

# Research into the brain and behavioural markers of vulnerability to problem and pathological gambling

The Wales Institute of Cognitive Neuroscience

## The purpose and scope of the research project

This is a multi-site research project that aims to identify the behavioural and neural correlates of problem/pathological gambling by comparing gamblers of differing severity and non-gambling healthy controls. Two simulated gambling tasks will be employed. By investigating how brain activity, physiology and cognitions differ in pathological and problem gamblers compared to non-gamblers, this research should increase our understanding of factors contributing to the vulnerability to, and the maintenance of, the excessive motivation to gamble. Behavioural studies are being conducted at Swansea, MEG brain imaging studies at Cardiff, and functional MRI studies at Bangor. Only the latter two studies involve the participation of gamblers.

## How the research is funded

The research is funded by the Wales Institute of Cognitive Neuroscience (<http://www.wicn.ac.uk>)

## Who is carrying out the research

Dr Natalia Lawrence and Dr Elanor Hinton, both Research Fellows in the School of Psychology Cardiff University are conducting the Cardiff studies. Dr Kenneth Yuen, a Research Fellow in the School of Psychology at Bangor University and by Prof. Miles Cox, Professor of the Psychology of Addictive Behaviours, is conducting the Bangor studies. Ms Alice Hoon, MSc, Research Student, and Dr Simon Dymond, Senior Lecturer, from the Department of Psychology at Swansea University, are assisting with the Cardiff studies. Dr Simon Dymond is the Principal Investigator.

## The timescale

The studies are currently underway, but we hope to complete data collection by the early summer.

## The outcomes and how the research will be published

The outcomes will likely be presented at professional conferences, both nationally and internationally, and the findings will be submitted for publication in a high impact peer-reviewed journal.

## Why the involvement of Forum members is sought

We are interested in recruiting forum members who have a gambling problem and who are interested in contributing to understanding the neuroscience basis of gambling. We are aware of previous, similar studies that have successfully sought the involvement of forum members in the past.

## How anonymity will be ensured if requested by a member

All participants will be allocated a unique participant identifier code that will be used throughout all stages of data collection, analysis and reporting of findings. Personal information, such as contact details and questionnaire scores, will be stored in a password-protected folder to which only the above-named local researchers have access. Brain images and behavioural data will be anonymised using the participants' identifier codes.