



BECKLEY FOUNDATION SCIENTIFIC PROGRAMME

2021



BECKLEY
FOUNDATION

About the Beckley Foundation

The Beckley Foundation is a charitable organisation set up by Amanda Feilding in 1998 to initiate and carry out pioneering research into the therapeutic potential of psychedelics, and to create a scientific base for global drug policy reform. The work of the Foundation relies entirely on donations.

Our mission

Our aim is to harness the power of science in order to integrate psychoactive substances into society as safe and effective tools, to treat a broad range of health conditions and enhance wellbeing.

"What we have done so far is open the door. However, there is an immense wealth of knowledge to continue mining." - Amanda Feilding



THE TIME
FOR PSYCHEDELIC
RESEARCH IS NOW

Psychedelics have the potential to create a revolutionary paradigm shift in mental health. There is now a unique window of opportunity to accelerate research so that the therapeutic value of these compounds may be recognised and used to their full potential.

EXPANDING
THE FRONTIERS
OF PSYCHEDELIC
KNOWLEDGE

Amanda Feilding is committed to using this momentum to further push the limits of scientific knowledge, with a wide spectrum of ongoing projects investigating psilocybin, LSD, ayahuasca, DMT, 5-MeO-DMT and ibogaine.

PREPARING
FOR THE FUTURE
OF PSYCHEDELIC
THERAPY

Our aim is to facilitate a broad access to psychedelic-assisted therapies for those in need through the exploration of alternative, more practical ways to use these compounds in therapy.

Many thanks to our donors!

To advance our knowledge of psychedelics and their therapeutic potential, and to ensure that governments, and indeed the public and private sectors, are properly informed, the Beckley Foundation relies exclusively on the generosity of our supporters. Donations of any amount are greatly appreciated and help us develop and expand our science, policy and outreach programmes.



Hold your phone camera up to the QR code to access our website and support the work of the Foundation.

To donate, please visit beckleyfoundation.org/donate

Message from the Director: Amanda Feilding



It has always been clear to me that psychedelics have many benefits to bring to our society, particularly in these times of crisis.

I set up the Beckley Foundation over twenty years ago in order to expand scientific research into psychedelics and reform global drug policy. Ours and other's work on these two fronts has led to a shift away from outdated 'prohibitionist' views and a changing tide in public opinion.

Ever more evidence from rigorously conducted research is confirming the high therapeutic value of psychedelics, with potential benefits that extend far beyond the field of psychiatry. We must look at how best to keep the momentum going.

Following over a decade of significant breakthroughs with the *Beckley/Imperial Psychedelic Research Programme*, we are now expanding with new networks and international collaborations alongside wonderful scientists, making use of a wide range of investigational approaches.

Faithful to its original mission, the Beckley Foundation will continue pushing the limits of our knowledge by conducting the best possible research, and daring to explore new and taboo territories.

I much look forward to sharing with you our exciting new programme of research, specifically focusing on LSD, and first of its kind research into under-explored compounds, such as 5-MeO-DMT and ibogaine.



Top: Amanda Feilding – Photo by Imogen Freeland

Why Support Us?



A TRACK RECORD OF MAJOR
BREAKTHROUGHS - P6

A UNIQUE VISION FOR SOLVING
MAJOR CRISES OF OUR TIME - P16

A WIDE RANGE OF
COMPOUNDS AND
RESEARCH INTERESTS - P8

COLLABORATIONS WITH
LEADING UNIVERSITIES
WORLDWIDE - P11

HIGH-STANDARD PUBLICATIONS TO
INFLUENCE PSYCHEDELIC RESEARCH - P22

ADVISED BY THE LEADING
EXPERTS IN THE FIELD - P23

DRUG POLICY INITIATIVES - P24

A FAR-REACHING GLOBAL VOICE
& HIGHLY INFLUENTIAL PRESENCE
IN THE MEDIA - P9



BECKLEY
FOUNDATION

A Track Record of Major Breakthroughs

Amanda Feilding has been studying the mechanisms underlying the effects of psychedelics since 1966. In 1998, she set up the Beckley Foundation in order to open up the doors of scientific research into the potential benefits of psychedelics, and to develop a scientific evidence base to help reform global drug policies, so that these compounds can be made available to patients in need.

Amanda Feilding establishes the Beckley/Bristol Research Programme with Prof David Nutt and herself as co-directors.



2005

Amanda establishes the Beckley/Imperial Research Programme with Prof David Nutt and herself as co-directors, and appoints Dr Robin Carhart-Harris as Principal Investigator.



2008

The first fMRI study of psilocybin is conducted as part of the Beckley/Imperial Research Programme, identifying for the first time crucial changes in the organisation of functional brain networks during the psychedelic experience.



2012

2005



Amanda sets up a collaboration with Berkeley, California, which gained the first ethical approval for a brain imaging study with LSD in humans.

2006



Amanda convenes the global *Cannabis Commission* which results in the seminal report *Cannabis Policy: Moving Beyond the Stalemate*, later presented at the UN.

2015



Amanda's collaborative research with UCL on the effects of two different strains of cannabis is featured in the Channel 4 documentary *Drugs Live: The Cannabis Trial*.

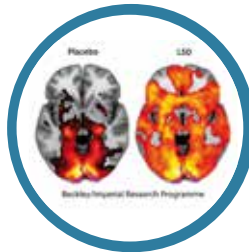
Psychedelic Milestones

The *Beckley/Imperial Research Programme* publishes ground-breaking results on psilocybin-assisted therapy for treatment resistant depression.



2016

The *Beckley/Imperial Research Programme* publishes the first images of the human brain on LSD. Amanda Feilding's collaboration with Johns Hopkins produces the first scientific evidence for the potential of psilocybin-assisted therapy for smoking cessation.



2016

The FDA grants breakthrough therapy designation for psilocybin and treatment-resistant depression, based on the *Beckley/Imperial* research with treatment-resistant depression.



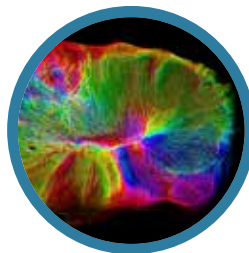
2018

2017



Amanda sets up the *Beckley/Brazil* and the *Beckley/Maastricht Psychedelic Research Programme*, investigating the potential of LSD.

