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Sommario/riassunto	This volume of the series Space Life Sciences provides insights into the latest findings of gravity research and the effect of gravity on biological systems, specifically on a cellular and molecular level. It starts by explaining the underlying physics of gravity and presenting some novel ideas on the basic principles of gravity perception. It then goes on to discuss how, in response to gravity perception, secondary messengers such as calcium and hydrogen peroxide, might control responses further downstream, like gene and protein expression and modulation.

Further, it describes the consequences for animal and plant cells as well as for metabolism. Written by experts in the field, this book is a valuable resource for students and researchers in biochemistry, medicine and biomedicine, wanting to gain a solid understanding of membrane biology, secondary messenger function and gene and protein expression, specifically in the context of gravity.