



BECKLEY FOUNDATION
SCIENTIFIC PROGRAMME

2019



For the past 20 years the Beckley Foundation has been initiating groundbreaking research into psychedelics while also working towards the reform of global drug policies, led by the vision of its founder and director 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, 5MeO-DMT, cannabis and MDMA.

PREPARING
FOR THE FUTURE
OF PSYCHEDELIC
THERAPY

Our aim is to refine our understanding of how these compounds can be used to treat a wide range of different health conditions, and optimize the various ways they can provide help to patients in need, and improve wellbeing and creativity in the healthy.

Many thanks to our donors!



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 Scientific Brochure and support the work of the Foundation.

To donate, please visit beckleyfoundation.org/donate



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Why Support Us?

Groundbreaking psychedelic therapies could be the start of a paradigm shift in the treatment of mental health. This is a truly exciting time for psychedelic research, and there is a desperate need to support it.

Psychedelics can transform the way we understand and treat mental health conditions.

We are facing an ever-worsening mental health epidemic. Everywhere, rates of anxiety, depression and addiction are on the rise, exerting a vast personal and economic toll.

Psychiatry is largely ill-equipped to remedy this situation, and there is an urgent need for novel therapies and treatments.

Psychedelic therapies are the perfect candidate for a breakthrough in mental health. Psychedelics have been shown to be well tolerated and highly effective medications in numerous scientific studies, with both immediate and long-lasting effects.

Recent evidence from pre-clinical research is demonstrating the unique properties of psychedelics, with potential therapeutic applications that extend far beyond the field of psychiatry (e.g. inflammatory and neurodegenerative disorders).

It is essential that more research is conducted into the underlying mechanisms and therapeutic applications of these highly promising compounds. The Beckley Foundation will continue playing a pioneering role in this area.



Amanda Feilding and the Beckley

“Psychedelics are a key to unlock a deeper level of the psyche. They can transform the individual in ways that modern science is only just beginning to understand.” – Amanda Feilding



Amanda Feilding has been called the ‘hidden hand’ behind the renaissance of psychedelic science, and her contribution to global drug policy reform has also been pivotal and widely acknowledged. Amanda was first introduced to LSD in the mid-1960s, at the height of the first wave of scientific research into psychedelics.

Impressed by its capacity to initiate mystical states of consciousness and heighten creativity, she quickly recognised its transformative and therapeutic power. Inspired by her experiences, Amanda began studying the mechanisms underlying the effects of psychedelic substances and dedicated herself to exploring ways of harnessing their potential to enhance wellbeing.

In 1998, Amanda set up the Beckley Foundation. Since then, she has initiated much groundbreaking research and has contributed to over 50 scientific articles published in peer-reviewed journals. Amanda has collaborated with leading scientists and institutions around the world to design and direct a wide range of

scientific research investigating the effects of psychoactive substances (cannabis, psilocybin, LSD, ayahuasca, DMT, 5MeO-DMT and MDMA) on brain function, subjective experience, and clinical symptoms.

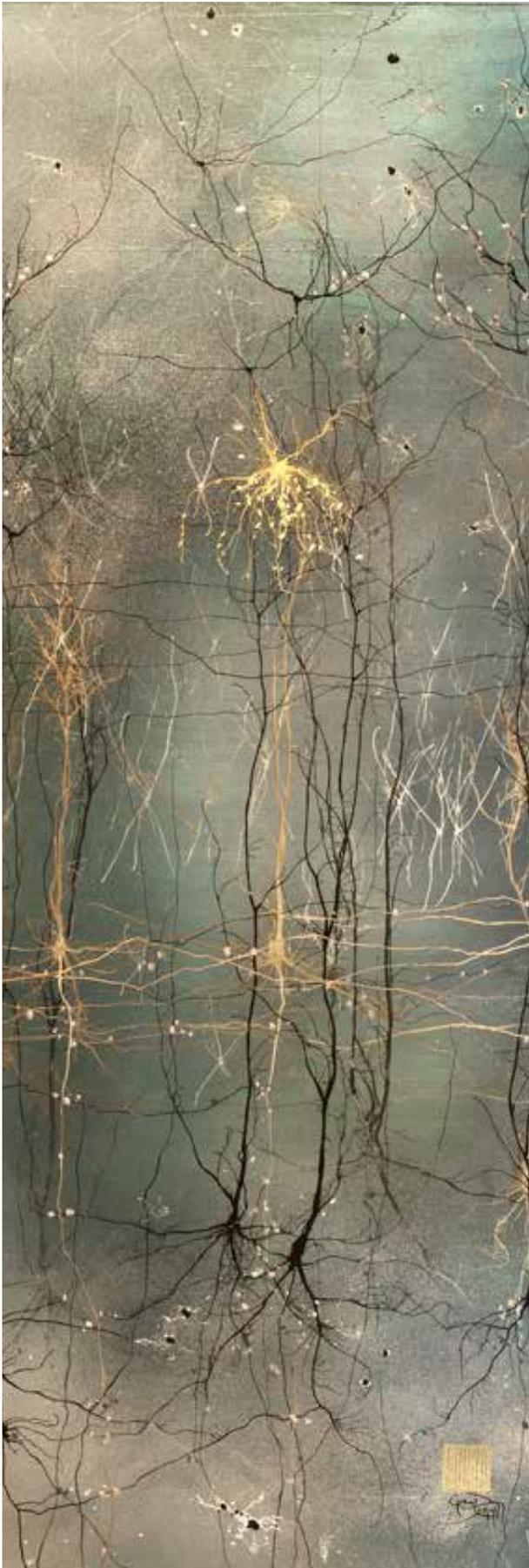
This pioneering research has led to a groundswell of interest in, and recognition of, the possible benefits that careful use of these extraordinary compounds can yield, and started demonstrating the great promise psychedelics hold in helping individuals with illnesses such as treatment-resistant depression and addiction.