2019



First results from Beckley/Brazil demonstrating the effect of LSD on synaptogenesis in lab-grown minibrains, and enhancement of cognitive functions in rats

2020



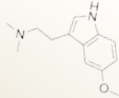
Ground-breaking results from our lab-based LSD microdosing research programme demonstrating for the first time some beneficial effects of LSD on mood, vigilance, neuroplasticity (BDNF) and pain tolerance.

A Wide Range of Compounds and Research Interests

5-methoxy-N,N-dimethyl-tryptamine

Translational research exploring the therapeutic potential of 5-MeO-DMT

First 5-MeO-DMT neuroimaging study: investigating the neural correlates of the mystical experience



Lysergic Acid Diethylamide

First LSD Neuroimaging study

LSD microdosing research programme: mood, pain management, cognition

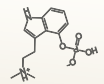
Observational studies in naturalistic settings to better understand the therapeutic use of this compound.



Psilocybin

First clinical studies of psilocybin-assisted therapy for depression and smoking cessation

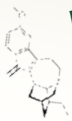
Range of remote research studies investigating the effects of natural psilocybin mushrooms microdosing (e.g. anxiety, depression, migraine)



Ibogaine

Ibogaine microdosing for Parkinson's Disease: a translational research programme

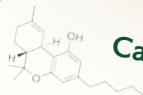
Exploration of other therapeutic applications



Cannabis

Neuroimaging research on the effects of different concentrations of THC and CBD

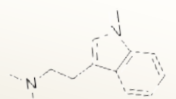
CBD for smoking cessation



Ayahuasca/DMT

Long-term effects of ayahuasca when ingested in a ritual setting, on the personal development and mental and emotional wellbeing of Western users

First neuroimaging investigation of DMT



A Global Voice



3,500+

Articles on our LSD research in international & national press, including The Sunday Times, The Guardian, Washington Post, The Financial Times, CNN and Scientific American



2000+

Articles on Psilocybin for depression including The Guardian (78,000 shares), The Spectator, The Mail Online, The Mirror, CNN and The Sun



6 million+

Views of The Guardian's "LSD's impact on the brain revealed in ground-breaking images"



500,000+

Twitter impressions per month. Followers include politicians, international journalists, healthcare professionals, academic researchers and leading research institutions.



40,000+

Facebook fans include scientists, policymakers, top journalists and medical cannabis campaign groups. Beckley research videos have been watched over 500,000 times.

Amanda Feilding's Collaborations with Leading Universities and Research Institutes Worldwide

Beckley/UCL

Since 2012

Research on MDMA and self-compassion.
Neuroimaging study of the effects of THC and CBD.

Beckley/Johns Hopkins

Since 2008

First psilocybin-assisted therapy for smoking cessation.
80% abstinence rate at 6 months.



Collaboration with Chicago University

A new collaboration set up in 2019 to investigate LSD microdosing for depression.

Beckley/ICEERS

Since 2014

Observational research on long-terms effects of ayahuasca ceremonies.

Beckley/San Pau

Since 2013

Research on ayahuasca.
First ground-breaking evidence for effects of ayahuasca on neurogenesis and mindfulness.

Beckley's Major Collaborations Highlights

BECKLEY/IMPERIAL

Set up in 2008, co-directed by Amanda Feilding and Prof David Nutt

The Beckley/Imperial Research programme successfully evolved into the Imperial Centre for Psychedelic Research in 2019, which builds on over a decade of pioneering work in this area carried out by the Beckley/Imperial research programme, including the first neuroimaging study with LSD (see appendix p 27) and a clinical trial that has kick-started global efforts to develop psilocybin therapy into a licensed treatment for depression (see appendix p 26)

Key achievements:

First neuroimaging study with LSD.
Psilocybin-assisted therapy for treatment-resistant depression.
Over 50 peer-reviewed publications.

Ongoing projects:

Self-blinded microdosing study.



BECKLEY/BRAZIL

Set up in 2017

Ongoing projects:

Translational research in brain cells, cerebral organoids, animal models and humans exploring new therapeutic applications for psychedelics.

BECKLEY/MAASTRICHT

Set up in 2017

Key achievements:

LSD microdosing dose-finding study (see p.13-14)
Psilocybin multimodal neuroimaging study.

Ongoing projects:

Investigation of the effects of repeated LSD microdosing in healthy volunteers on mood, cognition and pain, and multimodal assessment of changes in neuroplasticity



Spotlight on Our Microdosing Research Programme

About Microdosing

The practice of microdosing entails taking low doses of psychedelics, which are usually one-tenth of a hallucinogenic dose. For example, a microdose of LSD would be between 10 and 20 μg .

While this practice is growing in popularity, there is however very little research to support the validity of certain claims, which include improved cognition, productivity and mood.

Amanda Feilding and her research partners are seeking to uncover more information, both to assist with harm reduction among those microdosing in their daily lives, and, importantly, to support the evidence base for the introduction of possible psychedelic medicines.



"I was introduced to LSD in 1965. In the years that followed, other than the mystical, or peak experience, my aim was to hit that 'sweet spot', where vitality and creativity are enhanced, while leaving me in control of my concentration. I grew to love this state. It was, in a way, comparable to what people are doing today with microdosing." – Amanda Feilding

THE BECKLEY MICRODOSING RESEARCH PROGRAMME



LSD microdosing dose-finding study Beckley/Maastricht

Investigating the effects of various small doses of LSD (5, 10, 20 μg) on mood, cognitive functions, and tolerance to pain



Self-blinding microdosing study Beckley/Imperial

An innovative procedure to combine the rigour of placebo-controlled studies with the high number/low cost advantage of naturalistic studies



Repeated LSD microdosing Beckley/Maastricht

Effects on brain activity, neuroplasticity, long-term changes



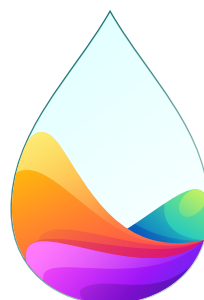
LSD microdosing for depression Beckley/Chicago

A study in individuals with high depression scores



Microdosing research platform

For surveys, observational studies and remote interventions (see p.15 for more information)



