

Hands-on Brain Research links University with School Education

Learn, try out and be surprised!

Students of natural and biomedical sciences develop mobile hands-on science experimental stations together with students of biology teaching for secondary schools. These stations arouse the interest of adolescents, families and the general public for brain research and promote the relevance of basic research. The hands-on science stations consist of easy-to-perform, entertaining and informative experiments, that people actively take part in and learn how the brain works through surprising self-experiences. These hands-on activities are complemented by tutorials, videos and posters thereby providing the translational context. They not only explain therapeutic and pathophysiological concepts, disease symptoms and the necessity of current and future research initiatives but represent a key tool to bring together research scientists, didactic education experts and students in schools and universities.

The easily reproducible hands-on activities are designed for long-term use at the university (in outreach activities) and at school (during regular lessons, special workshops and further education for teachers). They are a tool to achieve the following project goals:

1. Building a close network of students and researchers in natural sciences with didactical education experts, teachers, students of teaching in biology for efficient science communication
2. Providing current and future teachers with up-to-date research knowledge and respective teaching materials.
3. Identification and specific support for talented pupils interested in science. They are offered practical work in laboratories and internships.
4. Promoting public interest for basic research and its relevance for society.

This project clearly stands out from hands-on science activities at science fairs and museums by the integrative and sustainable development process that involves school and university. It was developed as a pilot project („Brain Day“) in 2016 at the Department of Pharmacology and Toxicology, Institute for Pharmacy, University Innsbruck and will be further optimized and implemented as an interdisciplinary education and science communication program.