Dr. Benjamin Rohaut

Neuro-intensivist and Neuroscientist (M.D. Ph.D.)

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Professional Experience:

- **Post-doc Research Scientist** in Neuro-ICU at Columbia University, New York; Director: Prof. Jan Claassen (current position since December 2016)
- **Post-doctorat** at Brain & Spine Institute (ICM), Paris; Director: Prof. Lionel Naccache (November 2015 – December 2016)
- **Clinical Fellowship -Assistant Professor in Neuro-ICU** (CCA); Neurological Department of La Pitié-Salpêtrière Hospital (AP-HP), University Pierre et Marie Curie (UPMC) - Paris-6 (Prof. Baulac / Prof. Lubetzki & Dr. Bolgert; November 2012 - October 2015)
- **Ph.D. in Cognitive Neuroscience** at ICM, Director: Prof. Lionel Naccache. Subject: *Neurophysiology of conscious and nonconscious semantic processing*; UPMC-Paris 06, Paris (November 2010- October 2015)
- **Clinical Fellowship in general ICU** (Praticien attaché temps plein) at La Pitié-Salpêtrière Hospital, Paris (Prof. Similowski; November 2009- October 2010)
- **Medical Residency** at La Pitié-Salpêtrière Medical School, UPMC-Paris 06 (November 2004- October 2009)

Education:

- **Ph.D. in Cognitive Neuroscience,** University Pierre et Marie Curie, UPMC-Paris 06, France, 2015
- **M.D.** at UPMC, Specialties: **Neurology** (DES; 2009) **& Intensive Care Medicine** (DESC; 2013)
- **Master-II:** Sciences & Technologies. Integrative Biology & Physiology, Specialty: Neurosciences, UPMC-Paris 06, 2008
- **National Medical Concourse** – "ENC": 490th/ 3729 candidates, 2004
- Admitted in Saint Antoine UPMC-Paris 06 Medical school (concourse, 24th/~600), 1999

Scientific interests:

Exploring **Brain Dysfunction** in Intensive Care Unit (ICU) and developing tools to improve assessment & treatment of severely brain injured patients suffering from **Disorder of Consciousness**.

Main Scientific Publications: (details available on Google Scholar) :

Relations between semantic processing and consciousness:

- Rohaut B & Naccache L. Disentangling conscious from unconscious cognitive processing with event-related EEG potentials. Revue Neurologique. 2017;173(7-8):521-28.
- Rohaut B, Alario F-X, Meadow J, Cohen L, Naccache L. Unconscious semantic processing of polysemous words is not automatic. Neurosci Conscious. 2016(1):niw010.
- Rohaut B, Faugeras F, Chausson N, et al. Probing ERP correlates of verbal semantic processing in patients with impaired consciousness. Neuropsychologia. 2015;66:279-292.

Impairment and recovery of consciousness:

- Raimondo F, Rohaut B, Demertzi A, et al. Brain-heart interactions reveal consciousness in non-communicating patients. Ann Neurol. 2017;82(4):578-91.
- Rohaut B, Raimondo F*, Galanaud D, Valente M, Sitt JD, Naccache L. Probing consciousness in a sensory-disconnected paralyzed patient. Brain Inj. 2017;31(1):1398-1403.
- Sitt JD, King J-R*, El Karoui I, Rohaut B, et al. Large scale screening of neural signatures of consciousness in patients in a vegetative or minimally conscious state. Brain. 2014;137(Pt 8): 2258-2270.
- King J-R, Sitt JD*, Faugeras F, Rohaut B, et al. Information sharing in the brain indexes consciousness in noncommunicative patients. Curr Biol CB. 2013;23(19):1914-1919.
- Faugeras F, Rohaut B, Weiss N, et al. Probing consciousness with event-related potentials in the vegetative state. Neurology. 2011;77(3):264-268.
- Bekinschtein TA, Dehaene S, Rohaut B, Tadel F, Cohen L, Naccache L. Neural signature of the conscious processing of auditory regularities. Proc Natl Acad Sci U S A. 2009;106(5):1672-1677.

Brain dysfunction in critically ill patients:

- Rohaut B, Porcher R, Hissem T, et al. Brainstem response patterns in deeply-sedated critically-ill patients predict 28-day mortality. PLOS ONE. 2017;12(4):e0176012.
- Azabou E, Rohaut B, Heming N, et al. Early impairment of intracranial conduction time predicts mortality in deeply sedated critically ill patients: a prospective observational pilot study. Ann Intensive Care. 2017;7(1):63.
- Sharshar T, Porcher R, Siami S, Rohaut B, et al. Brainstem responses can predict death and delirium in sedated patients in intensive care unit. Crit Care Med. 2011;39(8):1960-1967.

* :first co-author

Scientific Collaborations:

- **McDonnell JSMF-Project** since 2013: International collaboration exploring Disorder of Consciousness lead by Prof N.Schiff, NY, USA. (French Team lead by Prof L.Naccache)
- **GENER** (Groupe d'Exploration Neurologique en Réanimation) since 2013: French collaboration between neurointensivists, neurologists, intensivists, neurophysiologists, neuroradiologists and psychiatrists exploring neurological dysfunction in critically ill patients (Founded by Prof. T.Sharshar et Prof. J.Mantz)