Instructions for Contributors

The Editors of *Science*

General Editorial Policies

All papers submitted are considered for publication. The author's membership or lack of membership in the AAAS is not a factor in selection. Papers are accepted with the understanding that they have not been published, submitted, or accepted for publication elsewhere. Authors will usually be notified of acceptance, rejection, or need for revision in 4 to 5 weeks (Reports) or 6 to 10 weeks (Articles).

Types of papers. Six types of signed papers are published: Articles, Reports, Letters, Technical Comments, Meeting Reports, and Book Reviews. Familiarize yourself with the general form of the type of paper you wish to submit by looking over a recent issue of the journal, and then follow the instructions for that type of paper.

Reviews. Almost all Articles, Reports, and Technical Comments, whether solicited or not, are sent to two or more outside referees for evaluation of their significance and soundness. Forms showing some of the criteria reviewers are expected to consider are available on request.

Editing. Papers are edited to improve the effectiveness of communication between the author and his readers. The most important goal is to eliminate ambiguities. In addition, improvement of sentence structure often permits readers to absorb salient ideas quickly. When editing is extensive, with consequent danger of altered meanings, papers are returned to the author for correction and approval before type is set. Authors are free to make additional changes at this stage.

Proofs. One set of galley proofs or an equivalent is provided for each paper. Keep alterations to a minimum, and mark them only on the galley, not on the manuscript. Extensive alterations may delay publication by 2 to 4 weeks.

Reprints. An order blank for reprints accompanies most proofs. Special arrangements can be made to obtain reprints of letters and book reviews.

Writing Papers

Organize your material carefully, putting the news of your finding or a statement of the problem first, supporting details and arguments second. Make sure that the significance of your work will be apparent to readers outside your field, even if you feel you are explaining too much to your colleagues. Present each step in terms of the purpose it serves in supporting your finding or solving the problem. Avoid chronological steps, for the purpose of the steps may not be clear to the reader until he finishes reading the paper.

Provide enough details of method and equipment so that another worker can repeat your work, but omit minute and comprehensive details which are generally known or which can be covered by citation of another paper. Use metric units of measure. If measurements were made in English units, give metric equivalents.

Avoid specialized laboratory jargon and abbreviations, but use technical terms as necessary, defining those likely to be known only in your field. Readers will skip a paper they do not understand. They should not be expected to consult a technical dictionary.

Choose the active voice more often than you choose the passive, for the passive voice usually requires more words and often obscures the agent of action. Use first person, not third; do not use first person plural when singular is appropriate. Use a good general style manual, not a specialty style manual. The University of Chicago style manual, the style manual of the American Institute of Physics, and the *Style Manual for Biological Journals*, among others, are appropriate.

Manuscripts

Prepare your manuscript in the form used by *Science*. Use a good bond paper for the first copy. Submit two carbons. Do not use "erasable" or thin paper for the first copy. Double-space title, abstract, text, signature, address, references (including the lines of a single reference), figure legends, and tables (including titles, columns, headings, body, and footnotes). Do not use single-spacing anywhere. Put the name of the first author and the page number in the upper right-hand corner of every page.

Paging. Use a separate page for the title: number it page 1. Begin each major section—text, references and notes, and figure legends—on a new sheet. Put each table on a separate sheet. Place figure legends and tables after the references.

Titles. Begin the title with a word useful in indexing and information retrieval (not "Effect" or "New").

References and Notes. Number all references to the literature, footnotes, and acknowledgments in a single sequence in the order in which they are cited in the text. Gather all acknowledgments into a single citation, and keep them short ("I thank," not "I wish to thank"). Cite all references and notes but do not cite them in titles or abstracts. Cite several under one number when feasible. Use *Chemical Abstracts List of Periodicals* for abbreviations of journal names. If the journal is not listed there, provide the full name. Use the following forms:

Journal: H. Smith, *Amer. J. Physiol.* **98**, 279 (1931).

Book: F. Dachille and R. Roy, *Modern Very High Pressure Techniques* (Butterworth, London, 1961), pp. 163–180.

Chapter: F. Dachille and R. Roy, in *Reactivity of Solids*, J. H. De Boer, Ed. (Elsevier, Amsterdam, 1960), p. 502.

Illustrations. Submit three copies of each diagram, graph, map, or photograph. Cite all illustrations in the text and provide a brief legend, to be set in type, for each. Do not combine line drawings and photographs in one illustration. Do not incorporate the legend in the figure itself. Use India ink and heavy white paper or blue-lined coordinate paper for line drawings and graphs. Use heavier lines for curves than you use for the axes. Place labels parallel to the axes, using capital and lower-case letters; put units of measurement in parentheses after the label —for example, Time (sec). Plan your figures for the smallest possible printed size consistent with clarity.

