

BIOGRAPHICAL SKETCH

NAME: **Couraud, Pierre-Olivier**

POSITION TITLE: **Research Director, INSERM**

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

Ecole Normale Supérieure (ENS), Paris-Saclay		09/1975-78	Physical Chemistry
Agrégation Sciences physiques		1978	Physics & Chemistry
Anti-idiotypic antibodies against membrane receptors	Ph.D.	09/1987	Immunology
Ideon Corporation, Redwood City, CA, USA	Postdoc	1987-88	Molecular biology

A. Contribution to Science

As a cell biologist, I have been working on the biology of brain endothelium for about 30 years, being co-author of more than 260 peer-reviewed articles. Along these years, my main interest was to unravel the molecular mechanisms of the maintenance of the blood-brain barrier (BBB) integrity as well as to understand how circulating immune cells and bacterial pathogens cross the BBB and infiltrate the brain parenchyma under pathological situations such as Multiple sclerosis, Stroke or bacterial meningitidis. Identifying the signaling pathways involved in those processes within brain endothelial cells (in particular the LFA-1/ ICAM-1 and the Wnt pathways) required the development of appropriate *in vitro* models which could recapitulate the unique properties of the BBB as closely as possible. Accordingly, my team has been heavily involved in the production and diffusion of immortalized brain endothelial cell lines as valuable *in vitro* models: rat brain endothelial cell lines (RBE4, GPNT) and the human brain endothelial cell line hCMEC/D3 which altogether have been used worldwide for pharmacological, immunological or toxicological studies in more than 700 publications so far.

In addition, I have been active in technology transfer, first in co-founding the Biotech company Neurotech (initially in Evry, France, now Neurotech Pharmaceuticals in Rhode Island, USA) as early as in the late 90's in order to treat cerebral and retinal diseases, then as vice-president for technology transfer at Paris Descartes University (2012-2018). Finally, I have been appointed Head of Institut Cochin in Paris (2008-2022), a large Research Center gathering about 650 staff members, which is dedicated to basic research in biology (Immunology, Oncology, Diabetology and Reproduction) as well as therapeutic applications, in connection with the Hôpital Cochin near-by.

B. Positions and Honors

List in chronological order previous positions, concluding with the present position. List any honors. Include present membership on any Federal Government public advisory committee.

Positions and Employment

1982-1991	Scientist, Senior scientist Inserm
1991-2001	Research Director Inserm
2000-2010	Research Group Leader, Institut Cochin, Paris
2002-2006	Director of the Cell Biology Department, Institut Cochin, Paris
2011- present	Research Director Inserm, Classe Exceptionnelle
2012-2018	Vice-president Tech Transfer, Université Paris Descartes
2008-2022	Director of Institut Cochin, Paris
2022-present	Vice-Dean Faculty of Health, Université Paris Cité

Other Experience and Professional Memberships

1996-2000	NEUROTECH company: co-founder, Scientific Director
2000-2008	CNRS National scientific committee (Neurobiology and Immunology): member
2007-2016	IBBS (International Brain Barriers Society): member of the Executive Committee
2012-2015	Fondation Recherche Médicale: President of the Scientific Committee
2017-2022	INSERM Scientific Board: President

Honors

1995	Co-president of the organizing committee of the Cerebral Vascular Biology (CVB'1995), Paris
2002- present	Honorary Professor, University College London
2014	Annual Meeting of the Japan Neuroscience Society, Yokohama, Japan, invited Keynote lecture
2015	Co-president of the organizing committee of the Cerebral Vascular Biology (CVB'2015), Paris