Obituary: Roberto Frussa-Filho (1960–2013)

Laís F. Berro

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Dr. Roberto Frussa-Filho, a great neuroscientist and even greater person, died on 20 September 2013. The untimely passing of Roberto at 53 years of age was a substantial loss to family, friends, colleagues, and students, as well as the entire field of psychopharmacology. Roberto was born in São Paulo, Brazil, on 30 June 1960, and received both his bachelor's degree in Biological Sciences and his masters and doctoral degrees from the University of São Paulo under the guidance of Dr. João Palermo-Neto, his first and everlasting mentor.

Even before achieving his doctoral degree, Roberto joined the Pharmacology Division of Marília Medical School in 1986 as a professor, where his efforts and love for science culminated in the first five international publications in the history of that university. Later, impelled by the distance from family and friends and by the aspiration for better research conditions, Roberto continued to distinguish himself when, in

1989, he was chosen to join the Pharmacology Division of the Federal University of São Paulo, where he exerted his academic functions with pleasure and led one of the major research groups of the university until his last day. When referred to as the newest professor of the Federal University of São Paulo, Roberto commented: "This ensures my opportunity to make science for the rest of my life. For the rest of my life (or at least until my mandatory retirement), I will be able to dedicate myself to the most ludic of the activities, the delightful, serious game of questioning Nature and receiving its answers—a game to be shared with enthusiastic young people and dear colleagues." And so it was.

For years, Roberto led a strong department focused on pharmacology research and graduate training while maintaining a highly productive individual research program. In his joyful exercise of science, consonant with his long-standing commitment to the training and welfare of promising young neuroscientists, Roberto was responsible for training 53 masters and 24 doctors and authored more than 140 publications in several major journals in the field of psychopharmacology. Even during his 2 years of fighting against cancer, Roberto kept working and mentoring, so much so that 2013 became the most productive year of his entire life. He was a prolific researcher with broad vision and remarkable creative ability, which is attested to by his creation of a new, simple, ethically feasible, internationally accepted animal model that simultaneously evaluates learning, memory, anxiety, and motor function: the plus-maze discriminative avoidance task. This new animal model to study memory–anxiety interactions was the subject of an extensive line of research throughout Roberto's scientific career, which was always supported by psychopharmacology through the publication of several articles (Kameda et al. 2007; Patti et al. 2006; Silva et al. 1997, 2002; Zanin et al. 2013).

In addition to his contributions to the field of memory, Roberto's major contribution to the scientific field was related to the pharmacology of dopaminergic neurotransmission and

L. F. Berro (✉)
Departamento de Psicobiologia, UNIFESP, Rua Napoleão de Barros,
925, 04024-002 São Paulo, SP, Brazil
e-mail: berro.lf@gmail.com

L. F. Berro
e-mail: la_berro@yahoo.com.br

its behavioral consequences, always in the light of his personal statement that “the body is only useful to take the brain for rides.” His work was among the first to contrapose the well-known physiopathologic hypothesis of dopaminergic supersensitivity for the development of oral dyskinesia induced by neuroleptic drugs, proposing instead an oxidative stress hypothesis in a chapter in an internationally published book (Frussa-Filho and Palermo-Neto 2001). Roberto also showed the selective action of atypical neuroleptic drugs in the development of drug abuse in animal models of addiction (Carvalho et al. 2009; Fukushima et al. 2007, 2008; Frussa-Filho et al. 1997; Marinho et al. 2013). Building upon this line of research, he then studied the interactions between memory, dopaminergic neurotransmission, and sleep, culminating in the publication of a study in the journal *Sleep*, which has the highest scientific impact in the field (Patti et al. 2010). His efforts in that field made him one of the three main coordinators—one being his friend, idol, and fan, Dr. Sergio Tufik—of a large 10-year sleep project developed in the Federal University of São Paulo.

Roberto's passion for teaching made him one of the most esteemed educators, not only at his university but at several other universities in Brazil. He lectured around the country and was an important and high-minded contributor to scientific meetings for more than two decades. It was not unusual to see students greeting him after courses, thanking him for the best class they ever attended. It is a testament to his qualities as an extraordinarily wise teacher and unique human being that he was among the most honored teachers of Federal University of São Paulo for the classes he taught in biomedicine, medicine, and nursing courses and that an award was created in his memory by students of the São Paulo State University: the Roberto Frussa-Filho Award for Scientific Initiation.

As well as his remarkable achievements in the academic field, Roberto was an extremely captivating person, always surrounded by good people and known to be a devoted and honest friend. In addition to science, he had great passion for dogs, football, tennis, literature, poetry, music, movies, and, finally, love. On a personal note, Roberto was most delighted by and proud of his two sons, Gustavo and Rafael, and was a loving father and husband. In addition to his sons and myself—his wife—Roberto is survived by his mother, Daisy; his father, Roberto; siblings, Denise and Gilberto; as well as an innumerable number of people whom he touched and who carry the most vivid and worthy memories of him.

We deeply mourn the passing of our beloved Roberto, and his presence is sorely missed.

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