Photographs should have a glossy finish, with sharp contrast between black and white areas. Indicate magni-

fication with a scale line on the photograph.

Tables. Type each table on a separate sheet, number it with an arabic numeral, give it a title, and cite it in the text. Double space throughout. Give each column a heading. Indicate units of measure in parentheses in the heading for each column. Do not change the unit of measure within a column. Do not use vertical rules. Do not use horizontal rules other than those in the heading and at the bottom. A column containing data readily calculated from data given in other columns can usually be omitted; if such a column provides essential data, the columns containing the other data can usually be omitted.

Plan your table for small size. A one-column table may be up to 42 characters wide. Count characters by counting the widest entry in each table column (whether in the body or the heading) and allow three characters for spaces between table columns. A two-column table may be 90 characters wide.

Equations and formulas. Use quadruple spacing around all equations and formulas that are to be set off from the text. Most should be set off. Start them at the left margin. Use the solidus for simple fractions, adding the necessary parentheses. But if braces and brackets are required, use built-up fractions. Identify handwritten symbols in the margin, and give the meaning of all symbols and variables in the text immediately after the equation.

Articles

Articles, both solicited and unsolicited, may range in length from 2000 to 5000 words (up to 20 manuscript pages). Write them clearly in reasonably nontechnical language. Provide a title of one or two lines of up to 26 characters per line and a subtitle consisting of a complete sentence in two lines with a character count between 95 and 105 for the sentence (spaces between words count as one character each). Do not break words at the ends of lines. Write a brief author note, giving your position and address. Do not include acknowledgments. Place title, subtitle, and author note on page 1. Begin the text on page 2.

Insert subheads at appropriate places in the text, averaging about one subhead for each 3 manuscript pages. Keep them short—up to 35 characters and spaces. Do not use more than one degree or level of subheads.

Provide a summary at the end.

Do not submit more than one illustration (table or figure) for each 4 manuscript pages unless you have planned carefully for grouping. With such planning, many illustrations can be accommodated in one article. Consult the editorial office for help in planning.

Reports

Short reports of current research results may vary in length from 1 to 6 double-spaced manuscript pages of text. The shorter papers receive preferred treatment. Limit illustrative material (both tables and figures) to one item for each 3 manuscript pages. Three items is the maximum. A research report should have news value for the scientific community or be of unusual interest to the specialist or of broad interest because of its disciplinary nature. It should contain solid research results or reliable theoretical calculations. Speculation should be limited and is permissible only when accompanied by solid work.

Title. Begin the title with an important word (preferably a noun) that is likely to be useful to indexers. The title may be a conventional one (composed primarily of nouns and adjectives), a sentence (containing a verb), or a structure with a colon (Nictitating Membrane: Classical Conditioning and Extinction in the Albino Rabbit). Limit it to three lines of complete words of no more than 32 characters per line (spaces between words count as one character each). Do not use abbreviations. Type the title in the middle of page 1.

Abstract. Provide an abstract of 45 to 55 words on page 2. The abstract should amplify the title but should not repeat it or phrases in it. Qualifying words for terms used in the title may be used. Tell the results of the work, but not in terms such as "——— was found," "is described," or "is presented."

Text. Begin the text on page 3. Put the news first. Do not refer to unpublished work or discuss your plans for further work. If your paper is a short report of work covered in a longer paper to be published in a specialty journal, you may refer to this paper if it has been accepted. Name the journal. If the manuscript has not been accepted, refer to it as "in preparation." Omit references to private communications. Do not use subheads.

Signature. List the authors on the last page of the text and give a simple mailing address.

Received dates. Each report will be dated the day an acceptable version is received in the editorial office.

Letters

The Letters section provides a forum for discussion of matters of general interest to scientists. Letters are judged only on clarity of expression and interest. Keep them short and to the point; the preferred length is 250 words. The editors frequently shorten letters.

Technical Comments

Letters concerning technical papers in *Science* are published as Technical Comments at the end of the Reports section. They may add information or point out deficiencies. Reviews are obtained before acceptance.

Meeting Reports

Meeting reports should summarize two to four of the most important scientific results and give an interpretation of them in terms that can be understood by a wider audience than that represented by those who attended the symposium. Focus your report on events that will have interest, news value, and significance to an audience of varied background. A definitive report is not possible, and a catalog of who spoke on what subject is dull.

Book Reviews

Book reviews for *Science* are solicited. Describe, appraise, and evaluate the book. Write for a general scientific audience. Consider the book's scope, purpose, contents, and potential usefulness, and state your opinion of the book clearly and concisely.

Cover Photographs

Particularly good photographs suitable for use on the cover are desired if they can be published in connection with any type of paper.

