EXO Beyond the Cell

Science Exploration

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EXO - Beyond the Cell, a journal about how cells interact with their environment

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I'm pleased to announce the launch of *EXO - Beyond the Cell*, a new journal focused on how cells interact with their environment. In recent years, there has been an explosion of methods, data, and analyses of spatial data, revealing that the geography of cells is critical in tissue contexts[1]. Studying cells in isolation misses this critical aspect of how cells engage with their native environment; interactions between cells in tissues have a profound impact on cell and organ biology, and important implications for medicine[2]. Tissue interactions are critical in all areas of biology, from neuroscience[3] to immunology[4] to cancer biology[5] and far beyond.

As in most scientific revolutions, this new field of spatially-informed biology has required the development of new methods and analytical frameworks[6]. These include systematic and high-throughput global methods of data collection, including spatial transcriptomics, proteomics and metabolomics, as well as computational methods for multi-omic integration, 3D reconstructions, and defining spatial gradients, to name a few examples. With these new tools, we can now identify not just the different cell populations present in tissues, but also how they interact and how those interactions create different cell subtypes and states that drive normal physiology and pathophysiology. Indeed, the next century is likely to be one that is rich in spatial data, providing opportunities for deeper understanding, as well as improved diagnostic tools and therapeutic interventions.

EXO aims to be the premier journal for publishing rigorous and impactful studies, reviews, and commentaries on how cells interact with their environment. We are excited to receive papers on new technologies, tools, and applications in this frontier. I'm thankful to the truly outstanding members of our Editorial Board who have agreed to guide the journal and help us realize this mission. If you peruse their profiles on the website, you will find that we have exceptional scientists who are leaders in all aspects of this emerging field, and hence, manuscripts will be thoughtfully and carefully assessed. Regarding my own journey into spatial biology, my lab at Columbia University began exploring spatial tools for metabolism, including mass spectrometry methods, nearly a decade ago, stemming from our interest in how lipids and metabolites influence susceptibility to ferroptosis, a regulated form of cell death we identified in 2003[7], and then thoroughly defined in a series of papers from then through 2012[8-11], using the tools of chemical biology[12,13]. We indeed have seen over many years that spatial data are critical for understanding in vivo metabolism[14-16], pharmacology[17,18], chemical biology data[19-21], and more generally, cell biology[22-27]. Hence, my excitement about leading a journal dedicated to this field.

Let me turn to the journal itself and tell you some of the innovative features we are implementing. The journal is open access and hence there are no subscription fees; additionally, there won't be any article processing charges (APCs) until 2030. We have also launched a *Founding Contributor Program* to reward authors who publish in the journal in the first year. The first author or corresponding author of each review or primary article published before Nov 30th, 2026 will receive an APC waiver for use after 2030, when modest APCs are introduced. The journal will also provide a *Founding Contributor Certificate* and membership in our *Founding Contributor Honor Wall*, as well as eligibility for the *Founding Author Award* that we will announce after this period. We hope that these incentives will encourage the community to submit their best ideas and work to *EXO* so that we all benefit from a truly exceptional place to publish our findings and ideas.

I plan to be involved in each submission, ensuring that the journal provides authors with transparent, constructive, and effective feedback. We want to limit reviewer feedback to a handful of critical questions about whether the data support the conclusions, so

that we have rigorous and exceptional papers, but not unnecessarily requested experiments that drain time and resources. We want reviewers and authors to enjoy the experience of publishing in *EXO*. We also want to showcase *EXO* papers so that students and postdocs gain the benefit of visibility to help them in their next career step, becoming leaders in the spatial biology community upon publishing in *EXO*. I want to hear from our prospective authors – have we done a good job, and if not, how can we do better?

With many consortia, including HuBMAP[28], the Human Cell Atlas[29], and the Human Tumor Atlas Network[30] focused on mapping cells in their tissue contexts, we can see that spatial, single-cell biology is the next major frontier in biology and medicine. I look forward to watching this revolution unfold in the pages of *EXO*.

Declarations

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I thank the members of my laboratory for their contributions to our thinking about the importance of spatial biology over the last decade.

Authors contribution

The author contributed solely to the article.

Conflicts of interest

Brent R. Stockwell is an inventor on patents and patent applications involving ferroptosis, holds equity in and serves as a consultant to ProJenX, Inc, and serves as a consultant to Weatherwax Biotechnologies Corporation. Brent R. Stockwell is also the Editor-in-Chief of *EXO - Beyond the Cell*.

Ethical Approval

Not applicable.

Consent to Participate

Not applicable.

Consent for Publication

Not applicable.

Availability of data and materials

Not applicable.

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