Studies under development

Optimising microdosing therapeutic use, and exploring novel applications

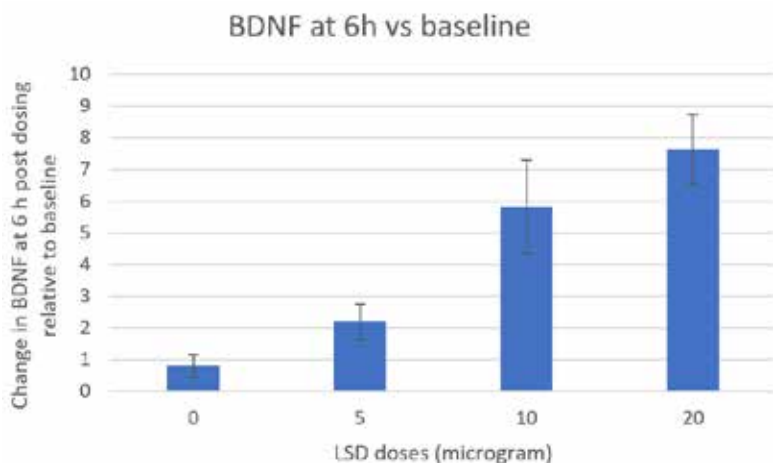
Spotlight on Our Microdosing Research Programme

Groundbreaking results

First evidence for an effect of LSD microdosing on neuroplasticity in humans

Given the interest in BDNF (Brain-derived neurotrophic factor) as a key player in several neurodegenerative and neuropsychiatric disorders, our *Beckley/Maastricht* dose-finding microdosing study included, among other measures, that of changes in BDNF plasma levels following low doses of LSD (5, 10, and 20 µg) and a placebo, in healthy volunteers.

The findings demonstrated an increase in BDNF starting 4h after LSD administration. 6h after administration, the increase in BDNF level was proportionate to the dose of LSD administered, a remarkable result that warrants studies in patient populations.



Important role of BDNF regulation in health and disease

Various studies have shown possible links between BDNF and conditions such as depression, obsessive-compulsive disorder, Alzheimer's disease, diabetes, and eating disorders. Conversely, higher levels of the protein are associated with improved cognitive functioning, mental health, and short- and long-term memory.

Microdosing improves mood and vigilance

Our results also demonstrate that small doses of LSD - particularly the highest dose we investigated (20 µg) - significantly enhanced positive mood as well as vigilance in our group of healthy participants.

Related ongoing and future work

Repeated LSD
Microdosing

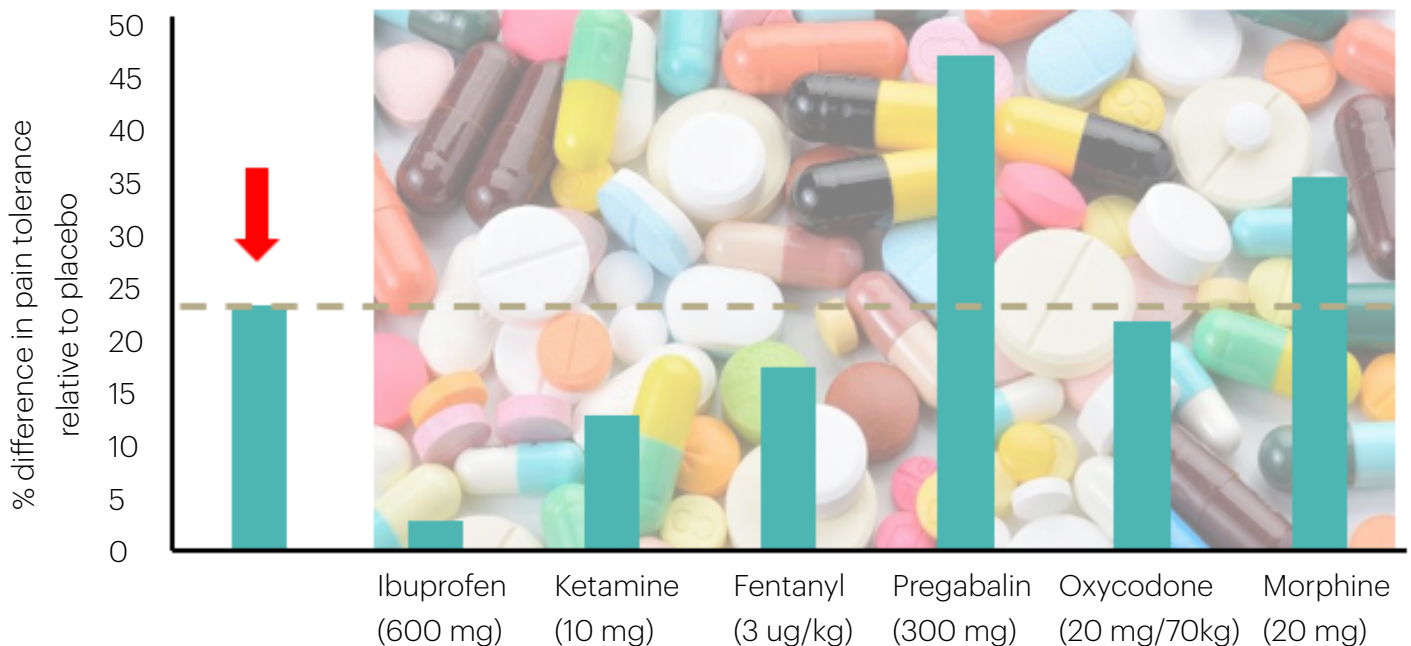
LSD Microdosing
for depression

Microdosing for
brain pathologies

Spotlight on Our Microdosing Research Programme

First evidence for the analgesic properties of LSD microdosing

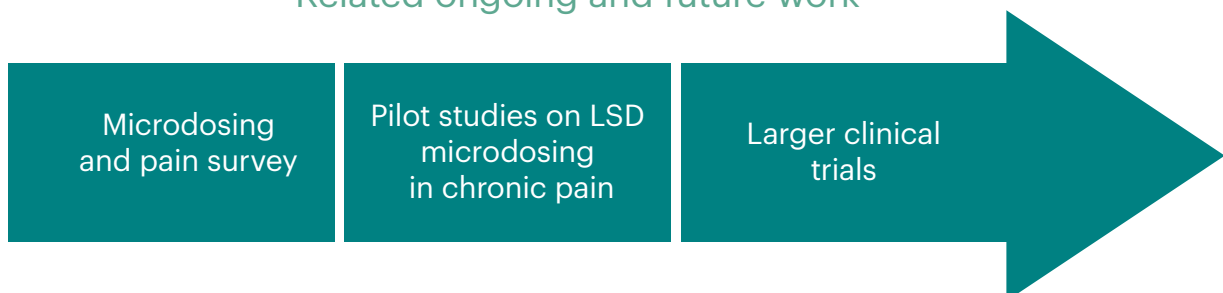
Another measure collected throughout the dosing days as part of our dose-finding microdosing study was that of pain tolerance. The study consistently indicated that a 20µg dose of LSD significantly reduced pain perception, as compared to the placebo.



