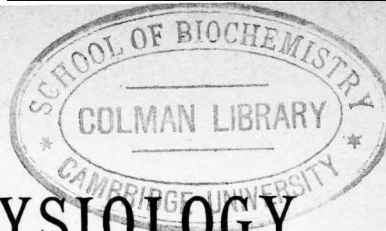


THE
JOURNAL OF PHYSIOLOGY.



EDITED BY

SIR MICHAEL FOSTER, K.C.B., M.D., F.R.S.

AND

J. N. LANGLEY, Sc.D., F.R.S.

AIDED, IN THE SELECTION OF PAPERS FOR PUBLICATION, BY

SIR T. LAUDER BRUNTON (LONDON).
PROF. DAVID FERRIER (LONDON).
EMER. PROF. A. GAMGEE.
DR W. H. GASKELL (CAMBRIDGE).
PROF. F. GOTCH (OXFORD).
PROF. W. D. HALLIBURTON (LONDON).
MR F. G. HOPKINS (CAMBRIDGE).
SIR VICTOR HORSLEY (LONDON).
DR A. SHERIDAN LEA (CAMBRIDGE).
PROF. A. B. MACALLUM (TORONTO).

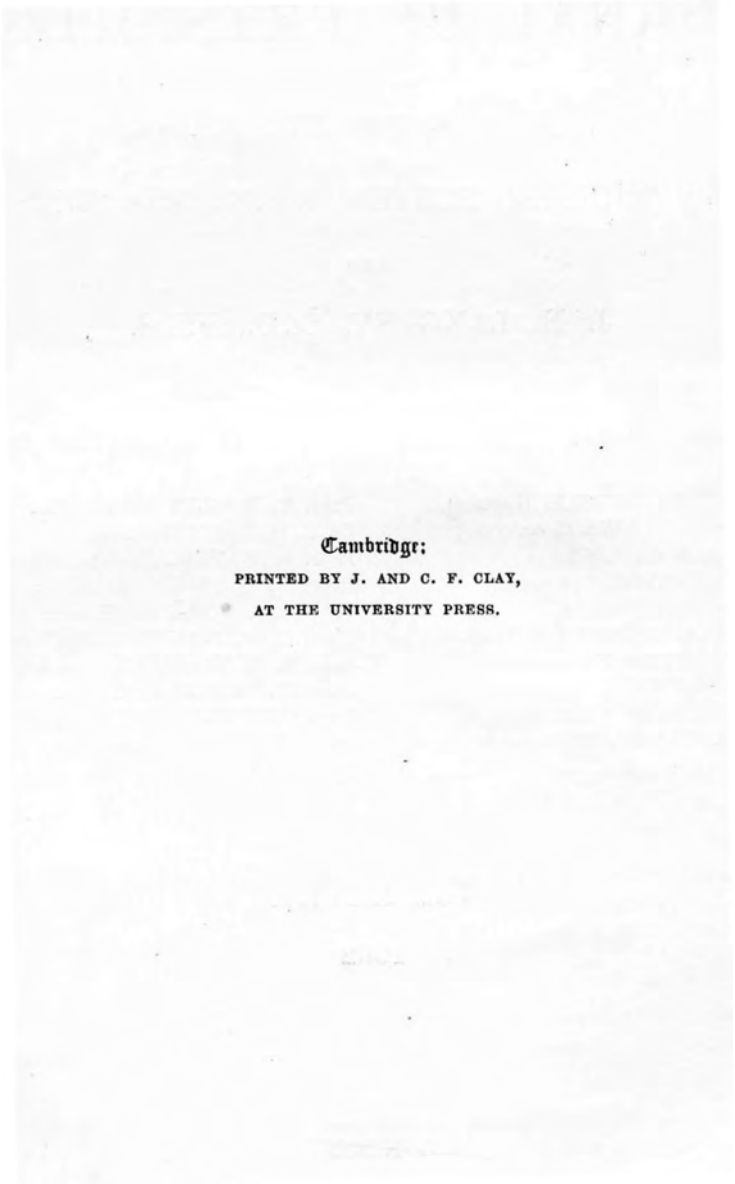
PROF. T. WESLEY MILLS (MONTREAL).
DR F. W. MOTT (LONDON).
PROF. E. WAYMOUTH REID (DUNDEE).
PROF. SIR J. B. SANDERSON, BART. (OXFORD).
PROF. E. A. SCHÄFER (EDINBURGH).
PROF. C. S. SHERRINGTON (LIVERPOOL).
PROF. E. H. STARLING (LONDON).
PROF. W. STIRLING (MANCHESTER).
PROF. ANDERSON STUART (SYDNEY, N.S.W.).
DR A. WALLER (LONDON).

VOL. XXVIII.

1902

LONDON:

C. J. CLAY AND SONS,
CAMBRIDGE UNIVERSITY PRESS WAREHOUSE,
AVE MARIA LANE.



Cambridge:

PRINTED BY J. AND C. F. CLAY,

AT THE UNIVERSITY PRESS.

CONTENTS OF VOL. XXVIII.

Nos. 1 & 2. March 27, 1902.

