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The Neuropsychopharmacology Centre at Imperial College London is the home of Profs David Nutt and Anne Lingford-Hughes. Here they conduct human experimental medicine studies using brain imaging and pharmacological challenge tests in human volunteers and patients with addictions (currently alcohol, heroin, smoking, gambling and overeating) and depression. Currently we are exploring the GABA-A, GABA-B, serotonin 5HT2A receptor, and endorphin systems. We can help train young researchers in techniques such as pharmacological EEG fMRI and PET though they will not be able to conduct their own experiments.

Current ongoing experiments include testing for changes in GABA-B receptor function in alcohol dependence, endorphin release (using <sup>11</sup>C-carfentanil PET) in alcohol dependence, GABA functional reserves (using tiagabine and [<sup>11</sup>C]-RO154513 PET) in alcohol dependence plus clinical trials of naltrexone in gambling and the treatment of GHB dependence and withdrawal, as well as the first study of psilocybin – a 5HT2A receptor agonist – as a treatment of resistant depression.