

# SCIENCE

VOL. 100

FRIDAY, DECEMBER 8, 1944

No. 2606

<i>General Aspects of Interdisciplinary Research in Experimental Human Biology</i> : DR. JOSEF BROZEK and PROFESSOR ANCEL KEYS .....	507
<i>Obituary</i> : I. Huang: DR. ARNOLD GESELL. <i>Recent Deaths</i> .....	512
<i>Scientific Events</i> : <i>The Proposed British Aeronautical College; The Junior Academy of Science of Wisconsin; Fellowships of the Textile Research Institute of Princeton University; The Foundation for the Study of Cycles; Awards of the American Society of Mechanical Engineers</i> .....	513
<i>Scientific Notes and News</i> .....	515
<i>Discussion</i> : <i>The Harvard Apparatus Company, the American Journal of Physiology and Dr. W. T. Porter</i> : DR. A. J. CARLSON and OTHERS. <i>Entomology in Wartorn China</i> : PROFESSOR J. LINSLEY GRESSITT. <i>The Threat to Pure Science</i> : EUGENE V. D. ROBIN; JAMES FEIBLEMAN .....	518
<i>Scientific Books</i> : <i>A Catalogue of Vascular Plants</i> : PROFESSOR E. D. MERRILL. <i>Chemical Machinery</i> : PROFESSOR PHILIP W. SCHUTZ .....	521
<i>Special Articles</i> : <i>Relation of the Streptococcus Lactis B Factor to "Folic Acid"</i> : DR. JACOB L. STOKES, DR. JOHN C. KERESZTESY and DR. JACKSON W. FOSTER. <i>The Effect of Atropine Sulfate on the Course of Influenza Virus Infection</i> : DR. A. H. WHEELER and DR. W. J. NUNGESTER. <i>Growth of Corallorhiza Maculata</i> : DR. D. T. MACDOUGAL and PROFESSOR H. S. REED. <i>Guanidino Arsenicals</i> : PROFESSOR MARSTON T. BOGERT and PROFESSOR WILLIAM C. STRICKLER .....	522
<i>Scientific Apparatus and Laboratory Methods</i> : <i>A Standard Penicillinase Preparation</i> : DR. A. J. LIEBMANN, E. B. MCQUARRIE and DR. D. PERLSTEIN. <i>Penicillin Treatment of Crown Gall</i> : PROFESSOR J. G. BROWN and ALICE M. BOYLE .....	527
<i>Science News</i> .....	10

SCIENCE: A Weekly Journal devoted to the Advancement of Science. Editorial communications should be sent to the editors of SCIENCE, Lancaster, Pa. Published every Friday by

## THE SCIENCE PRESS

Lancaster, Pennsylvania

Annual Subscription, \$6.00      Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary in the Smithsonian Institution Building, Washington 25, D. C.

## GENERAL ASPECTS OF INTERDISCIPLINARY RESEARCH IN EXPERIMENTAL HUMAN BIOLOGY<sup>1</sup>

By Dr. JOSEF BROZEK and Professor ANCEL KEYS

UNIVERSITY OF MINNESOTA

### INTRODUCTION

MUCH of the recent research in experimental human biology using a "total" interdisciplinary approach has received methodological stimulation from the attempt to predict what will happen, under specified conditions, to the intact human organism. In such a program the experimenter works with one "independent" variable (environmental temperature, caloric intake, vitamins, drugs, anoxia, physical work) and many "dependent" variables covering the whole gamut of biochemical, physiological and psychological responses. This type of research differs fundamentally from much of the earlier work in psychosomatics,<sup>2</sup> such as study of the covariation between morpholog-

ical characteristics and mental traits in which statistical methods provide the sole method of investigation. The study of the effects of vitamin intake or exposure to heat is amenable to the experimental approach, also such problems are much closer to real life situations and require a more truly interdisciplinary attack.

In applied fields a genuine cooperative approach is indispensable. This is readily understandable if we realize that the emphasis is placed upon analysis and manipulation of a sector of reality, and that this reality is always multifarious. It is significant that, in modern industrial research which is concerned with the materials and the manufacturing processes, "the lone worker is being replaced by a carefully chosen corps whose various talents dovetail together and whose collective knowledge and collective analytical

<sup>1</sup> From the Laboratory of Physiological Hygiene.

<sup>2</sup> D. G. Paterson, "Physique and Intellect," New York, Century, 304 pp., 1930.

# Science

**100 (2606)**

*Science* **100** (2606), 507-528.

ARTICLE TOOLS

<http://science.sciencemag.org/content/100/2606.citation>

PERMISSIONS

<http://www.sciencemag.org/help/reprints-and-permissions>

Use of this article is subject to the [Terms of Service](#)

---

*Science* (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. The title *Science* is a registered trademark of AAAS.

Copyright © 1944 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.