Bringing together a network of scientists, politicians and drug policy analysts, she was among the first to begin creating a scientific evidence-base to help reform global drug policies, in order to better protect health, reduce harms and economic costs, and uphold human rights.

From 1998, she initiated and hosted a series of 11 Seminars in the House of Lords, discussing key policy issues and drawing attention to the then ignored topics of cannabis and psychedelics. These seminars, and the papers arising from them, were highly influential in changing attitudes among thinkers and policy-makers worldwide.

Through the Beckley Foundation, Amanda continues to bridge the divide between science and drug policy; her pioneering psychedelic research is providing the scientific evidence upon which a case for drug policy reform can be built. Such reform will, in turn, allow for further research on these currently prohibited substances to progress and hopefully result in their rescheduling and the availability of psychedelic-assisted psychotherapy for those

Selected Scientific Achievements



1970s: AF writes *Blood & Consciousness* and delivers exhibitions around the topic of consciousness and its changing states at the ICA in London and PSI in New York, etc.

1998: AF collaborates with Prof Franz Vollenweider on a study investigating psilocybin's effects on changes in cerebral circulation using PET.

2005: AF initiates a research collaboration with Prof David Nutt at the University of Bristol, with the aim of investigating the effects of cannabis, LSD and psilocybin and cannabis on brain function, using brain imaging.

2005-2007: AF sets up a collaboration with Berkeley, California, which gained the first ethical approval for a brain imaging study with LSD in humans.

2008: AF establishes the *Beckley/Imperial Research Programme* with Prof David Nutt and herself as co-directors, and appoint Dr Robin Carhart-Harris as PI (see p9).

2012: The *Beckley/Imperial Research Programme* publishes the first neuroimaging study of the neural correlates of the psychedelic state induced by psilocybin (see p10), and carries out the first brain imaging study on individuals under the influence of MDMA.

2015: AF'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*.

2016: The *Beckley/Imperial Research Programme* publishes ground-breaking results on psilocybin-assisted therapy for treatment resistant depression (see p10).

The *Beckley/Imperial Research Programme* publishes the first images of the human brain on LSD (see p11). AF's collaboration with Johns Hopkins produces first scientific evidence for the potential of psilocybin-assisted therapy for smoking cessation (see p17).

2017-2018: AF sets up the *Beckley/Brazil* and the *Beckley/Maastricht Psychedelic Research Programmes*, investigating the potential of LSD.

Spotlight on the Beckley/Imperial Research Programme

The *Beckley/Imperial Research Programme* has been a highly productive partnership between Amanda Feilding and Prof David Nutt, co-founders and directors of the Programme, and Dr Robin Carhart-Harris, principal investigator. The collaboration began in 2005, when Amanda approached David about forming a partnership to investigate the effects of psychedelics and cannabis on brain function. Many new scientists have since joined the team.

