Heidelberg, 23 April 2013 – EMBO today announced **Sophie Martin** of the University of Lausanne, Switzerland, as the winner of the
2014
EMBO Gold Medal
. The award acknowledges her work to understand the molecular events that define the organization and development of the cell.

Martin has been working for the past 15 years to understand cellular polarity, in particular the way in which the spatial organization of cells contributes to cell size and cell division. In the last 11 years, she has been using fission yeast, which grow as single, rod-shaped cells, as a model system for her investigations.

In 2009, Martin discovered that a protein kinase called Pom1, which forms concentration gradients that originate from each end of the cell, regulates progression through the cell cycle. Martin proposed a model for how Pom1 gradients provide spatial information that prevents fission yeast cells from dividing until they reach a sufficient length.[1] This work renewed interest in the mechanisms of regulation of cell size.

Earlier work by Martin and colleagues identified a protein present on the growing ends of microtubules – the tube-like structures critical for shaping cells – and showed that this protein binds to an actin nucleation factor. Her work revealed a potential mechanism by which microtubules direct where the actin cytoskeleton promotes cell growth. [2]

“From early in her career, Sophie has demonstrated exceptional and consistent scientific achievement in molecular and cell biology,” said EMBO Member Daniel St Johnston, who supervised Martin when she was a PhD student studying cell polarization in *Drosophila* at the Wellcome Trust/Cancer Research UK Gurdon Institute at the University of Cambridge,

England. “She has also demonstrated a remarkable talent that includes a proven ability to change research fields and work on different model organisms while maintaining leadership roles in each of her chosen scientific areas.”

Martin’s earlier research on *Drosophila* focused on LKB1, a homologue of a human tumour suppressor protein. Her study revealed that loss of *lkb1* causes defects in cell polarity and tissue disorganization. This work was one of the first to propose that the loss of cell polarity contributes to the formation of tumours, as individuals affected by Peutz-Jeghers syndrome, which is caused by *lkb1* mutations, have cancerous intestinal polyps.[3]

“It is an immense honour to receive such a prestigious award,” said the prizewinner upon hearing the news. “I have always been fascinated by how biological processes are spatially organized within cells. I feel incredibly lucky not only to have the freedom to study this basic problem but to be rewarded for it.” She added: “I am extremely grateful to past and present colleagues who have contributed to this work through their insight and support.”

“Sophie Martin is a superb scientist. She is also a very active citizen of the scientific community, both locally and internationally,” stated EMBO Member Pierre Gönczy from the Swiss Institute for Experimental Cancer Research (ISREC) at the School of Life Sciences of the Swiss Federal Institute of Technology in Lausanne (EPFL).

Sophie Martin will receive the EMBO Gold Medal and an award of 10,000 Euros on 2 September 2014 at *The FEBS-EMBO Meeting* in Paris where she will also give a lecture about her research.

1. Martin and Berthelot-Grosjean (2009) *Nature* **459**: 782-783.

2. Martin et al. (2005) *Developmental Cell* **8**: 479-491.

3. Martin and St Johnston (2003) *Nature* **421**: 379-384.

CAREER STAGES

Sophie Martin received her PhD from the University of Cambridge in 2003 for her work in Daniel St Johnston's group at the Gurdon Institute on the molecular mechanisms of cell polarization in Drosophila. She pursued postdoctoral training at Columbia University in New York in the laboratory of Dr. Fred Chang where she studied the cytoskeleton in fission yeast. In 2007, Martin joined the Center for Integrative Genomics at the University of Lausanne as a Swiss National Science Foundation Professor. She was appointed Associate Professor at the Department of Fundamental Microbiology at the University of Lausanne in 2010. In 2009, she was elected an EMBO Young Investigator.

Sophie Martin, 38, received the Women in Cell Biology Junior Award in 2012 from the American Society of Cell Biology. She is the 2014 recipient of the Friedrich Miescher Award. Martin was awarded a European Research Council Starting Grant in 2010 to study the contribution of the spatial organization of cells to the cell cycle.

ABOUT EMBO

EMBO is an organization of more than 1500 leading researchers that promotes excellence in the life sciences. The major goals of the organization are to support talented researchers at all stages of their careers, stimulate the exchange of scientific information, and help build a European research environment where scientists can achieve their best work.