PERSONNEL PLACEMENT

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POSITIONS WANTED

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M.D. Seeks Research Position. Experience in pathology, exfoliative cytology. Radioisotopes, autoradiography. Physiology of reproduction, animal surgery. Box 617, SCIENCE.
12/29; 1/5, 12, 19, 26

Petrographer—Mineralogist, 10 years' experience ceramics, rocks, ores, fuels—XRD, XRF, DTA, TGA, MSA, optical microscopy. Box 641, SCIENCE. 1/5, 12

Virologist—tissue culturist, Ph.D. 1960. Teaching/research experience. Biosynthesis, immunology and tumorigenesis of viruses. Publications. Seeks academic or research position. Box 642, SCIENCE. 1/5

Entomologist, young postdoctoral training chemosterilization, publications, available July, seeks research/teaching appointment. Box 643, SCIENCE. X

POSITIONS OPEN

Applications for the Steroid Training Program in Biochemistry at the Worcester Foundation for Exptl. Biology, Inc., Shrewsbury, Mass., should be in before the April 1, 1968 deadline. Appointments will be made after February 1, 1968. Application forms available from Dr. F. G. Péron, Director, Steroid Training Program at the Worcester Foundation. The Program is sponsored by the National Institute of Arthritis and Metabolic Diseases. Stipends vary according to recipient's degree and postdoctoral experience. Dependency allowances are provided. Basic stipend with no relevant postdoctoral experience $6,000.

THE UNIVERSITY OF NEW BRUNSWICK
DEPARTMENT OF BIOLOGY

DEPARTMENT HEAD

The University of New Brunswick invites applications for the position of Head of the Department of Biology, Faculty of Science. Applications will be considered from candidates in any of the biological disciplines.

Candidates are expected to have demonstrated administrative and leadership abilities. The salary is negotiable.

The Department of Biology, University of New Brunswick, has a broad undergraduate Biology curriculum and offers programs leading to the degrees of M.Sc. and Ph.D. in several specialized areas of Botany and Zoology. The present teaching staff includes thirteen members.

The appointee to this position is expected to take up the appointment by July 1 and not later than September 1, 1968.

All applications must be in the hands of the selection committee not later than 31st January 1968. Applications and *curricula vitae* should be sent to Dr. Z. Valenta, Chairman, Selection Committee, Department of Chemistry, University of New Brunswick, Fredericton, N.B., Canada.

POSITIONS OPEN

Biologist to teach General Physiology, organize new course in Biochemistry. Small, four-year, co-educational liberal arts college in metropolitan location. Prefer Ph.D. with some teaching experience. Rank of Assistant Professor, salary $9,000-$11,000, no summer school. Research time and space available; chance to work with 2 or 3 in undergraduate independent study.
Professor William L. Downing, Chairman, Department of Biology, Hamline University, St. Paul, Minnesota, 55101.

BIOLOGIST, $10,200-$13,260. M.S. Degree in biological discipline or oceanography, plus three years experience in a related field. Graduate work may be substituted for experience on a year-for-year basis. Eastern Federal-Interstate Water Resources Agency. 40 hour work week. Liberal fringe benefits. Please submit resume, including availability and salary desired to **Delaware River Basin Commission, P.O. Box 360, Trenton, New Jersey 08603.**

Ph.D. DESIRED FOR EXPANDING MEDICAL LABORATORY IN BOSTON

Competent in analytical or clinical chemistry. Experience preferred, but will train qualified person in this rapidly developing field. Academic and research opportunities available for appropriate person. Write, **Confidential,** to **Dir., Leary Laboratory, 43 Bay State Road, Boston, Mass. 02215.**

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Carter-Wallace has immediate openings for chemists (B.S., M.S.) with experience and interest in the field of macromolecular natural products, their isolation, purification and characterization. Strong background in bio-analytical and biochemical procedures desirable.

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Pathologist-M.D., D.V.M. or Ph.D. with research background in atherosclerosis, trained in electron microscopy. To $15,000 for part time commitment. Resumes and/or inquiries to **Dr. S. C. Spraragen, Chief, Radioisotope Service, VA Hospital, 800 Poly Place, Brooklyn, N.Y. 11209. Telephone 212-836-6600, Extension 271.**

MEDICAL FACULTY ROTTERDAM
CHAIR OF CELL BIOLOGY, HISTOLOGY AND MICROSCOPIC ANATOMY

The Medical Faculty of Rotterdam invites applications for the post of Professor of Cell Biology, Histology and Microscopic Anatomy. The successful candidate will be expected to direct teaching and research in these fields and will receive a basic salary not less than fl. 51.256,—($14,252.60). Applicants are requested to send full information concerning present position, qualifications, publications and research interests, before the first of February 1968, to Professor B. Leijnse, Ph.D., Wytemaweg 2, Rotterdam, The Netherlands.

