described by McAlpine[2] for *Ophiobolus graminis*. Perithicia in considerable abundance were found embedded in the leaf sheath and mycelial plate. Microscopic measurements of perithecia and ascospores agree very closely with those given by Saccardo for *Ophiobolus graminis*.

As soon as a determination of the fungus had been made steps were taken to determine the source of the infection and to completely eradicate the disease from the infected area. An inspection was made of the farm which had grown the seed for the past two years. No evidence of take-all was found on this farm or on any of a considerable number of others in the vicinity of the diseased field and elsewhere. The crop from an area forty feet in diameter was spread over the ground and gasoline was poured over the infected spot and vicinity. The whole was then burned over.

The writers are indebted to Dr. W. B. Brierly, of the Rothamsted Experiment Station, England, and Professor Et. Foëx, of the Station de Pathologie Végétale, Paris, France, for examination of the affected wheat. Dr. Brierly states that the disease is indistinguishable from the take-all as it occurs in England. Professor Foëx concludes that the associated fungus is undoubtedly a species of *Ophiobolus*. Saccardo lists two species of *Ophiobolus* as occurring on wheat, *O. graminis* Sacc. and *O. herpotrichus* (Fr) Sacc. The ascospores of *O. herpotrichus* measure 135–150 × 2–2.5 microns, practically double the spore length of *O. graminis*. It has already been pointed out that the fungus under consideration agrees closely in spore measurements with Saccardo's *O. graminis*. It is not intended here to settle the question of the pathogenicity of the *Ophiobolus* as it occurs in this country or abroad. However, both the fungus and the diseased symptoms with which it is associated agree in essential details with the take-all of wheat and *Ophiobolus graminis* as described in Australia, France and elsewhere.

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[2] McAlpine, D., "Take-all and White Heads in Wheat," Victoria Dept. Agr. Bul, 9, 1904.

THE AMERICAN CHEMICAL SOCIETY. XII

DIVISION OF PHARMACEUTICAL CHEMISTRY

Charles E. Caspari, *chairman*

Edgar B. Carter, *secretary*

Stability and chloramine antiseptics: JULES BEBIE.

Chemistry and pharmacology of the chloramines: CARL NIELSEN.

Colorimetric estimation of adrenalin: WILBUR L. SCOVILLE.

Improved methods for arsenic estimation: H. F. FARR.

The melting point and the determination of free salicylic acid in acetyl salicylic acid: L. A. WATT.

Biological methods for digitalis assay: HERBERT C. HAMILTON.

Researches on hypnotics: E. H. VOLWILER.

Researches on anesthetics: ROGER ADAMS.

Wood alcohol and prohibition: CHAS. BASKERVILLE.

Drug absorption in the intestinal tract: G. H. A. CLOWES and A. L. WALTERS.

Iodine tolerance of the human body and iodine therapy: H. C. P. WEBER. A very unusual case of cure of tubercular meningitis is discussed. Only isolated instances of recovery from this disease are known in the literature. The cure was effected by dosage with extraordinary quantities of iodine, given as tincture with various albuminoses and fatty vehicles of administration. The maximum was 1 gram of iodine per day (equivalent to 0.033 g. per kg. body weight); the total equaled 12.35 g. over 22 consecutive days. No iodism was noted. The conclusions drawn were that (*a*) the maximum dose of I is not known, (*b*) the disturbing effects, iodism, are astonishingly small, or even absent, (*c*) therapeutic effects as bactericide, require piling up of I in the body, (*d*) that the disturbing effects of KI are often confused with the effects of I itself, (*e*) that aside from this, the methods of administering the I are of less significance. These conclusions seem to be worthy of, and require, verification.

The pharmaceutical chemistry and pharmacology of the chloramines: CARL NIELSEN. To obtain best results with the chloramines some knowledge of the chemistry of these products, particularly as regards incompatibilities, combinations and pharmacologic action, is essential.

Research on hypnotics: E. H. VOLWILER. History of hypnotics, soporifices, and sedatives.

Present day hypnotics, with comparative value and uses. Qualities desired in hypnotics and present research in this field.

Research on anesthetics: Roger Adams. Former anesthetics and their uses and drawbacks. Transition from natural to improved synthetic products. Qualifications of a good anesthetic and how the problem is being solved.

Improvements in the methods for arsenic estimation: H. V. Farr. A very brief review of the methods in present use is given. In addition to this a variation in the Gutzeit method is outlined, whereby the preliminary preparation of the chemical in ordinary cases is eliminated. Sulphites, etc., are oxidized by bromine and the arsenic subsequently reduced by potassium iodide, both of these reactions being accomplished within the reaction cell while the test is going on, representing a very great saving of time. In addition to this some simple methods for removing metals which interfere with the Gutzeit test are outlined, thus rendering this method more widely applicable. A gravimetric method for determining arsenic in the metallic form where this metal is present in considerable amounts is outlined. This is particularly applicable in cases where the simpler volumetric methods can not be used.

The colorimetric estimation of adrenalin: Wilbur L. Scoville. Solutions of adrenalin are necessarily acid, if kept in stock, in order to preserve the activity. This acid has a marked effect upon the color produced. The official process is designed for the estimation of adrenalin in the dried glands, and will apply to these, but is not satisfactory for commercial solutions. A method is given which is applicable to both, and which the author considers preferable to the official process. It is based upon Krauss's method, using potassium iodate as the oxidizing agent and pure adrenalin as a standard.

Stability of chloramine antiseptics: Jules Bebie. In order to assure the greatest possible degree of stability the chloramines must be produced with a high degree of purity. Investigation extended over period of one year indicates that chloramine-T in crystal and tablet form, by itself or when mixed with $NaHCO_3$ is stable. Aqueous solutions of chloramine-T alone or in mixture with Na_2CO_3 or NaCl are also stable. Dichloramine-T in powder form begins to deteriorate after about three months. The crystallized commercial product, however, is stable for about 8 months, and after 14 months shows only very slight degree of decomposition. Solutions of crystallized dichloramine-T in chlorosane are fairly stable for a couple of weeks. Halazone is fairly stable. Decomposition after one year amounts to about 3 per cent.

The determination of the melting point and free salicylic acid content of acetylsalicylic acid: L. A. Watt. A comparison of the methods in general use for the determination of the melting point of acetylsalicylic acid. The desirability of a uniform procedure is emphasized by the variation in the results obtained. For estimating the free salicylic acid content, comparison with a set of standards made from a mixed dye solution permits the close approximation of the violet color produced by the addition of ferric chloride to the acteylsalicylic acid solution.

The biologic methods for digitalis assay: Herbert C. Hamilton. The author questions the relevancy of certain criticisms of biologic assay on the ground that such an assay is limited in its scope. Biologic assays are not to decide the question of dosage nor the applicability of the drug for any particular purpose nor does a biologic assay merely record that a drug will kill an animal and permit the inference that the drug is standardized. A biologic assay is a comparison of the sample in question with a similar preparation of known activity. The comparison of effects is made on some test animal which responds to the action of the drug in so characteristic a manner that the effect is measurable. The proposed methods for digitalis with their advantages and disadvantages are described at length in order to emphasize the scope and limitations of the biologic assay of the digitalis series.

Charles L. Parsons,
Secretary

(*To be continued*)

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