



“Incontri al DSB”

Exceptionally potent human monoclonal antibodies against tetanus

January 31st, 2022 h. 10.30 - 12.30
Online webinar

Cesare Montecucco

Professor Emeritus

CNR, Institute of Neuroscience

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He works at the discovery of factors and signals involved in the regeneration of the neuromuscular junction after damage caused by toxins, autoantibodies and mechanical traumas and at the clarification of the mode of action of the neuroparalytic toxins causing Tetanus or Botulism or Snake Neuroenvenomings. He has carried out research in the Universities of Cambridge, Utrecht, and Costa Rica, the Institut Pasteur of Paris and the EMBL of Heidelberg.

He has studied the molecular and cellular pathogenesis of diseases caused by toxin producing pathogenic bacteria (anthrax, botulism, tetanus, *Helicobacter pylori*) and by poisonous snakes and insects. Major discoveries: a) the identification and characterization of the metalloprotease activity of the neurotoxins responsible for tetanus and botulism, b) the identification of their proteins targets (SNAREs) including sites of cleavage and mechanism of specific recognition, c) the metalloprotease activity and target of the anthrax lethal factor, d) the mechanism of action of two major virulence factors of *H. pylori*: VacA and NapA, e) the mechanism of action of the snake presynaptic PLA2 neurotoxins, f) that the intercellular signalling axis CXCL12 - CXCR4 controls axonal growth in peripheral neurons g) the identification of drugs that prevent botulism and of a drug that promotes regeneration of the neuromuscular junction after damage.

He has received several scientific prizes, including the Harvard Medical School Shipley Prize for Medicine 1993, the Biotech Prize 1998, the Feltrinelli Prize for Medicine 2004, the Redi Award 2009, the Hatheway Medal 2009; the Ehrlich Prize for Medicine 2011 and the Lifetime Achievement Award of the International Neurotoxin Association in 2019. He is member of the following Academies: Lincei, Leopoldina, EMBO, Europaea, IVSLA.

Registration:

<https://attendee.gotowebinar.com/register/5420797254404469262>

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