Preface to the Ninth Edition

For over two decades, Dr. Gerald Karp wrote, and continuously revised, *Cell and Molecular Biology: Concepts and Experiments*. During this time, he maintained a consistent focus on combining rigor with accessibility, so that even students without prior training in cell biology, molecular biology, or biochemistry have been able to learn cell biology not just as a collection of facts but as a process of discovery. The value of this approach is that the lessons learned extend far beyond the field of cell biology, and provide a way for students to learn how science works, how new experiments can overturn previous dogmas, and how new techniques can lead to groundbreaking discovery. This approach makes cell biology come alive.

After seven editions, Dr. Karp was ready to move on to other adventures. We were excited to take on the challenge of continuing Dr. Karp's unique approach to teaching cell biology, while continuing to put students first. Our goal has been to build upon Karp's hallmark experimental approach by bringing in our own unique perspectives and harnessing today's technology. With our new ***Experimental Walkthrough*** feature, available in WileyPLUS Learning Space, students can see first-hand how key experimental techniques are performed in the lab. These offer a mix of video, which show how researchers carry out experiments, and 3D animations that show a molecular-level view of how the experiments work. These Walkthroughs provide context and a visual explanation that helps make these important experimental techniques more concrete.

One key feature of the past editions was to highlight how cell biology impacts our daily lives, in terms of medicine and other areas of society. The ***Human Perspectives*** sections highlight human interest stories to reinforce and review basic cell biology, and also provide examples of how fundamental discoveries have progressed into clinical practice. We have expanded this feature so that now every chapter has at least one Human Perspectives section. As part of this feature we report on the latest clinical trials for various cell biology-based therapies and drugs, a feature that we hope will inspire students who are pursuing careers in health sciences fields. In addition to the full Human Perspectives sections, each chapter is now introduced with a short "chapter opener" designed to generate enthusiasm about the science in each chapter through provocative issues or questions. We hope that this will give our readers the opportunity to think more about the links between science, society, and our place in the universe.

In the ninth edition we have introduced two new sections for each chapter. ***Green Cells*** sections highlight important features of plant cell biology that underscore central concepts from each chapter and illustrate how the study of plants has informed our understanding of cells in general. ***Engineering Linkages*** sections address the interface between cell biology and biomedical engineering and are intended to make the cell biology material more accessible for engineering students while introducing biology students to important trends in bioengineering.

Working on the 9th edition has given us renewed admiration for Dr. Karp's writing and his ability to keep track of the cutting edge in the full range of topics that comprise cell and molecular biology. In this and future editions of *Karp's Cell and Molecular Biology: Concepts and Experiments*, we are dedicated to carrying out Dr. Karp's original mission of providing an interesting, modern and readable text that is grounded in the experimental approach. We welcome your ideas and feedback as we continue our work on this text, so please feel free to get in touch.

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WileyPLUS connects the text to carefully selected video, animations, and diagrams, and provides students many opportunities for self-study and practice. Instructors can customize their course content for students, create online homework and quizzes, and have insight into student activity through data analytics and reporting features. To try it, visit www.wileyplus.com. Here are some of the resources available in WileyPLUS:

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- Quantitative Tutorial Videos
- Cell View Animations
- Video Library
- Biology Basics Animations
- Instructor's Manual
- Clicker Questions
- Lecture PowerPoint Presentations
- Testbank and Answer Key

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