

- Home
- Business & Markets
- Hardware
- Software
- Server/Data Storage
- Networking/Community
- Services

Receive our free weekly newsletter - Click here to subscribe now!

Features

Scotland

US/Europe/Global

Universities

Hightech

Electronics

Energy

Bio

Materials

Security

Diary

Livewire

Gaberlunzie

Archive

Classifieds

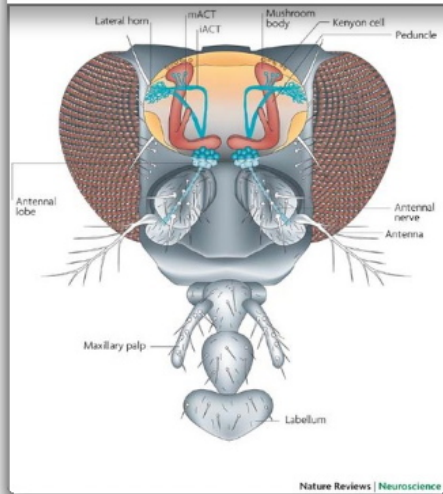
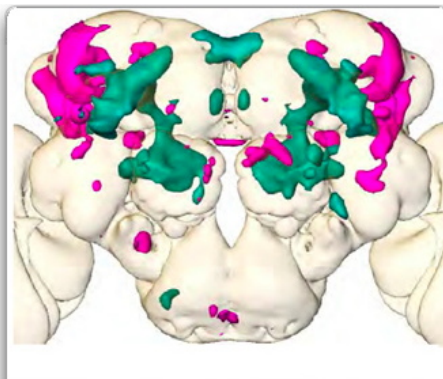
Advertising

Download



## Drosophila to illuminate the brain

Saturday 11th February 2012



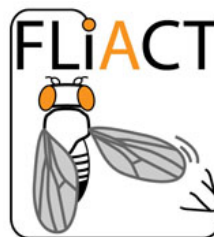
Drosophila brain Courtesy <http://revfrost.wordpress.com/tag/drosophila-melanogaster/> and Drosophila head courtesy: <http://tsjok45.multiply.com/photos/photo/1000/10>

**BrainWave Discovery, a four year old Scottish neuroscience company based in Gartmore, Falkirk is one of three participating SMEs in a new €3m 4-year European network FLiACT to train early stage researchers in various areas of neuroscience, and comprises eight academic centres promoting research in systems neuroscience with European Commission financial support.**

The Marie Curie Training Network **FLiACT**(Systems neuroscience of Drosophila: from genes to circuits to behaviours) has been launched to interconnect eight European research institutes and three industrial partners from different complementary fields of neuroscience (molecular genetics to bioengineering).

FLiACT aims to create a unique training network to explore new areas of research in neuroscience and also to foster collaborations with research institutions outside Europe such as the Janelia Farm Research Campus of the Howard Hughes Medical Institute.

This initiative is funded by the European Commission and coordinated by **Dr. Matthieu Louis from the Centre for Genomic Regulation in Barcelona (Spain).**



Search



Custom Search

### Related pages

Needed for database: tattoo & piercings

Newgen social media

Europe: dark ages threat to life sciences

Games: education failure in skills shortage

Global biotech: Scottish reinvention or revolution?

## BRAIN TRAINING GAMES

Intelligence

Memory

Attention

Focus

Speed

Language

Visual

Spatial

Math

Intelligence

Stress

Response



Understanding how the brain functions, is one of the most important unanswered questions and embraces mechanisms spanning multiple levels of description: from genes to biochemical pathways, to neurone circuits and behaviours.

Over the last decades, the tiny fruit fly *Drosophila melanogaster* has been invaluable to researchers as a premier model system to study how we perceive and integrate information arising from our senses (vision, smell, etc.). *Drosophila* is also a powerful model for studying the genetic bases of neuro-degenerative diseases affecting humans. With a million times fewer neurons than humans, study of the fly brain expects to shed light on general principles underlying functional organisation of neuronal circuits.

The FLiACT project mission is to allow a group of 12 early stage researchers from all over the world to be trained in Europe in neuroscience. Through collaborative and personalised research projects, the FLiACT fellows will seek to elucidate how neural circuits are genetically encoded and how neuronal computation controls behaviour.

Each fellow will carry out a significant part of his/her research in collaboration with the partners of the network through exchanges and joint experiments. The fellows (and mentors!) will also be trained in the most innovative technologies through a series of interdisciplinary scientific workshops on neuro-genetics, neuro-anatomy, neuro-imaging and behavioural analysis.

