

INTRACELLULAR CALCIUM

ANTHONY K. CAMPBELL

*School of Pharmacy and Pharmaceutical Sciences, Cardiff University, UK
and Welston Court Science Centre, UK*



Thousands of imaginative scientists, over more than a century, have revealed the fascinating story of intracellular calcium, through a pathway of ingenious invention and discovery.

***Intracellular Calcium*, the definitive book on this topic, reveals:**

- The pathway of discovery and invention of intracellular calcium over more than 100 years
- The evidence for intracellular calcium as a universal switch in all animal, plant, fungal and microbial cells
- How the components required for calcium signalling are named and classified
- The ingenious technology that has been developed to study intracellular calcium
- How calcium is regulated inside cells and how it works to trigger an event
- The role of intracellular calcium in disease, cell injury and cell death
- How many drugs work through the calcium signalling system
- How intracellular calcium is involved in the action of many natural toxins
- How the intracellular calcium signalling system has evolved over 4000 million years, showing why it was crucial to the origin of life

A key principle presented throughout the book is the molecular variation upon which the intracellular calcium signalling system depends. This variation occurs within the same cell type and between cells with different functions, providing the invisible matrix upon which Darwin and Wallace's Natural Selection depends.

Featuring more than 120 figures, including detailed chemical structures as well as pictures of key pioneers in the field, a bibliography of more than 2000 references, as well as detailed subject and organism indices, this definitive work provides a unique source of scholarship for all students, teachers and researchers in the biomedical sciences and beyond.

ANTHONY K. CAMPBELL is one of the leading scholars in intracellular calcium, having studied the subject for over 40 years. He is a pioneer in the use of bioluminescent indicators to measure and image free calcium in all the domains of life: animals, plants, bacteria and Archaea. This work led to an invention now used in several billion clinical tests per year world-wide.



Also available
as an e-book



References and other supplementary material
are available at the companion website:

wiley.com/go/campbell/calcium

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