"The present data suggests low doses of LSD could constitute a useful pain management treatment option that is not only effective in patients but is also devoid of the problematic consequences associated with current mainstay drugs, such as opioids. Over 16 million people worldwide are currently suffering from Opioid Use Disorder and many more will become hooked as a result of oversubscription of pain medication. I am encouraged by these results as I have long believed that LSD may not only change the sensations of pain but also our subjective relationship with it. We must continue to explore this with the aim of providing safer, non-addictive alternatives to pain management, and to bring people in pain a step closer to living happier, healthier and fully expressed lives."

– Amanda Feilding

Related ongoing and future work



Development of an online platform for research and harm reduction

COVID-19 has come with many challenges to research, but also brought many opportunities. Virtual research constitutes a new way of conducting science, with access to a much larger number of participants for a fraction of the cost of lab-based studies. Concerns over the quality of the data collected this way are becoming obsolete, as new wearable technology is developing at a fast pace.

The Beckley Foundation is in the process of developing its own online remote platform to conduct a range of exciting virtual studies (e.g. surveys & observational studies in psychedelics users) in order to further explore the various possible uses of psychedelics.

Tech, gizmos, and gadgets are at the heart of virtual research, from smartphone apps to wearables and e-diaries. Virtual trials will benefit from the wealth of technology on the market, facilitating rapid data collection.



Step 1

Surveys and experience collector

Example of ongoing surveys:

- Microdosing & pain
- Psychedelic use and changes in beliefs & worldviews

Step 2

Observational studies with wearables and drug testing kit

Example of planned studies:

- Ibogaine microdosing
- Mindfulness and microdosing

Step 3

Large-scale siteless clinical research

Example of research under development:

- Natural psilocybin microdosing for anxiety

New Programme of Research

Three major crises of our time

Mental health crisis

We are facing an ever-worsening mental health epidemic, that is being further fuelled by the COVID-19 pandemic. Rates of anxiety, depression and addiction have never been as high and continue rising.

Ageing crisis

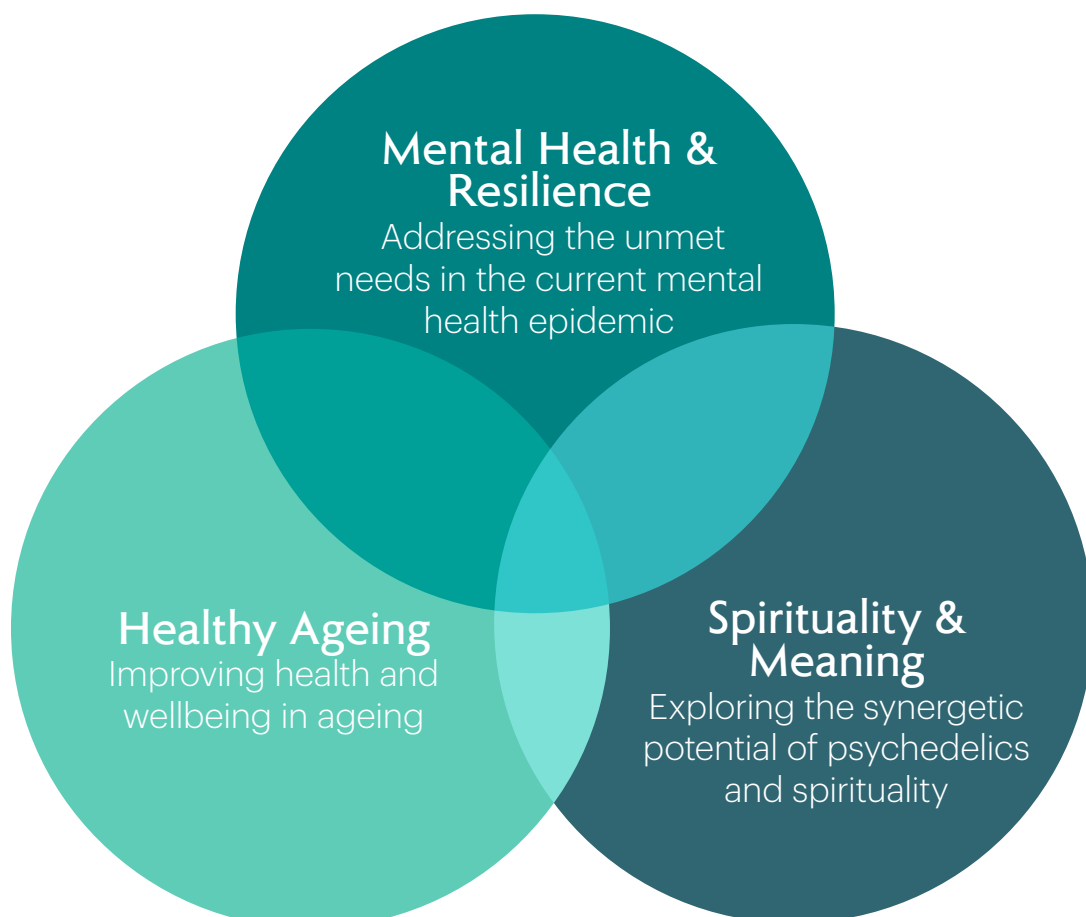
In 2015, 12.3% of the global population was aged over 60. By 2050, this proportion will have increased to 21.3%. Solutions are needed to extend the span of healthy and independent living.

Psycho-spiritual crisis

Western consumer culture is creating a psycho-spiritual crisis that leaves many disoriented and bereft of purpose, creating an unprecedented epidemic of demoralisation and existential distress.

Psychedelics, as research is showing, are uniquely versatile medicines that hold tremendous potential in addressing key aspects of these societal crises.

The Beckley Foundation has always been unique in its wide and exploratory approach to psychedelic research. With our new research programmes, we intend to extend our scope further than ever before, by simultaneously tackling what we consider to be three of the major crises of our time.



Healthy Ageing Research Programme

Psychedelics for a longer and healthier life

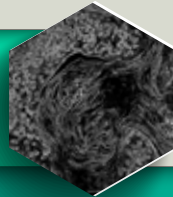
Our research suggests that psychedelics positively affect key physiological, psychological & behavioural functions.

These effects could be beneficial in the treatment of a number of age-related conditions.

