Riesner (member of the University Council) and his wife Dr. Hannelore Riesner (HHU Scholarship Ambassador), who having closed their start-up foundation made the funds available to HHU for the support of science and research. "For many years you have belonged to the group of our University's most reliable friends and are an indispensable source of support and help for me and the vice-presidents."

Life sciences unite natural sciences and medicine

"Life sciences unite disciplines from natural sciences and medicine. Strengthening this link above all in the area of basic research was the main idea behind the Biological-Medical Research Centre run jointly by the Faculty of Medicine and the Faculty of Mathematics and Natural Sciences. The building offers perfect conditions for research in this field which is still at an early stage", says Professor Klaus Höffken, Medical Director and Chairman of the Executive Board of the University Hospital. The ZSL currently being built and O.A.S.E, the medical library, are visible signs of the partnership between

Photo: Wilfried Meyer

Dr. Thomas Grünewald, State Secretary in the Ministry of Science, Professor Klaus Höffken, Medical Director and Chairman of the Executive Board of the University Hospital, Professor Anja Steinbeck, HHU President, Professor Ulf Pallme König, former HHU chancellor, Professor Detlev Riesner, university councillor, and Dr. Hannelore Riesner together laid the foundation stone for the new research building

"THE BUILDING OFFERS PERFECT CONDITIONS FOR RESEARCH IN THIS FIELD WHICH IS STILL AT AN EARLY STAGE."

Professor Klaus Höffken, Medical Director of the University Hospital

the University Hospital and the University. State Secretary Dr. Thomas Grünewald (Ministry of Innovation, Science and Research) passed on the regional government's good wishes. "The University has a very special spirit", he said. In his view, the new ZSL fits in perfectly with the guiding principles of the region's research policy, "a lot has been done here to set the right course." And: "The idea of joint activities – that is, cooperation between the universities of Düsseldorf and Cologne with a Max Planck institute and Jülich Research Centre – has won through." In this way, research potential is evolving which is of outstanding importance at both national and international level. The concept is also capable of self-innovation.

Former chancellor Professor Ulf Pallme König reminded the guests of the ZSL's history and how two presidents' offices and executive boards of the University Hospital have actively pushed the very complex planning, development and application phases.

Emeritus Professor Detlev Riesner confirmed that the University Council would continue to support the ZSL project, since "the origins of this building lie in the excellent scientific expertise of CEPLAS and the BMFZ." Professor Riesner was one of the founders of the BMFZ over twenty years ago and contributed, as a witness of that time, a little anecdote: When the BMFZ was presented to the Senate, the then president, Professor Kaiser, looked demonstratively in his direction and said "And later you will presumably want your own building for it." And Riesner remarked that precisely that has now come about.

"With the building of the new research facility, we are taking another great step in the further expansion of our re-

Rendering: Schneider + Sendelbach Architektengesellschaft

Photos: Wilfried Meyer

1: This is how it will look when it is finished in the autumn of 2017: The ZSL building, the shape of which is reminiscent of an X chromosome as known from genetics.

2: Professor Anja Steinbeck, HHU President

3: Professor Detlev Riesner, member of the University Council

4: Together they close the time capsule.

5: Professor Ulf Pallme König, former HHU chancellor

6: Professor Klaus Höffken, Medical Director

7: Dr. Thomas Grünewald, State Secretary

8: The contents of the time capsule

search priority of 'Molecular and Synthetic Life Sciences'", said Professor Klaus Pfeffer, Vice-President for Strategic Management and Equal Opportunities. "Since 2009, the University has already invested several million euro from its own 'Fit for Excellence' programme in cutting-edge life science research and networked a variety of research fields."

About € 32 million are planned for building, furnishing and equipping the centre, including large-scale apparatus. As is usually the case with such research buildings, half the funding comes from the national government and half from the regional government and HHU.

Centre for Synthetic Life Sciences Düsseldorf (ZSL)

Through its shape, which is reminiscent of the X chromosome known from genetics, the new research building creates a direct link to the research work conducted there: The entire synthetic-biological test track is mapped out in close physical proximity – from test planning in cooperation with the theory groups to experimental application to analytical platforms and data analysis as well as model construction.

