



6

NEWS FROM THE GUTENBERG RESEARCH COLLEGE



Dear colleagues,

We are happy to report on many interesting GRC activities. On the following pages we present you some highlights from last year: new research projects and awards, GRC events and of course our new GRC fellows.

In addition to our core business, the support of excellent researchers by granting GRC fellowships, we have discussed the future development of the fellowship program within the executive committee and with members of several faculties. We want to make use of the experience of the last years and of the results of an evaluation conducted by the Center for Quality Assurance and Development (ZQ) in order to make our support measures more effective and more suitable for the needs of different research fields. I would like to encourage you as members of

the faculties and research institutions of JGU to bring forward your ideas to shape the GRC fellowships in the most useful way. The needs and potentials of fellowships may vary significantly in the different scientific and artistic areas of JGU, and we always try to use this instrument in a way that the fellows and their research environment will benefit as much as possible from our support. We are looking forward to your ideas!

Yours sincerely,

Matthias Neubert
Director of the GRC



Prof. Johannes Henn, Institute of Physics, JGU

Johannes Henn is amongst the most outstanding and successful young physicists. He has achieved groundbreaking contributions to a variety of different topics such as Yang-Mills field theories, gauge theory and applications to collider physics. After several years of research at Lyon, Berlin and the Institute for Advanced Study in Princeton he has become professor of mathematical physics at Johannes Gutenberg University, where his broad range of interests perfectly matches with the research of the phenomenologists, string theorists and mathematicians at the Cluster of Excellence PRISMA and the neighboring institutes.



Prof. Jonathan Kipnis, Department of Neuroscience, University of Virginia

Neuroscientist Jonathan Kipnis is director of the "Center for Brain Immunology and Glia" at the University of Virginia, Charlottesville. He investigates the complex interactions between immune system and nervous system and is well known for his studies on the function of the adaptive immune system for the normal brain function. As GRC fellow, he will build up and lead a research group on cellular and

molecular neuroimmunology at the University Medical Center Mainz. There he will also cooperate with the colleagues of the Focus Program Translational Neurosciences (FTN) and the Research Center for Immunotherapy (FZI) and he will participate in the work of the Transregional Collaborative Research Center "Initiating/effector versus regulatory mechanisms in Multiple Sclerosis – progress towards tackling the disease".



Prof. Klaus Müllen, Institute of Physical Chemistry, JGU; Max Planck Institute for Polymer Research

From 1989 until 2016 Klaus Müllen was director of the Max Planck Institute for Polymer Research in Mainz and is one of the most renowned chemists worldwide. He has received several awards such as the Gauß Medal and the ACS Award in Polymer Chemistry. Furthermore, he is a member of the German National Academy of Sciences Leopoldina and a honorary member of the American Academy of Arts and Sciences. In his research, he focuses on a variety of topics in the area of organic chemistry, polymer chemistry and material sciences. Recently, he and his research group have made major achievements in soft matter research by the creative synthesis of unprecedented molecular structures. As GRC fellow, he will lead a research group at the Institute of Physical Chemistry of JGU.



ISABEL SCHNABEL, former member of the GRC executive committee, has become professor of financial economics at the University of Bonn. **SVEN HORKE**, the GRC network representative, has also accepted an external offer and left JGU. Legal scholar **EVA ELLEN WAGNER** and computer scientist **FRANZ ROTHLAUF** have been appointed to the executive committee. **CHRISTIAN BERGER** has been elected as new GRC network representative.

In April 2015, **SVEN BACH**, student member of the GRC executive committee, has been appointed as junior member of the Gutenberg Academy for Young Researchers. Furthermore he has finished his PhD studies at the Institute of Inorganic and Analytic Chemistry and thus has left the executive committee.

GRC fellow **DETLEF SCHUPPAN**, director of the Institute of Translational Immunology (TIM) at the University Medical Center Mainz, has received the Maki Celiac Disease Tampere Prize by the University of Tampere for his pioneering work in the field of celiac disease research.

