

SUCCESS STORY

ERINFLAMMATION/Inflammatory Signals Emerging from the Endoplasmic Reticulum

Research area: FP7 – European Research Council/Immunity and Infection (LS6)

Beneficiary: Prof. Fabio Martinon

Host institution: University of Lausanne (UNIL)

Start date – End date: 2012-01-01 to 2016-12-31

Duration: 60 months

Funding: € 1 498 076

Type of contract: ERC Starting Grant



FABIO MARTINON



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“For a researcher, discovering something new is similar to opening the hood of a Ferrari for a car fanatic.”

CELLS' RESPONSE TO STRESS OR THE MECHANISM OF ADAPTIVE IMMUNITY

Assistant professor in the Department of Biochemistry at UNIL, Fabio Martinon specializes in the molecular mechanisms responsible for inflammation. In 2011, he was awarded an ERC Starting Grant to further his research, “*Inflammatory signals emerging from the endoplasmic reticulum*”.

Is it right to say science was your vocation?

Yes indeed. It was obvious very early on that I would study science. But the choice of biology came later when I realised this discipline was more creative than mathematics or physics, and that biology made it possible to be in touch with nature and living things. However, today I essentially work on cultured cells, as we try to keep experiments on live animals to a strict minimum. In vitro it is possible to apply an infectious agent, or stress to these cells and to obtain a result similar to what you'll find in the organism.

Which was the most formative period of your career?

Straight after my BSC, in 1997, I was hired by Prof. Jürg Tschopp's laboratory in the Department of Biochemistry at the University of Lausanne. It's a very dynamic lab, with a thrilling research project in the field of the molecular mechanisms of inflammation. It's a domain where I'm still working. Within the framework of my

thesis, I was the first to identify a molecular machinery involved in the mechanisms of inflammation, which we've called inflammasome, and which has been picked up by scientists all over the world. Today, thanks to the ERC subsidy, I am researching the signalling paths that may play a role in the activation of the inflammatory process.

What does this subsidy bring you?

It is one of the most generous available to a beginner in research. And it fits perfectly within our thought process: to carry on fundamental research in a new field.



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ABOUT THE PROJECT

One function of inflammation is to pinpoint the damaged cells and to maintain the integrity of the tissue. Fabio Martinon's project is aimed at discovering the mechanisms that start off the inflammation processes, and how they occur. Named “*Inflammatory Signals Emerging from the Endoplasmic Reticulum*”, his research may eventually lead to therapeutic processes. In certain types of diseases these organelles play the role of markers and therefore make it possible to detect the

type of inflammation, to give a diagnosis and to provide the right answer. Notably within the field of diseases linked to cancer, cardiovascular diseases or obesity.

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