Latin alphabet contains many characters unknown to the Romans. Among these are: ö, ñ, ø, č, é, ç, å, ž, and many others. These are to be used whenever appropriate. Failure to use them in the name when they are quoted in the source will produce an erroneous spelling which is to be corrected to the proper form.) Names introduced in conflict with this principle are to be corrected in accordance with Article 19, Ia. [See Opinion 27; also Opinion 8, paragraph 4, of the Discussion.]

Example: In forming a name to honor the Swedish hemipterist, Carl Stål, the å should be used instead of a, as *Stålia*, but *Stalia*, if introduced without statement of source, would be acceptable. It could be corrected to *Stålia* only if proof of an error was in the original publication. (RICHARD E. BLACKWELDER, J. BROOKES KNIGHT, and CURTIS W. SABROSKY, *Washington, D. C.*)

The effects of a new class of antifilarial compounds, cyanines, on the metabolism of adult filariae and growth of bacteria have recently been described by Welch, *et al.* and by Brooker and Sweet (*Science*, May 9, pp. 486, 496). A striking similarity is obvious in the action of the cyanines and the antimalarial drug, atabrine.

Welch, *et al.* report that cyanine #348, (1-amyl-2,5-dimethyl-3-pyrrole)(1-6-dimethyl-2-quinoline) dimethinecyanine chloride, inhibited the respiratory activity of the filariae at low concentrations of the drug. This was associated with a compensatory increase in glycolysis. An analogous situation was reported in the action of atabrine in the glucose metabolism of *Plasmedium gallinaceum* (M. Silverman, *et al. J. inf. Dis.*, 1944, **75**, 212). Low concentrations of atabrine inhibited the respiratory activity of *P. gallinaceum*, with a resultant increase in glycolysis.

Brooker and Sweet reported that the growth inhibition of *Escherichia coli* by cyanine #348 was partially reversed by high concentrations of thiamine, riboflavin, nicotinic acid, and pantothenic acid but not by pyridoxine and p-aminobenzoic acid. Identical effects were obtained with these B vitamins in the growth inhibition of *E. coli* by atabrine by Silverman and Evans (*J. biol. Chem.*, 1944, **154**, 521). It was also shown that the naturally-occurring polyamines, spermine and spermidine, are active antagonists of the inhibitory effects of atabrine in the growth of *E. coli*. Both reports (Brooker and Sweet, Silverman and Evans) indicated that natural materials contain antagonists for cyanine #348 and atabrine whose activity cannot be replaced by the well-characterized B vitamins.

It seems quite possible that when the modes of action of cyanine #348 and atabrine are established, the fundamental mechanisms involved will be essentially the same. (MILTON SILVERMAN, *Division of Physiology, National Institute of Health, Bethesda, Maryland.*)

The results of determinations of the growth hormones of several species of plants, native and exotic, including trees, by M. Kramer and K. Silberschmidt have recently appeared (*Arg. Inst. Biol. Dept. Def. San. Agric.* (São Paulo), November 1946, 17, Art. 7).

Extractions were made from segments of organs and sections of cambium by contacts with agar, and measurements were made by the conventional *Avena* coleoptile bending test. Relative concentrations from leaves, inflorescences, etc. with expected gradients from regions of origin to growing tracts in stems and elsewhere were found.

Since climatic, seasonal, and geographic features were taken into account, it seems necessary to correct the erroneous assumptions that my own results, expressed as dendrographic measurements of *Salix* and *Populus*, were obtained by experiments in Washington, and that I found the behavior of the two trees parallel.

Dendrographic records of *Populus* were made of one of seven species native to the region, under regulated irrigation, through several of the long, dry, hot summers characteristic of the Tucson area. Similar observations on *Salix lasiolepis* were made from 1922 to 1935 at Carmel, California, at which place this tree is native (Carnegie Institution of Washington, Publ. 462, 1936, 152–158). The maritime climate, with equable temperatures, humidity, and unvarying soil moisture and with the implied longer growing season, forms a basis for a dendrographic record widely different from that of *Populus* in the Arizona desert. The divergent features of the hydrostatic meshwork of the two trees might be expected to cause their divergent behavior if cultivated together in a neutral region (*Amer. J. Bot.*, 1946, **33**, 318–328). (D. T. MACDOUGAL, *R.F.D. #1, Box 170, Carmel, California.*)

Certain parts of the recent paper of Taplin and Bryan on the use of micronized therapeutic agents by inhalation (*Science*, May 9, p. 502) merit comment.

(1) Taplin and Bryan indicate that their patients prefer the inhalation of penicillin dust to penicillin aerosol. It should be called to the attention of readers of *Science* that penicillin dust having particles 1 μ in diameter, as reported by these authors, is also an aerosol. Suspension of fine, solid particles in a gas constitutes aerosols very commonly used both in industry and in medicine. For example, burning asthma powder produces an aerosol which has been known and used for many years in the therapy of asthma.

(2) The arguments advanced by Taplin and Bryan on the advantages of administering penicillin and other antibiotics as fine powders 1 μ in radius are not necessarily correct. The mass of a particle 1 μ in radius is proportional to the cube of the radius. Assuming that the particle is 100 per cent penicillin, the mass is proportional to 1.0, or equal to 1 mass unit. The writer has utilized penicillin dissolved in water containing approximately 1,000,000 units/cc. with the DeVilbiss No. 640 nebulizer. With this nebulizer most of the dose is administered in particles from 1 to 2 μ in radius (*Ann. Allergy*, 1946, **4**, 440). It is evident that particles 1 μ in radius will have approximately 60 per cent of the mass of the liquid particle as penicillin, or each particle will contain approximately 0.6 mass unit. This is somewhat, but not much, less than the solid particles of the aerosol of Taplin and Bryan. However, this difference is more than compensated by the presence of many particles reaching 2 μ in radius. The dose of penicillin in these particles is 60 per cent of $(2.0)^3$ or 4.8 mass units of penicillin per particle. This is more than four times the amount of penicillin per particle of solid penicillin in a penicillin dust having particles 1 μ in radius.

(3) The loss of penicillin dust by deposit in the mouth and upper respiratory tract is not described.

In view of (a) the simplicity of using penicillin dissolved in a liquid, (b) the availability of ordinary commercial nebulizers, and (c) the difficulty of maintaining penicillin particles without aggregation in tropical storage, it is believed that, for the present, the use of penicillin aerosols in the form of liquid droplets is to be recommended for routine procedures. (HAROLD A. ABRAMSON, *The Biological Laboratory, Cold Spring Harbor, New York.*)