

**COST B27 Electrical oscillations and cognition.
WG 2. Diagnosis and Treatment.
UK Report**

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Chronic fatigue syndrome. Goldsmiths College, University of London.

Dr Lesley Parkinson/Brain Health is supporting the PhD studies of Tomas Ros on EEG subtyping and NF training of patients with CFS. This will be a collaborative study in the London practice of Alex Howard, BSc, who will support an additional PhD on his eclectic psychological therapy, and these will be combined with PhD studies by Deborah Bowden on the efficacy of Reiki. The three approaches will be compared in randomized controlled studies under the supervision of Professor John Gruzelier.

Attention Deficit Hyperactivity Disorder.

John Gruzelier's Cerebra funded trial at Imperial College comparing NF versus computerized attention training with children with ADHD is now completed except for some 6 month follow up evaluations. The results are being analysed by Tony Steffert, now undertaking PhD studies at Goldsmiths College, Drs Malcolm Hawken and Martin Batty and will be presented at SAN/COST in Swansea.

Anita Sawyer with a view to PhD studies, together with Helen Norton Green are planning comparisons between NF, AVE, and Tomartis methods on an individual case basis with children with special needs including ADHD and autism. The work will be done schools neighbouring Goldsmiths College with supervision by Dr Pam Heaton and John Gruzelier.

Dr Beverly Steffert, Tony Steffert and Professor Juri Kropotov are pioneering residential "holiday camp" NF training courses for ADHD to include practitioners and parents where the emphasis is on hands on training as much as academic courses.

Dyslexia. Dr Beverly Steffert/Learning Recovery.

Dr Steffert is continuing research on EEG subtyping of visual versus auditory dyslexia, and differential treatment with NF, tinted lenses and overlays.

Dr Steffert is extending to reading disorders the residential NF training approach for teachers.

Peak Performance. Goldsmiths College.

Trainee Eye Surgeons.

A controlled comparison of slow versus fast wave EEG-NF training with junior doctors at the Western Eye Hospital by Tomas Ros with the support of Dr Parkinson and under the supervision of John Gruzelier is currently under analysis. Initial results disclose advantages for SMR training in surgical skills performance with both objective assessment and subjective ratings by consultant surgeons. Results will be presented at COST/SAN in Swansea.

Novice Singers.

A NESTA funded three year research award to John Gruzelier began in April in collaboration with Trinity College of Music supporting the PhD studies of Joe Leach. NF protocols will be compared with follow-up for efficacy on singing performance, creativity, wellbeing and cognition in adults and primary and secondary school children.

Creative Presence States.

A three year EU FP6 consortium programme, Presencia, has begun to include a WP on creative presence states under the direction of John Gruzelier at Goldsmiths College, supporting the PhD studies of Tony Steffert and Danielle Keizer. This will extend John Gruzelier's Imperial College research on EEG-NF with respect to performing and nonperforming arts, and the efficacy of creative visualization with VR assisted NF for immune enhancement. Other COST B27 collaborators in Presencia include from Austria Profs Pfurtscheller and Neuper and Dr Gernot Muller-Putz and from Switzerland Professor Lutze Janke.

Peak Performance: Canterbury Christ Church University

Dr David Vernon has undertaken a study, to be reported at SAN, using alpha enhancement NF versus noncontingent control on mental rotation performance.

Peak Performance: Swansea University, UK; Vrije Universiteit Brussels, Belgium

Dr Edwin Verstraeten, Joram Bosman & Kurt Van Steenwinckel have completed a randomized placebo-controlled study with SMR NF and sleep quality in 20 normal sleepers. SMR training significantly reduced sleep latency (19.9 vs. 29.8 min.) and the wake time after sleep onset (56.3 vs. 80.4 min.). As a result, sleep efficiency also improved (87.2 vs. 81.3 %). Only two sessions of SMR training versus placebo-control in normal sleepers significantly improved sleep latency, wake after sleep onset, and sleep efficiency. This will be reported at SAN.

SUBMITTED GRANT PROPOSALS

FP6 IST 6 SEQUAL self enhanced quality of life.

ETH Zurich together with Gruzelier and Linnell at Goldsmiths College, and including COST B27 members Verstraeten at Swansea and Janke at Zurich, together with partners throughout Europe, have submitted a proposal to develop an individual tailored technical platform to enable the elderly to act independently at home. This is based around NF training protocols for attention and memory, sleep quality, recovery from Stroke, etc.

An **ESRC** grant proposal is in progress by Dr Verstraeten to explore traumatic brain injury response in mild TBI cases to NF. The study aims to compare EEG biofeedback and a one-off early intervention using cognitive behavioural methods to identify its utility in alleviating symptoms that persist 6 months post injury. A group that refuse all treatment will form another control group.