

## EDITORIAL

# I wish I were more organised, like the rest of me!

Michael Way\*

Some days, I don't know whether I'm coming or going, especially when I have an editorial to write, which I should have started earlier, along with a bunch of imminent important deadlines that I also have to meet. I am not the only one to experience this state of confusion and chaos, as many people find it hard to focus when they are too busy and overwhelmed. Thankfully, outside the context of disease, the same is not true of our cells and tissues – they know exactly what to do and when to do it. I guess I could go on some courses to improve my organisational skills or say no to more things, but I know I will never be as organised as my own cells and tissues.

But how can my cells be so organised when I am not? Excluding red blood cells, it turns out that virtually all the cells in our bodies are inherently polarised in some fashion. Moreover, this polarisation has shaped our development from the moment we were conceived. Polarisation of biochemical processes, as well as of the molecular and structural organisation of the cell over multiple length scales, is responsible for the exquisite apical–basal polarity of epithelial cells, for the ability of neurons to transduce information and for cells to migrate in the right direction. Underlying cell polarisation is the correct spatial and temporal delivery of mRNA, proteins and lipids, which are all essential for numerous cellular functions and processes, including ensuring that cell division occurs in the right place with the correct orientation. Not surprisingly, given its fundamental role in regulating cell differentiation and proliferation, polarisation is a central aspect of tissue organisation and function. Its importance is also underscored by the fact that a hallmark of tumorigenesis is the loss of tissue organisation and a breakdown in cell polarisation.

Work over the years in many model systems, such as *Drosophila*, *C. elegans* and yeast, has led to the identification of many of the components involved in establishing cell and tissue polarity. However, there are still many mysteries concerning how the physical and biochemical mechanisms regulating the establishment, remodelling and maintenance of cell and tissue polarisation are coordinated, as well as how they scale with size and shape. And remember, we also still don't fully understand what goes wrong during cancer and whether loss of polarisation is a consequence or driver of the disease.

Given these far-reaching roles in cell and developmental biology, as well as in tumour progression, we have decided that the eighth Journal of Cell Science Special Issue will focus on cell and tissue polarity. This Special Issue will be guest edited by David Bryant, who is a Reader at the University of Glasgow, based at the Cancer



David Bryant

Research UK Beatson Institute, and a member of the Journal of Cell Science Editorial Advisory Board. Dave has made seminal contributions to understanding how epithelial cells undergo polarisation, particularly using three-dimensional culture methods. His laboratory's research focuses on how cell polarity is generated in normal tissues, and how this is lost in prostate, ovarian and colorectal tumours. A central theme of the laboratory is understanding how a class of lipids termed phosphatidylinositol phosphates (PIPs), as well as their regulators and effectors, control cell polarisation.

We will welcome submissions for our Special Issue on Cell and Tissue Polarity until 15 July 2023. The Special Issue will also contain reviews and poster articles, commissioned by our in-house Reviews Editors. We look forward to working with Dave on this important topic. You can find out more at <https://journals.biologists.com/jcs/pages/polarity> and contact us at [jcs@biologists.com](mailto:jcs@biologists.com) about any potential submissions.

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