



News Article

A week with Professor Giacomo Rizzolatti (30th of November – 6th of December 2015)

G. Di Giovanni^{*1}

¹Coordinator of the Malta Neuroscience Network Program, University of Malta

Professor Giacomo Rizzolatti, Professor Emeritus in physiology at the University of Parma, is the discoverer of ‘mirror neurons’ and director of the ‘Social and Motor Cognition’ centre at the Italian Institute of Technology. From January 2016 he has been appointed by the Rector Professor Jaunito Camilleri as Senior Researcher Advisor by the University of Malta within the Department of Physiology and Biochemistry.

Award winner and world-renowned neuroscientist, Professor Giacomo Rizzolatti received the ‘Brain Prize’ in 2014, a prestigious prize for brain research bestowed by the Grete Lundbeck European Brain Research Prize Foundation in Copenhagen.

Professor Giacomo Rizzolatti was invited by Professor Giuseppe Di Giovanni on behalf of the Malta Neuroscience Network Program of the University of Malta as key-note speaker at the IX Malta Medical School Conference (MMS), the most important event for the local medical community, which this year was held in St. Julian at the Hilton Hotel from the 3rd to the 5th of December. The conference, for the second time, had different sessions in Neuroscience and for the first time a commune session in neurology-neuroscience. This was an important success and showed the biomedical research done within the School of Medicine integrated in the international scientific scenario. Professor Rizzolatti co-chaired with Professor Di Giovanni the Neuroscience Session 4D, which hosted many international speakers. Professor Luigia Trabace, from the University of Foggia, presented unpublished data on the pathogenesis of psychiatric disorders: role of redox dysregulation. Prof. Alessandro Stefani, from Tor Vergata, Rome, talked about specific or synergistic effects of deep brain stimulation of the subthalamic nucleus and L-dopa on TMS-evoked cortical reactivity in Parkinson’s disease patients. Mr Seán Doyle gave a talk on be-

half of Professor Bob Fern from Plymouth University on acute ischemic injury of astrocytes, followed by Professor Mario Valentino, University of Malta, on *in vivo* imaging and monitoring astrocytes in health and disease by using multiphoton microscopy. Dr Maria D’Adamo from the University of Perugia presented her new results on the implications of inwardly-rectifying K⁺ channels in the pathogenesis of autism. The session was concluded by Dr. Massimo Pierucci that presented his PhD work on the Lateral habenula, nicotine and dopamine.

On that day Professor Rizzolatti and Professor Di Giovanni were received by the President of Malta, Her Excellency Marie Louise Coleiro Preca at her residency San Anton Palace, Attard on a courtesy call. The reason for this meeting was that Professor Rizzolatti was giving a talk at the Palace in Valletta at 7.00 pm in Tapestry organised by The President’s Foundation for the Well-being of Society, the Malta Neuroscience Network Programme and Narrative Structures. The talk entitled “Mental Wellbeing: Understanding the others” was a great success with more than 150 people in attendance.

On Saturday the 5th of December Professor Rizzolatti gave his plenary lecture (Plenary 6) at the IX MMS entitled: “The Mirror mechanism: the neural basis and clinical applications”. Successively, he co-chaired the Poster Session 17 with Professor Giuseppe Di Giovanni. Ms Melanie Grima presented data on “Genetic polymorphisms associated with loss of immunologic self-tolerance in myasthenia gravis”, Dr. Christian Zammit on “Functional electrophysiological assessment from optic nerve and callosal slices in mice to study ischemic injury”, Mr Francis Delicata on his Master’s Project on “5-HT_{2C} receptor modulation of the lateral habenula activity: an electrophysiological and neuroanatomical study”, Mr Seán Doyle on “Glutamate release mechanisms in pre-myelinated CNS white matter”, Mr Daniel

^{*}Correspondence to: Giuseppe Di Giovanni (giuseppe.digiovanni@um.edu.mt)

Cassar on “Acute nicotine induces anxiety and disrupts temporal pattern organization of rat exploratory behavior in hole-board: a potential role for the lateral habenula”, Dr Roberto Colangeli on “Synergistic activity of cannabinoid type 1 and serotonin 2B/2C receptors for the prevention of status epilepticus in rats”, Mr Robert Zammit, “A laser speckle contrast imaging system to study blood flow dynamics in the rodent brain” and Ms Jasmine Vella on “assessment of neuronal and glial injury in a rodent model of focal ischemia”.

