Preface

The hematopoietic stem cell (HSC) field has continued to grow and become more sophisticated with each passing year. Methods for isolation of HSC and progenitor subsets and a variety of single cell and molecular technologies have led to a greater understanding of the heterogeneity within the phenotypically defined HSC subsets. The first two editions of Hematopoietic Stem Cell Protocols are very thorough resources in the user-friendly Methods in Molecular Medicine format. This is the third edition of Hematopoietic Stem Cell Protocols and aims to provide timely protocols in the HSC field while continuing the tradition. This edition teaches major new technologies that have advanced the state of the art in the field and promise to drive research in many unexpected and exciting ways in the future.

The first chapter is an overview that ties the other chapters together into a larger picture of the HSC landscape.

The methods chapters include similar categories to the last editions but with entirely new approaches and innovative insights. The author list is made up of leading researchers who have made major contributions toward these technical advances and who have provided a much needed resource for new stem cell investigators.

We thank all of the contributors for their time and effort. It has been a pleasure for both co-editors to work with the contributing authors on this project. To provide updates in the fast-paced HSC field is an important endeavor. We have specifically focused on the HSC population and did not focus directly on the stem cell-associated niche which comprises a new field in itself and deserving of a separate edition. We are delighted to have organized this information into a comprehensive and essential resource. It is our hope that this resource will be a critical addition to all laboratories seeking to isolate and characterize HSCs for research and for therapeutic applications.

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