Essilor and Vision Institute launch SilverSight chair on visual aging

Paris, 20 January 2015. Essilor and the Vision Institute (UPMC, Inserm and CNRS) today announced the launch of the SilverSight industrial chair on the Jussieu campus. Supported by the National Research Agency (ANR) and Essilor, this chair is held by Dr Angelo Arleo, Vision Institute neuroscience researcher and CNRS research director. His team of 16 international scientists is working on the topic “healthy visual aging, action and autonomy”. The chair aims to evaluate and gain a better understanding of the degeneration mechanisms involved in perceptive and cognitive functions related to the aging of the visual system, as well as to develop and recommend appropriate screening methods and instruments.

With the aging of the population, the growing impact of age-related visual disturbances is becoming a serious public health problem. There are currently 470 million people over the age of 65 in the world. That figure will rise to 820 million in 2025 and 2 billion in 2050¹. In France, the number of people over 60 will also grow significantly: from 13 million now to 22.3 million in 2050. Worldwide, poor vision costs $275 billion a year in lost productivity².

In view of this major demographic trend, the SilverSight chair, with an initial duration of four years, aims to improve our understanding of the factors underlying the functional vision and spatial navigation perceptual deficits involved in visual aging. Combining experimental psychophysics and computational neuroscience, SilverSight adopts a multidisciplinary approach to designing and evaluating innovative screening methods, ophthalmic optical products, functional and cognitive re-education protocols and other solutions and services designed to mitigate the effects associated with visual aging.

“This chair is the first large-scale research laboratory to study the healthy aging of the eye”, says Angelo Arleo, who holds the chair. SilverSight will also be involved in defining new

¹ Source= OMS. ² Source= Vision Impact Institute
standards for the design of early diagnostic tools for detecting visual disturbances in the elderly. Moreover, the results from epidemiological analyses will promote a better understanding of the characteristics and needs of the aging population. The fruits of this work will be made available to healthcare professionals to help them further develop their activity in the ophthalmology and vision science fields.

“This partnership with the Vision Institute aligns perfectly with Essilor’s strategy, which is to join forces with the best research experts all over the world in order to advance our understanding of vision and eye-brain interactions. This approach will contribute to Essilor’s mission of improving lives by improving sight.” observes Eric Perrier, R&D Director of Essilor International.

José-Alain Sahel, director of the Vision Institute, emphasises that “the chair is an extension of the very successful partnership supported by Oseo-Bpifrance between 2007 and 2012 (the Descartes Programme) and also strengthens the research centre on disability (the HomeLab and Streetlab³ platforms) and the neuroscience research priorities of the Vision Institute. The increasing needs associated with an aging population and the quality of the partnership with Essilor have led to this very promising new development.”

A team of dedicated specialists. A fundamental-research team of 16 international researchers has been created. The academic researchers making up the new team have multidisciplinary skills covering areas such as psychophysics, neurobiology, optometry, clinical evaluation and mathematical modeling.

Access to cutting-edge test platforms. The chair will rely on a number of existing teams and facilities, including the “HomeLab” and “Streetlab” platforms, which will make it possible to carry-out behavioural experiments with people who have a sensory deficit in a fully monitored controlled environment. Ergonomics experts, engineers, ophthalmologists, optometrists and orthoptists will use it to test existing solutions or prototypes to assess their benefits indoor and outdoor reconstructed environments, equipped with cameras and sensors designed to model their behaviours. Additionnally, the chair premises will develop its own experimental platforms specific to its research areas, which will contribute to unique expertise in the field of neurosensory aging.
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About the Vision Institute The UPMC/Inserm/CNRS Vision Institute, headed by Dr José-Alain Sahel, is France’s leading centre completely dedicated to scientific and medical research on eye diseases. The campus, located at Quinze-Vingts hospital, brings together all research stakeholders – doctors and researchers and industrial companies – around a common goal: step up the pace of innovation on behalf of patients. Ten industrial companies and 250 clinicians and researchers are working hand in hand to understand eye diseases, discover new treatments and preventive solutions, and develop and validate innovative technologies to help the visually impaired.

About Essilor. Essilor is the world leader in ophthalmic optics. From design to production, the company has developed a wide range of lenses to correct and protect vision. Its mission is to help improve people’s lives by improving their vision. The company invests more than €150 million per year in research and innovation to offer increasingly high-performance products. Its leading brands include Varilux®, Crizal®, Transitions®, Definity®, Xperio®, Optifog™, Foster Grant®, Bolon® and Costa®. Essilor also develops and markets equipment, instruments and services for optical professionals. Essilor reported consolidated net sales of more than €5 billion in 2013 and employs more than 55,000 people. The company, which distributes products in more than 100 countries, has 28 production plants, more than 450 prescription laboratories and cutting and mounting centres as well as several research and development centres worldwide.

About UPMC UPMC is the direct successor of Sorbonne University’s college of sciences. It is France’s leading science and medical institution. Research at UPMC ranges from fundamental to applied in all areas of knowledge. The university explores the major issues of sustainable development as they apply to health, climate change, water, biodiversity, energy and communications. A key player in knowledge and innovation development, it supports the commercialization of research in collaboration with ATT Lutech, Agoranov (start-up incubator) and Quadrivium (risk capital). It has exceptional institutes in the areas of vision, neuroscience, degenerative diseases, cardiovascular and metabolic diseases, immunology and infectious diseases, cancer and public health. It is a member institution of Sorbonne Universities. Key figures: 34,000 students, 10,100 employees, 100 research laboratories, 7,300 papers published per year (around 11% of all papers published in France). Awards: Nobel Prize in Physics, 1997 and 2012; Henri Poincaré Prize, 2012; Fields Medal, 1994, 2010 and 2014; CNRS gold medals, 1996, 1998, 2009; Inserm Grand Prize, 2007; Irène Joliot-Curie Prize, 2007 and 2011; 16 ERC prizes, 2008-2013; more than one-quarter of the members of the French Academy of Sciences are associated with UPMC.