

An interview with Olivier Pourquié

Olivier Pourquié is the new director of the Institute of Genetics and Molecular and Cellular Biology (IGBMC) in Strasbourg, France, and as of this month takes on another crucially important role in the developmental community – that of *Development's* new Editor in Chief. Recently, we asked James Briscoe, in his capacity as a director of the Company of Biologists, to interview Olivier and to discover more about his research career and interests and how they will shape the future content and directions of *Development*.



Describe your research interests in one sentence?

I am interested in embryonic patterning in vertebrates.

What projects are you working on at the moment?

We are trying to figure out how axis extension and segmentation are controlled in vertebrates. We are also carrying out large-scale studies to figure out the logic of the transcriptional programme that underlies paraxial mesoderm development.

What has been the most exciting moment in your career?

Realising that the static pictures of gene expression that we were seeing in the embryo in fact reflected the oscillatory gene expression that is associated with somite formation.

Why have you moved from Kansas City to Strasbourg?

The IGBMC is one of the leading institutes in France and it was hard to refuse the offer to be its director when it came. I'd also been

in the States for seven years and it was time for our family to return home.

How would you sum up your new institute?

A superb, very well thought out research machine organised by its founder Pierre Chambon and his team. It covers everything from structural biology to human genetics and from mouse physiology to, of course, development. We're also supported by world-class core facilities.

Where did you go to university?

I graduated from the National Institute for Agronomy (now called AgroParistech), an engineering school in Paris.

Why did you become a developmental biologist?

I went to listen to the public lectures of Francois Jacob at the College de France, when he was describing the discovery of Homeobox genes in the late eighties and was completely fascinated. It was this experience that influenced me to study developmental biology.

In which labs did you train and what made you go to these?

I talked to one of my professors at Agro, who sent me to Nicole Le Douarin's lab for an internship. I ended up staying there for nine years.

Who are your scientific heroes?

As a true Frenchman, I believed that Buffon and Lamarck had evolution all figured out until I read Darwin's *On the Origin of Species*. It is probably the scientific writing that impressed me most. Ed Lewis, Denis Duboule, François Jacob and Nicole Le Douarin are also among my scientific heroes. I like people who are able to think outside of the box.

What is your favourite paper, or the paper that has influenced you the most?

I think Ed Lewis' classic *Nature* paper in 1978 (Lewis, 1978). It really poses a

conceptually simple, yet key, question that it boldly addresses with simple tools, leading to the discovery of amazing concepts, such as colinearity. It tells you how important it is to ask the right questions.

How has developmental biology changed during your career?

Enormously, of course. To cite but a few breakthroughs, PCR has been invented, genomes have been sequenced, and imaging has made tremendous progress. When I started, scientists were building their careers on the study of one gene!

Development offers a true resource for the community and has for generations of developmental biologists

What do you think will be the next big breakthroughs in the field?

We need to figure out what signalling pathways actually do in developmental processes and how so few of them can elicit such tremendously different responses. Also, the elucidation of developmental gene networks, their architecture and their underlying logic will constitute a key breakthrough. The first cure to be enabled by cells engineered from reprogrammed stem cells would also be a tremendous achievement for developmental biology.

Do you have a favourite *Development* paper?

Off the top of my head, I can think of Couly, Coltey and Le Douarin from 1993 (Couly et al., 1993), which offered many great concepts derived from a thorough descriptive study. Much more interesting than many mechanistic studies.

When did you first start reading *Development*?

Just when it changed its name from the *Journal of Embryology and Experimental*

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 December 2009

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For more on Olivier Pourquié's vision for *Development*, see his Editorial: The four revolutions of *Development* (Pourquié, 2010).

Morphology to Development, when I was an undergraduate in Nicole Le Douarin's lab. I published my first paper in *Development* (Pourquié et al., 1990) over 20 years ago!

What do you like about *Development*?

It's run for scientists in the field by active scientists. *Development* offers a true resource for the community, and has for generations of developmental biologists, something the other journals in this field can't claim.

Why did you take the job of Editor in Chief of *Development*?

I had been an editor of *Developmental Biology* for nine years and enjoyed it, but I was attracted by the idea of being able to act more directly on the strategy of the journal.

Are you making any changes to *Development*?

Yes, I want to significantly reinforce systems biology and to cover stem cell biology much more vigorously. We are replacing the Development and Disease

section by a Development and Stem Cells section and are also recruiting new editors. For example, Nipam Patel and Rong Li have recently joined us as new editors.

Why should developmental biologists send their papers to *Development*?

Because it is an outstanding journal, with a consistent track record of publishing landmark papers in developmental biology. It is read by everyone in the field, and I think it is important to keep the journal as strong as possible so that scientists' voices are heard, to counterbalance the private interests that are currently ruling the publishing world.

Is it important to you that *Development* is a not-for-profit journal?

Of course, it is absolutely key and means that the journal is only centered on scientists' rather than on publishers' interests. This is a guarantee of true service for the community that is completely independent of any economic considerations.

If you weren't a scientist, what would you like to do and why?

I would probably be an archaeologist or a professional scuba diver because I always liked history and water.

What three things would you take to a desert island and why?

A mask, fins and snorkel as a good way to get food and distraction.

What would a reader be surprised to know about you?

I like stuffed animals.

If you wrote a book of your life, what would the title be?

A long way to science.

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