

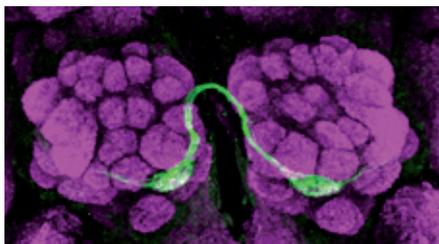
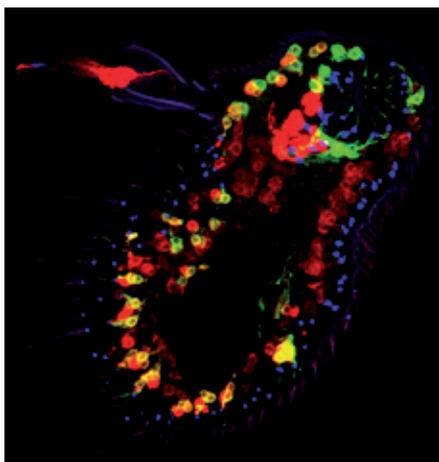
SUCCESS STORY

**OLFACTORYGLURS/Olfactory Perception in Drosophila:
Analysis of a Novel iGluR-related Family of Odorant Receptors**
Research area: FP7 – European Research Council / Physiology,
Pathophysiology and Endocrinology (LS4)
Beneficiary: Prof. Richard Benton

Host institution: University of Lausanne (UNIL)
Start date – End date: 2008-07-01 to 2013-06-30
Duration: 60 months
Funding: € 1 500 000
Type of contract: ERC Starting Grant



RICHARD BENTON



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THE SEX-DRIVE MECHANISM OF THE DROSOPHILA FLY

Richard Benton and his team are analysing the relationship between the olfactory system and the brain of flies. The aim is to understand how flies use smell to switch behaviour to suit their environment. In 2007 he received a research grant from the European Research Council (ERC) for a project entitled “*Olfactory Perception in Drosophila*”.

What attracted you to a career in research?

I carried out a small lab project for my high school diploma, and it was then that I discovered the creative side of research. That was so exciting: I had my own original idea; some might call it inspiration. This was a significant event in my life as I embarked on a path that would lead me to doctoral work at Cambridge. Here I experienced the immense pleasure of discovering something new, to be the only one who knew about it for a few minutes or a few hours. But the real turning point in my career came later, in the US, when I switched to the fascinating field of neurobiology.

How would you describe your life as a researcher?

Research is a social and creative career. It is full of surprises; no two days are ever alike. In reality, this is not a career, or even a job: rather, it is something that drives one's entire being, 24/7. Even while we are asleep, the brain continues to work. Additionally, I do not have a boss. So pressure comes not

from above but from the need to deliver results.

What do you think are the benefits of an ERC grant?

As a researcher in charge of a team, I can decide how the funds are used. I have five years to complete my project. I can be ambitious and think big, and do not have to deal with constraints. I have recruited five researchers, and together we form a community of interest. Moreover, this grant, which was awarded in 2007, gives me a great deal of visibility.

“In the world of research, the emotion component is huge. We experience real surges in adrenalin. Sometimes we even have trouble sleeping!”



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ABOUT THE PROJECT

The project led by Richard Benton looks into the mechanisms of chemical signal processing — from bacteria to human beings — that allow individuals to interact with their environment, such as mechanisms for finding food, escaping from danger or choosing a sexual partner. The focal point of the research is the olfactory system of *Drosophila*, or the fruit fly. Though relatively simple, this system offers a wide range of behavioural typologies. Richard Benton has identified a

particular neuronal receptor, called IR84a, which participates in the seduction cycle of this species. This receptor also reacts with phenylacetic acid, secreted by certain plants, and can be found as an ingredient in men's perfumes.

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