Jean Talairach (1911–2007)

On March 15, 2007, one of the giants in the field of neurosurgery disappeared. Jean Talairach left his footprints on the historical path of neurosurgery. His many achievements covered the whole field of functional neurosurgery, from psychosurgery to stereotactic biopsies of brain tumors and including, amongst many others, the treatment of movement disorders, pain and epilepsy. Beyond his technical achievements, he established a strict and demanding line of thought, which, even if not always evident, still dominates the current philosophy of functional and stereotactic neurosurgery.

Born on January 15, 1911, in Perpignan, the capital of French Catalonia, he moved to Paris to complete his medical studies, which he had started in Montpellier. Influenced by his famous cousin, the psychiatrist Henri Ey, he embraced the field of psychiatry at the Hôpital Sainte-Anne, where he became the head of one of the services in 1945. Uncommonly in the field of psychiatry at the time, he was very quickly convinced that organic relationships existed between neuropsychological disorders and the functions of the human brain. He promptly became interested in the therapeutical opportunities offered by neurosurgery. He is purported to have said: 'Psychosurgery is too important to be left to neurosurgeons alone;' and he joined the neurosurgical service, which had been set up by Marcel David at the Hôpital Sainte-Anne. Although not a neurosurgeon, he became head of the department of stereotactic surgery. At that time he started to show the qualities which were to characterize him for the rest of his life: rigor, critical thinking and an intense ethical concern about the implications any technique may have for the patient, an obsession with precise meth-

odology and the necessity to have everything clearly worked out before being stated and applied. For this very reason he designed his own stereotactic frame and several accessories which, combined with a very rational methodology, formed an approach still used by a large number of functional neurosurgical teams in France and other countries. His use of double grids and long-distance stereoradiology, minimizing the magnification coefficient, enabled the development of simple but rigorous arithmetical rules to correct parallax errors and allowed the safe placement of penetrating probes and tools with minimal risk of damaging vessels. The replaceability of his frame and its compatibility with neuroradiological methods available at the time (ventriculography, double-incidence angiography and biorthogonal images) meant that electrodes and biopsy probes could be positioned in accordance with anatomical structures as known at the time. Along the same lines, he and Pierre Tournoux worked on anatomical atlases, relating the vessels to anatomical structures and minimizing the individual variability by developing the proportional grid system. This system proved so valuable that it was universally used and later integrated into the SPM software to display the anatomo-functional data of functional neuroimaging in SPECT, PET and later MEG.

Like Hiro Narabayashi, a neurologist who became a functional neurosurgeon, the psychiatrist Jean Talairach had the flexibility of mind to become a neurosurgeon when he felt that this method would best help his patients. His flexibility was also demonstrated when, after the advent of levodopa (which reduced the need for stereotactic treatment of movement disorders), he applied his meth-

odology to other areas and practically invented the field of stereotactic biopsy for brain tumors and used brachytherapy as treatment when resection was not the best choice. He was helped in this by Gabor Szikla, exiled from Budapest, whose technical perfectionism matched Jean Talairach's tendencies. At the same time, his friendship with another famous neurologist, Jean Bancaud, led to the development of a comprehensive methodological, scientific and intellectual approach to epilepsy surgery. Their partnership produced invaluable results and concepts. They participated in the classification of epilepsies, using their understanding of the mechanisms of seizure generation and propagation. Their multidisciplinary approach to pharmacoresistant epilepsies, which included the development of stereo electro-encephalography, has set standards in the surgical treatment of this disease.

Jean Talairach had an impressive personality. The extent of his knowledge, the rigor of his mind, the ethical concepts which were always perceptible behind his ideas

and approaches, the extreme honesty of the evaluation of his results, and his charismatic humanism attracted a crowd of neurosurgeons, neurologists, radiologists and pathologists from around the world, fascinated by and devoted to him and his closest collaborators Jean Bancaud and Gabor Szikla. Most French stereotactic and functional neurosurgeons feel indebted to his leadership and are proud to have been his pupils. Several renowned foreign neurosurgeons spent a fellowship with him, among them Patrick Kelly and Nicholas Zervas from the United States, Miguel Manrique from Spain, Claudio Munari from Italy, Tomokatsu Hori from Japan, Osvaldo Betti from Argentina, Mariano Bordas-Ferrer from Paraguay, Guy Bouvier from Canada, and many others.

The magnitude of a career is measured by the importance of the contributions and achievements. Jean Talairach disappeared this year, but the impact of his tremendous work in functional and stereotactic neurosurgery will remain as it concerns the fundamental concepts.

Alim Louis Benabid

Erratum

In the Abstracts of the '2006 Biennial Meeting of the American Society for Stereotactic and Functional Neurosurgery, Boston, Mass., June 1–4, 2006', published as *Stereotact Funct Neurosurg* 2007;85:19–65, the name of the author Prof. Osvaldo Vilela Filho was erroneously abbreviated as O.V. Filho. In the abstracts on pages 24, 29, 42, 46, and 62 it must read **O. Vilela Filho**.

The correct entry in the Author Index must read **Vilela Filho, O.**