



Junior research groups at the BfR

Researching the future

Imprint

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How BfR's young researchers do their research

Five junior research groups were set up at the BfR to promote young researchers. This is very much a win-win situation, because after obtaining a PhD, postdocs can pursue their own projects in a group – and our Institute sets specific priorities in research. Reason enough to introduce these Young Explorers and their research projects.



Making sure that food arrives safely

Which processes do foods pass through during their manufacture? This is being examined by the “Supply Chain Models” junior research group. Dr. Sascha Bulik and his team work in the Biological Safety department on solutions that help to estimate risks in the production and distribution of food. They are reconstructing the network through which pig feed is marketed in Germany so that contamination and logistical risks can be assessed more easily. In another project, the group is modelling how salmonella spreads in the processing of pork.

The “Supply Chain Models” group (l to r):

*Carolin Hobe (laboratory specialist),
Daria Glushkina (doctoral candidate),
Dr. Sascha Bulik (team leader),
Henning Siemen (doctoral candidate)*

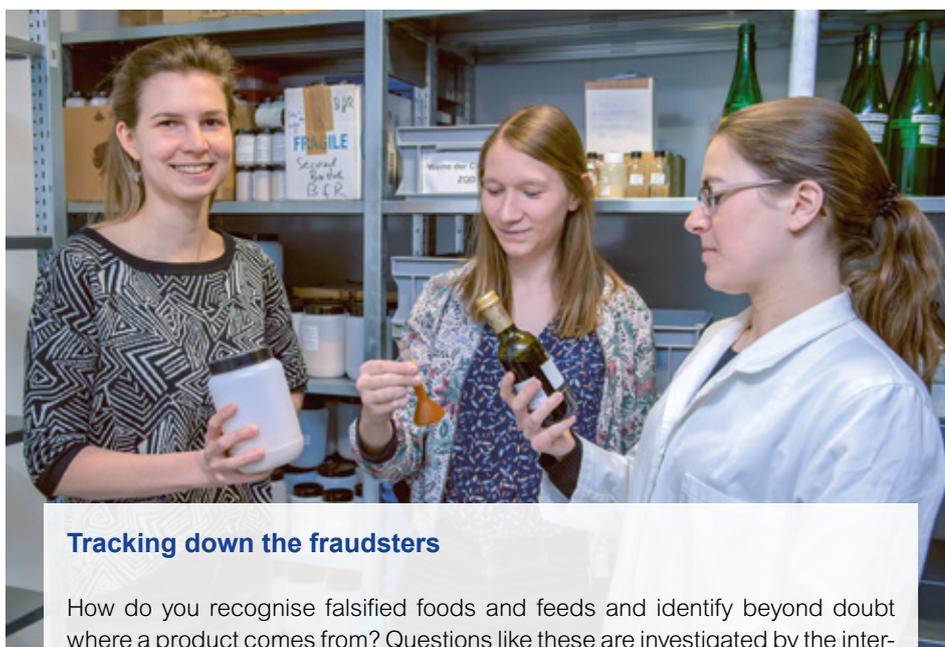


Focusing on the tiniest particles

The junior research group “Nanotoxicology” is located in the department of Food Safety. It conducts research on nanomaterials which can enter the body via food. This can involve both metallic and organic particles, such as nanoplastics and microplastics. Toxicological test methods on cell models of the human intestine and liver are used. The group is headed by Dr. Holger Sieg. His team includes two doctoral candidates and a technical assistant.

The “Nanotoxicology” group (l to r):
Linn Voß (doctoral candidate), Valerie Stock (doctoral candidate), Dr. Holger Sieg (team leader), Marén Schließ (technical assistant)

The “Authenticity along the Supply Chain” group (l to r):
*Dr. Julia Raeke (deputy team leader),
 Alicia Niedzwiecka and
 Mona Ehlers (both
 doctoral candidates).
 Not included in the
 photo are team leader
 Dr. Bettina Horn and
 doctoral candidate
 Aline Wisniewski.*



Tracking down the fraudsters

How do you recognise falsified foods and feeds and identify beyond doubt where a product comes from? Questions like these are investigated by the inter-departmental junior research group “Authenticity along the Supply Chain”, which is headed by Dr. Julia Raeke. The focus here is on three aspects: the development of non-targeted analytical methods e.g. to prove the origin of maize, the species-specific detection of animal proteins in feed using mass spectrometry; and the development of measures for the risk estimation of future food cases in support of the competent authorities.

A closer look at tattoos

Some tattoos suddenly cause allergies years later. The “Tattoos” junior research group headed by Dr. Ines Schreiber takes a closer look at substances which have a particularly allergenic effect – whether it tends to be the pigments themselves or their break-down products. Her team has also been conducting research into the question of how colour pigments react to UV radiation for some time now. Ever since it was established as part of the Chemicals and Product Safety department, the group has grown steadily and now comprises two doctoral candidates, a technical assistant and a master's student in addition to the team leader.



The “Tattoos” group (l to r):
*Obinna-Antony Uzokwe
 (master's student),
 Mana Kaveh and
 Henrik Hering (both
 doctoral candidates),
 Dr. Ines Schreiber (team
 leader). Not included in the
 photo are Markus Kühn
 and Sandra Schiewe, the
 group's technical assistants.*

How substances affect the body

The “Toxicokinetic Modelling” junior research group is dedicated to the fundamental question of “What happens to substances when they enter the body?” and the related issue “What do substances do to the body?” Pyrrolizidine alkaloids – a group of toxic secondary plant constituents – and aluminium are currently the focus of their research. A speciality of the group headed by pharmacist Dr. Christoph Hethey is to transfer results from laboratory test tubes over computer-based simulations to the human real-life situation.



The “Toxicokinetic Modelling” group (l to r):
Dr. Christoph Hethey (team leader), Anja Lehmann and Dimitra Eleftheriadou (both doctoral candidates). Not included in the photo is Petra Zocher, the group’s technical assistant.



Fresh wind at the BfR

By focusing on research and further academic qualification, new structures were created within the BfR through the junior research groups. They were established in the context of ongoing development at the BfR.

More information:

www.bfr.bund.de/en > *The Institute*

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