Chronic pain



Inflammatory diseases



End-of-life depression and anxiety



Neurodegeneration



Prevention of cognitive decline

In healthy individuals, boosting these functions may also have numerous positive effects.



Longevity



Mood and vitality enhancement



Flexibility and resilience

Mental Health & Resilience: Our Three Major Areas of Research Focus

PREVENTION

Can psychedelics be used to promote wellbeing and flexibility, to enhance resilience to stress or pain, and to cope with adverse life events?

TREATMENT

How can we optimise psychedelic-assisted therapy, better understand which patients populations it may benefit most, and ensure these therapies are widely accessible?

MAINTENANCE

What are the best strategies to prolongate the benefits of psychedelic-assisted therapy and avoid relapse?

Amanda Feilding is developing and initiating a range of research projects that will address these essential questions, by making use of the full spectrum of possible approaches, from information gathering via surveys, to the development of pioneering clinical studies, through the carrying out of observational research following psychedelic users in their journey towards recovery.

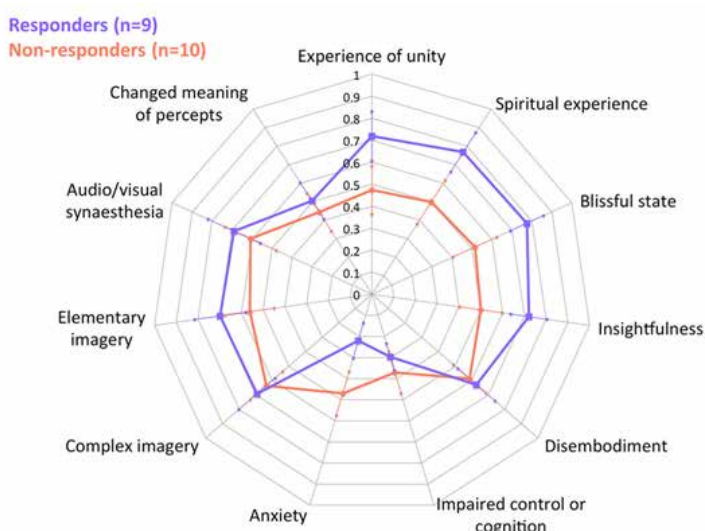
"I believe that if people would learn to use LSD's vision-inducing capability more wisely, under suitable conditions, in medical practice and in conjunction with meditation, then in the future this problem child could become a wonderchild." – Albert Hofmann

Spirituality & Wellbeing Research Programme

How important is the mystical experience in the long-term benefits of psychedelic-assisted therapy?

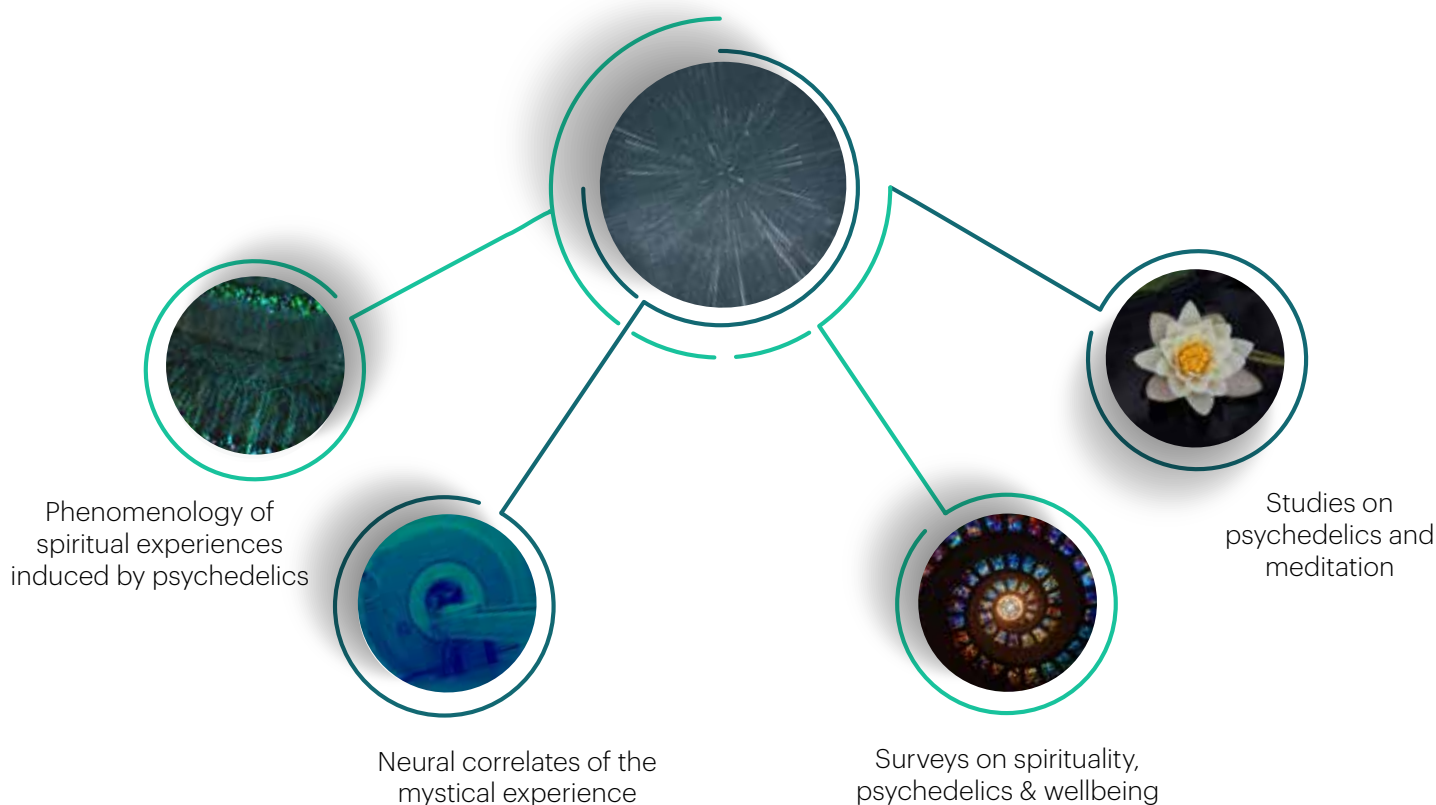
Recent research on psychedelic-assisted psychotherapy has shown the great promise of this therapeutic approach for the treatment of numerous mental health conditions. Instead of medicating people away from their emotions, it promotes a reconnection with them. In the first clinical study of psilocybin-assisted therapy for treatment resistant depression, carried out by the *Beckley/Imperial* team, we found, for the first time in the history of psychiatry, that the mystical experience lies at the very heart of treatment efficacy.

