

IN MEMORIAM

Tribute to Paul M. Vanhoutte, MD, PhD (1940–2019)

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Professor Paul M. Vanhoutte passed away at the age of 78 years on August 23, 2019. All our thoughts are with his family, his wife, children, and grandchildren.

Professor Vanhoutte will be remembered as an internationally renowned figure in cardiovascular medicine and pharmacology for his major scientific contributions that unraveled the importance of endothelial cells regulating the underlying vascular smooth muscle in vascular health and disease and for his seminal discoveries that emphasized the complexity of that regulation. His scientific productivity included >669 original research articles, and 574 editorials, reviews, or book chapters in the cardiovascular field.

Paul M. Vanhoutte was born in Belgium; he obtained his medical degree at the University of Ghent and his PhD degree at the University of Antwerp. His outstanding academic career took him to prestigious Professor positions at the Mayo Clinic in Rochester, Minnesota, and at Baylor College of Medicine in Houston, TX. During this time, he also was involved at the highest levels in the International Union of Basic and Clinical Pharmacology. Later on, he moved to the pharmaceutical industry as Vice-President of R&D at the Institut de Recherches Internationales Servier, in France. From 2003 and until this summer, he held several academic positions at the University of Hong Kong, including Chair Professor and

Head of the Department of Pharmacology and Pharmacy. He also was Visiting Professor at 13 different universities across the world and an active member of numerous scientific academies and societies. He never retired.

As many young research fellows, we were all attracted by his charismatic leadership, his profound passion, love of science, and his rare human and mentoring qualities. Throughout his life, Professor Vanhoutte expressed a genuine interest in the well-being of his fellows and in their scientific careers. He would encourage us by citing Alexander the Great "There is nothing impossible to him who will try." Professor Vanhoutte traveled extensively but was never more than a phone call or an email away, always available to discuss scientific results. We all remember his excitement when discovering new or unexpected results through his famous words "I feel a paper coming on, sharpen your pencils!" which would even further fuel our energy to gather the necessary data to complete the study.

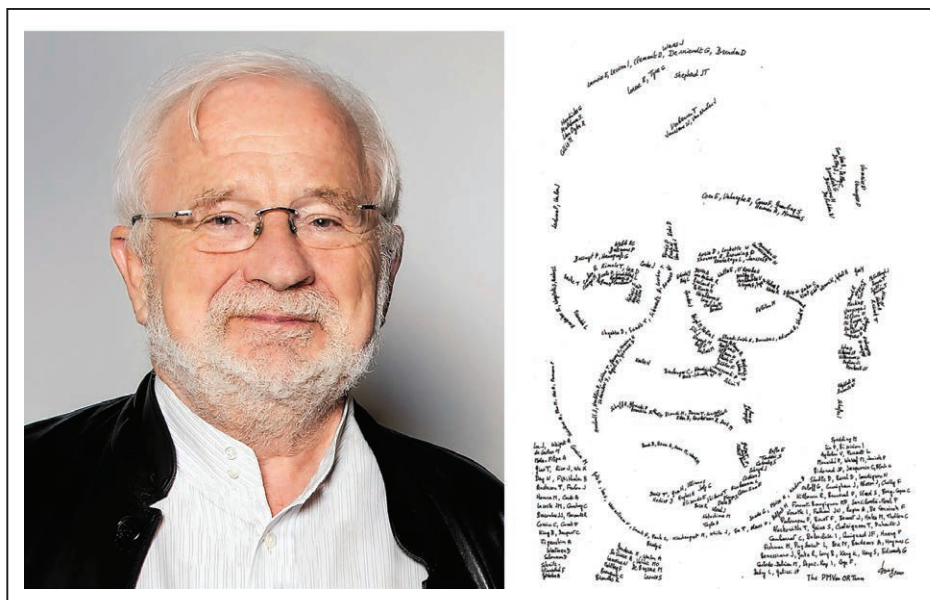
Some of us were with him at the beginning of his career when his interest was on catecholamines and the regulation of venous tone, working with Dr John Shepherd at the Mayo Clinic.¹ Others joined his lab in the 80s, at the time of Robert Furchgott's discovery of the obligatory role of the endothelium as a regulator of smooth muscle function and remember Paul's profound admiration for Furchgott's scientific mind.²⁻⁶ Other fellows

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Left, Photograph of Professor Paul M. Vanhoutte in 2015. **Right**, Professor Vanhoutte portrait at 60 with all his fellows' names. Drawing by Dr Tony Verbeuren at 60. Reproduced from Bond¹⁹ with permission. Copyright ©2001, Elsevier.

took part in his work on dysfunctional and regenerated endothelium that led to the discovery of the underlying molecular mechanisms.^{7–10} Others were with him during the search for endothelium-dependent contracting^{11–15} and hyperpolarizing factors^{16–18} and their role in health and disease.

Professor Vanhoutte took much pride in organizing a series of scientific meetings titled Mechanisms of Vasodilatation. It was at the Fourth Mechanisms of Vasodilatation conference, held in Rochester in the summer of 1986, where Robert Furchgott and Louis Ignarro independently announced the finding that EDRF (endothelium-derived relaxing factor) was nitric oxide. Shortly thereafter, Professor Vanhoutte gained in a few years an international reputation for his work on EDRF, nitric oxide, and other endothelium-derived vasoactive factors in health and disease. He was the first to discover endothelium-dependent contractions, in particular in arteries exposed to hypertension. He was an extraordinary speaker, captivating his scientific audience until the end of his life, having given an address at Mechanisms of Vasodilatation in Rotterdam in May 2019. He was unique in constantly citing our names when describing our results at conferences, but he remained very humble regarding his own input; he even used to say that his only scientific contribution was to give his blood for experiments in the first article reporting endothelium-dependent responses to platelets. Professor Vanhoutte's scientific life centered on blood vessels, veins, and arteries; "the tissue never lies," he used to say when data were not what his fellow would expect from their experiment.

Aside from the lab, Paul Vanhoutte lived well, enjoying good food, good wine, good laughs, and sometimes a cigar. He loved jokes and always had a new one to

tell the audience. Throughout the years, and particularly at venues such as Experimental Biology, Mechanisms of Vasodilatation, and EDHF Meetings, his current and former fellows would meet with him for "PMV dinner parties" that were not to be missed. We are honored to have accompanied him on his scientific journey.

Paul Vanhoutte will always be in our hearts.

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Disclosures

None.

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