This is important in order to be able to implement the research programme of the CEPLAS Cluster of Excellence (see below). Already existing large-scale apparatus and new equipment for which funding applications have been submitted will be brought together in four jointly run technology platforms: The "BMFZ Genomics and Transcriptomics Laboratory" and the "BMFZ Proteomics Laboratory", a central scientific facility of Heinrich Heine University which links medical research with fundamental natural science disciplines. The "Center for Advanced Imaging" and the "Metabolomics Laboratory" will also be housed in the ZSL. In addition, a "phytotron" for the cultivation of experimental plants under controlled environmental conditions with state-of-the-art LED technology is planned. The research programme is in line with the national government's "High-Tech Strategy" in the area of "Climate and Energy", specifically with regard to the topic of "Plants" (with a focus on "Sustainable food production, climate protection and resource efficiency").

CEPLAS – Cluster of Excellence on Plant Sciences – from complex characteristics to synthetic modules: The project

bundles the expertise of the universities of Düsseldorf and Cologne, the Max Planck Institute for Plant Breeding Research as well as Jülich Research Centre. The declared objective of CEPLAS: To develop, in view of dwindling resources and a growing demand for food, more effective and sustainable plant cultivation methods.

Cluster of Excellence on Plant Sciences (CEPLAS)

CEPLAS also offers novel training programmes for students, doctoral researchers and in particular post-doctoral fellows. In this way, the next generation of researchers is educated and the foundation laid for predictive and synthetic biology: The fields of biology, informatics and microbiology are moving closer together. Since 2012, the CEPLAS Cluster of Excellence has been awarded an average of € 8 million per year in funding for five years from the nationwide "Excellence Initiative" of the national and regional governments.

The contents of the time capsule

HHU President **Professor Anja Steinbeck** placed the following items in the time capsule, which was then walled into the foundation stone: The resolutions of the President's Office regarding the ZSL, the initial "Fit for Excellence" programme from 2010, the original resolution for the "Cluster and Graduate School Building" (CGG) as well as the book on the 50-year history of the University published in 2015.

Professor Klaus Höffken, Medical Director of the University Hospital, added the draft plan of the CGG, that day's issue of the "Rheinische Post" newspaper as well as HHU's press release about the laying of the foundation stone. State Secretary **Dr. Thomas Grünewald** threw in a coin: A symbolic euro.

Former chancellor **Professor Ulf Pallme König** placed in the capsule the application for an expertise on a research building for synthetic life sciences and **Professor Detlev Riesner**, member of the University Council, added the application for the CEPLAS Cluster of Excellence, the architect's draft plan for the entrance hall of the ZSL and that day's issue of the "Frankfurter Allgemeine Zeitung".

Decision-making support for borderline medical situations

Profile: The Ethics Committee of Düsseldorf University Hospital


Photo: Ulf Oberländer

Dr. Thorsten Trapp (49), Deputy Chairman of the Ethics Committee, joined Düsseldorf University Hospital in 2003. He studied Biochemistry and Protestant Theology at the universities of Münster, Bochum and Munich and also completed advanced studies in Medical Ethics at the distance teaching university of Hagen. He completed his doctorate in Biochemistry at the Max Planck Institute of Psychiatry in Munich on the topic of molecular mechanisms of stress, following which he was Research Group Leader at the Max Planck Institute of Neurological Research in Cologne. Dr. Trapp is Research Group Leader and lecturer at the Institute of Transplantation Diagnostics and Cell Therapeutics of Düsseldorf University Hospital.

The will of the patient is the underlying principle of medical care. But what if the patient is unable to express himself? This is one of the questions occupying the Ethics Committee of Düsseldorf University Hospital.

"The purpose of the Ethics Committee is to make a contribution to helping the people entrusted to us at Düsseldorf University Hospital under special consideration of their right to self-determination and their dignity. The way we treat people affected by sickness and suffering, who are cared for at our hospital from the start of life until death, should be characterized by respect, consideration, trust and empathy."

These are the first words of the preamble to the charter of the Clinical Ethics Committee (Klinische Ethik-Komitee (KEK)) of Düsseldorf University Hospital. Dr. Thorsten Trapp is Deputy Chairman of the committee, which was established in 2013, currently has 18 members and is composed not only of doctors and nursing staff but also representatives of the hospital's pastoral care and welfare services as well as lawyers specialized in medical law.

Everyday moral issues

Dr. Trapp: "The Ethics Committee examines all moral questions which occur in everyday hospital life. Then there is a second committee in the shape of the faculty's Ethics Commission, which compiles reports on clinical studies with humans, for example whether research projects or test series are unobjectionable."

