Here the problem of sheer bulk rears its head. At least one major index, *Index Medicus* published by the National Library of Medicine (NLM), has been forced to make an arbitrary decision regarding publication of the names of multiple authors. As of January 1964, *Index Medicus* will list all authors only when there are three or fewer. When there are four or more, only the first three authors' names, followed by *et al.*, will appear in the "names" section, as well as cross-references from the second and third names. The authors omitted will be given credit only in the somewhat inaccessible magnetic-tape master records permanently on file at NLM. NLM's primary reason for this decision is that so many papers today have multiple authors that the consumption of space by printing all names would have precluded its planned expansion of journal coverage. Forced to choose between enlarging journal coverage, that is, the amount of information available to medical scientists, and giving full printed credit to all authors, NLM made the only possible choice.

Here is another reason that the order of names in a by-line should be closely examined, at least by medical authors.

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The question raised by Irvine H. Page (10 Apr., p. 139) with respect to the number of authors' names and their arrangement is one that has to be faced with each new article submitted for publication. It seems trivial but is not, for if the number of authors should be arbitrarily limited to one, the motivation and interest of others in making contributions to the improvement of the article would be decreased and the published article would therefore not be as good as it might have been.

After much discussion of this question in our laboratory, we have arrived at the following conclusions. Each published article should include as authors all those who have made substantial contributions to the work involved in its creation, and lesser contributions should be acknowledged in footnotes or at the end of the article. The authors' names should appear in the order of the magnitudes of their contributions to the creation of the final article. The first author would therefore be the one who is primarily responsible for the results and conclusions, but each of the other authors must accept a proper share of the responsibility for the validity of the work.

No arbitrary limit should be set by journal editors for the number of authors of a scientific article, heads of laboratories should not "almost routinely put their names first," no author's name should be put first just because he or she "was young and needed the push," no person's name should be omitted if he or she has made a substantial contribution, and no person's name should be included if he or she has not made such a contribution.

The best procedure is that which will result in the publication of the best articles.

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Standard Sampler for Assay of Airborne Microorganisms

An International Aerobiology Symposium, sponsored by the Office of Naval Research and the University of California, was held on the Berkeley campus in October 1963. During this meeting an open discussion of problems involved in sampling airborne microorganisms brought forth the following general agreement:

1) That sampling, as now conducted, is essentially an art.

2) That each investigator must, of necessity, employ the sampling procedure yielding the most productive and useful information for his purpose.

3) That the loss of viability incurred as a result of the sampling step is difficult to assess and may not always be constant.

4) That in studies of respiratory disease, the animal host is the ultimate sampler although animals cannot always be utilized for this purpose, especially in studies relating only to survival of airborne microorganisms.

5) That data obtained with any specialized sampler should be correlated with at least some results obtained in a similar manner with a standard reference sampler, in order that other workers may better judge the applicability of such data to their own investigations. The reference sampler chosen should be one that is widely used and readily available.

Therefore, the undersigned urgently recommend that reports of viable assay of airborne microorganisms include some data obtained with the AGI 30 Impinger (*1*) operated at an air flow rate of 12.5 liters per minute. The sampling medium, duration of sampling, the volume of medium, the collection temperature, and the holding time and temperature between the sampling and the assay should be stated.

In experiments where concentrations of cells are too low to be adequately sampled by the impinger, or where the number of airborne particles is being determined, it is recommended that the Stacked Sieve (*2*) sampler be employed and that the air flow rate and medium volume in each section be stated. It is recognized that samplers employing solid media may produce some viable loss of sensitive organisms, especially if the sampling operation is extended for any appreciable length of time.

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1. Army Chemical Corps Type; see *U.S. Public Health Monograph No. 60* (1959), p. 24. Available from Ace Glass Incorporated, P.O. Box 192, Vineland, N.J., and Chatas Glass Company, 570 Broadlawn Terrace, Vineland, N.J. (No endorsement of products is intended.)
2. See A. A. Andersen, *J. Bacteriol.* **76**, 471 (1958). Available from Andersen Samplers and Consulting Service, 1704 Ash Avenue, Provo, Utah. (No endorsement of products is intended.)