

HUMAN REPRODUCTION AND *in vitro*
FERTILISATION

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DIMENSIONS OF SCIENCE

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HUMAN
REPRODUCTION
AND *in vitro*
FERTILISATION

H. J. Leese

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First published 1988

Published by
MACMILLAN EDUCATION LTD
Houndmills, Basingstoke, Hampshire RG21 2XS
and London
Companies and representatives
throughout the world

British Library Cataloguing in Publication Data

Leese, H. J. (Henry J)

Human reproduction and in vitro
fertilisation.

1. Women. Ova. In vitro fertilisation.

Social aspects

I. Title II. Series

362.1'042

ISBN 978-0-333-45121-2

ISBN 978-1-349-09803-3 (eBook)

DOI 10.1007/978-1-349-09803-3

For Brenda, David and Matthew

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Series Editor's Preface

This book is one in a Series designed to illustrate and explore a range of ways in which scientific knowledge is generated, and techniques are developed and applied. The volumes in this Series will certainly satisfy the needs of students at 'A' level and in first-year higher-education courses, although there is no intention to bridge any apparent gap in the transfer from secondary to tertiary stages. Indeed, the notion that a scientific education is both continuous and continuing is implicit in the approach which the authors have taken.

Working from a base of 'common core' 'A'-level knowledge and principles, each book demonstrates how that knowledge and those principles can be extended in academic terms, and also how they are applied in a variety of contexts which give relevance to the study of the subject. The subject matter is developed both in depth (in intellectual terms) and in breadth (in relevance). A significant feature is the way in which each text makes explicit some aspect of the fundamental processes of science, or shows science, and scientists, 'in action'. In some cases this is made clear by highlighting the methods used by scientists in, for example, employing a systematic approach to the collection of information, or the setting up of an experiment. In other cases the treatment traces a series of related steps in the scientific process, such as investigation, hypothesising, evaluating and problem-solving. The fact that there are many dimensions to the creation of knowledge and to its application by scientists and technologists is the title and consistent theme of all the books in the Series.

The authors are all authorities in the fields in which they have written, and share a common interest in the enjoyment of their work in science. We feel sure that something of that satisfaction will be imparted to their readers in the continuing study of the subject.

Preface

This book began as a lecture to the Annual Meeting of The Association for Science Education, in York in 1986. I thank Mary Waltham of Macmillan Education for suggesting I turn the lecture into a book, and for her encouragement and advice during its writing.

The book is an attempt to take one example of modern biology, *in vitro* fertilisation (IVF), and place it in its social context. In practice, this has meant describing the biology of IVF, the social aspects of the science surrounding it, the incidence and nature of infertility, the clinical procedures involved in IVF, the ethical issues raised and the response of Government. In other words, the book explores separately some of the multidisciplinary aspects of IVF. Since so much of the subject matter is open to a variety of interpretations, it has largely been left to readers to form their own overview of this fascinating topic.

While every effort has been made to present the latest information, this is a very fast-moving field, in which the state of the art changes rapidly. I hope readers will bear with the occasional fact or statement that has been overtaken by events.

I thank Drs John Biggers, Dave Gardner and Liz Lenton for their valuable comments on parts of the book and Michael Hooper for so skilfully drawing the diagrams. Ultimate responsibility for everything in the book is, of course, mine.

Finally I am indebted to Bob Edwards for introducing me to that wonder of nature, the early human embryo, and to my wife, for her constant support and quintessentially female viewpoint.

Acknowledgements

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The Benjamin/Cummings Publishing Company for illustrations based on *The World of the Cell* by Wayne M. Becker, pp. 491 and 620. Copyright © 1986.

The Controller of Her Majesty's Stationery Office for extracts from *Human Fertilisation and Embryology: A Framework for Legislation*, Cm. 259, DHSS.

Macdonald & Co. (Publishers) Ltd for a diagram based on *Infertility: A Sympathetic Approach* by Robert M. L. Winston, p. 159, Martin Dunitz.

Macmillan Magazines Ltd for extracts from 'Social Values and Research in Human Embryology' by Robert G. Edwards and David J. Sharpe, *Nature*, Vol. 231, 14.5.71 and 'Early Stages of Fertilization *in vitro* of Human Oocytes Matured *in vitro*' by R. G. Edwards, B. D. Bavister and P. C. Steptoe, *Nature*, Vol. 221, 15.2.69.

Sereno Laboratories Ltd for illustration based on 'In Vitro Fertilisation: Some Questions Answered', p. 7.

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List of Abbreviations

AID	Artificial Insemination by Donor
AIH	Artificial Insemination by Husband
FSH	Follicle Stimulating Hormone
GnRH	Gonadotrophin Releasing Hormone
HCG	Human Chorionic Gonadotrophin
HMG	Human Menopausal Gonadotrophin
IVF	<i>in vitro</i> Fertilisation
LH	Luteinising Hormone
LHRH	Gonadotrophin Releasing Hormone
MRC	Medical Research Council
RCOG	Royal College of Obstetricians and Gynaecologists
SLA	Statutory Licensing Authority
VLA	Voluntary Licensing Authority