

## The 11th European Symposium on Clinical Hemorheology, Rouen, France, 19–22 September 2000

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# Fåhraeus award ceremony laudatio: 10th awardee Gustav Born

J.-F. Stoltz  
*President ESCH*

Received 4 May 2001  
Accepted 4 May 2001

It is a great honour, a great pleasure and a great pride for me to introduce to you today Gustav Born the 10th recipient of the Fåhraeus medal. Usually individuals become honoured by a prize, at times a prize gets honoured by a recipient. But before I present him with the award, please let me give you a short reminder of his record.

In 1979, during the 1st symposium on Clinical Hemorheology that I had organised in Nancy with my colleague P. Drouin, the idea was proposed by S. Chien, H. Schmid-Schoenbein, J. Dormandy, P. Drouin and myself to instate a scientific distinction that would be awarded every two years to a scientist in the fields of microcirculation, hemorheology and thrombosis. The first recipient was S. Chien (1981), J. Dormandy (1983), H. Schmid-Schoenbein (1985), J.-F. Stoltz (1987), Di Perri (1989), J. Stuart (1991), H. Meiselman (1993), A. Ehrly (1995), S. Witte (1997). The awardee is designated by a secret ballot (except in 1991 and 1993) of the representatives of all the European Clinical Hemorheology and Microcirculation Societies and Groups. This year, the 10th recipient, elected on the occasion of our 11th meeting, is Professor Gustav Born.

It is not an easy task to present, in a few minutes, the scientific record and achievements of Gustav Born. There is a saying in France, whereby a “translator is a traitor” and I fear that this could apply to me today, in this exercise where I will undoubtedly forget some of his many achievements, and I hope Gustav will forgive me my forgetfulness.

Gustav Born was born 1921 in Goettingen (Germany). In 1933, his family settled in Great Britain in Cambridge and then in Edinburgh. In 1938, he entered the Medical School in Edinburgh University gaining the Vans Dunlop Scholarship. After a surgical residency, he joined the Royal Army Medical Corp as medical officer. From 1943, he was on active war service in the Far East, first as a general medical officer and then as a clinical pathologist for the British occupation forces in Japan.

After demobilisation in 1947, Gustav Born went to Oxford in 1948 to begin research under Sir Howard Florey. In 1951, he presented a PhD thesis on bacteriolytic enzymes.

In 1958, Gustav Born return to Oxford at the invitation of Dr Geoffrey Dawes (FRS), Director of the Nuffield Institute for medical research. At the same time, he joined the staff of the pharmacology department. It was at this time that Professor Born began his fundamental work on blood platelets at the Royal College of Surgeon where he was appointed to Vandervelle chair and head of department of pharmacology in 1960. He was also Honorary Director of the Thrombosis Research group of the Medical Research Council (1964–1973). During this period, Born's department became acknowledged as an internationally leading center of pharmacological research, attracting numerous coworkers from all over the world and particularly his long friend John Vane, who was a senior lecture working on prostaglandins for which he later received the Nobel price.

In 1972, Gustav Born was elected Fellow of the Royal Society followed in 1973 by his election to the Sheild chair of Pharmacology in Cambridge.

In 1978, he began Professor and Head of the Department of Pharmacology at Kings College in London. During this period, he continued to work on circulating cells and blood vessels including the influence of cell surfaces on the interactions between circulating cells and endothelium, mechanisms of inhibition of cell adhesion and hemodynamics effects.

After retiring from University, Gustav Born became in 1988 Research Director of the William Harvey Research Institute recently founded by Sir John Vane at the Medical College of St-Bartholomew's Hospital in London.

Professor Born is best known for his major contributions to knowledge of haemostasis and thrombosis through his fundamental work on platelets. In 1956 with Professor Blaschko, he provided the first evidence that adrenaline was associated with ATP. He showed that during blood clotting ATP in platelets is dephosphorylated to ADP. For his investigations of platelet physiology and pharmacology, Gustav Born invented the photometric method for analysing platelet aggregation *in vitro*. The principle of his optical aggregometer has ever been used world-wide in fundamental, clinical and pharmacological investigations. He discovered the basis mechanisms of platelet aggregation including the essential cofactors calcium and fibrinogen. Two of his papers in *Nature* and in *Journal of Physiology* became "citation classics" and have been cited several thousand times. In other respect, Gustav Born was the first to make measurements on granulocyte rolling in venules. He showed also that the negative charged densities on vascular endothelia greatly exceed these on the surfaces of other cells.

In a lengthy collaboration with M.J. Davies and P.D. Richardson, he established that liability to fissuring of human aortic plaques is associated with decreased resistance to mechanical deformation and increased number of macrophages in the plaque cap.

In atherogenesis, Gustav Born and his co-workers have identified factors which influence the uptake into artery walls of the atherogenic proteins LDL. The density of anionic sites on the endothelial surface limit the uptake of LDL and fibrinogen.

In the last ten years, he has mainly been working on a major aspect of atherogenesis which is factors determining the flux of atherogenic plasma proteins from blood in arterial walls.

In summary, Professor Born's cardiovascular research has been extraordinarily innovative and productive, both by increasing our understanding of important pathophysiological processes and by providing essential starting points for the development of new drugs.

For his important scientific contributions, Gustav Born has been awarded and received many distinctions.

I can only summarize some of them:

- Fellow of the Royal Society (1972);
- Fellow for Scientific distinction of the Royal College of Physicians (1979);

- Honorary Doctorates in Science from the Universities of Bordeaux (1979), and Paris (1987);
- Honorary Doctorates in Medicine for the Universities of Münster (1980), Leuven (1981), Edinburgh (1982), Brown University of Providence (1987), Munich (1989).

His prizes include the Alexander von Humboldt Award (1994) and the international senior Aspirin Award (1995). He has also been Professor of the “Fondation de France” (1982–1984).

He was President of the International Society on Thrombosis and Haemostasis (1977–1979) and President of its International congress in 1979. He is also an honorary member of the “Club de Rome”.

Professor Born is married, with five children and six grandchildren and lives in London.

This is, my dear colleagues, the man who today is receiving the Fåhræus award, and it gives me great pride to present it to him on behalf of the European Society for Clinical Hemorheology council. I make myself your interpreter in congratulating him on behalf of you all for his fundamental contributions to cardiovascular and thrombosis fields.

Rouen, September 21st, 2000