Harris to join the *Beckley/Imperial Psychedelic Research Programme* in 2009 as Principal Investigator and Beckley Research Fellow. Following up on the success of the *Beckley/Imperial* psilocybin for treatment resistant depression study, he is now leading a larger phase II double-blind randomized controlled clinical trial, comparing changes in depression and imaging outcomes after a single dose of psilocybin versus six weeks of an SSRI treatment for major depressive



The programme has carried out pioneering brain imaging studies with LSD, psilocybin, DMT and MDMA, using fMRI, MEG and EEG. These have greatly expanded our understanding of how psychedelics work in the brain, and have provided invaluable insights into the nature of different states of consciousness and how they can aid the treatment of mental illnesses and inspire the mystical experience.

Inspiring a new generation of psychedelic research scientists

Amanda and David invited Robin Carhart-

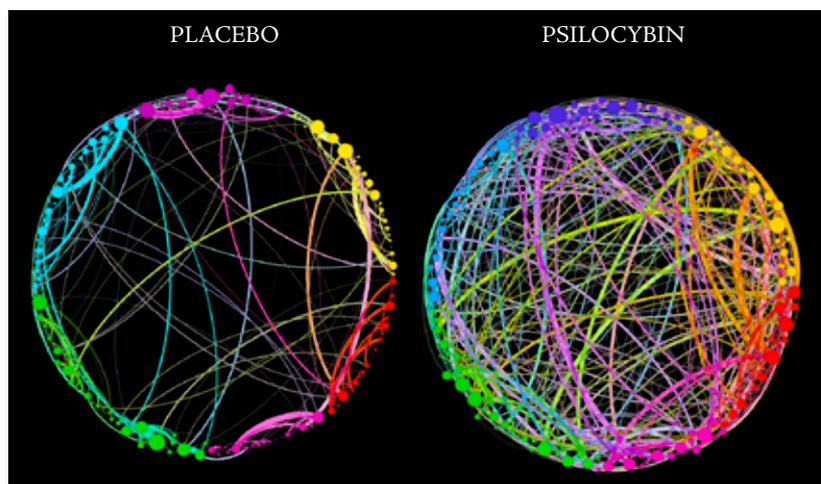
disorder. The programme is currently undertaking brain imaging studies with DMT and psilocybin and will soon start a study investigating 5MeO-DMT.



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.

This analysis of data from the first Beckley/Imperial psilocybin study explores complex networks through the new lens of 'homological scaffolds'. The now-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.

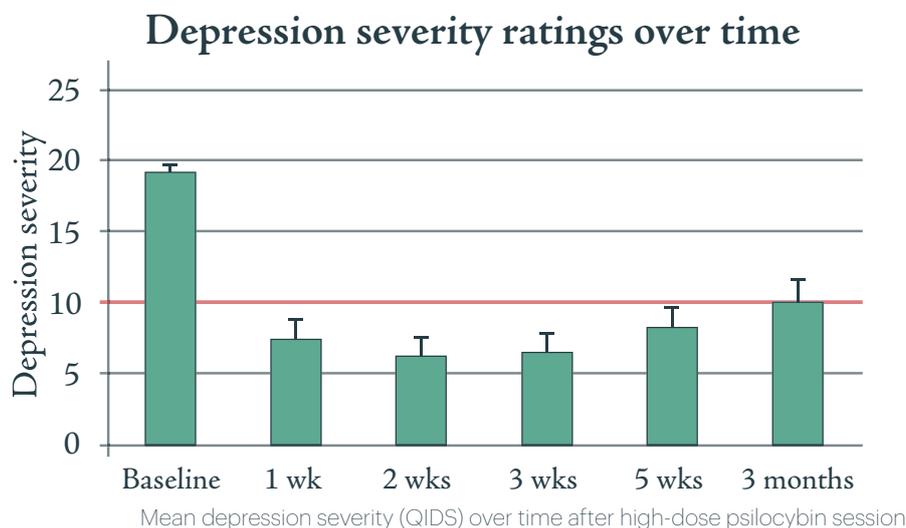


Homological scaffolds of brain functional networks.

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



Each bar indicates the average depression severity scores across the 20 participants. The red horizontal line indicates the cut-off for mild (non-clinical) depression (i.e. scores lower than 10).

