Tributes to George Brecher, MD., (1913–2004)

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Accepted May 10, 2005

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George Brecher, MD., Professor Emeritus, University of California School of Medicine, San Francisco, a graduate from the Medical Faculty of the German University in Prague (1938), died on July 5th, 2004. George Brecher was born in Olomouc on 5th November 1913. In Olomouc he attended elementary and high school (gymnasium) ended with the final exam (maturita; 1931). He began his undergraduate studies at the University of Göttingen in Germany; however he chose to return to Prague, Czechoslovakia, for his medical studies. Since all his previous education was in German he enrolled into the Medical School of the German University in Prague where the teaching language was German. He came from a Czechoslovak – Jewish family, and by leaving Czechoslovakia in 1939, he probably saved his life. The promoter of his graduation, professor of pharmacology Dr. Emil Starkestein, died in the Nazi concentration camp in 1942.

George Brecher had enjoyed the cultural life of Prague in pre-war Czechoslovakia. Later, he often remembered "Přítomnost" of Ferdinand Peroutka, a journal for intellectuals, published in Czech. Though living abroad from 1939, Dr. Brecher remained fond of Czech culture. He was also always friendly to Czech scientists he met and interested in their work and achievements.

Due to the Second World War, Dr. Brecher started his scientific carrier late and his first publication appeared only in 1950. However, he continued publishing his work until 1998. His contribution to experimental hematology and to the clinical laboratory diagnostics was brilliant and has been widely recognized.

After graduating in 1938, Dr. Brecher started his medical internship in Czechoslovakia. He immigrated to England in 1939, where he continued his

Figure 1 – Professor George Brecher, MD., was born on November 5, 1913, died on July 5, 2004.

postgraduate internship in surgery. From1940 he studied at the London's School of Hygiene and Tropical Medicine. In 1942 he arrived in the USA where he took a residency in pathology at the Mayo Clinic in Rochester, then he served in the U.S. Army Medical Corps from 1944 till 1946, and then became a Fellow in Pathology at the National Institute of Health in Bethesda (NIH). It was only here that his distinguished scientific carrier in hematology and laboratory medicine started. He stayed at NIH for 20 years, and from 1953 to 1966 was the Chief of Hematology at the Department of Clinical Pathology. In 1966 he was appointed professor at the University of California San Francisco (UCSF), where he became Chairman of the Department of Laboratory Medicine (which he founded) till his retirement in 1978. Even after his retirement, he continued to carry out research at the Lawrence Berkeley National Laboratory at the University of California and continued to collaborate with the Department of Laboratory Medicine, UCSF, as professor emeritus.

Dr. Brecher had contributed significantly to laboratory diagnostics by devising new methods of blood cell examination and introducing automation into blood analysis. He also participated in several clinical studies dealing with the diagnostics and pathogenesis of various blood diseases. He extended his clinical interests to research directed to regenerative processes in the hematopoietic system and to the cellular and humoral regulations involved. In his 1951 paper, co-authored by Dr. Cronkite [1], he provided evidence for possible existence of cells that circulate in blood and enhance bone marrow regeneration damaged by irradiation. This introduced the discovery of hematopoietic stem cells, which was exploited 20 years later in clinical bone marrow transplantations. In the beginning of 1950s, he experimentally studied the possibility of using transfusions of platelets and leukocytes to treat bone marrow failure. His further experimental studies were devoted to the regulation of erythropoiesis, and were realized with Dr. Frederick Stohlman, Jr., a prominent clinical and experimental hematologist. These are just a few examples of Dr. Brecher's vast scientific achievements during the time he was chief and chairman at the NIH and UCSF.

After his retirement in 1978, he made a major discovery showing that hematopoietic tissue can be successfully transplanted to normal nonirradiated mice. This provided evidence that recipients did not necessarily have to undergo intensive preconditioning such as whole body irradiation and/or administration of lethal doses of cytostatics [2–4]. This paved the way to non-myeloablative conditioning regimens with reduced toxicities which are now widely introduced into clinical transplantations of the hematopoietic tissue.

Dr. Brecher demonstrated that a single stem cell can not only regenerate the whole hematopoietic system but can also make its own copies that can be further transplanted [5]. He knew well the power of experiment and the necessity of a deep but critical interpretation of results, and he had the courage to search for unorthodox possibilities and solutions. His passion for science was insatiable

and he remained active as the associate editor of Blood Cells, Molecules and Diseases until his death last year.

Dr. Brecher was a devoted father to his four stepchildren and a good husband to Eva, who also studied in Prague in pre-war Czechoslovakia. He received great support from his family. Everyone who visited them in their home highly appreciated the warm welcome and the lovely atmosphere of the family. Due to his scientific achievements and his great respect of Charles University in Prague, Dr. Brecher was awarded the Honorary Medal by the First Faculty of Medicine in 1991. The medal and diploma holds a privileged place at his house in Kensigton, CA.

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