On the 2nd of December, during his visit to Malta, Professor Giacomo Rizzolatti and his wife were invited for *colazione* by His Eminency Giovanni Umberto De Vito and his wife Hadar Halevi. Other guests included Professor Giuseppe Di Giovanni, Professor Vincenzo Crunelli (Cardiff University and Malta University) and his wife Laura Garufi, Professor Richard Muscat, Pro-Rector for Research and Innovation, University of Malta, Hon. Christopher Fearne MP - Parliamentary Secretary for Health, and Dr Ruth Farrugia, Director of the President Wellbeing Foundation. On the 3rd of December, a dinner with the Rector Professor Juanito Camilleri was held at the Black Pig, in Valletta.

For Professor Giacomo Rizzolatti, this visit followed a previous visit to Malta in 2007 and it will not be the last. Indeed, from January 2016, Professor Rizzolatti has been appointed as Senior Researcher Advisor by the University of Malta within the Department of Physiology and Biochemistry.



Figure 1: Professor Rizzolatti met some of the members of the Malta Neuroscience Network on the 2nd of December 2015. From the left, Professor Mario Valentino, Professor Ian Thornton, Dr. Noellie Brockdorff (Dean of Faculty of Media & Knowledge Sciences), Professor Godfrey Laferla (Dean of the Faculty of Medicine and Surgery), Professor Rizzolatti, Professor Giuseppe Di Giovanni (Co-ordinator of the MNN), Dr. Norbert Vella, Professor Richard Muscat (Pro-Rector for Research and Innovation) and Dr. Malcom Vella.

Professor Giacomo Rizzolatti

Professor of Human Physiology, Head of the Brain Center for Motor and Social Cognition of the Italia Institute of Technology (IIT). Giacomo Rizzolatti studied in Padua where he graduated in Medicine (1961) and Neurology (1964). He received his training in physiology at the University of Pisa (1965–68) and in psychology at the McMaster University, Hamilton, Ontario, Canada (1970–71). Most of his scientific career has taken place at the University of Parma where he is still working as Director of the Brain Center for Social and Motor Cognition of IIT.

He has been “visiting professor” at the Department of Anatomy of the University of Pennsylvania, Philadelphia (1980), and “Sage Professor” at University of California, Santa Barbara (2007). From January 2016 he has been appointed as Senior Researcher Advisor by the University of Malta within the Department of Physiology and Biochemistry.

The main focus of his research concerns the motor system and its role in cognitive functions. He is the discoverer of the mirror neurons.

He is a Member of Accademia Europaea, of Accademia dei Lincei, of the Institute de France (Académie des Sciences), and Honorary Foreign Member of the American Academy of Arts and Sciences and Foreign Member of National Academy of Science (USA).

He has received many awards, some of which include the “Golgi Prize for Physiology”, “George Miller Award” of the Cognitive Neuroscience Society, the “Feltinelli Prize for Medicine” of Accademia dei Lincei, the Herlitzka Prize for Physiology, Accademia delle Scienze di Torino, Prix IPSEN, Neuroplasticity, Fondation IPSEN Paris 2007, the Grawemeyer Award for Psychology, Luiseville and Prix Signoret, Neuropsychology, Fondation IPSEN Paris 2010 and recently the Brain Prize from Lundbeck Foundation. He received Honorary Degrees from the University Claude Bernard of Lyon, from the University of St. Petersburg, St. Petersburg and from KU Leuven.