The First Brain Imaging Study to Investigate the Effects of LSD

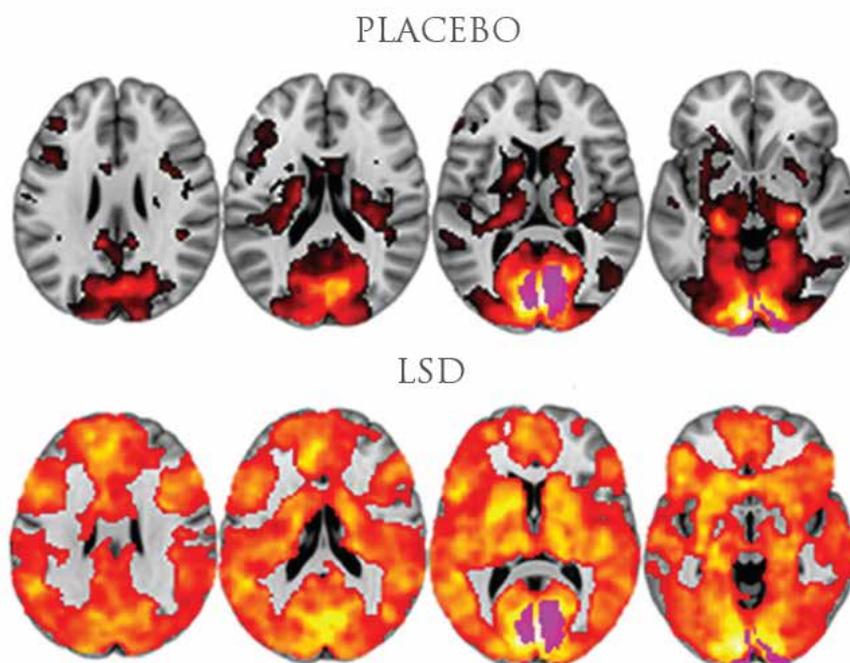
In 2014, the *Beckley/Imperial Research Programme* started the first-ever brain imaging study with LSD, a long-standing ambition of Amanda's. Results were published in PNAS in 2016 and launched at the Royal Society, London, to global acclaim. Marked changes were observed in brain blood-flow, neural activity,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



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.



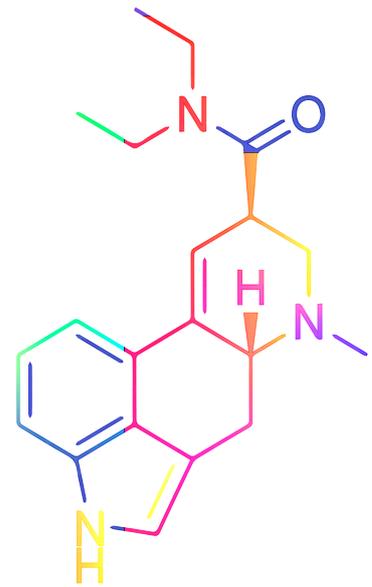
*Beckley/Imperial Research Programme - 2016 PNAS
Neural correlates of the LSD experience revealed by multimodal neuroimaging shows dramatically increased connectivity between the visual centre and the rest of the brain.*

Beckley Foundation LSD Research Programme

LSD undoubtedly has the most significant action on the brain of any drug ever discovered. In the decades that followed its discovery, it was hailed as a powerful scientific tool for investigating consciousness and the treatment of mental illness. It was widely studied in the treatment of addiction and mood disorders, with extremely promising positive outcomes, before being outlawed by the Misuse of Drugs Act in 1973.

Introduced to LSD in the 1960s, Amanda Feilding has dedicated her life to the study of the mechanisms underlying the exceptional changes in consciousness brought about by this extraordinary compound as well as other psychedelics.

Following up on the success of the *Beckley/Imperial LSD Research*, Amanda is currently developing a three-armed *LSD Research Programme* to explore its various therapeutic applications and underlying mechanisms of actions, with a focus on both micro and macro-doses.



Unravelling the Potential Benefits of LSD Microdosing

Most of the psychedelic research around the world has focused on large doses and the healing potential of the 'mystical' or 'peak' experience in which profound shifts in consciousness and perspective can occur. However, a growing body of anecdotal evidence suggest that psychedelics may also exert positive effects on health and wellbeing at much lower doses.

Many microdosing adherents attribute a variety of health and wellbeing benefits to microdosing psychedelics, including enhanced mood, focus, and cognition, but there has yet to be more rigorous, placebo-controlled lab based studies of the practice, a gap in the scientific literature that Amanda is determined to fill. She set up an exciting *LSD Microdosing Research Programme* with the aim to thoroughly evaluate the safety and efficacy of microdosing on a number of cognitive, emotional, and physiological parameters, paving the way for research into the therapeutic applications of microdosing under clinical trial conditions.



