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Press release, Wednesday, November 07, 2018

EMBARGOED UNTIL WEDNESDAY, 7 NOVEMBER 2018, 6.00 P.M. CET

Award for project on the positive influence of maternal intestinal microbes

This year's Johanna Dürmüller-Bol DBMR Research Award from the Department for BioMedical Research (DBMR) at the University of Bern goes to Stephanie Ganal-Vonarburg. The Research Award, endowed with CHF 30,000, was presented at the "Day of BioMedical Research", on Wednesday, November 7, 2018.

The winner of the Johanna Dürmüller-Bol DBMR Research Award 2018 is Dr. Stephanie Ganal-Vonarburg. As a Senior Scientist, she conducts research in the Gastroenterology / Mucosal Immunology Research Laboratory at Bern University Hospital and at the Department for BioMedical Research at the University of Bern. Ganal-Vonarburg is being awarded for her research in the field of commensal microbiota - the microbes in the intestine.

The Research Award, endowed with CHF 30,000, was presented at the "Day of BioMedical Research", on Wednesday, November 7, 2018. The prize serves to promote young researchers in biomedical research at the Medical Faculty of the University of Bern.

Strengthening newborns' immunity

Our internal and external body surfaces, such as the skin, respiratory tract and intestines, are colonized by a variety of microbes known as microbiota. These microbes are of great importance for the human body; they not only help us to digest food and to produce vitamins, but also mature our immune system so that we can defend ourselves better against pathogens. The unborn fetus in the womb is considered to be completely germ-free, since the colonization of the body with microbiota only takes place during and especially after birth. For a long time it was assumed that the positive influence of these benign microbes on the host organism does not begin until after birth. In her work, Stephanie Ganal-Vonarburg and her colleagues have been able to show that bacterial metabolites are transferred from the maternal microbiota to the child even earlier, in a process that takes place through the placenta during pregnancy, and through the maternal milk after birth, thus contributing to the maturation of the immune system. Changes in the child's immune response can be observed;for example, the colonization of the intetsine by good bacteria after birth is accepted more easily. This kind of influence on the child's immune system was long-lasting and could still partly be detected in adulthood.

In her future work, Ganal-Vonarburg hopes to use the prize money to investigate how the maternal

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microbiota can influence the immune system of children in the longer term on a molecular level. In particular, she is planning to investigate whether epigenetic mechanisms - which lead to molecular changes in the DNA structure and thereby to altered cell functions - play a role in this. In a second part of her work, she wants to identify bacterial products in breast milk that have positive properties with regard to the child's immune system. "Substances like this could be used in medicine in the future and help strengthen the immunity of newborns" says Stephanie Ganal-Vonarburg.

Short biography on Stephanie Ganal-Vonarburg

Stephanie Ganal-Vonarburg was born in Offenburg (Germany). From 2003 to 2009 she studied Molecular Medicine at the University of Freiburg, Germany, and at the University of British Columbia in Vancouver, Canada. She subsequently completed her doctorate in molecular medicine and immunology in Professor Andreas Diefenbach's laboratory at the University of Freiburg and received her doctorate (Dr. rer. nat.) in 2013. Ganal-Vonarburg came to Switzerland as a postdoctoral fellow in 2013 with the help of a Marie Curie scholarship from the European Union and an EMBO scholarship. From 2013 to 2016, she worked on the role of maternal microbiota in the development of the child's immune system in Professor Andrew Macpherson's laboratory at the Department for BioMedical Research at the University of Bern. The results of this study were published in the journal "Science" in 2016. Ganal-Vonarburg has headed the Gastroenterology Research Laboratory at DBMR together with Andrew Macpherson since September 2016 and is involved in the management of the CMF Core Facility.

Dr. Stephanie Ganal-Vonarburg is available to provide further information or for an interview.

Video on research by Stephanie Ganal-Vonarburg.

Contact:
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The Johanna Dürmüller-Bol foundation extends its commitment

The research award was already donated by the Johanna Dürmüller-Bol Foundation from 2012 to 2017, and it will continue to support the Department for BioMedical Research DBMR until 2021. The aim of the foundation is to motivate and support researchers early on in their career at the University of Bern Medical Faculty in its fields of medicine and science.

More information about the Dürmüller-Bol foundation: https://fjdb.ch/

Day of BioMedical Research 2018

Other awards are being presented alongside the Johanna Dürmüller-Bol DBMR Research Prize 2018 on the Day of BioMedical Research.

University of Bern's Department for BioMedical Research cordially invites you to the

Day of BioMedical Research 2018
Wednesday, November 7, 2018, from 10 a.m. to 5 p.m.
in the Langhans auditorium, Murtenstrasse 31, 3010 Bern

You can take a look at the program here.

Department for BioMedical Research DBMR

The Department for BioMedical Research DBMR (formerly DKF) is an institute that is part of the Medical Faculty and has the remit to provide the 45 research groups at Bern University Hospital with the ideal infrastructure and scientific support. The majority of these research groups are based at the university hospital clinics. The remaining groups are DBMR internal research groups that are involved in daily scientific support and coordinating the equipment and infrastructure. The DBMR is also responsible for running the technology and Tier Core Facilities. The Department's groups are supported by Central Services, which are responsible for administration, computer science, technical support and bioinformatics.

More information: http://www.dbmr.unibe.ch/index_ger.html

Contact details and further information about the Day of BioMedical Research and the Johanna Dürmüller-Bol DBMR Research Award in general:
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The announcement of the winner of the Johanna Dürmüller-Bol DBMR Research Award is subject to a blackout period: WEDNESDAY NOVEMBER 7, 2018, 6.00 P.M. CET
Once the blackout period has expired, all the other Day of BioMedical Research award winners will also be announced on http://www.medienmitteilungen.unibe.ch**.**