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Presse release

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GESDA launches the Villars Science Anticipation Days

The first high-level anticipation workshop on neuro-augmentation will be held from March 20-22, 2023 in a resort in the Vaud Alps.

Interventions in the brain will be the focus of three days of discussions by a select group of the world's best scientists in their field. What can we expect from neuro-augmentation over the next 25 years? Progress is already being made today through interventions in the brain that are helping to ease the lives of patients suffering from neurodegenerative diseases or paralysis. Many researchers envision making use of these technologies in the future to improve our human capabilities, for example, to improve our memory or our ability to concentrate. These and other questions will be addressed during a workshop organized by the Geneva Science and Diplomacy Anticipator Foundation (GESDA) in the Vaud resort.

This new platform, **the Villars Science Anticipation Days**, will bring together researchers each year in the spring to discuss scientific breakthroughs on a given theme. The conclusions gathered from these days will feed into the GESDA Science Breakthrough Radar® that is published in autumn. For this first edition, the discussions will focus on the fundamental questions raised by neuro-augmentation (augmented humans).

Over the past two years, GESDA has conducted extensive consultations with more than 1,200 scientists from around the world to identify scientific breakthroughs that are likely to have the greatest impact on humans, society and our planet over the next 5, 10 and 25 years.

Among the identified trends are potential breakthroughs in neuro-augmentation. Much hope is also pinned on advances in genetic engineering. Genome editing is already improving the diagnosis and treatment of cancer and other diseases associated with aging. Gaining a better understanding of the origin and evolution of diseases requires research in artificially created biological tissues. The use of brain organoids — simplified versions of real brain organs and tissues that can be created in the laboratory — is promising.

Scientists gathered in Villars for this anticipation workshop will have no shortage of topics to discuss. They will focus on the state of our knowledge, and our anticipation of future advances, pertaining to how we might augment brain function within three interdisciplinary themes: 1) brain "hacking," or the ability to access personal neural data; 2) hybrid brains, or the creation of "chimeras" that are created by mixing cells from different species to study the brain and to better understand certain neurological conditions; and 3) artificial cognition, or the use of experimental psychology to better understand and explain machine learning algorithms that are benchmarked according to human performance.

The workshop, supported by the defitec foundation, will begin with presentations by Patrick Aebischer, vice-chairman of the GESDA Board of Directors; Michael Hengartner, chairman of the Board of the Swiss Federal Institutes of Technology, who also chairs the GESDA Academic Forum; and Mu-ming Poo, director of the Chinese Academy of Sciences Institute of Neuroscience. Swiss Ambassador Alexandre Fasel, president of the GESDA Diplomatic Forum, and Karen Rommelfanger, founder and director of Emory University's Neuroethics Program and Neuroethics and Neurotech Innovation Lab, will close the workshop with their reflections on the implications of these technological advances for humanity.