*Amanda has given a number of talks and interviews on microdosing. Here, she is talking at the conference *Horizons: Perspectives on Psychedelics* held in New York in 2017.*

SELF-BLINDED LSD MICRODOSING SURVEY

Collaboration with Dr Balázs Szigeti and Dr David Erritzoe, Imperial College

Launched in September 2018, this study is recruiting volunteers who are currently microdosing, or are planning to start microdosing on their own initiative. The study is designed so that the participants will set up their own placebo control.

To register for the study, or for any more information, please visit:

<http://selfblinding-microdose.org/>

The Beckley/Maastricht Microdosing Research Programme

Co-directed by Amanda Feilding and Prof Jan Ramaekers

Amanda developed this collaborative research Programme with Prof Jan Ramaekers in 2017, to investigate in great detail this increasingly popular practice, and its potential therapeutic applications.

Our first lab-based placebo-controlled microdosing study is investigating the short-term effects of LSD microdoses on mood and cognition. 24 participants received a range of minute doses of LSD (5, 10, and 20 ug) along with a placebo. We are measuring the acute effects of the drug on cognitive performance and mood, as well as other measures that will provide important information about the safety profile of the drug.



After the initial study, the *Beckley/Maastricht* research team will carry out a study designed by Amanda and inspired by her own experience, which will aim to investigate the physiological and psychological effects of repeated LSD microdosing. Two groups of 25 participants will receive a microdose of LSD or a placebo, twice a week for one month. Changes in brain activity will be measured using EEG, and tasks, questionnaire surveys and subjective reports will also be used to assess the effects of microdosing on mood, cognitive function and creativity.

As a keen player of Go (the ancient Chinese strategy game), Amanda has proposed an innovative approach to assess changes in intuitive pattern recognition, and the 'Aha!' moment, both of which are often reported to occur with microdosing, and which are particularly challenging to investigate using conventional laboratory tests. Go is also well known as a game that takes a few minutes to learn but a lifetime to master, making it an ideal paradigm for us to compare learning and performance improvement over time across microdosing and placebo groups.



The Beckley/Brazil LSD Research Programme

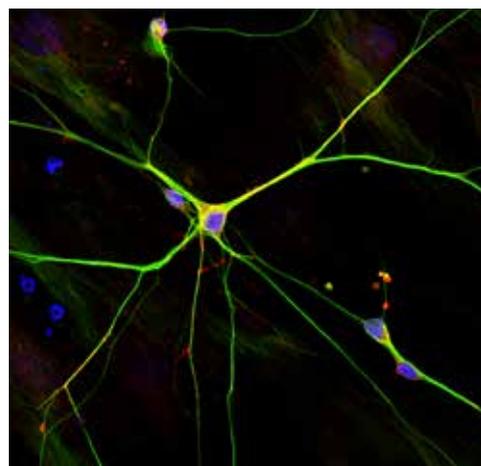
Co-directed by Amanda Feilding, Prof Sidarta Ribeiro from the University Federal of Rio Grande do Norte, and Prof Stevens Rehen from the D'Or Institute



In 2017, Amanda expanded the *Beckley LSD Research Programme* by setting up an exciting new collaborative programme with Prof Sidarta Ribeiro (left) and Prof Stevens Rehen (right) at the prestigious D'Or Institute for Research and Education (IDOR) in Brazil.

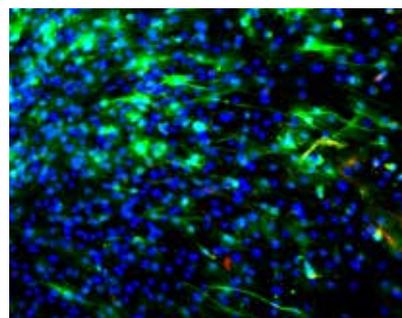
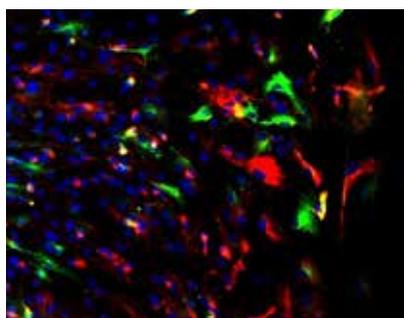
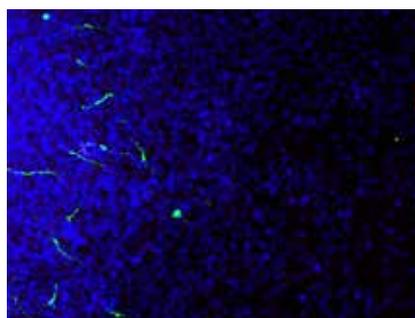
As part of the *Beckley/Brazil Psychedelic Research Programme*, we are undertaking a series of ground-breaking experiments designed to characterize the effects of LSD at the molecular and cellular levels. This collaboration will focus on the action of LSD on key mechanisms in the brain such as neuroplasticity, inflammation and neurogenesis.

