

# The Hungarian Society of Laboratory Medicine – serving patients for 70 years

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## ARTICLE INFO

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## EDITORIAL

The history of laboratory diagnostics is the true tale of the spectacular medical and technical developments of the past decades. Probably no other medical disciplines have undergone this steep development in the same period of time. A typical hospital laboratory in the 1930's reported annually around 200 'chemical assays' and the same amount of histological examinations, about 1000 bacteriological tests and 2-3000 Wassermann reactions. These data obviously show that before the Second World War, this simple formula could be applied: laboratory diagnostics = bacteriology + some rare chemical tests. These figures were considerably rewritten before the end of the 1940's by the widespread introduction of spectrophotometers, mostly based on discoveries by Arnold Beckman, and the subsequent application of standard and reproducible procedures for measuring chemical analytes like creatinine, bilirubin and total protein. Another boost for laboratory testing was obtained when, in the 1950's, Wallace Coulter developed his first simple cell counter that later was developed into a hematology analyzer. The recent forms of this equipment can provide 25-30 biologically / clinically useful numerical results in a very reliable manner and may process over 1000 samples per

day. Hardly anybody could foresee this type of development.

It should be mentioned that dedicated colleagues from Hungary, considerably contributed to the development of laboratory medicine. There were several scientists and practicing physicians in the early 20th century whose work established valuable clinical laboratory methods that are in general use even today. Some of them are listed below.

Sándor Korányi (1855-1944), an outstanding clinician, introduced the technique of freezing point determination for the evaluation of urine osmolality, the first exact test for renal function that later provided the basis for osmometry. He and his colleagues also introduced a titration method for the measurement of gastric HCl. Kálmán Pándy (1868-1945) was an eminent neurologist who performed cerebrospinal fluid (CSF) analysis in his laboratory by his own hands. Once a bottle of phenol accidentally turned over and got mixed with a drop of CSF sample, Pándy noticed the development of an opalescent cloud. Based on this observation, he worked on optimizing the method for measuring the protein content of CSF and, finally, he established the 1:15 phenol dilution as a suitable test. Many senior colleagues may be also familiar with a glucose assay, the so called Somogyi-Nelson method. Mihály Somogyi (1883-1971) was one of the inventors reported the original test, which was later modified by Nelson. Somogyi also made seminal discoveries by describing the 'Somogyi-effect' a paradoxical situation of insulin-induced post-hypoglycemic hyperglycemia. Probably the best known Hungarian laboratorian is Lóránd Jendrassik (1896-1970). His name is linked to the discovery of the chemical reaction for serum bilirubin measurement; the so called 'Jendrassik-Gróf' method, that served for decades as the state-of-the-art bilirubin methodology worldwide. Even today, a modified form of, the Jendrassik method utilizing diazonium salt is used for the detection of bilirubin.

In 1946, the medical and health science workers established the joint Society for Pathologists (Kórbonctan in Hungarian) and Laboratory Specialists (Laboratóriumi Diagnosztika) and thus the Society was named KOLAB. This Society also included a Division for Experimental Medicine. During the next decades, the three areas diverged and the Hungarian Society of Laboratory Medicine evolved, which today counts over 450 members. The Society holds biennial meetings at variable locations. The 70-year old Society will hold its jubilee meeting on 25-27 August, 2016 in Szeged.

The contributors of this 70-year anniversary issue are all well-known to the field of Hungarian Laboratory Medicine. Géza Bödör is a professor at the University of Colorado and Section Chief of the Chemistry and Molecular Laboratories at the VA Medical Center in Denver, Colorado, USA. Gábor L. Kovács was the director and professor of two large laboratories for 25 years, at the Markusovszky Teaching Hospital and subsequently at the Department of Laboratory Medicine at the University of Pécs, and is presently the director of the Szentágotthai Research Center in Pécs. Professor Barna Vásárhelyi is the director and professor of the youngest Laboratory Medicine Department at the Semmelweis University in Budapest. Katalin Kristóf is the chief of the Diagnostic Microbiology Division at the same Department. Zsuzsanna Bereczky is the head of the Division of Medical Laboratory Sciences at the University of Debrecen. Éva Ajzner is the acting president of the Hungarian Society of Laboratory Medicine and the head of the Laboratory Department of the Jósa András Teaching Hospital in Nyíregyháza. I, János Kappelmayer, am the director of the Department of Laboratory Medicine at the University of Debrecen. This volume embraces various aspects of Laboratory Medicine and will hopefully demonstrate the multivalency of our discipline.