

Going further back, the following promise was made in 1947 by Frank Aydelotte, then director of the Institute: "I have given an undertaking to the faculty that I would never recommend to the trustees an appointment of which the faculty did not approve". This principle has been a firm tradition ever since, until the present altercation. It is our hope that negotiations now in progress between faculty and trustees will lead to a reaffirmation of Aydelotte's undertaking.

For readers who may have been misled by your headline, let me emphasize that the Institute has no connexion with Princeton University, which has a long record of excellent administration.

Your faithfully,

JOHN MILNOR

*The Institute for Advanced Study,  
Princeton, New Jersey 08540*

## Careers

SIR,—The worsening market situation for scientists and technologists described in your supplement, "Careers for Scientists", and the threat of further reductions in scientific establishments, especially in the largest companies, leads to one irresistible conclusion: the need for scientists and technologists to join this union set up by the Council of Science and Technology Institutes just over a year ago. It is one reason why membership is already 4,000 and climbing steadily.

Of course, as several of your contributors pointed out, the picture is not all black. More and more science graduates are entering managerial employment, which we believe to be essential if the science-based industries are to develop their full potential, or scientific work at a supporting level. Viewed, therefore, as a whole, we would agree with Mr Davies that we are not producing too many highly educated people and can do with more, provided that planning is sensible and that people are told what to expect. This, too, emphasizes how vital it is that scientists and technologists moving into unfamiliar fields make sure that they can avail themselves of the assistance which APST can provide.

Yours faithfully,

M. I. GILLIBRAND

*Association of Professional Scientists  
and Technologists,  
Hinchley House,  
14 Harley Street,  
London W1N 2BE*

## Citation and Distinction

SIR,—Garfield<sup>1</sup> continues to make superficially plausible claims for the Science Citation Index, which his company publishes. Obviously Nobel Prize awards and citation frequency are partly

caused by the same factors. It may be coincidental that Nobel Prizes are not given in the evolutionary half of biology (with adjacent fields such as stratigraphic geology), where the literature is extraordinarily diverse and is poorly represented in the Index.

In Garfield's lists<sup>2</sup> of most-cited and highest-impact journals, eighty-one and seventy-one respectively of the first 100 are devoted exclusively to chemistry, physics, biochemistry, physiology, and medicine. This partly reflects the same bias in the source, but also the fact that there are, for example, more organic chemists than evolutionary biologists.

In a forthcoming work where I propose a new scientific law with considerable applicability, I make few references. But the result depends directly on, and would have been impossible without, a large proportion of all the work in evolutionary biology that has been done in the past. A simple-minded cost-effectiveness approach like Garfield's would have prevented this work from being done.

Any action taken on the basis of such biased results as Garfield's clearly discriminates against the areas under-represented. These areas are as a whole probably more dependent on extensive availability of literature than is any other area of science.

Yours faithfully,

LEIGH VAN VALEN

*Committee on Evolutionary Biology,  
The University of Chicago,  
5734 Ellis Avenue, Chicago,  
Illinois 60637*

<sup>1</sup> Garfield, E., *Nature*, **242**, 485 (1973).

<sup>2</sup> Garfield, E., *Science*, **178**, 471 (1972).

## Human Papova Viruses

SIR,—We would like to correct some of the facts in your News and Views article "Human Papova Viruses" (*Nature*, **241**, 308; 1973).

A human papova virus of the polyoma virus subgroup "first came to light" when Zu Rhein and Chou observed by electron microscopy virus particles in brain cells of patients with progressive multifocal leucoencephalopathy (PML) (*Science*, **148**, 1477; 1965). Many attempts have been made to grow this virus *in vitro* without success.

Simultaneously with our report of the isolation of BK polyoma virus from the urine of a renal transplant patient (Gardner *et al.*, *Lancet*, **i**, 1253; 1971), Padgett and her colleagues described the successful culture of JC polyoma virus directly from the brain of a patient with PML (Padgett *et al.*, *Lancet*, **i**, 1257; 1971). It was unfortunate that no reference to this important work was made in your article. Later, Weiner and his co-workers reported the isolation of two further strains of polyoma virus from the brains of two patients with PML (*New*

*Engl. J. Med.*, **286**, 385; 1972). Both of Weiner's isolates appear to be antigenically identical and biologically similar to the simian polyoma virus (SV40) whereas JC, the other virus isolated from PML, appears antigenically unrelated to SV40 by immunofluorescence.

Our BK polyoma virus has only a very minor antigenic cross-reaction with SV40 and shows many differences from this virus biologically, including the property to agglutinate human O and guinea-pig erythrocytes to high titres. It seems therefore that we are indeed dealing with a group of different human polyoma viruses. In the discussion of human papova viruses it must not be forgotten that human common wart virus is also a member of the papova virus group although it belongs to the papilloma virus subgroup.

Yours faithfully,

SYLVIA D. GARDNER  
ANNE M. FIELD

*Virus Reference Laboratory,  
Central Public Health Laboratory,  
Colindale Avenue,  
London NW9 5HT*

# Announcements

## Miscellaneous

Elections to the US National Academy of Sciences:

Edward Hamblin Ahrens, jun., **Rockefeller University**; Robert Wayne Allard, **University of California, Davis**; Andrew Alm Benson, **Scripps Institution of Oceanography**; Howard Alan Bern, **University of California, Berkeley**; James Daniel Bjorken, **Stanford University**; Harold Charles Bold, **University of Texas**; John Tyler Bonner, **Princeton University**; Frederick Herbert Bormam, **Yale University**; Gordon Howard Bower, **Stanford University**; Felix Earl Browder, **University of Chicago**; Donald David Brown, **Carnegie Institution of Washington**; Arthur Earl Bryson, **Stanford University**; Bernard Budiansky, **Harvard University**; John Werner Cahn, **Massachusetts Institute of Technology**; Robert Merritt Chanock, **George Washington University**; Albert McCavour Clogston, **Sandia Corporation**; Ansley Johnson Coale, **Office of Population Research, Princeton, New Jersey**; George C. Cotzias, **Brookhaven National Laboratory**; Philip Ernest Converse, **University of Michigan**; Ellis Brevier Cowling, **North Carolina State University**; James Edwin Darnell, jun., **Columbia University**; Albert Dorfman, **University of Chicago, School of Medicine**; Otis Dudley Duncan, **University of Michigan**; Isidore Samuel Edleman, **University of California Medical Center, San Francisco**; Wallis Thomas Edmondson, **University of Washington**; Edmond