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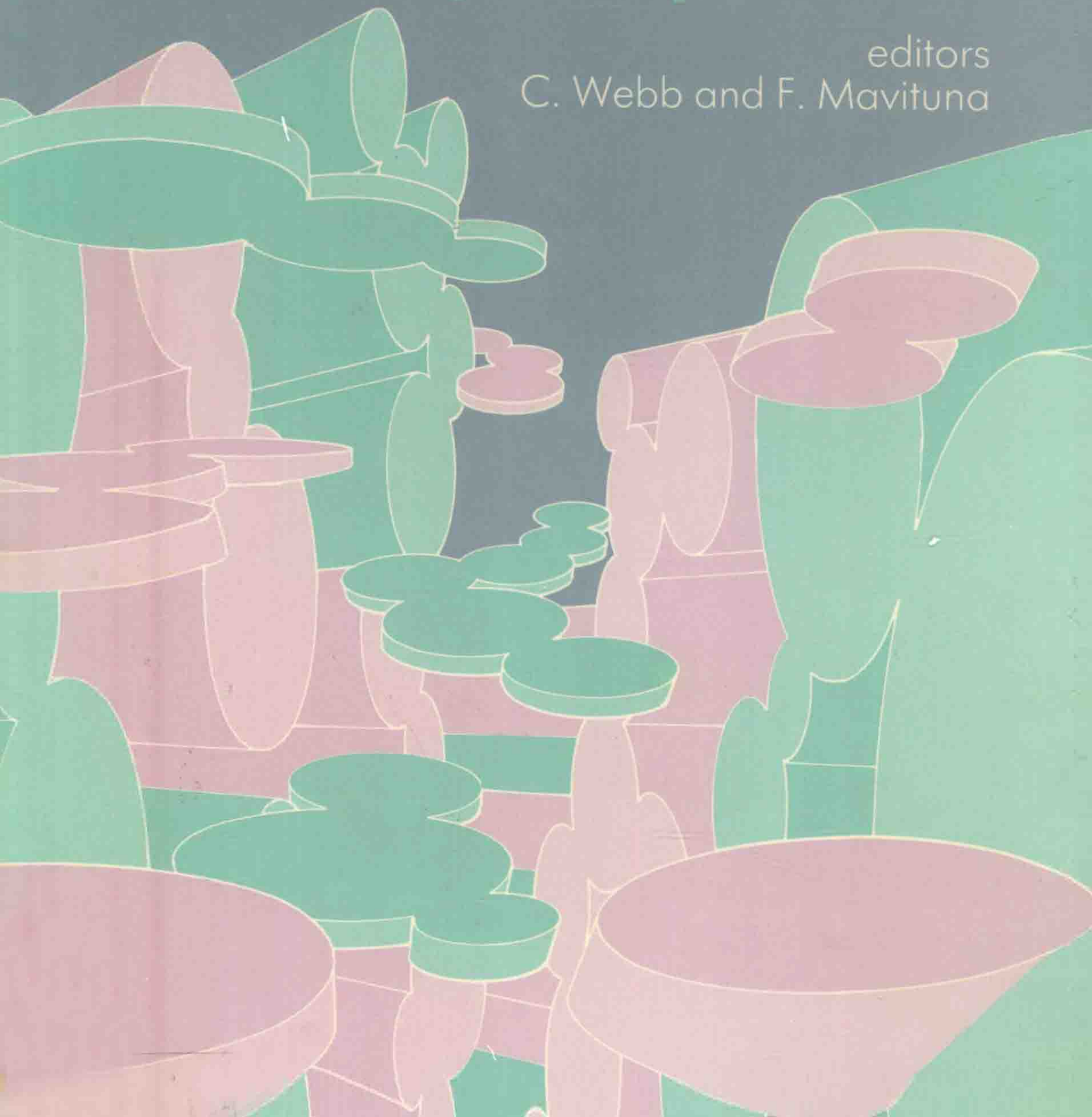
PLANT AND ANIMAL CELLS

process possibilities

editors
C. Webb and F. Mavituna



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Process Possibilities

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A conference organised by the
Institution of Chemical Engineers
and the University of Manchester Institute of Science and Technology

Published by
Ellis Horwood Limited, Chichester

First published in 1987 by
ELLIS HORWOOD LIMITED
Market Cross House, Cooper Street,
Chichester, West Sussex, PO19 1EB, England
The publisher's colophon is reproduced from James Gillison's drawing of the ancient Market Cross, Chichester.

Distributors:
Australia and New Zealand:
JACARANDA WILEY LIMITED
GPO Box 859, Brisbane, Queensland 4001, Australia
Canada:
JOHN WILEY & SONS CANADA LIMITED
22 Worcester Road, Rexdale, Ontario, Canada
Europe and Africa:
JOHN WILEY & SONS LIMITED
Baffins Lane, Chichester, West Sussex, England
North and South America and the rest of the world:
Halsted Press: a division of
JOHN WILEY & SONS
605 Third Avenue, New York, NY 10158, USA

British Library Cataloguing in Publication Data
Plant and animal cells: Process possibilities
(Series in biochemistry and biotechnology). —
(Ellis Horwood books in the biological sciences).
1. Cell culture 2. Tissue culture
I. Webb, Colin II. Mavituna, Ferda
III. Series
574'.0724 QH585

Library of Congress Card No. 87–3400

ISBN 0–7458–0145–5 (Ellis Horwood Limited)
ISBN 0–470–20853–8 (Halsted Press)

Phototypeset in Times by Ellis Horwood Limited
Printed in Great Britain by The Camelot Press, Southampton

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Editors' preface

Early in 1986 the Institution of Chemical Engineers published *Process Engineering Aspects of Immobilised Cell Systems*, a book which arose from a conference of the same name held in March 1984, at the University of Manchester Institute of Science and Technology (UMIST). The last paper at that meeting discussed the possible future applications of immobilised plant and animal tissue cells and provided the idea for a further conference to discuss, more broadly, the Process Possibilities for Plant and Animal Cell Cultures. This book is based on papers presented at the conference, which was held in Manchester in March 1986, and sponsored jointly by the North Western Branch of the Institution of Chemical Engineers and UMIST.

A range of new products is becoming available as a direct result of scientific and technological developments in the field of animal and plant cell culture. Some of these products are reaching the scale-up stage of their development and are therefore ripe for commercial exploitation. Many others, however, have not, as yet, been explored beyond the research laboratory. Nevertheless, it is timely to bring together the knowledge and experience of those working in the field, both at laboratory and pilot scales, in order to assess the long term possibilities for, and impediments to, the development of industrial processes which exploit the special properties of plant and animal cells.

This book is concerned primarily with those aspects of plant and animal cell cultures which will influence the future realisation of commercial processes. It is arranged in six parts to highlight various process aspects, rather than to concentrate on either plant or animal cell science, since many aspects of process development are common to all biotechnological systems. Each section has therefore been arranged to give a balance between plant cell and animal cell topics. As such it is hoped that this book will provide a sound basis for future developments and act as a guide to those entering either field.

The Institution of Chemical Engineers and UMIST express their thanks to all those who contributed to the conference and the publication of this book particularly the authors, session chairmen and Dr Jong Park and Mr Andy Wilkinson of UMIST for their help at the time of the conference. Thanks are also due to Mr Julio Faria (April Computing Executive) for his contribution to the technical organisation of the conference.

Finally, special thanks are extended to Dr Paul Williams of UMIST for his organisation of the poster session at the conference and for his contribution to the preparation of this book, and to Miss Angela Oates for the enthusiastic and efficient way in which she carried out the job of conference secretary.

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