a National Institute of Mental Health, to be located in the vicinity of the District of Columbia.

The National Registry of Rare Chemicals, 35 West 33rd Street, Chicago 16, Illinois, lists the following wanted chemicals: 2-isoimidazole; 2,1,3-triazole; 4,1,2-triazole; furazan; 1,2,4-oxadiazole; 1,3,4-oxadiazole; isotetrazole; pyridazine; pyrazine; quebrachitol; d-quercitol; cellopentaose; α-benzylpyridine; hydroxytyramine; epinine; 2,2-difluoropropane; glucose 6-phosphate; 2-phosphoglyceric acid; 3-phosphoglyceric acid; and hygrine.

A comprehensive list of powder metallurgy patents to date, including a brief abstract for each invention, has been compiled by Raymond E. Jager and Rolla E. Pollard, of the National Bureau of Standards, and is now available as NBS Publication M184 (*United States patents on powder metallurgy*) from the Superintendent of Documents, Washington 25, D. C., at $.30 per copy.

Make Plans for—

American Institute of Electrical Engineers, Pacific General Meeting, August 26–29, San Diego, California.

Mathematical Association of America, September 1–2, Yale University, New Haven, Connecticut.

Fourth International Cancer Research Congress, September 2–7, St. Louis, Missouri.

American Astronomical Society, 77th Meeting, September 3–6, Dearborn Observatory, Evanston, Illinois.

First International Biometric Conference, September 5–6, Marine Biological Laboratory, Woods Hole, Massachusetts.

American Psychological Association, September 9–13, Detroit, Michigan.

American Roentgen Ray Society, September 14–19, Atlantic City, New Jersey.

American Chemical Society, 112th National Meeting, September 15–19, New York City.

American Association for the Advancement of Science, 114th Meeting, December 26–31, Chicago, Illinois.

COMMENTS *by Readers*

The scientific world has no direct concern with the political side of the conference between the Indonesian and Netherlands Governments deciding on their future relations. These negotiations, however, also involve the status of the scientific institutions on Java and Sumatra, which are of much more than local significance. This is to be regretted, since it is generally admitted that the direction of scientific work and its results have no national or political boundaries. This was typically shown in Java, where men from all nationalities have contributed to scientific biological knowledge of the tropics. Swiss (Hasskarl, Zollinger, Bernard, Vischer, Schweizer), German (Junghuhn, Rumphius), Danish (Jensen, Gandrup), Swedish (Booberg, Tengwall), American (Rands, Yampolski), Chinese (Tan Sin Hok, Tung), Indonesian, and Dutch scientists all contributed while being employed at government and private research institutes and experiment stations. Appointment to such positions was dictated not by political considerations but by qualification for the job. This made the agricultural experiment stations in the Netherlands East Indies among the best in the world.

Recently, alarming news has come from Java concerning these scientific institutions. Plans had been formulated to have all scientific services placed on a commonwealth basis. The Indonesians, however, have claimed complete control over them. This has been ceded to them by a preliminary Netherlands Government decree. Indonesians have been appointed as directors of the institutions, irrespective of their qualifications. Thus, a veterinarian has been named director of the famous Botanic Gardens in Buitenzorg.

This is not scientific direction but political control, which nowhere in the world has produced scientifically significant results. Is it not time for us scientists to act and prevent renewal of methods which were so disastrous in Germany? It has been suggested that the scientific institutions in the Netherlands East Indies be brought under the supervision and control of UNESCO, which would insure continuation of the high standards maintained in the decades before the Japanese invasion. An expression of opinion in this matter, directed toward our representatives on UNESCO, might give results. (F. W. WENT, *California Institute of Technology, Pasadena.*)

In the spring of 1946 I observed that many wild plants of *Cornus florida* in the vicinity of Ann Arbor, Michigan, which I remembered as having borne pure white blossoms formerly, now produced pink flowers. The pink tint usually was uniform over any one plant, but it ranged from the slightest blush to a deep pink from plant to plant. None was seen which was quite as deeply colored as the red variety of *Cornus florida*, but some were near it.

In the present season all these plants again formed white flowers, making it apparent that the weather of the spring of 1946, one of the driest on record for the region, was responsible for the change of color. Although I have no record of it, the amount of sunshine must have been much greater than usual. The combination of much light and little water may have caused a great increase in anthocyanin formation paralleling the familiar *firing* of the lower leaves of corn in hot, dry weather. (CARL D. LA RUE, *Department of Botany, University of Michigan.*)

Folliculinids are complex ciliated protozoans, very similar to the better-known stentors. The stentors are found chiefly in fresh water; the folliculinids, mainly in marine and brackish water, although some have been recorded from fresh water in England, France, Switzerland, Canada, and Uruguay. Since they occur in so many remote points in all oceans, it is easy to assume that they will yet be found along the coasts of all lands.

That they occur in India was stated in 1916, but this publication was so deeply

buried in accounts of other animals that it has only recently been exhumed by H. Shrinivasa Rao, Deputy Fisheries Adviser to the Government of India, who communicated the facts to me.

Folliculinids fasten their dwellings to all sorts of inanimate and animate objects. Some seem to have uncanny ability to search out concealed places and may establish their dwellings within those abandoned by other small animals. Some locate on the outside of hydroids, and it is in association with the latter that they have been found in India.

