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PRESS RELEASE

WORLD'S FIRST IMAGES OF THE BRAIN ON LSD RELEASED

This research was undertaken as part of the

BECKLEY/IMPERIAL RESEARCH PROGRAMME

CO-DIRECTED BY DAVID NUTT AND AMANDA FEILDING

LEAD INVESTIGATOR ROBIN CARHART-HARRIS

[STRICT EMBARGO UNTIL 7PM (GMT+1) 11.04.16]

The **Beckley/Imperial Research Programme** has released the world's first images of the human brain on LSD. The images are part of the first ever brain imaging study to examine the effects of LSD on the human brain; the findings are being published on 13.4.16 in the *Proceedings of the National Academy of Sciences*: "**Neural Correlates of the LSD Experience Revealed by Multi-Modal Neuroimaging** by Carhart-Harris R, Feilding A, Nutt D *et al*".

These first findings from the **Beckley/Imperial Research Programme** give invaluable insight into how LSD may be used, firstly to help treat some of society's most intractable illnesses, such as depression, addiction and OCD, and secondly, to further our understanding of the nature of consciousness itself.

The findings illustrate the principles of psychedelic action, i.e., the *destabilisation* and *disintegration* of normally well-organised independent brain networks, accompanied by reduced segregation *between* brain networks, resulting in much greater connectivity and communication between the different networks. Altered activity and communication patterns involving high-level brain networks correlates with experiencing fundamental changes in consciousness, such as ego-dissolution, altered meaning and a more fluid state of consciousness. In addition, our results provide invaluable insight into how LSD changes how the visual system functions and gives a scientific basis for the common psychedelic experience of 'seeing with the eyes shut'.

This pioneering LSD research is the culmination of over 40 years of Amanda Feilding working towards her aim of establishing a scientific understanding of how psychedelic drugs work in the brain and how they can be used beneficially. This study builds on the previous work of the *Beckley/Imperial Research Programme* into psilocybin (the active ingredient in magic mushrooms) which identified the Default Mode Network as being particularly affected by psychedelic drugs. This network of highly interconnected brain regions plays an extremely important function as a top-down control mechanism, which reduces and co-ordinates the activity of other brain areas. It is also responsible for the maintenance of a stable sense of self, daydreaming and self-reflection. By reducing the influence of the Default Mode Network, a more fluid and disorganised state of consciousness is brought about where new associations are made, and rigid patterns of behaviour may be broken down.

'After decades of prohibition and bureaucratic obstacles, we are finally unveiling the brain mechanisms underlying the potential of LSD, not only to heal, but also to deepen our understanding of consciousness itself' **Amanda Feilding**

NOTES FOR THE EDITOR

The **Beckley Foundation** is a UK-based think-tank and research centre that, since its establishment in 1998 by its Executive Director Amanda Feilding, has been at the forefront of scientific research into the mechanisms of action and potential medical benefits of psychoactive substances, and of global drug policy reform. Its Scientific Programme uses the latest developments in neuroscience and neuroimaging technology in order to explore how psychoactive substances act upon the human brain, both to increase our scientific understanding of the mysteries underlying consciousness, and to open up new avenues of treatment for mankind's many illnesses.

The **Beckley-Imperial Research Programme** was initially set up in 2005 when Amanda Feilding persuaded David Nutt to collaborate on researching the mechanisms underlying psychedelics. In 2009, when David moved to Imperial College, Robin Carhart-Harris became the programme's lead investigator.

The Programme works at the frontiers of research into the effects of psychoactive substances on the brain. By utilising the latest neuroimaging technology they unveil the changes in blood supply and the neural mechanisms by which psychedelics produce their profound effects on consciousness. By bringing about a more fluid state of consciousness, psychedelics may overcome excessively rigid patterns of thought, which underlie such conditions as depression, addiction, post-traumatic stress disorder and obsessive-compulsive disorder.

Interviews: Amanda Feilding and David Nutt, co-directors of the study, will be available to be interviewed on request.

Images: images and other materials are available on request.

The Science and the Study: Please see the attached fact sheet for details on the methodology and findings of the study.

Please contact George McBride on george@beckleyfoundation.org or on 01865 351 209 - 07771566693 & download images and press packs from:
<https://www.dropbox.com/sh/nok815xjluyzakl/AAAkwohLYEQPZiGuphVEOF2xa?dl=0>