Research Associate, ion reaction research in mass spectrometers. Ph.D., physics or physical chemistry. Experience with vacuum techniques, electronics, spectroscopy desirable. Academic institution. Salary $8,000-$10,000. Dr. James Green, New England Institute, Grove Street, Ridgefield, Connecticut.

Research Assistant, Physical Chemistry, B.S. or M.S., fundamental research projects in photochemistry, photobiology. John Lee, New England Institute for Medical Research, Grove Street, Ridgefield, Connecticut.

Research Assistant, ion research in mass spectrometers. B.S., or M.S., in physics or physical chemistry, ability in high-vacuum techniques, electronics. Training in mass spectrometry provided. Minimum salary $6,000. Dr. James Green, New England Institute, Grove Street, Ridgefield, Connecticut.

POSITIONS OPEN

UNIVERSITY OF ALBERTA
FACULTY OF SCIENCE
DEPARTMENT OF GENETICS

Applications are invited for an academic position from geneticists with research experience in some fundamental aspect of genetics.

The appointee will be expected to carry on research and to undertake teaching duties. A new biological sciences building now under construction will provide extensive research and teaching facilities.

The present staff of the department participates in active research on biochemical genetics of bacteria, fungi, *Drosophila* and higher plants, radiation biology of mammalian cell cultures, cytology and cytotaxonomy of animals and plants (including fungi), population genetics of animals and man, ecological aspects of genetic polymorphism, theoretical and applied quantitative genetics of plants, chemically induced mutation and recombination and developmental genetics.

The rank and salary will be appropriate to the appointee's experience and candidates with exceptional qualifications will be given special consideration.

Inquiries concerning the post and the form of applications should be directed to: Dr. J. Weijer, Chairman, Department of Genetics, University of Alberta, Edmonton, Alberta, Canada.

TOXICOLOGY-PATHOLOGY

Pharmaceutical Industry

DEPT. DIRECTOR, supervise toxicology-pathology depts. Salary to $27,000

GROUP LEADER, toxicology. Salary to $21,000

SECTION LEADER, pathology. Salary to $22,500

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COURSES

ANNOUNCEMENT

THE WEIZMANN SCHOOL ON SELECTED TOPICS IN PROTEIN RESEARCH

The Weizmann School on Selected Topics in Protein Research, sponsored by the Weizmann Institute of Science and the Institut de Biologie Physico-Chimique (Foundation Edmond de Rothschild, Paris), will be held in Israel from May 5 through May 16, 1968. The first week of the School will take place in Safed in the Gallilee, and the second week at the Weizmann Institute of Science in Rehovoth.

The following topics will be dealt with:

1. The intramolecular forces and conformation of proteins
2. The active sites of enzymes and the regulation of their activity
3. Antibody formation, activity and structure
4. Structural and contractile proteins
5. Heme proteins
6. Energy transfer in proteins
7. New methods of peptide synthesis

The teaching body will include Scientists from abroad as well as from Israel.

The Foundation Edmond de Rothschild of Paris covers the cost of the organization of the School and offers a per diem support to the students who will be accepted to the School. Such support will cover expenses during their stay in Israel, including travel in the country during the course, according to program. Overseas travel expenses will have to be borne by the participants. There will be a $10 registration fee per participant.

Applications should be sent to Dr. Z. Bohak, Department of Biophysics, The Weizmann Institute, P.O. Box 26, Rehovoth, Israel, with a copy to Prof. B. Pullman, Institut de Biologie Physico-Chimique, Universite de Paris, 13 Rue Pierre Curie, Paris-V, France. The closing date for the submission of the application is February 1st, 1968.

FELLOWSHIPS

Predoctoral Fellowships in Physiology—Training leading to the Ph.D. with special orientation in physiological control systems, cardiovascular, temperature regulation, endocrinology and neurophysiology. Emphasis upon preparation for academic careers combining teaching and research. Stipends with tuition and dependency allowance available to qualified undergraduates in engineering, biology, chemistry, mathematics or physics. A maximum of five new students accepted each year, maintaining a low student-advisor ratio. Detailed information from: **The Department of Physiology, Loyola University, 706 S. Wolcott Ave., Chicago, Illinois 60612.**

GRADUATE STUDY

Graduate Study in Biochemistry. Predoctoral appointments leading to the Ph.D. degree are available for the academic year, 1968-1969. Excellent facilities in newly enlarged, modern, air-conditioned building. Opportunities in a variety of research areas, including molecular biology, biophysical chemistry, enzymology, intermediary metabolism, and natural products chemistry Tax-free stipend plus tuition and fees for 12 months. Address inquiries to: **Dr. Richard Abrams, Chairman, Department of Biochemistry and Nutrition, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania 15213.**

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