UNLOCKING THE SECRETS OF HOW GENETIC VARIATION AFFECTS PERCEPTION OF PAIN COULD LEAD TO PERSONALISED MEDICINES

VALENCIA, 4 September 2019 – Gene studies reveal that about half of our sensitivity to pain is determined by our genetic makeup, with key differences caused by variant forms of individual genes, delegates at the European Pain Federation's biennial Congress in Valencia, Spain, will be told this week.

Professor Luda Diatchenko, from the Alan Edwards Centre for Research on Pain in Montreal, Canada, will tell the 3,500 delegates that the results of genetic studies have been used – and hopefully will continue to be used – to develop new drugs to treat chronic pain.

"My aim is to personalise pain diagnosis and treatment by unlocking the secrets of how specific variations in genes affect an individual's pain perception and sensitivity," Professor Diatchenko explained.

"Why, for example, does one person with minimal tissue damage from arthritis suffer debilitating chronic pain, while another patient with major damage reports very little pain? If we can discover the molecular and cellular events that lead humans to develop chronic pain, then we can develop and prescribe medicines that fit the genetic and molecular pain profile of individual patients more precisely," she said.

She added that "when comparing whole genomes, there is significant correlation between the hereditary information encoded in both mouse and human DNA. This means that using animal models to study human pain genomics is extremely valuable."

The EFIC Congress, between 4-7 September, is the largest scientific congress on pain in 2019, bringing together some of the most recognised experts in the field of pain medicine to exchange knowledge, ideas and the latest advances in the field.

Other highlights at the Congress include presentations on the latest advances in neurostimulation; how pain is experienced differently between different age-groups; the relationship between gender and migraines; how the evolution of digital healthcare will impact pain treatment; and whether there is 'an opioid crisis' in Europe.

Professor Luda Diatchenko, MD, PhD is a Canada Excellence Research Chair in Human Pain Genetics, at McGill University's Alan Edwards Centre for Research on Pain.

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NOTES FOR EDITORS:

The European Pain Federation (EFIC) is a multidisciplinary professional organisation in the field of pain research and medicine. Established in 1993, EFIC constituent chapters represent Pain Societies from 37 European countries and close to 20,000 physicians, basic researchers, nurses, physiotherapists, psychologists and other healthcare professionals across Europe, who are involved in pain management and pain research.

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