A Baker's Dozen of Ubiquitin

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The biomedical landscape would be substantially different had Avram Hershko, Irwin Rose, and their colleagues at the Technion Institute (Haifa) and the Fox Chase Cancer Center (Philadelphia) not discovered the basic framework of ubiquitin-dependent regulation three decades ago [1, 2]. The fundamental strategy of targeted protein degradation through ligation of ubiquitin to cellular proteins, and the related signaling pathways involving an expanding host of ubiquitin-like polypeptides, has transformed the understanding of cell regulation and homeostasis. The timing of the emerging appreciation of the importance of the ubiquitin system, and the major conceptual advances within the field since, has been fortuitous since each has coincided with the evolution of major methodological approaches that have propelled discovery: fundamental methods of cloning and recombinant protein expression, the advent of yeast genetics, high-throughput screening, and more recent proteomic techniques. Therefore, we stand at the beginning of the fourth decade of the field in an excellent position to exploit past discoveries as ubiquitin moves into translational research and drug discovery. This special focus issue

of *Cell Biochemistry and Biophysics* highlights a baker's dozen of papers originating from the second Annual Ubiquitin Drug Discovery and Diagnostics Conference held August 23–25, 2010 in Philadelphia. The selection of papers highlights the diversity of cutting edge topics currently serving, in part, as the foci of the field. We thank the organizers of the meeting and the authors and their colleagues for making this special focus issue possible.

References

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