

## FIRST PERSON

# First person – Kenrick Waite

First Person is a series of interviews with the first authors of a selection of papers published in Journal of Cell Science, helping researchers promote themselves alongside their papers. Kenrick Waite is first author on 'Proteasome granule localization is regulated through mitochondrial respiration and kinase signaling', published in JCS. Kenrick is a postdoc in the lab of Jeroen Roelofs at Department of Biochemistry and Molecular Biology, University of Kansas Medical Center, Kansas City, USA, where he is interested in understanding how cells regulate biological processes and how this is linked to different phenotypes or diseases.

### How would you explain the main findings of your paper in lay terms?

Proteasomes are protein recycling centers found at locations in the cell where their activity is required for different processes. In our model system, baker's yeast, as well as in a variety of mammalian cell types, most proteasomes are found in the nucleus. We found that upon inhibition of the cell's energy producing mitochondria, proteasomes relocate from yeast nuclei to cytosolic granules. This process was specifically controlled by several kinases. Our work shows that mitochondrial respiration is an important regulator of proteasome localization and presumably function.

### When doing the research, did you have a particular result or 'eureka' moment that has stuck with you?

When working to find the signaling pathways regulating proteasome localization, we were struck by one kinase in particular, mitogen activated protein kinase 1 (Mpk1). We found that this kinase was only important in regulating proteasome localization if there was active mitochondrial respiration. This was fascinating because it added a regulatory component to our model; it showed that respiration is a key regulator of proteasome localization.

### Why did you choose Journal of Cell Science for your paper?

We wanted to publish our work in a high quality journal with a rigorous and fair review process. JCS seemed like a good fit for the type of data, and other studies on proteasome granules have been published in the journal in previous years. We also value that JCS has a long history and is run by scientists with a goal of supporting the scientific community.

### Have you had any significant mentors who have helped you beyond supervision in the lab? How was their guidance special?

Early in my career, I was doing an internship with the USDA. There, I worked under the supervision of Dr Barbara Drolet. Though I



Kenrick Waite

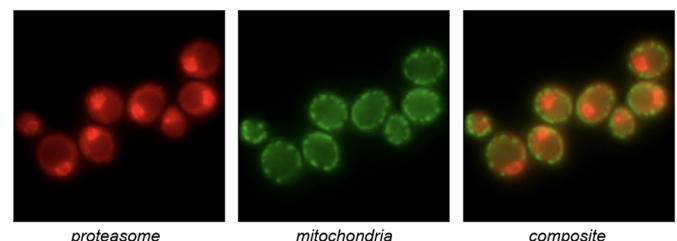
loved the work, my confidence in myself to become a 'real' scientist was not high. Luckily, Dr Drolet had enough confidence in me and after my internship she helped to secure a research job for me at the USDA. A year later, she encouraged me to apply to grad school and helped me with the process. Her guidance at those early stages was instrumental to my success today.

### What motivated you to pursue a career in science, and what have been the most interesting moments on the path that led you to where you are now?

I have always been curious about biology and what goes wrong in diseases such as cancer. As an undergraduate, I wanted to know more, so I joined a lab to gain some research experience. Interestingly, my first biology job was not in cell biology but in ecology, surveying biting flies that transmit viruses. Though a fantastic experience, I discovered my passion was for cell biology.

### What's next for you?

My goal is to keep doing good research that is of interest to me and that advances knowledge in cell biology. I am open to different pathways that lead in that direction, including academia.



Proteasome (red) and mitochondria (green) localization in non-stressed yeast.

Kenrick Waite's contact details: Department of Biochemistry and Molecular Biology, University of Kansas Medical Center, Kansas City, 3901 Rainbow Blvd., HLSIC 1077, Kansas, USA.  
E-mail: kwaite2@kumc.edu

**Tell us something interesting about yourself that wouldn't be on your CV**

I love to garden. The process of learning how to grow something effectively, then watching it come to fruition is fascinating to me.

**Reference**

Waite, K. A. and Roelofs, J. (2022). Proteasome granule localization is regulated through mitochondrial respiration and kinase signalling. *J. Cell Sci.* **135**, jcs259778. doi:10.1242/jcs.259778