

# Newsletter of the LRA Healthy Ageing

02/2019 | 11/03/2019

This newsletter contains news from the LRA Healthy Ageing as well as the latest news from ageing research, information about projects, networks and cooperations as well as events.



Best regards,  
Astrid van der Wall

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## News from the LRA Healthy Ageing



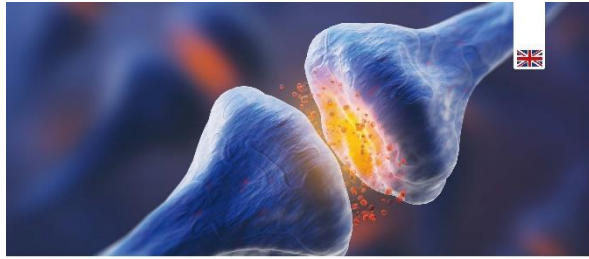
Source: LRA Healthy Ageing / pigurdesign Potsdam.

### Eighth edition of „Healthy Ageing – Forschung aus erster Hand“ published

The eighth edition of „Healthy Ageing – Forschung aus erster Hand“ has been published. The research magazine of the Leibniz Research Alliance (LRA) Healthy Ageing focusses yet again on the latest research results of the 21 member institutes. In the new edition, we not only report on current research results from the institutes, we also provide

information about the working groups within the alliance, introduce scientists and suggest events. The journal addresses scientists who look into ageing research outside their specialised fields as well as readers who take an interest in the topics ageing and demographic change. The articles present a wide interdisciplinary spectrum of the

LRA Healthy Ageing – from biomedical ageing research to neurology, educational research, spatial planning and economics. The journal has been published in English.



Forschung aus erster Hand | **08**  
**Healthy Ageing**

<b>Newly developed Eczema during ageing</b>	Little is known about eczema in the elderly. New insights on this topic were recently published in the <i>Journal of Allergy and Clinical Immunology</i> . They are based on a two-step investigation of researchers from the IUF in Düsseldorf.
<b>Bioactive compound improves memory</b>	The progressive loss of memory severely impairs the quality of life of those affected. So far, no drugs are known to prevent age-related cognitive decline. A new study proves the memory-enhancing effect of a plant ester as an active ingredient from the medicinal plant <i>Rhodiola rosea</i> .
<b>Better understanding cardiovascular diseases</b>	Cardiovascular diseases are the most common cause of death in Germany. They can markedly lower life expectancy and quality of life. Researchers successfully identified a new marker which could be used in future to determine the risk of heart attack, stroke and other adverse cardiovascular events earlier and with more precision.



Topics in the eighth issue:

- 1. Eczemas in old age**  
 Little is known about eczemas in old age. Scientists at the Leibniz Research Institute for Environmental Medicine (IUF) in Düsseldorf have now released publications on this topic.
- 2. Increased blood flow supports liver regeneration**  
 The liver is one of the most important human organs. It is of fundamental importance for the metabolic process and the immune system. In

addition, the liver is able to fully recover within weeks even if more than half of the organ has been removed. Researchers have now found that this extraordinary regenerative capacity of the liver is due to increased blood flow.

- 3. Inflammatory processes compromise nerve regeneration in old age**  
 The regenerative capacity of the nervous system decreases with old age. As a result, there is a growing risk of serious neural disease. Scientists in Jena and Bonn have now established a link between chronic inflammation and reduced nerve regeneration, and identified a promising bio-marker for therapeutic approaches.
- 4. Bioactive compound of the Rhodiola plant improves memory**  
 In an ageing society, an increasing number of people suffers from memory loss. The continuous loss of memory capacity has a considerable impact on the sufferers' quality of life. Scientists of the Leibniz Association have now, for the first time, found an active substance in the Rhodiola plant.
- 5. How breast cancer cells feed on fat and protect themselves from cell death**  
 Breast cancer is the most common cancer type in women in Germany. Why cancer cells are so capable of surviving is one of the major questions in research. Dr Cristina Cadenas, researcher at Leibniz Research Centre for Working Environment and Human Factors in Dortmund (IfADo), and her team have discovered a mechanism of how breast cancer cells feed themselves on nutrients, thus ensuring a survival advantage at the same time.

