

The Marmoset Brain in Stereotaxic Coordinates

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*Our colleagues who helped building scientific
excellence at Pfizer Amboise during the last 30 years.*

Preface

Laboratory-bred common marmosets (*Callithrix jacchus*) have a natural lifespan in captivity in excess of 12 years, and their maximum longevity is more than 16 years. Due to its small size, its relatively easy adaptation to laboratory conditions and neuroanatomical similarities with human species, this animal is considered to represent a convenient primate model for neurosciences and drug development.

During our research and due to scarce available literature data in this species, a need for some support regarding the morphological interpretation of autoradiographic data and brain anatomy was raised. Based on existing stereotaxic equipment and technological skills, we decided to build a basic atlas of the marmoset brain in stereotaxic coordinates. Several technical difficulties were addressed, and the final document is now ready after 2 years of hard work. We hope this atlas will provide a comprehensive guide for those – researchers and undergraduates – interested in the marmoset brain, tissue target characterization and comparative anatomy. The nomenclature and atlas presentation were inspired from existing reference brain atlases in other species, and the quality of illustrations was achieved thanks to automated whole slide scanning.

We would be pleased to receive comments from the delineations we have made, so that continuous improvement could be made in future editions.

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About the Authors



Dr. Xavier Palazzi is a senior veterinary pathologist currently working at Biomatech-NAMSA in France where he is in charge of evaluating the preclinical safety and efficacy of medical devices. He received his DVM from Lyon veterinary school in 1998 and his French certification in veterinary pathology in 2001. He then became a diplomate of the European College of Veterinary Pathology in 2003. Hired in 2004 by Pfizer Global R&D in Amboise (France), he was put in charge of Investigative Pathology until 2007 and developed stereotaxy combined with laser capture microdissection in the marmoset in order to measure mRNA expression of selected brain nuclei for some CNS projects.



Nicole Bordier is an experienced histotechnologist and electron microscopist. She was in charge of the resin laboratory in Drug Safety Research and Development at Pfizer Amboise (France) until 2008, where she developed expert techniques in neurobiology.