## **IN MEMORIAM**

## Professor Alfred Bollinger January 23, 1932 - April 3, 2015



Prof. Alfred Bollinger, 1932 - 2015



Alfred Bollinger explaining his new method of microlymphography using fluorescent dextran.

On April 3, 2015, Alfred Bollinger, one of the last enduring early pioneers of angiology and specifically lymphangiology, passed away. He leaves behind his wife Verena, two daughters, and four grandchildren.

He was born January 23, 1932, in Herisau, Appenzell, the son of a newspaper editor and attended gymnasium in St. Gallen, all in Switzerland. His medical studies took place in Geneva and Zurich with one semester in Rome, accounting for his facility with languages. Training in internal medicine followed in Olten and St. Gallen with one interruption of one year at the National Heart Institute in Mexico City. With the intention to become a cardiologist, he went to Prof. Robert Hegglin at the University Hospital of Zurich, who commissioned him to concentrate his activities on peripheral vascular disease.

Dr. Bollinger, at that time, did not even know the term Angiology but made himself familiar with it by consulting with somewhat older colleagues, Leo Widmer in Basel and Arnold Kappert in Bern. He wrote a monograph on venous occlusion plethysmography in angiology to become in 1968 a "Privatdozent" at the medical faculty, winning the Max Ratschow award for that work.

Soon after, he introduced, as one of the first in Europe, pressure measurement in ankle arteries by Doppler ultrasound. He applied the Doppler also to the peripheral veins for diagnosis of valvular incompetence and thrombosis. The next project was exploration of the microcirculation by video-and fluorescence microscopy. He developed with his group the method of microlymphangiography using fluorescent dextran. Also,

dynamic measurements were performed not only in the blood vasculature but also in lymphatic capillaries. Beatrice Amann, by then his research assistant, remembers that he volunteered to be her first subject to have a lymph vessel punctured for the pressure measurements. Lymphology became one of his early and continuing areas of interest and activity in the International Society of Lymphology.

In the meantime, his group had grown to a University Division of Angiology with a great international reputation. Several young scientists, especially awardees from the German research society (DFG), applied to work with him. Several later professors who emerged from his scientific school were Andreas Grüntzig, Felix Mahler, Ernst Schneider, Kurt Jäger, Ernst Pilger, Ulrich Hoffmann, Ulrich Franzeck, Iris Baumgartner, and Beatrice Amann Vesti, who is head of his former Angiology Department. In addition, numerous angiologists trained in clinical practice with him.

He was always open to discover new and promising methods and constantly encouraged younger colleagues. Grüntzig developed the balloon catheter first for peripheral arteries before he dared to apply it in the coronaries, and Bollinger supported him through many investigations and hostilities. He also promoted enthusiastically the new application of Duplex ultrasound in peripheral and intestinal arteries as performed by Kurt Jäger.

Bollinger was active also in the medical societies. He was president of the Swiss Society of Angiology, he made important preparatory work for the recognition of angiology as a full medical discipline, and he founded the Swiss Society of Microcirculation.

He organized the 1991 European Conference of Microcirculation in Zurich and other international meetings, among them also a symposium on lymphology. He received numerous national and international awards and honorary memberships such as of the Swiss and German Societies of Angiology, and the European and World Societies of Microcirculation.

All these accomplishments do not fully convey his multifaceted personality. He was not only interested in medical and scientific problems but also in many cultural fields. His broad mind covered also literature, photography, vulcanology, and mountaineering, to give only some examples of his activities. He was a productive author not only of almost 500 medical articles but also three fictional novels, and photo-books on his favorite volcanic island Stromboli and the Lake of Zurich. He chose early retirement in 1995 from his chair to become a dedicated professional writer.

A last word should be directed to his sociability, sympathy, and long-term friendships. There is hardly any coworker, colleague or not, whom he did not ask about their circumstances and the future of their life. Until the end of his life, he was interested in the future of his department and the discipline of Angiology encompassing both the blood and lymphatic vasculature. Those who had the privilege to know him will not ever forget him.

Prof. Dr. med. Felix Mahler Spital Männedorf CH-8708 Männedorf, Switzerland E-mail: f-mahler@bluewin.ch