The latest edition can be found [here](#)

## Workshop Healthy Ageing 2020 at the IfADo in Dortmund

The next workshop of the Leibniz Research Alliance Healthy Ageing will take place on 17-18 March 2020 at the Leibniz Research Centre for Working Environment and Human Factors (IfADo) in

Dortmund. Again, all focus groups of the LRA Healthy Ageing are invited to meet for one- or two-day workshops and to discuss their research with other scientists and disciplines.

## Preventing Alzheimer's through exercise and a healthy diet

Full lecture hall at the Berlin-Buch Campus. Prof Dr Konrad Beyreuther, founding director of Network Ageing Research at Heidelberg University, held a public lecture on Alzheimer's and the development of the disease at the MDC.C in Berlin-Buch yesterday. The audience learnt about some surprising scientific findings. For example, that only seven percent of Alzheimer's dementia is hereditary, but that the majority is influenced by the environment and one's lifestyle. New to many in the audience was also how early the brain shows damages and that cognitively challenging activities, regular exercise and a healthy diet have a significant positive impact on the progress of the disease. And the best news of the evening? We never forget music. Even if the disease is already very advanced, we still remember the music that has been part of our lives since we were young. The lively discussion after the lecture proved that these new findings were well received by the audience.

The lecture was held as part of the 3rd International Healthy Ageing Symposium. From Wednesday to Friday, ageing researchers from various disciplines followed the invitation of the Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP) at the Berlin-Buch Campus to discuss ageing and prevention of diseases in the second half of life. Biomedical scientists, biologists, cognitive and educational researchers, epidemiologists, spatial planners and economists exchanged their findings during a convention organised by the Leibniz Research Association Healthy Ageing.



*On February 20<sup>th</sup>, Prof Dr Konrad Beyreuther, founding director of Network Ageing Research at Heidelberg University, held a lecture on the prevention of Alzheimer's at the MDC.C in Berlin-Buch. Source: Ausserhofer/LRA Healthy Ageing.*

Professor Dr Konrad Beyreuther PhD is founding director of Network Ageing Research (NAR) at Heidelberg University. His research interest concerns the brain function in humans, Alzheimer's disease and the genetics of ageing. As former professor of molecular biology, director of the Centre for Molecular Biology (ZMBH) and Dean of the Faculty of Biology, he has held a senior professorship at Heidelberg University since 2009. Beyreuther's current research interest concerns the plaque formation in Alzheimer's dementia and the development of rational therapies.

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## News and findings on Ageing Research

### **“Salt Prince” CC1: Recently discovered protein has an important function in plants – and may become significant in Alzheimer's research**

**FMP Leibniz-Forschungsinstitut für Molekulare Pharmakologie, 26 February 2019**

The structure and properties of the recently discovered CC1 protein have been described by the international team around scientist Arndt Wallmann of Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP) and

Christopher Kesten of the ETH in Zurich in a current study in Nature Communications. The particularity of this protein: It is not only essential for the salt level in plant cells, its function is similar to that of Tau-related proteins which, in the human body, play a major part in Alzheimer's disease.

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## **New Centre of Competence for Innovative Diabetes Therapy (KomIT) is funded by NRW and EU**

**DDZ German Diabetes Center, 26 February 2019**

A new competence centre, funded by the State of North-Rhine Westphalia (NRW) and the EU, will be established at the German Diabetes Centre (DDZ) in Düsseldorf for around 3.5 million euros over the next three years. At the new competence centre, a consortium of eight partners from industry and university research will focus on the development of new diabetes therapies. The new centre is coordinated by DDZ, and its purpose is the efficient translation of innovative research results into clinical application, improving the diabetes management of patients.

