## MICHAEL SOMOGYI 1883--1971



Michael Somogyi was born in Reinersdorf, Austria-Hungary, on the 7th of March, 1883. At the age of 16, he enrolled at the University of Budapest and supported himself through to graduation, when he obtained a degree in Chemical Engineering. He spent the following year there as Assistant in Biochemistry. The romantic books that he had read about America induced him to travel to the United States, but the only employment he could find was driving a horse and buggy for a German physician in New York, and later working in a Cincinnati rope factory for \$7.00 a week. He therefore sent back to Budapest for letters of introduction, and returned to New York City, where he obtained a post as Assistant in Biochemistry at Cornell University Medical College that he held from 1906 to 1908. He then returned to Budapest, where he was head chemist in the Municipal Laboratory for over a decade, including several agonizing years during World War I when he was put in charge of feeding the destitute. He received his Ph. D. at the University of Budapest in 1914 with a dissertation on catalytic hydrogenation.

In 1922, Dr. Somogyi was invited by P. A. Shaffer, a former colleague at Cornell University, to return to the United States, and he became an Instructor in Biological Chemistry at the Washington University School of Medicine in St. Louis. In 1926, he was appointed the first biochemist at The Jewish Hospital of St. Louis, a position that he held until his retirement in 1957. In 1969, Michael Somogyi suffered a massive stroke from which he never recovered, and he died on July 21st, 1971.

In 1922, while on the faculty of Washington University School of Medicine, in teamwork with Shaffer and E. A. Doisy, Dr. Somogyi was instrumental in working out the method for the preparation of insulin that remains to this day the one used

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worldwide for the commercial production of insulin. The first child diabetic to be treated with insulin in the United States was an 18-month-old boy in the St. Louis Children's Hospital in early October, 1922, and the insulin was prepared by this trio of researchers.

During Dr. Somogyi's years at The Jewish Hospital of St. Louis, he consulted with his physician associates concerning the care of over 5,000 patients having diabetes 'mellitus. In 1949, at the American Chemical Society meeting in Atlantic City, New Jersey, he stated that many diabetic patients were receiving such large doses of insulin that they were "actually victims of chronic insulin poisoning". As a result of this one paper, Dr. Somogyi received letters from all over the world requesting help. In addition to criticizing the administration of excessive doses of insulin, Dr. Somogyi also believed that many diabetic patients receiving insulin therapy could be better managed with a proper diet and weight loss. He considered that injection of insulin is inappropriate therapy for overweight diabetics. He discovered that the glucose tolerance of most diabetics improves with weight loss, often to the point where they become aglycosuric and can continue so if they receive a proper diet. He predicted that, should oral hypoglycemic agents ever become available, they would eventually be discarded as useless and even harmful.

Dr. Somogyi published over 70 papers on various aspects of clinical chemistry, including the preparation and purification of insulin, the measurement (in Somogyi units) and significance of diastase (amylase), fermentation, measurements of blood potassium, the determination of glucose in blood and urine, the determination of glycogen, the determination of ketone bodies in blood and urine, and the physiology of action of insulin and other hormones. His name is permanently associated with the Somogyi reagent. Dr. Somogyi's last three major articles appeared in the issue of the American Journal of Medicine published in February, 1959; they were entitled "Quantitative Relationship Between Insulin Dosage and the Amount of Carbohydrates Utilized in Diabetic Persons", "Exacerbation of Diabetes by Excess Insulin Action", and "Diabetogenic Effect of Hyperinsulinism". The effect discussed in the last paper is now known worldwide as the "Somogyi Effect", and can be summarized in his phrase "Hypoglycemia begets hyperglycemia".

Dr. Michael Somogyi was honored in 1914 by The Royal Academy of Sciences of Budapest for research in food chemistry, and by clinical chemists with the Ernst Bischoff Award (1953) and the Donald D. Van Slyke Award (1964).

A group of Dr. Somogyi's close friends and collaborators in research have established The Michael Somogyi Diabetes Foundation. The foundation plans, through research and fellowships, to give wider circulation to Dr. Somogyi's discoveries, so that both physicians and patients can improve the care of the diabetic.

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