Preface

Ataxia-telangiectasia (A-T) is a rare and severe genetic disorder affecting children. Since the discovery and cloning of the ATM (ataxia-telangiectasia, mutated) gene causing the disease in 1995, A-T has become an ever expanding field of research that has been enriched by contributions from the broad community of scientists attracted to the field by the fundamental role played by the ATM kinase in DNA damage signaling and diverse cellular processes. This has led to the development of a great number of protocols related to studies of the ATM gene and protein, which have been scattered across many published papers and books, including the *Methods in Molecular Biology* series. It is a timely undertaking by the *Methods in Molecular Biology* program to collate the essential protocols in A-T research and present them in a single volume. The positive response received from the majority of scientists we have contacted to share their protocols for the book is a testament to the collaborative spirit of the A-T research community. Many colleagues made the poignant observation that, in 2015, we celebrated 20 years since the discovery of the ATM gene and that it is now important to reflect on discoveries, which have been made possible by the invention and application of many new techniques and approaches in A-T research.

We have attempted to present a reasonably comprehensive collection of protocols by our contributors within the space limitations of a single volume. These limitations precluded us from giving sufficient attention to A-T animal models, which, without a doubt, deserve a separate volume due to their importance and complexity of techniques used. We do apologize for any unintentional omissions.

We hope this book will be a handy desktop reference for both seasoned A-T researchers and postgraduate students, as it demonstrates the breadth of recent developments in A-T studies. We also hope to ignite and attract the interest of colleagues from diverse fields to A-T research in an effort to bring their expertise and fresh ideas to resolve many A-T puzzles still waiting to be pieced together.

For all scientists working in the A-T field, the ultimate goal is to alleviate the suffering of A-T children and their families. We hope that our humble effort to collate technological and methodological advances in ATM and DNA damage research will facilitate this goal by helping scientists to utilize these techniques in their labs.

This book would not have been possible without generous contributions of many scientists, who shared their knowledge, for which I am very grateful. I am also sincerely grateful to the series editor, Professor John Walker, for his help, advice, and patient guidance in preparing this volume. I am indebted to Professor Martin Lavin for his relentless effort to advance ATM research and his continuing support over the years.

Herston, QLD, Australia — *Sergei V. Kozlov*

http://www.springer.com/978-1-4939-6953-1

ATM Kinase
Methods and Protocols
Kozlov, S.V. (Ed.)
2017, XIV, 437 p. 93 illus., 69 illus. in color., Hardcover
ISBN: 978-1-4939-6953-1
A product of Humana Press