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## **How lung cancer cells fool the immune system**

**IfADo Leibniz Research Centre for Working Environment and Human Factors, 11 February 2019**

Cancer cells are able to fool the human immune system by producing proteins which deactivate immune cells. PD-L1 is one of those proteins. Dr Karolina Edlund of the Leibniz Research Centre for Working Environment and Human Factors at the TU Dortmund University (IfADo) has researched the influence of PD-L1 on the prognosis of lung cancer. Her findings indicate that: The more PD-L1 exists, the shorter the survival period of lung cancer patients who have never smoked. Her study was recently published in the renowned "Journal of Thoracic Oncology".

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## **Number of people with type 2 diabetes in Germany to reach up to twelve million by 2040**

**DDZ German Diabetes Center, 08 February 2019**

At least 7.2 percent of the population in Germany is currently suffering from diabetes, most from type 2 diabetes. The number of diabetes sufferers will increase significantly in the next two decades. Scientists at the German Diabetes Centre (DDZ) in Düsseldorf and the Robert Koch Institute (RKI) in Berlin predict that up to 12 million people in Germany could be suffering from type 2 diabetes in the next 20 years. This would mean an increase by up to 77 percent in the period from 2015 to 2040.

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## **Smart guide: EU research project for sustainable work**

**IfADo Leibniz Research Centre for Working Environment and Human Factors, 08 February 2019**

Working until the age of 67 or even beyond 70? People in industrial countries are living longer and the average age of the workforce in companies increases, while professional requirements are changing at the same time. The digital age demands flexibility, working under time pressure and lifelong learning. These requirements present challenges especially for older workers. Purpose of the recently started EU research project "sustAGE"

is therefore the development of a person-centred digital recommendation system with the aim to increase the cognitive, emotional and physical performance of older workers. The IfADo contributes with its expertise in the field of work psychology as one of ten project partners.

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## **Genetic analyses show: Genetic material influences blood glucose response – individuals with a variant in the glucose transporter gene respond better to Metformin**

**DDZ German Diabetes Center, 06 February 2019**

Many diabetes sufferers take the diabetes medication Metformin to improve their blood glucose levels. A team of scientists at the German Diabetes Centre (DDZ) has found that Metformin reduces the blood glucose level in individuals, who have recently developed type 2 diabetes and carry a particular variant of the GLUT-2 gene, more than in individuals without this variant.

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## **How the *Clostridium ramosum* intestinal bacterium promotes excess weight**

**DIfE German Institute of Human Nutrition Potsdam-Rehbruecke, 06 February 2019**

It is a known fact that weight is influenced by certain gut bacteria. Until now, little has been known about how this effect is created. In an article of the Scientific Reports journal, a research team at the German Institute of Human Nutrition (DIfE) in Potsdam-Rehbruecke has now demonstrated that the *Clostridium ramosum* bacterium encourages the intestinal cells in mice to increasingly release the neurotransmitter serotonin. Serotonin promotes the fat intake from the intestines, thus fat pads increase faster.

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## **How breast cancer cells feed on fat and protect themselves from cell death**

**IfADo Leibniz Research Centre for Working Environment and Human Factors, 24 January 2019**

Breast cancer is the most common cancer type in women in Germany. Why cancer cells are so capable of surviving is one of the major questions in research. Dr Cristina Cadenas, researcher at Leibniz Research Centre for Working Environment and Human Factors in Dortmund (IfADo), and her team have discovered a mechanism of how breast cancer cells feed themselves on nutrients, thus ensuring a survival advantage at the same time.

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## **Better diagnosis and understanding of cardiovascular diseases**

**DIfE German Institute of Human Nutrition Potsdam-Rehbruecke, 22 January 2019**

Cardiovascular diseases are the most common cause of death in Germany, affecting especially older people. Besides the life expectancy, cardiovascular diseases can also have an enormous impact on the quality of life. Researchers at the DIfE have now managed to identify a new marker: The chemerin protein provides insights into some yet unknown mechanisms of the pathogenesis and could be used in future for diagnosing the risk of heart attacks, strokes and co. earlier and more accurately.