Patients who demonstrated the greatest improvement in their depression scores (See graphic: blue line – 9 responders) were those who had undergone a greater mystical experience during the psychedelic intervention. Lower ‘peak’ experiences were reported in those with weaker therapeutic response (red line - 10 ‘non-responders’).



Projects Under Development

One of the Beckley Foundation's goals is to explore in depth the link between psychedelics and spirituality – knowledge which could be key to fully harnessing their synergistic transformative and healing potential.



Selected Scientific Articles

BECKLEY/IMPERIAL RESEARCH PROGRAMME

Co-directed by Prof David Nutt & Amanda Feilding

Psilocybin with psychological support for treatment-resistant depression: an open-label feasibility study (2016), Carhart-Harris RL, Bolstridge M, Rucker J, ...Feilding A, ... Nutt DJ, *The Lancet Psychiatry*, 3(7), 619-627

Neural correlates of the LSD experience revealed by multimodal neuroimaging (2016), Carhart-Harris RL, Muthukumaraswamy S, Roseman L, Kaelen M, ..., Feilding A, Nutt DJ, *PNAS*, 113(17), 4853-4858

Neural correlates of the DMT experience assessed with multivariate EEG (2019), Timmermann C, Roseman L, ..., Nutt DJ, Carhart-Harris R, *Scientific Reports*, 9, 16324

Increased global functional connectivity correlates with LSD-induced ego dissolution (2016) Tagliazucchi E, Roseman L, Kaelen M, ..., Feilding A, Nutt DJ, Carhart-Harris R, *Current Biology*, 28(8), 1043-1050

Psilocybin with psychological support for treatment-resistant depression: six-month follow-up (2018), Carhart-Harris RL, ..., Feilding A, Taylor D, Curran HV, Nutt DJ, *Psychopharmacology (Berl)*, 235(2):399-408

Increased amygdala responses to emotional faces after psilocybin for treatment-resistant depression (2017), Roseman L, Demetriou L, Wall MB, Nutt DJ, Carhart-Harris RL, *Neuropsychopharmacology*, pii: S0028-3908(17)30639-1

Altered Insula connectivity under MDMA (2017), Walpola IC, Nest T, Roseman L, Erritzoe D, Feilding A, Nutt DJ, Carhart-Harris RL, *Neuropsychopharmacology*, 42(11):2152-2162

Neural correlates of the psychedelic state as determined by fMRI studies with psilocybin (2012), Carhart-Harris RL, Erritzoe D, Williams T, ..., Feilding A, Wise R, Nutt DJ, *PNAS*, 109(6), 2138-214

COLLABORATION WITH JOHNS HOPKINS UNIVERSITY

Pilot study of the 5-HT_{2A} agonist psilocybin in the treatment of tobacco addiction (2014), Johnson MW, Garcia-Romeu A, Cosimano MP, Griffiths RR, *Journal of Psychopharmacology*, 28(11); 983-992

BECKLEY/BRAZIL RESEARCH PROGRAMME

Co-directed by S Rehen, S Ribeiro, de Araujo DB and Amanda Feilding

d-LSD enhances novelty preference by increasing synaptic connectivity: an integrative view on how psychedelics may enhance cognition (In prep),. Ribeiro S, Rehen S, de Araujo DB, Feilding A

BECKLEY/MAASTRICHT RESEARCH PROGRAMME

Co-directed by Prof Jan Ramaekers & Amanda Feilding

Low Doses of LSD Acutely Increase BDNF Blood Plasma Levels in Healthy Volunteers (2020), Hutten N., Mason N, ..., Feilding A., Ramaekers J, and Kuypers K, *ACS Pharmacology & Translational Science*

A low dose of lysergic acid diethylamide decreases pain perception in healthy volunteers (2020), Ramaekers J, Hutten N, Mason N, ...Liechti M, Feilding A and Kuypers K, *Journal of Psychopharmacology*

Mood and cognition after administration of low LSD doses in healthy volunteers: A placebo controlled dose-effect finding study (2020), Hutten N., Mason N, ..., Feilding A., Ramaekers J, and Kuypers K, *Eur Neuropsychopharmacol*, 41:81-91

Me, Myself, Bye: Regional alterations in glutamate and the experience of ego dissolution with psilocybin (2020), Mason, N., Kuypers, K.,..., Feilding A, Ramaekers J., *Nature Neuropsychopharmacology* 45(12), 2003-2011

BECKLEY/SANT PAU RESEARCH PROGRAMME

Prof Stevens Rehen, Prof Sidarta Ribeiro, Prof Draulio B de Araujo and Amanda Feilding

The alkaloids of Banisteriopsis caapi, the plant source of the Amazonian hallucinogen Ayahuasca, stimulate adult neurogenesis in vitro (2017), Morales-Garcia J, de la Fuente Revenga M, Alonso-Gil S, ..., Feilding A, Perez-Castillo A, Riba J, *Scientific Reports*, 7: 5309

Assessing the Psychedelic "After-Glow" in Ayahuasca Users: Post-Acute Neurometabolic and Functional Connectivity Changes Are Associated with Enhanced Mindfulness Capacities (2017), Sampedro F, de la Fuente Revenga M, Valle M, ..., Feilding A, Riba J, *The International Journal of Neuropsychopharmacology*, 20 (9) 698-711

Ayahuasca: pharmacology, neuroscience and therapeutic potential (2016), Domínguez-Clavé E, Soler J, Friedlander P, ..., Feilding A, Riba J, *Brain Research Bulletin*, 126(1), 89-101

Exploring the therapeutic potential of Ayahuasca: Acute intake increases mindfulness-related capacities (2015) Soler J, Elices M, Franquesa A, A Friedlander P, ..., Feilding A, Pascual JC, Riba J, *Psychopharmacology*, 233(5), 823-829

Scientific Advisory Board



Sir (Prof) Colin Blakemore

"Amanda has made significant contributions to the field of psychedelic research"