The Ethics Committee meets once a month. Its tasks are many and varied. Press relations, for example. An information session with a panel discussion on the topic of "The Will of the Patient" took place in the summer at University House – and was packed to the door. Dr. Trapp: "It's clear that ethical issues related to living and dying meet with considerable interest."

The Ethics Committee also offers further training measures on medical ethics issues at the University Hospital, for example on active and passive euthanasia. One set of issues is the drafting of guidelines and recommendations for standard situations. What do ward staff do if a Jehovah's Witness urgently needs a blood transfusion but his religion forbids it? What are the characteristics of a good living will? And how should

What makes a good living will?

doctors and nursing staff react, for example, when a large Roma family lays siege to an intensive care ward where a relative is being treated? Ultimately it is a matter of two committee members who provide advice in specific cases as facilitators and then document the outcome.

"Ethics committees are not legally mandatory", says Dr. Trapp. "But there have been such committees for over ten years in hospitals affiliated to the church." Medical ethics issues have increasingly been a topic of public discussion in the USA since the 1960s. It was the time when the first dialysis machines came onto the market. At the beginning they were still very expensive and very rare. The question was 'Who decides whether a kidney patient is attached to the machine or not?' What were known as "Life or Death Committees" soon formed. Dr. Trapp makes it clear that the Ethics Committee sees itself as a forum and in the role of facilitator: "At the end of the day, it is the medical team, that is, the doctors, nursing staff and perhaps welfare services, who makes

the decision in each specific case." The Ethics Committee has its own coordination unit, of which one of the aims is to maintain close links with teaching.

"Our medical students are very interested in the topic of 'clinical ethics'. Palliative medicine is a compulsory subject in the new syllabus. In the framework of 'Bedside Teaching', they also come into contact with critically or incurably ill people. Questions of medical ethics arise automatically. There are also courses in 'Borderline Situations in Medical Care'. One of the goals of the new syllabus is to improve students' 'socio-ethical competence'. "Fact is: The focus is always on the will of the patient", says Dr. Trapp. "Twenty years ago, students' views on this were still very different." R.W.

"ONE OF THE GOALS OF THE NEW SYLLABUS IS TO IMPROVE STUDENTS' 'SOCIO-ETHICAL COMPETENCE'."

Dr. Thorsten Trapp, Deputy Chairman of the Ethics Committee

DICE: Economist Jens Wrona reaps prizes for research on domestic trade flows in Japan

That political borders can be a barrier to business is well known in international trade research. What is less well documented is the fact that trade barriers can also exist within a country. Jens Wrona, economist in Düsseldorf, has proven with his research work that there is far less trade between east and west Japan than within the two regions, although there are neither political nor obvious historical reasons for it.

This characteristic east-west "border" can be attributed far more to the bipolar structure of the Japanese economy, which is organized in two large clusters: Tokyo in the east and Osaka in the west. The economic exchange within these two areas is particularly lively; conversely, trade flows between the two clusters are far smaller than would normally be expected.

Dr. Jens Wrona (30), economist and DICE Assistant Professor, was awarded not just one but two important prizes for his research. First of all he won the Reinhard Selten Prize for the best research paper by an academic under 32 years of age in the framework of the annual convention of the Social Policy Association (Verein für Sozialpolitik), the society of all German-speaking economists. The prize, which is named after the only German winner so far of the Nobel Prize in Economic Sciences, is regarded as the highest distinction for young economists in German-speaking countries. In addition, in September Jens Wrona was awarded the "Young Author Best Paper Award" at the annual conference of the European Trade Study Group (ETSG) in Paris. The ETSG is the largest group of European trade economists.

Professor Justus Haucap, Director of DICE, is extremely pleased: "We are very proud to have with Jens Wrona such an excellent and creative young economist amongst us. Furthermore, his research on the Japanese economy fits perfectly here in Düsseldorf. We will hear a lot more from Jens Wrona in the future!"

Top team in economics

After so much success recently, it is not surprising that the Düsseldorf economists numbered for the first time amongst the Top 25 faculties of economics in German-speaking countries in a ranking published by the Handelsblatt newspaper in mid-September. And this although the faculty is still relatively small and manageable, with far less professors than elsewhere. "It's great fun working in such an ambitious team", says Jens Wrona. C. G.

Photo: Uli Oberländer

Prize winner and Assistant Professor **Dr. Jens Wrona** (30) was awarded the Reinhard Selten Prize as well as the "Young Author Best Paper Award" of the European Trade Study Group (ETSG).

