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Basel

## Research Project

### Biological Foundations of Risk Taking

#### Third-party funded project

**Project title** Biological Foundations of Risk Taking

**Principal Investigator(s)** [Rieskamp, Jörg](#) ; [de Quervain, Dominique](#) ; [Hertwig, Ralph](#) ; [Papassotiropoulos, Andreas](#) ;

**Organisation / Research unit**

Departement Psychologie / Economic Psychology (Rieskamp)

**Department**

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**Status** Completed

Benjamin Franklin (1789) once famously remarked that in this world there is nothing certain but death and taxes. Although we cannot help but navigate a world full of risk and uncertainty, people differ widely in how they deal with risk. Psychologist and economists have documented a large inter-individual variability in people's risk taking, but the determinants of this variability are still largely unknown. Recent research, however, suggests that biological factors contribute to a person's appetite or disdain for risk. To address this, the current project will elicit risk taking using a wide array of behavioral paradigms and investigates the cognitive, genetic, and hormonal foundations of risk taking. Adopting a multi-disciplinary approach by linking economic psychology, cognitive and decision science, and cognitive and molecular neuroscience enables the project to pursue important objectives: First, risk taking should be measure with a variety of measurement paradigms. Second, the cognitive mechanisms and processes underlying risk taking should be identified by using cognitive modeling techniques. Third, overt behavior and cognitive processes will be related to variations in genetic polymorphisms and hormonal states, respectively. Consequently, the project comprehensively investigates to what extent differences in risk-taking behavior and in associated cognitive processes can be mapped onto differences in biological properties. The project should help in developing better diagnostic tools for measuring risk taking and the identification and treatment of pathological risk taking such as drug addiction or gambling.

The project consists of Prof. Dr. Jörg Rieskamp (University of Basel, Economic Psychology), Ralph Hertwig (University of Basel, Cognitive and Decision Science), Prof. Dr. Andreas Papassotiropoulos (University of Basel, Molecular Neuroscience), and Dominique de Quervain (University of Basel, Cognitive Neuroscience).

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