

METHODS IN MOLECULAR BIOLOGY

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Exosomes and Microvesicles

Methods and Protocols

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Preface

Exosomes and Microvesicles: Methods and Protocols brings together a collection of methods for studying extracellular vesicles (EV). There has been significant growth in the field of EV research over the last decade as we understand more about the role of exosomes, microvesicles, and other EVs in many facets of cellular biology. This has been brought about with the emerging role of EVs in cell-cell communication and their potential as sources of disease biomarkers and a delivery agent for therapeutics.

The protocols in this volume of *Methods in Molecular Biology* cover methods for the analysis of EVs which can be applied to those isolated from a wide variety of sources. This includes the use of electron microscopy, tunable resistance pulse sensing, and nanoparticle tracking analysis. Furthermore, analysis of EV cargoes containing proteins and genomic material is covered in detailed chapters that contain methods for proteomic and genomic analysis using a number of different approaches. Also presented are approaches for isolating EVs from different sources such as platelets and neuronal cells and tissues. Combined these provide a comprehensive discussion of relevant methodologies for researching EVs. As with other volumes in the *Methods in Molecular Biology* series, the notes sections at the end of each methods chapter give invaluable insight into the methods and provide information which can help with troubleshooting and further experimental optimization.

I would like to thank the chapter authors for their contributions to this volume and the editorial assistance of John Walker (Series Editor) in putting this volume together.

Melbourne, Australia

Andrew F. Hill

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