Troubleshooting and Problem-Solving in the IVF Laboratory
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This book is dedicated to the memory of Bob Edwards (1925–2013) and Jean Purdy (1945–1985), as a tribute to their 10 years of heroic and persistent IVF troubleshooting in Oldham, 1968–1978. Their wisdom, courage, and indefatigable enthusiasm and stamina in facing and overcoming multiple problems, setbacks, and challenges was finally rewarded with the birth of the first two Test Tube Babies, both conceived towards the end of their troubleshooting journey in Oldham: Louise Brown (single embryo transfer November 12th 1977, born July 25th 1978) and Alastair MacDonald (single embryo transfer May 23rd 1978, born January 14th 1979).
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Preface

In September 1998, approximately 200 IVF scientists worldwide participated in a 48-hour International Internet Conference hosted by Thomas Elliott and Kay Elder on behalf of Alpha, Scientists in Reproductive Medicine: "Problem Solving and Troubleshooting in IVF." The edited Proceedings of this Conference were published by Phil Matson and Ladybrook Publishing in 1998, as one of a series of World Wide Conferences on Reproductive Biology; copies of this book ran out within a month of its printing, and it remained out of print thereafter. Demand for the book continued, and electronic pdf copies were sent on request over the subsequent decade. Fourteen years later, in 2012, Dr. Rajvi Mehta requested permission to re-print the book in order to help local embryologists in India, with the support of Trivector Scientific Pvt Ltd and Trivector Embryology Support Academy. This confirmation of continuing demand for guidance in troubleshooting IVF systems prompted us to consider writing an update to the original Conference Proceedings book.

During 2013, Quartec GmbH launched a series of Troubleshooting workshops held in a number of European countries, along with a series of scheduled Webinars (www.quartec.co); the popularity of both workshops and webinars further reinforced the suggestion that an updated book would be a useful contribution to the field of IVF Clinical Embryology. A third co-author (BW), agreed to join us, with the valuable contribution of practical experience, case reports, and tips gained from troubleshooting in IVF laboratories all over the world.

The chapters include commonly encountered problems, supported by case reports, and contain the essential theoretical background necessary to understand the science and implement solutions. Each chapter contains specific practical tips, as well as troubleshooting flowcharts and process maps that can be followed in tackling different types of problem. The scope of the book is intentionally restricted to routine clinical IVF/ICSI practice only: more complex and novel technologies can only succeed if they adhere to the same established fundamental basic principles that contribute to success in conventional culture of gametes and embryos.

We hope this book will provide a useful guide in helping IVF clinics to maintain the highest, consistently reliable success rates possible, in order to achieve the dream of every infertile couple: the birth of a healthy live baby.
Acknowledgments

We are grateful to all of the participants of the 1998 International Internet Conference on Troubleshooting and Problem Solving in IVF for their many valuable contributions at that time. Topics and questions posted on Embryomail (www.embryomail.net), and on IVF.net (www.ivf.net) provided a further valuable resource and source of inspiration, and we are immensely grateful to all of the scientists who continue to post questions, suggestions, and advice with such enthusiasm and dedication. Thanks also to Nadir Çiray and Yves Ménézo for helpful comments and suggestions.

Kay gratefully acknowledges the continuing support of Mike Macnamee and all of the team at Bourn Hall Clinic. . . . Thank you! Bryan would like to acknowledge all of the staff in laboratories where he has been called in to provide locum embryology, consultancy, and troubleshooting. He is also grateful to all of the labs that permitted photographs to be taken.