A bicentennial celebration of the birth of Claude Bernard

J. F. X. Jones

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Claude Bernard was born on July 12, 1813 in the Beaujolais region of France. Although his original impulse was to become a playwright, he eventually decided to study Medicine in Paris. Here, he encountered the invigorating scepticism of Francois Magendie who was embroiled in a priority dispute with the British physician Charles Bell. Their joint discovery is now celebrated as the Bell-Magendie Law and states that ventral spinal roots are motor in nature whilst dorsal spinal roots are sensory. The superior dissection skills of Bernard were immediately apparent to Magendie who hired him as a *preparateur* for his laboratory. One of his early discoveries was the function of the chorda tympani which relays the sensation of taste from the anterior tongue. He also discovered salivary secretomotor fibres and his place in the history of the autonomic nervous system was secured when he described vasomotor fibres and the Bernard–Horner syndrome (a syndrome involving damage to the cervical sympathetic chain). A simple observation of the jejunal lacteals of a rabbit in a post-prandial state led him to infer the function of pancreatic juice and its action in the digestion of fat. He also discovered that the liver is capable of secreting glucose and went further to discover the storage form of this sugar and this he named glycogen.

The striking characteristic of Bernard which made him especially interesting to historians of science was his

ability to transcend the limitations of his discipline, laboratory and methods.

Bernard exceeded current demands for studies which extend from “molecule to man”; he cultivated a broad biological philosophy which considered both the cosmic (external) environment and the internal environment of living things. The molecule glycogen which he discovered is also found in the plant kingdom and the existence of a universal plant and animal starch intrigued him. His studies and philosophical writings would eventually inspire the concept of homeostasis.

Professor Ken O’Halloran is the recent young successor to the chair of Physiology at University College Cork. During the summer of 2013, his department of Physiology graciously hosted a 1-day symposium to mark the birth of this most important figure of integrative Physiology. International invited speakers included Professor Prem Kumar (University of Birmingham) who spoke about oxygen homeostasis, Professor Lucy Green (University of Southampton) who spoke about foetal adaptation to malnutrition and Professor Julian Paton who described very recent investigations into the role of the carotid body in hypertension. The local Professor of Anatomy, John Cryan also contributed a stimulating and enjoyable overview of host and intestinal microbiome interactions. The day ended with the inception of the first intervarsity undergraduate prize in Physiology competition.

J. F. X. Jones (✉)
School of Medicine and Medical Science,
University College Dublin, Dublin, Ireland
e-mail: james.jones@ucd.ie