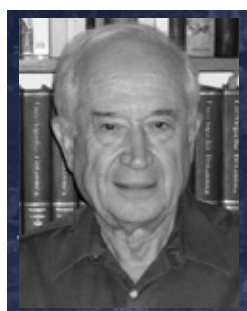
Prof David E. Nichols



Prof David Nutt



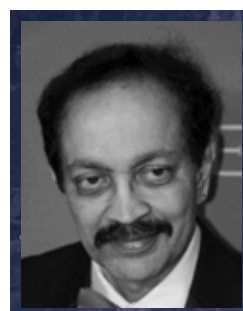
Prof David E. Nichols



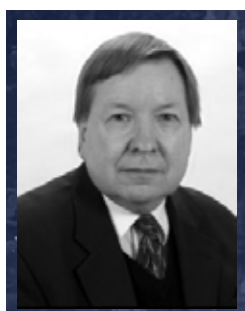
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Prof Roger Pertwee

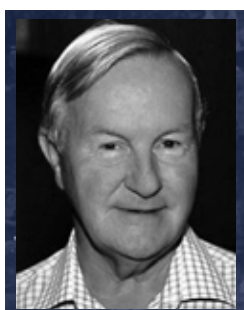


Prof Val Curran



Dr Mark Geyer

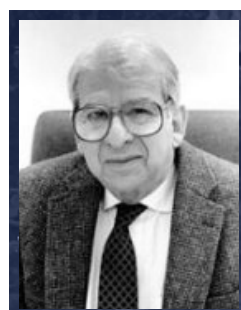
IN MEMORIAM



Prof Leslie L. Iversen



Dr Jordi Riba



Prof Lester Grinspoon

The Beckley Foundation Scientific Advisory Board includes leading international scientists on the topics of consciousness, neuroscience, biochemistry, psychiatry and psychology.

Drug Policy Programme

Global Reform

The 'War on Drugs' continues to cause worldwide devastation. Prohibition costs taxpayers billions each year, yet policies have failed to eliminate drugs, instead increasing the risks and harms associated with their use. Unregulated and mired in criminality, the illicit drugs trade is now worth over \$350 billion a year, and is associated with escalating violence, corruption, incarceration, and suffering.

Over the last 20 years, Amanda Feilding and the Beckley Foundation have been at the forefront of global drug policy reform, pioneering a scientific evidence base on which to build balanced alternatives to the prohibitionist approach. We bring together international scientists, politicians, and other experts to explore key issues at influential seminars and produce a range of seminal books, reports, and papers. Collectively, these aim to minimise the harms incurred by current policies, and introduce rational alternatives which encourage research into the medical and social impact of certain psychoactive substances.

A Selection of Key Achievements

Society & Drugs: A Rational Perspective (2002 - 2011). This series of 11 highly influential seminars held at the Houses of Lords, brought together for the first time eminent politicians, scientists, policy-makers, and other experts to discuss key policy issues at the national and global levels. Out of these discussions came a series of policy reports and books, that laid the foundations for global drug policy reforms which are currently taking place.

The seminars also paved the way for our ongoing policy programme which has included the following initiatives:

The founding of two leading organisations: the International Drug Policy Consortium (IDPC) and the International Society for the Study of Drug Policy (ISSDP). These were both founded by Amanda Feilding and Mike Trace as part of the *Beckley Foundation Policy Programme* and launched at the Beckley Foundation Seminar of 2004. Since then they have become independent and flourished.

The Beckley Foundation Global Cannabis Commission was initiated by Amanda in 2006, and launched in 2008 with the report *Cannabis Policy: Moving Beyond Stalemate*. This report was the first of its kind and has been extremely

influential in the regulation of cannabis at UN and national levels. It was later co-published with Oxford University Press.

The Global Initiative for Drug Policy Reform was launched in 2011 at a Beckley Foundation seminar at the House of Lords. The *All Party Parliamentary Group for Drug Policy Reform* was set up to support this initiative. The seminar was attended by high level governmental representatives from 14 countries interested in reform. Former Brazilian President Fernando Cardoso attended leading the representation of the Global Commission on Drug Policy.

The Beckley Foundation's International Advisory Work. Amanda was invited by both the Guatemalan and Jamaican governments to advise them on drug policy reform. This included writing two reports for the President of Guatemala, Otto Perez Molina, one entitled *Paths to Reform*, which the president used at the UN and other international meetings. In Jamaica, Amanda worked closely with the Minister of Justice and the government in the implementation of a regulated cannabis industry.

The foundation has also been involved in advisory work in Mexico and Colombia among other countries.

Drug Policy Programme



Policy Publications

The Foundation has produced over 40 books, reports, and briefing papers on global drug policy issues, which have had a strong role in influencing the UN and various governments and states in their moves towards reform. Our publications present a thorough review of the impact of current prohibitionist policies and shed light on many previously obscured areas of this complex issue, while opening up the avenues for alternative policies.

We present alternatives to prohibition that:

- Promote public health and human rights
- Reduce drug-related crime, violence and corruption
- Enable governments to gain control of, and profit from, one of the world's largest economies
- Dismantle the barriers to scientific and medical research

KEY PUBLICATIONS

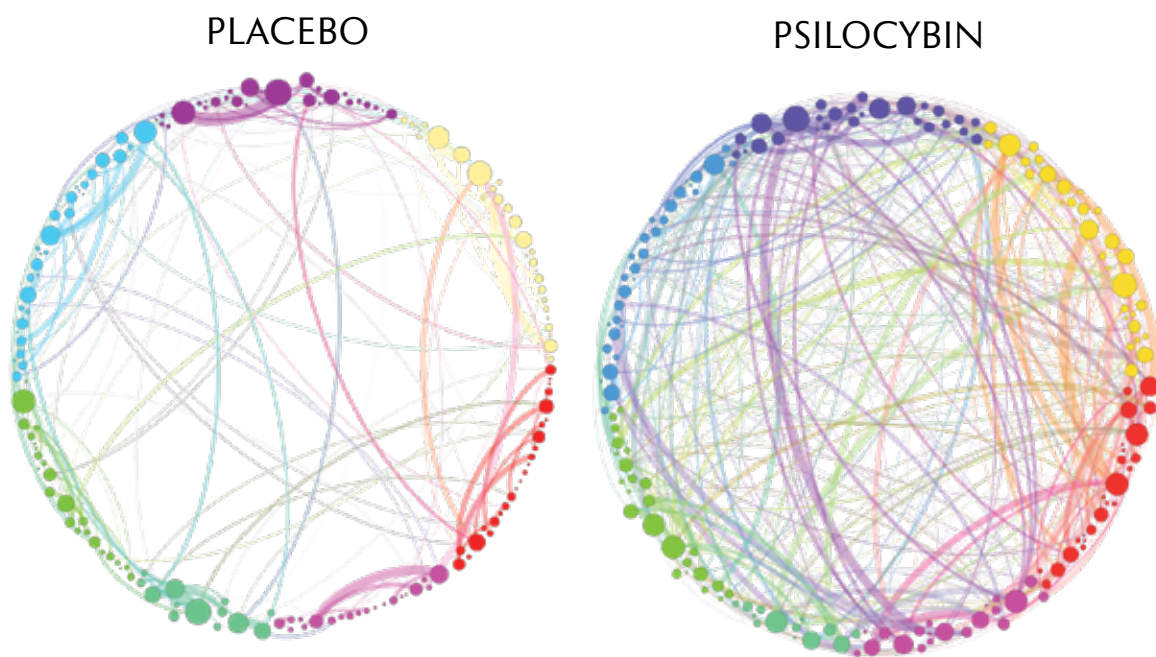
Cannabis Policy: Moving Beyond Stalemate (2008) is a pioneering report produced by the **Beckley Foundation's Global Cannabis Commission**. Since the commission was set up in 2006, it has demonstrated how draconian drug policies do not curb use. The book laid out for the first time alternative routes towards minimising the harms associated with cannabis: through decriminalisation and the establishment of a legally regulated market.

