

Microbes have an effect on aging

Old Herborn University Seminar on the microbiome in the "Hohe Schule"

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HERBORN: Again, international scientists had a meeting on the intestinal microbiome at the "Old Herborn University Seminar" in the auditorium of the "Hohe Schule". This time the subject was the role of the microbiome in aging processes in humans and animals.



Final photo of the Old Herborn University Seminar in the auditorium of the "Hohe Schule": The Summer School participants with the new "Honorary Professors": (top right) Dario Riccardo Valenzano, (left) Robert J. Pignolo, Brian Kennedy, Christoph Kaleta, Josef Anrater and Janelle C Arthur. The seminar leaders were (front left) Professor Dr. John Bienenstock, Professor Dr. Peter J. Heidt and (right) Dr. Volker Rusch. (Photo: H. Lange / OHUS).

Microbes in the gut affect the metabolic processes of their host, can send signals to the brain and are also responsible for the development of diseases such as cancer, says Dr. Volker Rusch, founder of the "Old Herborn University". For him and his colleagues, the seminar builds on the scientific tradition of the "Alma Mater Johannea".

Johann VI. (the elder), Count of Nassau-Dillenburg, founded the Alma Mater Johannea in 1584. Four faculties were created in Herborn: theology, philosophy, jurisprudence and medicine. Although the "Hohe Schule" never received the status of university, it had a good reputation in Europe. After it had ceased to exist in 1817, the revival came in 1984: On the 400th anniversary of the "Hohe Schule", the IXth International Symposium on Intestinal Microecology, the first special meeting of the Society for Microbial Ecology and Disease held

outside the USA, took place in Herborn. Organizer was the Institute of Microecology of Dr. Rusch.

The success and enthusiasm of the guests about the ambience of the "Hohe Schule" led to the foundation of a summer university, which started on July 13, 1987, with the first seminar of the "Old Herborn University".

This present year, international scientists met in Herborn for the 32nd time to exchange information about new findings on the intestinal microbiome of humans and animals. The theme of "Ageing and the Microbiome" reached from sharks and African killifish to humans.

In old age, physical functions diminish and the microbiome also changes, according to Rusch and his scientific colleagues. In part, this is only indirectly related to aging processes: older people often eat one-sided and consume less healthy fibres, which makes the intestinal microbiome less versatile. The intestinal microbiome consists of many different microorganisms with different properties and functions. They support the digestion, but also significantly affect the metabolism and the immune system.

In old age, the diversity of species decreases, the proportion of pathogens increases, which leads to more inflammation and weakening of the immune system. Many diseases can be the result, such as cancer.

In the run-up to the seminar, the first, four-day "Old Herborn University Summer School" took place: 18 postgraduates and postdocs from the Czech Republic, Germany, France and the USA dealt with the interactions between the host and the microorganisms that colonize it. Anyone who understands the complex relationships, said Rusch, could specifically develop new probiotic preparations for certain patients.

The "Old Herborn University Seminar" hosted nine scientific lectures and the presentations of the summer school students. At the end a ceremony took place in which Dr. Rusch together with Professor Dr. John Bienenstock from Canada and Professor Dr. Peter J. Heidt from the Netherlands awarded "honorary professorships" to the speakers of this seminar. (W)