



## EDITORIALS

### **THE ANNUAL MEETING**

The founders of the American Diabetes Association originally established the Annual Meeting in the belief that it would be a major interest of the Membership. Since then the Association has developed new and varied functions, but the Annual Meeting continues to hold its place of importance.

The details of the Program for the Meeting in June 1952 are presented elsewhere in this issue of the Journal. It includes a well-balanced selection of scientific papers dealing with both investigation and practice. The highlight will be the Banting Memorial Lecture, to be delivered by Professor Charles H. Best.

A joint session with the Endocrine Society will again be held. Since the two Societies have numerous interests which coincide and since many of our members belong to both, the combined sessions held in recent years have proved mutually advantageous.

The panel discussions which were tried with success last year will be repeated at this meeting. Members are urged to submit questions which they wish answered for their own information and for the general interest of the audience.

The banquet will provide an occasion for sociability. It also promises to be a noteworthy event in the history of the Association for reasons which will be revealed in due time.

The Scientific Sessions will be followed by a Conference of Affiliate Associations, which will permit exchange

of ideas and development of projects to serve diabetics throughout the continent. Mention should also be made of the activities carried on in advance of the Scientific Sessions. The year-round activities of the Association are largely determined by work done during meetings of the Council and the Committees held at this time.

The Twelfth Annual Meeting at Chicago promises to be unusually valuable and productive for the Association and its Members.

### **BIOLOGICAL ANTAGONISM**

The concept of the "essential metabolite" as the key-stone of metabolic processes has been generally accepted in modern biological thought. In tracing pathways of the intermediary metabolism of such metabolites, the use of isotopes has been extremely valuable. A second approach to such investigations is the use of an analogue of a metabolite which competes with the metabolite for a biological substrate but is unable to substitute for it in the subsequent metabolic reactions. The result is an interference with an essential metabolic process.

Such an interference may have widespread uses and effects. For example, it may lead to the discovery of a new metabolite, as in the case of para-amino benzoic acid, or to the discovery of a new function of a previously known metabolite, such as the demonstration that tryptophane may be a precursor of nicotinic acid. By the proper choice of such antagonistic agents, it may be possible to explore the steps in various metabolic

syntheses and transformations. An early application of this procedure led to the recognition of a possible chain reaction in purine synthesis. In many instances, the antagonism between structurally related agents may serve to maintain physiological order as evidenced by the beneficial antagonism between potassium and sodium ions, or between testosterone and various estrogens. In still other instances, the process of blocking cellular reactions may disturb physiological order with a net result which is beneficial to the organism. The antagonism between dicoumarol and vitamin K with its anticoagulant effect and that between acetyl-choline and prostigmine which results in an anticholinesterase effect are typical examples. At times, the blocking effect may inhibit growth or cause death of the cell. Hence, the phenomenon may be applied to the fields of bacteriology, virology, and cancer research.

The concept of biological competition, or antagonism, has achieved sufficient importance to merit three recent and important reviews<sup>1, 2, 3</sup> which should be of considerable interest to the medical profession. In these reviews, the application of the concept to pharmacology, chemotherapy, physiology, and biochemistry covers such diversified units as antibacterial agents, vitamins, amino acids, purines, pyrimidines, steroid hormones, antithyroid compounds, a variety of drugs, simple ions, and antiviral substances. Both synthetic and naturally-occurring antagonists have been investigated. The former have been applied largely to the field of therapeutics and include such substances as sympathetic-blocking agents, antihistamines, sulfonamides, and folic acid antagonists. The latter may be extremely important in the maintenance of biological order through the stabilization which results from antagonisms between ions, or amino acids, or hormones.

Although the concept is not a new one, the discovery of the competition between sulfonamides and para-amino benzoic acid has resulted in the renaissance of a somewhat neglected idea. It seems to hold a clue not only to the etiology of certain diseases and the therapy of others, but also to the maintenance of order in the constant flux of physiological processes.

—ROSEMARY MURPHY, M.D.

#### REFERENCES

- <sup>1</sup> D. W. Woolley, Consulting Editor: Antimetabolites, Ann. N.Y. Acad. Sci. 52:1197-378, 1950.
- <sup>2</sup> Martin, G. J.: Biological Antagonism. The Theory of Biological Relativity. New York, The Blakiston Company, 1951.
- <sup>3</sup> Woolley, D. W.: A Study of Anti-metabolites. New York, John Wiley & Sons, Inc., 1952.

#### PATIENT EDUCATION AND THE A.D.A. FORECAST

The *A.D.A. Forecast* is the Association's foremost means of direct service to the diabetic patient. A great deal of time, thought, and effort have gone into the continued development and improvement of this publication, under both its original editorial guidance and its current management by Frederick W. Williams, M.D., Editor in Chief, and Mr. Groff Conklin, Managing Editor. Since it began publication in 1948, the magazine has proved its usefulness for many types of diabetics.

The value of the *Forecast* to the individual diabetic is easy to describe. It gives him practical information to help him in his day-by-day diabetic regimen. It prepares him for problems which may confront him in the future. It strengthens him by giving a feeling of solidarity and fellowship with the many others like himself—other diabetics with the same problems, frustrations, discomforts and complications. One of the magazine's popular and effective departments is "The Funny Side," in which diabetics enjoy a laugh at themselves or at the non-diabetic outside world. Finally, the *Forecast* helps the patient to free himself from needless anxiety and unhappiness. Letters are frequently received from readers who express their satisfaction at finding that others have learned how to cope with diabetic problems, and who say that because of the magazine they no longer feel so isolated or so different.

An effort is constantly being made by the Editors of the *Forecast* to broaden its scope and make it of interest to a wider segment of the diabetic population. This is not a simple task, since diabetics are of all ages, educational levels, tastes, and degrees of sophistication. As consistently as possible, the magazine has been kept firmly in the middle of the road, so that diabetics of nearly every type, barring the semiliterate, will be able to find something in it to their taste.

The *Forecast* is useful to physicians as well. They find the magazine an aid in their efforts to teach their patients and to secure their cooperation in achieving good diabetic management.

Finally, the *Forecast* helps the Association to bring itself to the attention of diabetics everywhere. It is the most effective means, outside of individual correspondence, of providing—as an Association—direct assistance to persons with diabetes. It does not trespass on the intimacies of the doctor-patient relationship, being careful not to intrude medical advice when that advice should be given personally. Yet it makes constant and fairly successful efforts to set diabetics straight on many knotty problems and obscure questions; two examples