The expert on the Hebrew Bible and the history of ancient Israel **ISAAC KALIMI** has been affiliated as honorary member of the Scandinavian Society for Iranian Studies in 2015. Moreover, the GRC fellow

has been appointed as corresponding member of the Belgian Royal Academy for Overseas Sciences.

In spring 2015, the Klaus Tschira Foundation has granted the J. Hans D. Jensen Award to GRC director **MATTHIAS NEUBERT**. The award is given to excellent scientists in the field of theoretical physics and connected with a visiting professorship at the Institute for Theoretical Physics of the University of Heidelberg.

GRC deputy director **DAMARIS NÜBLING** and GRC fellow **WALTER BISANG** have been appointed to the Academy of Sciences and Literature Mainz as full members of the class of humanities and social sciences.

KATHARINA LANDFESTER, member of the GRC executive committee, has been elected to the board of directors of the German Chemists Society (GDCh).

Neurobiologist and GRC fellow **AMPARO ACKER-PALMER** has received an ERC Advanced Grant for the investigation of communication between neurons and blood vessels in the brain. Besides, she has become member of the renowned European Molecular Biology Organisation (EMBO).



Former GRC fellow **STUART PARKIN**, director of the Max Planck Institute of Microstructure Physics in Halle, has received an ERC Advanced Grant to strengthen and advance his research in the field of spintronics.

Physicist and GRC fellow **JAIRO SINOVA** has founded the "Spin Phenomena Interdisciplinary Center" (SPICE) at JGU. The center is fostered by the Alexander von Humboldt Foundation and the state Rhineland-Palatinate and aims at scientific interchange and cooperation between different disciplines that research on spin phenomena. Sinova is also involved in the new DFG Collaborative Research Center "Spin+X: Spin in its collective environment" of JGU and the University of Kaiserslautern.

Immunologist **DETLEF SCHUPPAN** leads a working group of the European research project "Elucidating Pathways of Steatohepatitis (EPOS)". The project is funded by the European Commission and examines non-alcoholic fatty liver disease. In addition Schuppan has founded, in cooperation with Ulrich Pöschl, director at the Max Planck Institute for Chemistry, the Mainz Center for Chemical Allergology (MCCA) in order to explore the chemical basis of allergies and hypersensitivities.

In December 2015, the University Medical Center Mainz has opened a new interdisciplinary center for rare diseases of the nervous system under the leadership of **SUSANN SCHWEIGER**, member of the GRC executive committee and director of the Institute of Human Genetics at JGU.

Physicist **FRANK MAAS**, member of the GRC executive committee, participates in the Collaborative Research Center "The Low-Energy Frontier of the Standard Model – From Quarks and Gluons to Hadrons and Nuclei", which focuses on the investigation of fundamental questions of the subatomic world. In autumn 2015, the DFG has approved of four more years of funding.

The classical studies scholar **DORIS PRECHEL**, member of the GRC executive committee, and her team carry forward their project "Archaeological and Chronological Investigation of the Middle Elamite Period at Haft Tappeh" in Iran. The continuing support of the DFG enables the pursuit of the excavations until 2017 to get new insights about the location, one of the most important cities of the Elamite empire, and its history.



GUTENBERG RESEARCH AWARD 2015

The celebration was accentuated by an impressive musical performance of pieces from George Gershwin's "Porgy and Bess". Dmitry Ryabchikov and Lingyuan Gao were accompanied by Christian Rohrbach on the piano.

In May 2015, the GRC has granted the Gutenberg Research Award to the theologian Kwok Pui Lan and the polymer chemist Kazunori Kataoka for their outstanding scientific accomplishments. Kwok Pui Lan, born in Hong Kong, teaches theology at the Episcopal Divinity School in Cambridge, Massachusetts, and is one of the most famous representatives of post-colonial feminist theology. In her studies she focuses on a paradigm shift in the historiography of Christian mission and emphasizes the position of local missionaries. Furthermore she works on the interreligious hermeneutics of the bible and has shown that – especially in Asia – the bible can only be interpreted in relation to non-Christian religions and their own hermeneutical traditions. In her lecture "Religion and Peacebuilding" she explained how her perspective challenges established ways of thinking and thereby can lead to new insights.

