

Preface

Considerable effort and time is a devoted to introducing cell culture and fermentation technology to undergraduate students in academia, generally through a range of courses in industrial biotechnology and related disciplines. Similarly, a large number of textbooks are available to describe the applications of these technologies in industry. However, there has been a general lack of perception of the significant developments in downstream processing and isolation technology, the need for which is largely driven by the stringent regulatory requirements for purity and quality of injectable biopharmaceuticals. This is particularly reflected by the general absence of coverage of this subject in many biotechnology and related courses in educational institutions.

For a considerable while I have felt that there is increasing need for an introductory text on various aspects of downstream processing, particularly with respect to the needs of the biopharmaceutical and biotechnology industry. Although there are numerous texts that cover various aspects of protein purification techniques in isolation, there is a need for a work that covers the full range of isolation technology in an industrial setting. It is anticipated that *Downstream Processing of Proteins: Methods and Protocols* will play a useful part in filling this gap and thus prove a useful contribution to the field. It is also designed to encourage educational strategies to broaden the coverage of these topics in industrial biotechnology courses by including examples of this important and rapidly developing element of the industrial process. The hope is that this will result in graduates having a reasonable understanding of downstream processing principles and techniques, and thus be better prepared to fulfill the ever-increasing demand for competent isolation scientists in industries.

This is, of course, achieved with the help of the dedicated contributing authors of *Downstream Processing of Proteins: Methods and Protocols*, without whose willingness to contribute and patience it would not have been possible. I would also like to thank the Humana Press and Prof. John Walker (Editor in Chief) for their encouragement and prompt feedback. My thanks are also due to the Malvern Plurima Development management for providing me with the time and opportunity to fulfill this task, and without whose support it

would have been impossible. Finally, I wish to thank my wife, children, and family members for allowing me to persevere with my editing activities in perhaps what should have been their time.

Mohamed A. Desei, PhD