Licensing and Regulation of the Cannabis Market in England and Wales: Towards a Cost-Benefit Analysis (2013) was the first report to quantify the fiscal and social benefits of a regulated and taxed cannabis market.

Roadmaps to Regulation: MDMA (2019) The report outlined, for the first time, detailed recommendations for drug policy reform in order to better control the production, distribution, purchase, and consumption of MDMA products.

Appendix: Pioneering Research on Psilocybin for the Treatment of Mental Disorders

In 2012, the findings of the first *Beckley/Imperial* psilocybin study using the latest brain imaging technology were published to international acclaim in the prestigious scientific journal PNAS. This ground-breaking study, initiated by Amanda Feilding, generated over half a dozen articles, each furthering our understanding of the way psychedelics alter consciousness and may constitute invaluable therapeutic tools, and led to the Medical Research Council awarding a grant to study the efficacy of psilocybin for the treatment of depression.



Beckley/Imperial Research Team 2016

This analysis of data from the first *Beckley/Imperial* psilocybin study famous images illustrate how psilocybin promotes strong, long-range, functional connections between brain regions which do not communicate significantly in normal consciousness. The psychedelic state is associated with less constrained neural networks, revealing the potential to enhance creativity and treat mental illnesses.

Psilocybin for treatment-resistant depression

The first pilot study was published in 2016 in the *Lancet Psychiatry*, with remarkably positive results: 67% of subjects with treatment-resistant depression were in remission one week after taking psilocybin, and 42% remained depression-free three months later. This is an unprecedented achievement, as the participants had suffered from depression for an average of 18 years and had failed to respond to any other treatment.

The study was extended to bring the total number of participants to 20 and to observe the longer term effects of the psilocybin treatment. Results supported the earlier findings and helped further elucidate the ways in which psilocybin brings about a beneficial therapeutic outcome.

Appendix: The First Brain Imaging Study to Investigate the Effects of LSD

In 2014, the *Beckley/Imperial Research Programme* started the first-ever brain imaging study with LSD, a long-standing ambition of Amanda's. Results were published in PNAS in 2016 and launched at the Royal Society, London, to global acclaim. Marked changes were observed in brain blood-flow, neural activity, and network communication patterns that correlated strongly with the drug's hallucinatory and other consciousness-altering properties.

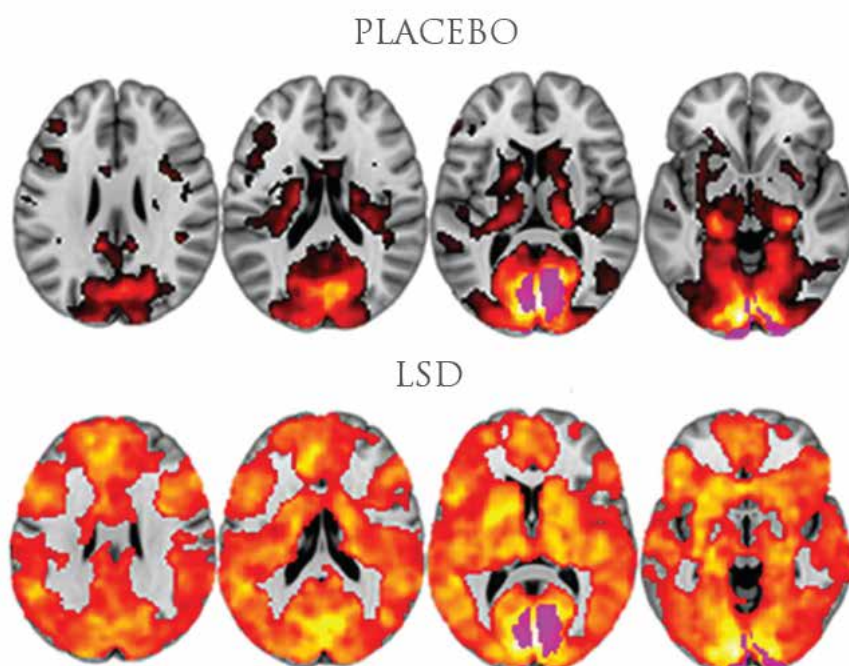


Amanda Feilding, David Nutt and Robin Carhart-Harris at LSD Revealed at the Royal Society

LSD was shown to decrease connectivity between key regions of the brain's Default Mode Network (DMN) that are involved in processing various aspects of selfhood – such as autobiographical memories and self-awareness, thinking about the past, and planning the future. This effect correlated strongly with the subjective experience of 'ego dissolution', implying the importance of the DMN for maintaining the boundaries of the ego.

At the same time, LSD caused a dramatic increase in connectivity between other regions of the brain that are normally highly segregated. This can induce more free-flowing patterns of cognition, allowing users to become more creative and break free from rigid modes of thought and behaviour – such as those underlying psychological disorders like depression and addiction.

These results have significant implications for the neurobiology of consciousness, as well as for potential applications of LSD as a valuable tool for psychotherapy.



Beckley/Imperial Research Programme - 2016 PNAS

Neural correlates of the LSD experience revealed by multimodal neuroimaging shows dramatically increased connectivity between the visual centre and the rest of the brain.



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