E JOURNAL OF CELL BIOLOG

Cell biology beyond the cell

Priya Prakash Budde¹ and Tom Misteli²

¹Reviews Editor and ²Editor-In-Chief, The Journal of Cell Biology

This issue of the *JCB* marks the start of a new series of reviews entitled "The Cell Biology of...". The goal of this series is to elucidate the cell biology underlying complex physiological processes. The series will start with a set of reviews on the senses and will extend to other fundamental physiological topics including sleep, memory, and regeneration.

Why these reviews? Let's face it, as cell biologists we are often overly focused on studying the molecular details of a cellular process. We are comfortable with the inner workings of the cell—but how does this fit into the bigger picture of an entire organism? These reviews will make it clear that cellular function is the basis of all higher order, complex biological processes and they will highlight the continuum of biological function from the molecular to the organismal level. Our hope is to get cell biologists interested in diverse biological processes and appreciate how much beautiful cell biology underlies them. To achieve this, we have made every effort make each review easily accessible to nonexperts. The first review in this series on the cell biology of hearing from Ulrich Müller and colleagues (Schwander et al., 2010) does a wonderful job of deconstructing this amazing process in an accessible and engaging way. Although these reviews are geared toward professional cell biologists, we hope that they will serve as resources for the broader biological community, particularly teachers and students. Like all reviews published in the JCB, these reviews will be freely available online from the date of publication.



of a larger effort by the JCB to publish insightful and definitive reviews. Over the last year, we have expanded our reviews section to include a broader range of topics. In addition to reviews on core topics in cell biology, we have published a number of reviews on the cellular basis of disease (for a recent example, see Elliott and Ravichandran, 2010), on emerging topics such as synthetic biology (Haynes and Silver, 2009), on key methods that are revolutionizing cell biology such as automated screening in microscopy (Conrad and Gerlich, 2010), and on how cell biology can be applied in therapeutic settings (Ruoslahti et al., 2010). By diversifying our review content, we hope to keep our readers abreast of all facets of the ever-changing world of cell biology. Moreover, we hope to break the barrier of what topics are traditionally deemed

cell biology. Because the simple fact is

cell biology underlies every biological

process, no matter how complex.

This new series of reviews is part

References

Conrad, C., and D.W. Gerlich. 2010. Automated microscopy for high-content RNAi screening. J. Cell Biol. 188:453–461. doi:10.1083/ jcb.200910105

Elliott, M.R., and K.S. Ravichandran. 2010. Clearance of apoptotic cells: implications in health and disease. *J. Cell Biol.* 189:1059– 1070. doi:10.1083/jcb.201004096

Haynes, K.A., and P.A. Silver. 2009. Eukaryotic systems broaden the scope of synthetic biology. J. Cell Biol. 187:589–596. doi:10 .1083/jcb.200908138

Ruoslahti, E., S.N. Bhatia, and M.J. Sailor. 2010. Targeting of drugs and nanoparticles to tumors. *J. Cell Biol.* 188:759–768. doi:10 .1083/jcb.200910104

Schwander, M., B. Kachar, and U. Müller. 2010. The cell biology of hearing. J. Cell. Biol. 190:9–20. doi:10.1083/jcb.201001138

© 2010 Budde and Misteli This article is distributed under the terms of an Attribution–Noncommercial–Share Alike–No Mirror Sites license for the first six months after the publication date (see http://www.rupress.org/terms). After six months it is available under a Creative Commons License (Attribution–Noncommercial–Share Alike 3.0 Unported license, as described at http://creativecommons.org/licenses/by-nc-sa/3.0/).

Correspondence to Priya Prakash Budde: pbudde@mail.rockefeller.edu