"Once a 'Humboldtian', forever a 'Humboldtian'"

Alexander von Humboldt Network Meeting at Heinrich Heine University

Source: de.wikipedia.org/wiki/Alexander_von_Humboldt

BY UTA BRUNNER

Around 200 young researchers from over 40 countries will be guests at Heinrich Heine University Düsseldorf (HHU) for the Network Meeting of the Alexander von Humboldt Foundation from the 29th of February to the 2nd of March 2016. The scientists are currently fellows of the foundation in Germany and working at German research institutions.

Excellent researchers

The purpose of the event is to allow the new "Humboldtians" to get to know both each other as well as Düsseldorf – as a good example of Germany as a centre of research. Foundation staff will give them advice on living and working in Germany.

Professor Andrea von Hülsen-Esch, Vice-President for International Relations at HHU, is very pleased that the University will host the Networking Meeting in 2016: "Having here at HHU such an excellent group of researchers as our guests is a great honour for us. We will use this wonderful opportunity for a mutual exchange of ideas and experience in order to be able in future to welcome even more AvH-funded scholars from throughout the world to HHU as a renowned location for research".

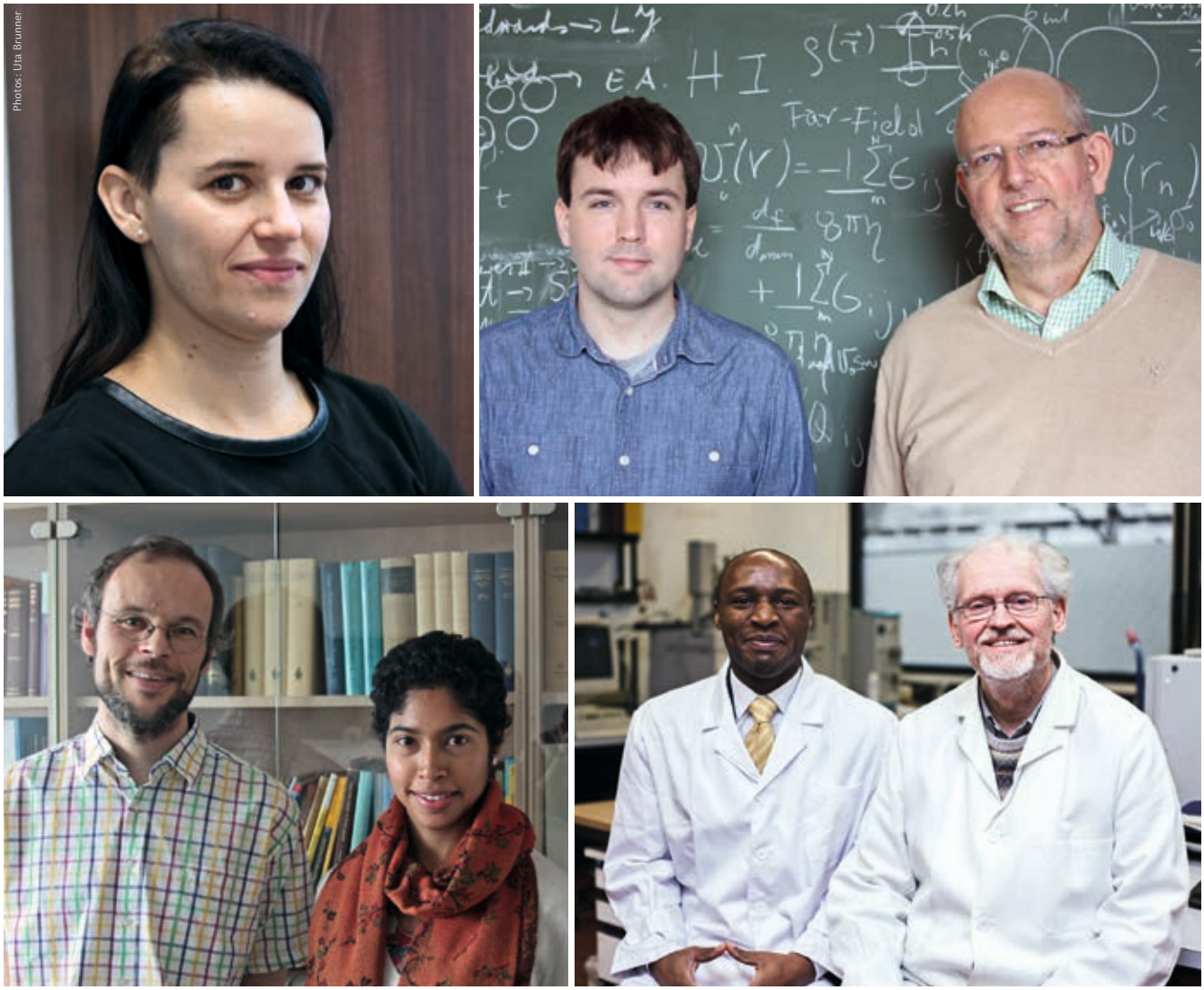
Ten AvH visiting scholars from as many countries are currently undertaking research work at HHU. Four host chairs and their guest fellows told the Heine Research Academies about their experiences in the AvH network.