Three small and medium-sized enterprises (SMEs) also participate in the project. All fellows will have the opportunity to interact with the private sector, and the SMEs will train them in technology transfer, entrepreneurship, intellectual property management, business presentations, marketing and project management.

In collaboration with the Janelia Farm Research Campus, fellows will have the opportunity to broaden their career perspectives at an international level while contributing to one of the most fascinating fields of modern science.

#### SCOTLAND'S BRAINWAVE DISCOVERY



Scotland's BrainWave Discovery (**BWD**) operates well below most news radar levels, but provides services that enable Central Nervous System (CNS) drug R&D divisions of pharmaceutical companies make faster, cheaper and better informed decisions earlier in the drug discovery pathway. BWD know-how is based on science from both the Universities of Edinburgh and **Glasgow**.

Development work supported by a Scottish Enterprise Proof of Concept Award in 2005 saw BWD formed in 2008, as a limited company. In 2009 Scottish Enterprise reviewed BWD, identified it as having significant growth potential and appointed an account manager to link it into the business development community.

BWD CEO (*above*) is Dr R Wayne Davies whose experience includes six years as CEO of Neuropa Ltd, a spin-out company of the University of Glasgow and UmanGenomics AB of Umeå, Sweden where he had hands-on experience of biotechnology company management, board membership, multi-round fundraising from venture capital and local Angel sources and interaction with major pharmaceutical companies. An expert in genetics, molecular biology and neuroscience having been Professor of Biotechnology at the University of Glasgow since 1989, he led the team which started the commercial development of the science underlying BrainWave.

CSO Dr J Douglas Armstrong is expert in *Drosophila* genetics and molecular biology, computing and informatics and active in a number of business networks in the pharmaceutical sector having published important work in *Drosophila* behaviour genetics and nervous system molecular network analysis.



He provides core bioinformatics, synthetic biology, *Drosophila* neuro genetics and behaviour expertise to the company and Reader at the School of Informatics at the University of Edinburgh, Assistant Professor (Adjunct) of Biochemistry and Cell Biology at Rice University.



The third team member is Matt B Mahoney: director of business development in North American who has worked closely with *Drosophila* for over ten years. After studying genetics at the UCB, Matt joined the Alzheimer's disease team at Exelixis Inc, where he ran forward genetic screens for various clients.

Subsequently, he was recruited to EnVivo Pharmaceuticals, where he helped to optimise and run their *Drosophila* behavioural screening platform integral to the identification of multiple treatment candidates for neurodegenerative diseases.

This spun off into a separate company, Vitruvean, LLC, where Matt was responsible for Drosophila-based drug screening, marketing and business development. This invaluable experience is now focused on the development of Brainwave-Discovery's business in the USA and Canada.

FLiACT intends to have a timely structuring effect in a strategic area for European research and technology: systems neuroscience. **Dr Louis (right) leader of the Sensory Systems and Behaviour group at the Centre for Genomic Regulation and coordinator of the project**, envisions FLiACT as "an unprecedented opportunity for Drosophila systems neuroscience to gain momentum in Europe. This network will allow us to enhance our individual research potential through collaborations.



"We are really excited that Europe is giving us a chance to progress towards a fundamental understanding of how brains create internal representations of the world and how multisensory signals are integrated to make complex decisions. Given the nature of these questions, working with a "simple" organism amenable to genetics represents an extraordinary advantage. With only 100,000 neurons and sophisticated behaviours, the flies represent a perfect tradeoff between simplicity and tractability."

**FLiACT European partners:**

Academic partners are Centre for Genomic Regulation, Spain, VIB, Leuven, Belgium, Johannes Gutenberg Universität Mainz, Germany, University of Fribourg, Switzerland, Institute of Molecular Pathology, Austria, Max Planck Institutes for Chemical Ecology, Jena, and Neurobiology, Martinsried, Germany, Institut de Biologie du Développement de Marseille-Luminy, France, and Champalimaud Centre for the Unknown, Portugal. The other SMEs are Belgian-base Piera and Digital Cell Imaging Laboratories.

---

[About Us](#) [Contact Us](#) [Advertise on this Site](#) [Legal](#)

Scotland, Computer News in Scotland, Technology News in Scotland, Computing in Scotland, Web news in Scotland computers, Internet, Communications, advances in communications, communications in Scotland, Energy, Scottish energy, Materials, Biomedicine, Biomedicine in Scotland, articles in Biomedicine, Scottish business, business news in Scotland.  
© Compute Scotland 2010

Website : [beachshore](#)