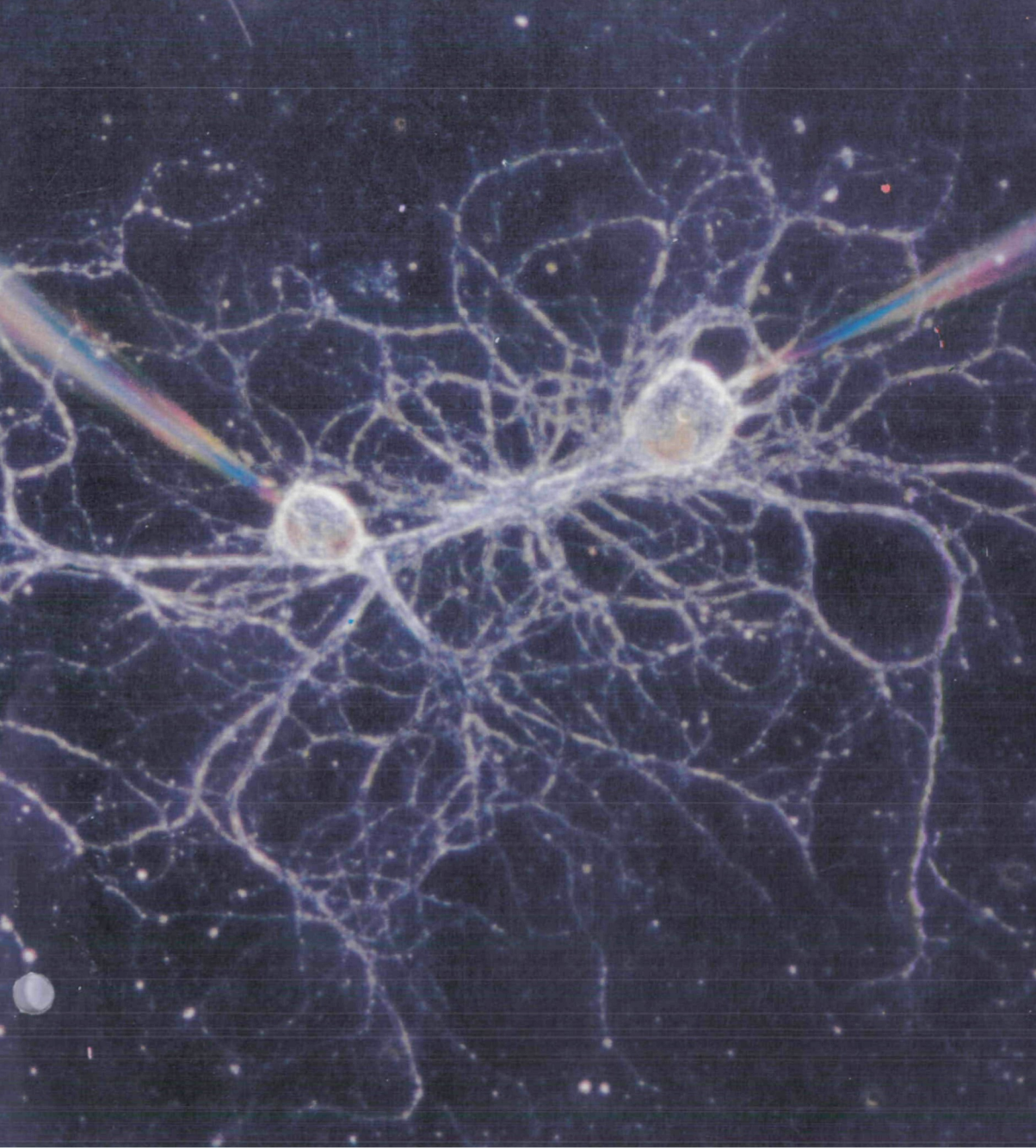


VOLUME 154

The Journal of

NOVEMBER 1990

Experimental Biology



The Journal of
Experimental
Biology

The Company of Biologists Limited · Cambridge

The Company of Biologists Limited, founded in 1925, is a 'Company Limited by Guarantee' having tax-exempt charitable status. There is a Board of Directors consisting of about 20 professional biologists, two of them appointed annually by the Society for Experimental Biology, who receive no salary or fees for their services. The Company's main function is to own and produce *The Journal of Experimental Biology*, the *Journal of Cell Science and Development*, and to appoint the Editors of these journals. These are part-time appointments held by established professional biologists of some eminence, and once they have been appointed the Company exercises no control over editorial policy.

The Company is precluded by its charitable status from making a commercial profit on its operations, and its aim is to produce high-quality journals at the lowest possible price. Any surplus on publishing not required for the journals' reserves is transferred to an Educational Trust Fund, which makes substantial grants in aid of societies concerned with the fields of interest covered by the Company's journals. Grants are also made to conferences and summer schools in the fields of its journals.

The Company's independence of commercial publishers enables it to choose the most effective form of publishing to give papers accepted the widest possible circulation in journals of high quality and prestige. Changes in production and distribution of the journals have resulted in significant increases in the speed of publication.

Cover photograph

A co-culture of *Aplysia californica* neurones L10 (right) and R15 (left) after 3 days *in vitro*, photographed under dark-field illumination. Both cells are impaled with microelectrodes. Photograph by David Kleinfeld (see pp. 237–255).

The Journal of --- **Experimental** --- **Biology**

VOLUME 154

1990

EDITED BY

C. P. ELLINGTON

WITH W. A. FOSTER & E. A. HOWES

EDITORIAL BOARD

R. McN. ALEXANDER (LEEDS)

R. G. BOUTILIER (DALHOUSIE)

M. BURROWS (CAMBRIDGE)

P. J. BUTLER (BIRMINGHAM)

V. E. DIONNE (SAN DIEGO)

D. H. EVANS (FLORIDA)

P. D. EVANS (CAMBRIDGE)

R. K. JOSEPHSON (IRVINE)

J. M. GOSLINE (BRITISH COLUMBIA)

M. F. LAND (SUSSEX)

G. V. LAUDER (IRVINE)

C. P. MANGUM (WILLIAMSBURG)

B. R. McMAHON (CALGARY)

J. G. NICHOLLS (BASEL)

U. M. NORBERG (GÖTEBORG)

K. SCHILDBERGER (MAX-PLANCK
INSTITUT, SEEWIESEN)

G. N. SOMERO (SCRIPPS INSTITUTION
OF OCEANOGRAPHY)

P. W. WEBB (MICHIGAN)

Published and Printed by The Company of Biologists Limited,
Department of Zoology, University of Cambridge,
Downing Street, Cambridge CB2 3EJ

© The Company of Biologists Limited 1990

**This Publication
is available in Microform**

University Microfilms International

300 North Zeeb Road, Dept. P.R., Ann Arbor, MI. 48106