Kazunori Kataoka teaches at the University of Tokyo and explores the use of nano-transporters that build themselves on the basis of long-chain molecules for cancer therapy. He is considered a pioneer of this concept, which involves the inclusion of the medication in so-called micelles so that it can reach the affected organs more rapidly. Different polymer micelles which have been designed by Kataoka are currently being tested in clinical studies in different countries and are on the verge of actual practice. This could lead to a crucial breakthrough in cancer research. At our annual celebration, he outlined his research on "Block Copolymer Micelles as Smart Nanosystems for Targeted Drug Delivery."

Another highlight of the annual celebration was the welcoming of the new GRC fellows: the molecular biologist Krishnaraj Rajalingam, the neurophysiologist Jochen Roeper and the social pedagogue Cornelia Scheweppe.

Workshop with the Frankfurt Institute for Advanced Studies (FIAS)

In November 2015, the members of the GRC and the Frankfurt Institute for Advanced Studies (FIAS) met for the second time for a common workshop. In her presentation "Systemic Risk in the Financial Sector" the economist Isabel Schnabel – member of the German Council of Economic Experts and former member of the GRC executive committee – introduced a genuine economic perspective on explanations of systemic risks and financial crisis, whereas computer scientist and FIAS fellow Nils Bertschinger in his lecture "Volatility Dynamics and Systemic Risk" outlined a natural scientific approach which aims at a new perspective on this highly debated issue.

GRC "Gewölbegespräch"

In February 2016, the GRC continued its series of talks with a lecture by GRC fellow Isaac Kalimi. He presented his new book "Fighting over the Bible: Jewish Interpretation, Sectarianism and Polemic from Temple to Talmud and Beyond" in which he reconstructs different controversies and positions concerning the interpretation of the Hebrew Bible and discusses multifaceted interpretations of the Written and the Oral Torah.

Moreover, the new video series "GRC: Faces of Excellence" has been introduced. In cooperation with JGU's Media Center, selected GRC fellows present their research in an entertaining and informative way so that not only the respective expert communities, but also other viewers may gain an insight into their research. The first two videos show "Matthias Schott and his Particle Collisions" and "Silvia Hansen-Schirra Bridging Brains and Words". These and future video portraits will be released on the websites of JGU and GRC.

Semester program of the GRC network

The GRC continued its program for the strengthening of personal and scientific exchange within the interdisciplinary GRC network. During the last year GRC fellows, members of the executive committee and of the Gutenberg Academy as well as faculty representatives met for lunch concerts at the Mainz School of Music, for a tea time and for a guided tour through the newly opened School of Seeing. Patrick Schollmeyer, the School's curator, introduced the guests into its first exhibition "Museum aus Gips und Kleister – Das vergessene Mainzer Pantheon".



... with the Gutenberg Academy
for Young Researchers

In their joint Round Table, members of the GRC and the Gutenberg Academy discussed "International Academic Careers". Petra Beli, leader of an Emmy Noether Independent Junior Research Group at the Institute of Molecular Biology (IMB), junior professor Gesa zur Nieden from the Institute of Musicology of JGU and the GRC fellow and Alexander von Humboldt Professor Jairo Sinova introduced the topic. They portrayed the experience that they gained in the course of their scientific careers in different countries and different academic systems. Together with the experts Rainer Henkel-von Klauß from the International Office and Nicole Birkle, Julia Doré and Silvia Tschauder from the research departments of JGU and the University Medical Center, the participants discussed the importance of international experience for academic careers and the issue of the internationalization of German universities.



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