	PAGE
A further research into fatigue of the central nervous system when caused by electrical stimulation. By A. G. LEVY, M.D. (<i>Lond.</i>). (Eight Figures in Text.)	1
Path of impulses for inhibition under decerebrate rigidity. By A. FRÖHLICH, M.D., and C. S. SHERRINGTON, M.A., M.D., F.R.S. (Two Figures in Text.)	14
Some effects of the ligation of the renal arteries in the frog. By A. P. BEDDARD, M.A., M.D.	20
The effect of local injury upon the excitatory electrical response of nerve. By FRANCIS GOTCH, D.Sc., M.A. (<i>Oxon.</i>), F.R.S.	32
The innervation of the frog's stomach. By WALTER E. DIXON, M.A., M.D. (Thirteen Figures in Text.)	57
Some experiments on the functions of the medulla of the kidney. By FRANCIS D. BOYD, M.D., F.R.C.P. (<i>Edinb.</i>)	76
The relationship of the spleen to the formation of the blood corpuscles. By D. NOËL PATON, G. LOVELL GULLAND, and J. S. FOWLER. (Ten Figures in Text.)	83
The influence of subcutaneous injections of large quantities of dextrose on the metabolism in the dog. By JAMES SCOTT, M.D.	107
Note on the absorption of the nitrogen of oatmeal by the dog. By D. NOËL PATON.	119
On the residual pressures in the vascular system when the circulation is arrested. By LEONARD HILL, M.B., F.R.S. (Eleven Figures in Text.)	122
Pancreatic diastase, and its zymogen. By H. M. VERNON, M.A., M.D. (Six Figures in Text.)	137
The differences of action of various diastases. By H. M. VERNON, M.A., M.D. (Two Figures in Text.)	156
On the digestion of cane sugar. By J. H. WIDDICOMBE, M.A.	175

LINDA HALL LIBRARY
KANSAS CITY, MO.

No. 3. May 28, 1902.

	PAGE
Fatigue in non-medullated nerves. By T. GREGOR BRODIE, M.D., and W. D. HALIBURTON, M.D., F.R.S. (Six Figures in Text.)	181
Note on fœtal muscle spindles. By LAURA FORSTER, M.D., L.R.C.P., L.R.C.S.	201
On the formation of lymph by the liver. By F. A. BAINBRIDGE, M.B., M.R.C.P. (Two Figures in Text.)	204
On the local reactions of the arterial wall to changes of internal pressure. By W. M. BAYLISS. (Eleven Figures in Text.)	220
A method of estimating the oxygen and carbonic acid in small quantities of blood. By JOSEPH BARCROFT, M.A., B.Sc., and J. S. HALDANE, M.D., F.R.S. (Three Figures in Text.)	232
Intestinal absorption of solutions. BY E. WAYMOUTH REID	241

No. 4. July 21, 1902.

Metabolism on ordinary and forced diets in normal individuals. By FRANCIS W. GOODBODY, M.D., M.R.C.P., NOEL D. BARDSWELL, M.D., M.R.C.P., and J. E. CHAPMAN, M.R.C.S., L.R.C.P.	257
Further researches on antidromic nerve-impulses. By W. M. BAYLISS. (Twelve Figures in Text.)	276
Taste and the fifth nerve. By Sir W. R. GOWERS, M.D., F.R.S.	300
On the innervation of the urinary passages in the dog. By C. H. FAGGE, M.S. (Eight Figures in Text.)	304
The visual acuity of the natives of Sarawak. By CHARLES S. MYERS	316
Reticulin and collagen. By M. SIEGFRIED	319

No. 5. September 12, 1902.

The mechanism of pancreatic secretion. By W. M. BAYLISS and E. H. STARLING. (Seventeen Figures in Text.)	325
The influence of oxygen upon the survival respiration of muscle. By W. M. FLETCHER, M.A., M.B. (Three Figures in Text.)	354
On the products of the proteolytic action of an enzyme con- tained in the cells of the spleen. By J. B. LEATHES	360
A further note on the pyramidal tract (Monakow's bundle). By E. H. FRASER, M.D. (Nine Figures in Text.)	366

CONTENTS.

v

No. 6. December 15, 1902.

The conditions of action of the pancreatic secretion. By H. M. VERNON, M.A., M.D. 375

The submaximal electrical response of nerve to a single stimulus. By FRANCIS GOTCH, D.Sc., M.A. (*Oxon.*), F.R.S. (Six Figures in Text.) 395

On the pitch of Galton-whistles. By CHARLES S. MYERS, M.D. 417

A preliminary communication on the changes in nerve cells after poisoning with the venom of the Australian tiger-snake (*Hoplocephalus curtus*). By BASIL KILVINGTON, M.S., M.D. (Nine Figures in Text.) 426

On saline diuresis. By ARTHUR R. CUSHNY, M.A., M.D. . . 431

Pancreatic zymogens and pro-zymogens. By H. M. VERNON, M.A., M.D. 448

The relation of oxygen to the survival metabolism of muscle. By W. M. FLETCHER, M.A., M.B. (Thirteen Figures in Text.) . 474

The nature of the lesions which hinder the development of nerve-cells and their processes. By H. K. ANDERSON, M.D. . . 499

On the effect exerted on the coagulability of the blood by an admixture of lymph. By A. E. WRIGHT, M.D. 514

PROCEEDINGS OF THE PHYSIOLOGICAL SOCIETY.

January 18, 1902.

E. H. Embley. The causation of sudden death during the administration of chloroform i

February 8, 1902.

E. I. Spriggs. On a new method of observing peptic activity . . . v

March 1, 1902.

Thomas Lewis. On the structure and functions of the hæmolymph organs . vii

March 22, 1902.

J. Herbert Parsons. Arcus Senilis ix

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.