Many small jellyfish that swim free in the ocean separated themselves from hydroids, like plants branching, and firmly fixed to objects of the ocean floor. Among these the genera called *Tima*, *Eirene*, and *Phortis* are much alike, and even specialists have not agreed as to which name to use. MacCrady, the pioneer student of jellyfish in America, described a species of *Phortis* from Charleston, South Carolina, and W. K. Brooks, in his studies of jellyfish of Beaufort, North Carolina, was able, in 1883, to rear the hydroid phase from this same rare jellyfish.

Another species of *Phortis* shines with exceptionally strong blue-green phosphorescence. In 1905 Browne took from the sea off Ceylon a jellyfish he named *Eirene ceylonensis;* however, Mayer, in his *Jellyfish of the world*, decided that this was really a *Phortis*—a conclusion also reached by N. Annandale when in 1915, as superintendent of the Indian Museum, he reared from this jellyfish the little hydroid he had discovered in 1906 and identified as *Campanulina.* The same sort of jellyfish taken from the sea off Ceylon by Browne suddenly appeared in great numbers in July 1915, more than 1,000 miles away, in a brackish canal near Calcutta, in the delta of the Ganges. The canal water had a salinity of but 1.0085, reduced to 15°C. In this canal, "far removed from the sea though connected at one point with the tidal waters of the Hooghly," the jellyfish were no longer found in September, when the monsoon rains probably further diluted the brackish water. From these little jelly-fish less than an inch in diameter were reared the *Campanulina* hydroids, scarcely visible to the naked eye. In this study the work of Annandale was continued by R. E. Lloyd, professor of biology at the Medical College, Bengal, and their combined results were published under the title "Hydrozoon *Campanulina ceylonensis* (Browne)" (*Rec. Ind. Museum, Calcutta*, 1916, **12**, 49–57). We quote from Lloyd's detailed account the following sentence—sole evidence of the occurrence of folliculinids in India: "The hydroid first found at Port Canning was living in association with the protozoan *Folliculina* and this organism also occurred among the colonies taken from the canal."

Dr. Rao's search in the collections of the Indian Museum revealed nothing in the way of slides or material bearing upon these folliculinids. Apparently Prof. Lloyd did not identify the species of folliculinid he observed, but as to Lloyd's identification of the group Dr. Rao writes that he has "no reason to doubt his identification of the infusorians he found on the hydroids of Port Canning."

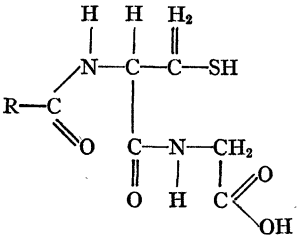
It is possible that other casual references to the occurrence of folliculinids in some corner of the world may remain hidden in the vast literature. Should anyone discover such hidden records, I would greatly appreciate being guided to them. (E. A. ANDREWS, *The Johns Hopkins University, Baltimore, Maryland.*)

The differentiation of the pathogenic species of *Sporotrichum* has always presented difficulties. It has been known since 1915 that carbohydrate fermentations, pigment formation, and production of chlamydospores are variable factors and cannot be used for the identification of species. In fact, the tendency among mycologists today is to regard the *Sporotrichum* pathogenic to man as one species.

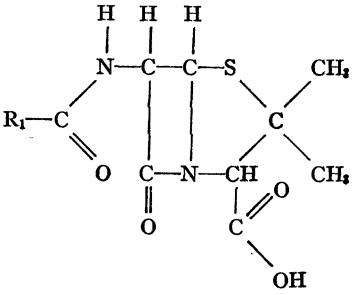
Sixteen strains of *Sporotrichum* representing examples of *S. schenckii*, *S. beurmanni*, *S. asteroides*, and *Rhinocladium equinum*, originating in America, Europe, and South Africa, were studied. Extensive agglutination and absorption experiments showed that these *Sporotricha* all have a common antigenic factor.

Details of this work are being published elsewhere. (H. I. LURIE, *South African Institute for Medical Research, Johannesburg.*)

With reference to the interesting discussion between C. S. Leonard (*Science*, November 29, 1946, pp.501–502) and C. J. Cavallito (*Science*, February 28, pp. 235–236) about the mode of action of penicillin, I should like to call attention to an interesting circumstance which I did not find mentioned in the literature available to me, *i.e.* the remarkable structural resemblance between penicillin and glutathione. In fact, the thiazolidine ring of penicillin may be imagined as resulting from a double ring closure between the β-methyl group of cysteine and the amino group of glycine on one side and between the SH group of cysteine and the α-methyl group of glycine linked together by a (dimethyl)-methyl radical on the other side (Fig. 1).



Glutathione



Penicillin

FIG. 1

From this point of view the terminal groups of penicillin would be characterized by a double ring formed between certain members of the open chains of the cysteyl-glycine radical through the intervention of a dimethyl methane, which would blockade irreversibly the SH group of cysteine. The glutamyl radical of glutathione is replaced with different other acyl radicals in the different classes of penicillin (pentanoyl, heptanoyl, valeryl, phenylacetyl, etc.).

It would be too far-reaching to draw without experimental basis any conclusion from this circumstance, but one may think of the possibility of penicillin competing with glutathione for enzymatic or other mechanisms important for microbial reproduction. (E. FISCHER, *Experimental Laboratory, S. A. Organa, Santiago, Chile.*)