HeRA: How do you benefit from AvH funding as a scholar?

Dr. Ramsay Kamdem (Cameroon, Georg Foster scholar at the Chair of Pharmaceutical Biology and Biotechnology at HHU): "I'm very grateful that Alexander von Humboldt Foundation gave me the opportunity to come here and work. There are many benefits e.g. using new material and analytical techniques that I was not able to use in my home country. I also received a lot of help by AvH to organize my living in Germany, e.g. learn the language."

Dr. Petra Zadnikova (Czech Republic, Humboldt fellow at the Chair of Developmental Genetics at HHU): "What I like very much about Humboldt foundation is that once you are a "Humboldtian" you are forever a "Humboldtian". AvH supports you also once you are back in your country. Once you start your own research group you can also become a host for other Humboldt fellows."

Dr. Frank Smallenburg (The Netherlands, Humboldt fellow at the Chair of Theoretical Physics II – Soft Matter at HHU): "There is a great flexibility of the Humboldt fellowship. You just get the money, it is a quick reviewing process and soon after you can start working. Also in terms of research we are free to do whatever we like. In our field we have to adjust projects rather



Dr. Petra Zadnikova, Dr. Frank Smallenburg and Professor Hartmut Löwen; Professor Benjamin Klopsch and Dr. Anita Thillaisundaram, Dr. Ramsay Kamdem and Professor Peter Proksch (from left to right)

quickly and that is possible with the AvH scholarship."

Dr. Anitha Thillaisundaram (Malaysia, Humboldt fellow at the Research Group in Algebra and Number Theory at HHU): "You have research money at your disposal. So one can travel and also invite speakers. That is really the best situation one can hope for. In addition, the fellowship opens up a lot of doors."

HeRA: How do you benefit from hosting an AvH scholar?

Prof. Peter Proksch (Humboldt host for the third time, Chair of Pharmaceutical Biology and Biotechnology at HHU): "First of all we get good people through the very tough selection. For the person who gets the funding, it is a really distinguishing award. Being a Humboldt host is also prestigious for myself."

Genuine welcome culture

Prof. Rüdiger Simon (Humboldt host for the second time, Chair of Developmental Genetics at HHU): "It is a recognition and honour that Humboldt fellows come here and want to work here. AvH offers the fellows a lot of possibilities to get to know Germany. It is a welcoming culture. They very much facilitate the integration of the fellows."

Prof. Hartmut Löwen (Humboldt host for the fourth time, Chair of Theoretical Physics II – Soft Matter at HHU): "Humboldt fellows are very excellent scientists. In combination with the flexibility of the fellowship you have the best options to work and publish together."

Prof. Benjamin Klopsch (Humboldt host for the first time, Research Group in Algebra and Number Theory at HHU): "This fellowship is best suited for our field of research as we are interested in people. We hardly need money for instruments or lab equipment. In addition, the application process is streamlined and very efficient."

Read the full interviews at
www.hera.hhu.de/en/AvH-Interviews

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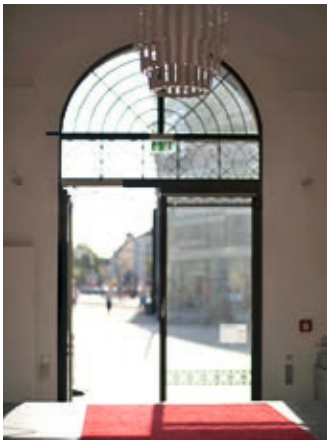

Photos: Ivo Mayr

University House

University House was donated to Heinrich Heine University by the van Meeteren Foundation. Its purpose is to provide information and advice as well as foster an exchange between science, culture and education.

In the framework of a large spectrum of events, the University offers local citizens the possibility to take part in modern research and its results and shares university life with the city.

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