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## Calls

### **How diet, food components and food processing affect body weight regulation and metabolic disorders associated with excess weight**

**BMBF, 18 February 2019**

A health-promoting lifestyle with a balanced diet and sufficient physical activity is important for maintaining health and well-being. An unhealthy lifestyle as well as the growing proportion of older people in the total population are accompanied by an increasing prevalence of chronic diseases like diabetes, cancer, cardiovascular and neurodegenerative diseases. To meet abovementioned challenges, the European Joint Programming Initiative “A Healthy Diet for a Healthy Life” (JPI HDHL) was founded as a voluntary and partnership-based association of Member States and associated States of the European Union in 2010. The overall objective of JPI HDHL is to better understand the link between diet, lifestyle and health through cross-border cooperation and coordination of research activities. This knowledge is then to be implemented in strategies, products and services helping to enable a healthy lifestyle for citizens in Europe and beyond.

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### **José Carreras Leukaemia Foundation awards research grants**

**José-Carreras-Leukämie-Stiftung, 11 February 2019**

Three grants are designated for doctors and natural scientists with experience in haematological, cell biological, immunological or psycho-oncological research work, who work at a scientific institution in Germany and who are under the age of 35. The grant consists of a funding amount of Euro 41,400 for one year. The grant can be extended twice for one more year respectively on application and after evaluation by the Scientific Advisory Board of high-level experts. Closing date for applications is 31 March 2019 (postmark).

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### **TWAS-DFG Cooperation Visits Programme**

**DFG, 7 February 2019**

Based on the agreement with The World Academy of Sciences for the Advancement of Science in Developing Countries (TWAS), the German Research Foundation (DFG) draws the attention of scientists at German scientific institutions to the fact that they have the possibility to invite young science graduates of all disciplines from sub-Saharan Africa to their institution for a three-month research and cooperation visit.

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### **Projects on the subject of multinational research regarding translational biomarkers in brain diseases as part of ERA-NET NEURON**

**BMBF, 1 February 2019**

Maintaining, improving and, if necessary, restoring human health is a top priority worldwide. In Europe, a fourth of the population suffers from neurological and psychiatric disorders. The arising, in part long-term, implications right through to the mortality rate present a heavy burden on the economy as well as on society. Thus,

neuroscientific research and in particular its translation into diagnostic and therapeutic results is of fundamental importance in the improvement of the health of our society.

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## Ageing Meetings

24-29 March 2019, Ventura/USA

[› GRC Stem cells and cancer: Developmental, Metabolic and \(Epi\)Genomic Mechanisms Driving Organogenesis and Tumorigenesis](#)

28-30 March 2019, Berlin/Germany

[› Undoing Aging 2019 - Accelerating rejuvenation therapies to repair the damage of aging](#)

15-18 April 2019, New Orleans/USA

[› Aging in America Conference](#)

24-26 April 2019, Zürich/Switzerland

[› 5th International Conference Aging & Cognition 2019](#)

23-25 May 2019, Göteborg/Sweden

[› International Association of Gerontology and Geriatrics European Region Congress 2019](#)

30 May-2 June 2019, Burlingame/USA

[› American Aging Association: Translating Aging](#)

23-26 June 2019, Rotterdam/Netherlands

[› Natureconferences: Ageing, Health & Rejuvenation](#)

10-13 September 2019, München/Germany

[› II. Joint Meeting of the German Society for Immunology \(DGfI\) and the Italian Society of Immunology, Clinical Immunology and Allergology \(SIICA\)](#)

24-26 October 2019, Hexham/United Kingdom

[› 10th Annual Alliance for Healthy Aging Conference - Intervention: from Mice to Humans](#)

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