

From electric fish to human brain: an historical overview of European Neuroscience from the University of Pisa

The idea of publishing this rather eclectic collection of articles of neurosciences came about during the commemoration of the bicentenary of Carlo Matteucci's birth (1811) and the centenary of Giuseppe Moruzzi (1910). Matteucci was one of the founders of electrophysiology and Moruzzi an influential advocate of neurophysiology. Internationally recognised by the scientific community, both men had been professors of physiology at the University of Pisa from 1840 to 1859 and from 1949 to 1981 respectively. In their honour two celebrations were organized under the sponsorship of the University of Pisa: one at the Villa di Corliano as a satellite symposium of the 15th annual meeting of the international society of the history of neuroscience (Piccolino et al., 2010) and the other at the Institute of Physiology of The University of Pisa (Bagnoli and Ghelarducci, 2010).

The reader will note that some of the articles highlight the historical achievements of Matteucci and Moruzzi in research and demonstrate how modern European neuroscience was influenced by their work. Other articles describe individual or collective important accomplishments during these two hundred years of European exploration in the field of Neuroscience.

With regard to the celebration of Moruzzi whom many of us have known personally, an additional dimension is provided by some of his many pupils and collaborators who describe his academic curriculum, his strong and original character, and his daily activities to which they were witness, and others show how their scientific work evolved toward new research subjects and technologies. From this viewpoint, the article of Zanchetti (this volume) who was his first pupil along with Arduini, is particularly touching. It demonstrates the attachment of all the early and late collaborators of Moruzzi to "il professore".

Perhaps a main goal of this collection is also to show that, in spite of economical and political dif-

iculties, Italian educational and cultural activities are still striving to survive. It seems to us significant that this initiative comes from the University of Pisa which historically provided a vibrant cultural environment and attracted strong scientific personalities of whom Matteucci and Moruzzi are two examples. Interesting documents of the XV century show that under the regency of Lorenzo de' Medici, la Signoria di Firenze "prescriveva a tutti coloro che volessero adire ad impieghi pubblici nel dominio fiorentino, a quelli che bramassero laurearsi in dottori per esercitare la medicina, o trattar le cause nel foro, e ad altri nazionali, l'obbligo di recarsi all'università di Pisa" (Repetti, 1841). Not to mention Matteucci who in 1862 became national education minister in the recently unified Italy, which this year celebrates its 150th anniversary. However, at this time there is a tendency amongst research students to leave the Italian university due to the widespread national lack of interest in the development of research. A similar tendency was also present after World War II at the time of Moruzzi, obviously for different reasons. Moruzzi nonetheless encouraged researchers to pursue their studies in their own country. This passionate approach led him to become an influential advocate of the neuroscience culture in Italy (see Ghelarducci, 2010; Piccolino, 2010). We wish to dedicate this work to the young generations of Europeans in the hope that they will continue to believe that science is not only an essential human need, but that its exploration is a symbol of freedom.

The *Archives Italiennes de Biologie*, the international scientific journal founded in 1882 by Angelo Mosso is the obvious journal where to publish this collection because it is an Italian journal from the University of Pisa and because Moruzzi, who was the chief editor for many years (1967-1980), attached a particular interest to its quality and to its international survival. We all warmly thank the

chief editors P. Pietrini and B. Ghelarducci, a pupil of Moruzzi.

We are very grateful to Paolo Bandecchi, head of the publishing company *Rotolito Lombarda*, and to Gabriele Orsini, Pisa Province general manager, both doctors of the University of Pisa. They actively and generously participated in the planning and the preparation of Matteucci and Moruzzi celebrations thus making possible this publication.

We sincerely thank Agostino and Rosanna Agostini Venerosi della Seta who opened the doors of their beautiful villa to host the meeting in honour of Matteucci and Moruzzi.

Giovanni and Paolo, the sons of Moruzzi, were present throughout the celebrations, and assisted in reconstructing their father's scientific documents as well as providing a glimpse of his personality. They also invited the scientific community to their home in Bombodolo, where the library and the garden offered us with an even more intimate portrait of Moruzzi (see also Meulders, 2010). We thank them with particular affection.

Cesira Batini, August 2011

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