



Press release

## **The 21<sup>th</sup> Jean-Louis Signoret Neuropsychology Prize of the Fondation Ipsen has been awarded to Cathy Price (University College London, London, UK)**

**Paris (France), 4 December 2012** – The international jury under the presidency of Prof. Albert Galaburda (Harvard Medical School, Boston, USA) awarded on November 27<sup>th</sup>, 2012 the 21<sup>th</sup> Jean-Louis Signoret Neuropsychology Prize of the Fondation Ipsen (20.000€) to Cathy Price (University College London, London, UK). Her work played a major role in the understanding of the neurological substratum of writing and reading.

Over the last 150 years, our understanding of the neural basis of reading and writing has emerged from studies of neurologically impaired patients and functional imaging studies of healthy skilled readers. The first major contribution came from the work of Dejerine (1891, 1892) who identified the lesion sites that caused two different types of alexia: Alexia with agraphia described patients who had acquired a deficit in both reading (alexia) and writing (agraphia) and this was associated with damage to the left angular gyrus. The left angular gyrus was therefore linked to memories of visual word forms that are required for both reading and writing. In contrast, alexia without agraphia (which is associated with lesions to the left occipital lobe and the splenium of the corpus callosum) was thought to arise from a disconnection of visual word form processing (in the left angular gyrus) from visual processing in the occipital cortex. The second major contribution came in the 1970s from reports of alexic patients who had selective difficulty reading either new words (e.g. SHAP) or familiar words whose pronunciation was inconsistent with their spellings (e.g. YACHT). This led to cognitive models of reading that had at least two different reading routes: one that involved word recognition and/or semantics and one that could proceed on sublexical spelling to sound translation. The third major contribution developed in the 1990s with the advent of functional neuroimaging techniques. Early studies aimed to identify the anatomical regions that supported the lexical and sublexical reading pathways that had been predicted by cognitive models of reading. Contrary to expectation, neuroimaging results are not easily reconciled with the current cognitive models but instead show a much more complex reading system that involves multiple brain regions and multiple processing pathways.

Cathy Price's university training was in Physiology and Psychology. Her PhD was in cognitive neuropsychology and focused on the behavioural assessment of patients with agnosia and dyslexia and her postdoctoral training was in positron emission tomography and its application to the functional anatomy of language. Since 1997, she has been funded by the Wellcome Trust to build a functional anatomical model of language that explains both skilled and functionally impaired language skills. Her future aim is to provide a clinical tool to predict speech and language recovery after stroke on the basis of structural brain scans.

### **About the Jean-Louis Signoret Neuropsychology Prize**

Launched in 1992, this prize has been awarded by the Fondation Ipsen to many renowned specialists: Eric Kandel (1992), Jacques Paillard (1993), Rodolfo Llinas (1994), Stephen Kosslyn (1995), Alfonso Caramazza (1996), Jean-Pierre Changeux (1997), Edoardo Bisiach (1998), Joseph LeDoux (1999), Joaquin Fuster (2000), Stanislas Dehaene (2001), Deepak Pandya (2002), Uta Frith (2003), Hanna and Antonio Damasio (2004), Marc Jeannerod (2005), Faraneh Vargha-Khadem (2006), Alvaro Pascual Leone (2007), Elizabeth Warrington (2008), Pierre Maquet (2009) and Giacomo Rizzolatti (2010) and Patricia Kuhl (2011).



The jury members are: Albert Galaburda (Harvard Medical School, Boston, USA), President, Jocelyne Bachevalier (Emory University, Atlanta, USA), Laurent Cohen (Hôpital de la Salpêtrière, Paris, France), Branch Coslett (University of Pennsylvania, Philadelphia, USA), Richard Frackowiak (CHUV, Lausanne, Switzerland), Didier Hannequin (Hôpital Charles Nicolle, Rouen, France), Kenneth Heilman (University of Florida, Gainesville, USA), Bernard Laurent (Hôpital Bellevue, Saint-Etienne, France), Kimford Meador (Emory University, Atlanta, USA), Michel Poncet (C.H.U. Hôpital Timone, Marseille, France), Donald Stuss (The Rotman Research Institute, Toronto, Canada).

#### **About the *Fondation Ipsen***

Established in 1983 under the aegis of the Fondation de France, the mission of the Fondation Ipsen is to contribute to the development and dissemination of scientific knowledge. The long-standing action of the Fondation Ipsen aims at fostering the interaction between researchers and clinical practitioners, which is indispensable due to the extreme specialization of these professions. The ambition of the Fondation Ipsen is to initiate a reflection about the major scientific issues of the forthcoming years. It has developed an important international network of scientific experts who meet regularly at meetings known as Colloques Médecine et Recherche, dedicated to six main themes: Alzheimer's disease, neurosciences, longevity, endocrinology, the vascular system and cancer science. Moreover the Fondation Ipsen has started since 2007 several meetings in partnership with the Salk Institute, the Karolinska Institutet, the Massachusetts General Hospital, the Days of Molecular Medicine Global Foundation as well as with the science journals Nature, Cell and Science. The Fondation Ipsen produced several hundred publications; more than 250 scientists and biomedical researchers have been awarded prizes and research grants.

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