Our current study holds great promise of considerably improving our understanding of the mechanism of action of LSD in the brain. Our Programme covers pioneering research in mini brains, animals and humans.



Human neurons grown in vitro from induced pluripotent stem cell in the Rehen Lab at the D'Or Institute.

Previous work by Dr Jordi Riba in collaboration with Amanda at the *Beckley/Sant Pau Research Programme* revealed for the first time that components of Ayahuasca have the potential to promote the birth of new neurons. Our collaborators at the *D'Or Institute* are now investigating whether other psychedelic compounds such as LSD also possess this astonishing property.



The Beckley Foundation Psilocybin Research Programme

PSILOCYBIN FOR CREATIVITY

Collaboration with Prof Jan Ramaekers and Dr Kim Kuypers as part of the Beckley/Maastricht Psychedelic Programme

This project is examining whether psilocybin can facilitate an individual's ability to devalue previously-learned associations by enhancing creative thinking. The mechanisms underlying this phenomenon are being studied using behavioural measures and neuroimaging (MRI spectroscopy and fMRI). Results from this work will deepen our limited understanding of how psychedelics can expand creative capacity and, in doing so, will reveal potential therapeutic targets for altering maladaptive learning mechanisms characteristic of mental illness.



THE LONG-TERM EFFECTS OF PSILOCYBIN

Collaboration with Taylor Lyons as part of the Beckley/Imperial Psychedelic Research Programme

A growing body of evidence suggests that a single exposure to psilocybin can have safe, long-lasting psychological effects on healthy individuals and patient populations, improving psychological wellbeing for example. Science is currently gaining an initial understanding of the acute brain action of psilocybin and related psychedelic compounds, but their potential longer-term effects are not as well studied nor understood. This study is investigating the acute and longer-term effects of psilocybin on brain function, anatomy and psychology using a range of cutting-edge neuroimaging techniques and qualitative assessments.

The Beckley Foundation Ayahuasca Research Programme

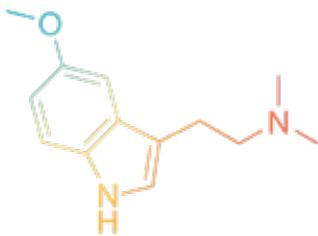
AYAHUASCA AND DMT

For centuries, if not millennia, indigenous Amazonian shamans have used ayahuasca to heal the physical, emotional, and spiritual ills of their communities. This visionary brew contains the psychoactive compound DMT, as well as other chemicals called monoamine oxidase inhibitors (MAOIs) which prevent the human body from breaking down DMT before it reaches the brain.



THE EFFECTS OF DMT ON THE HUMAN BRAIN USING FMRI AND EEG

Led by Chris Timmerman as part of the Beckley/Imperial Research Programme



This study is using EEG, fMRI and questionnaires to examine how alterations in brain activity relate to changes in subjective experience under DMT. The results will give insight into the therapeutic properties of this powerful psychedelic compound and reveal the different mechanisms underlying the effects of LSD and DMT.

SURVEYING THE EFFECTS OF AYAHUASCA ON QUALITY OF LIFE, WELLBEING, AND HEALTH

Collaboration with ICEERS and the Temple of the Way of Light, Peru

For years people have spoken about the profound healing potential of ayahuasca, but few studies have attempted to explore this systematically. This project evaluates the long-term effects of ayahuasca, when ingested in a ritual setting, on the personal development and mental and emotional wellbeing of Western users. Collecting data from hundreds of participants over two years, we aim to generate much-needed scientific evidence about ayahuasca's benefits and risks, while also examining its potential to treat depression, anxiety, grief and post-traumatic stress disorder, among other conditions.



Courtesy of The Temple of the Way of Light

The Beckley Foundation Cannabis Research Programme

EFFECTS OF DIFFERENT STRAINS OF CANNABIS ON BRAIN FUNCTION

Collaboration with Dr Matthew Wall and Prof Val Curran, University College London

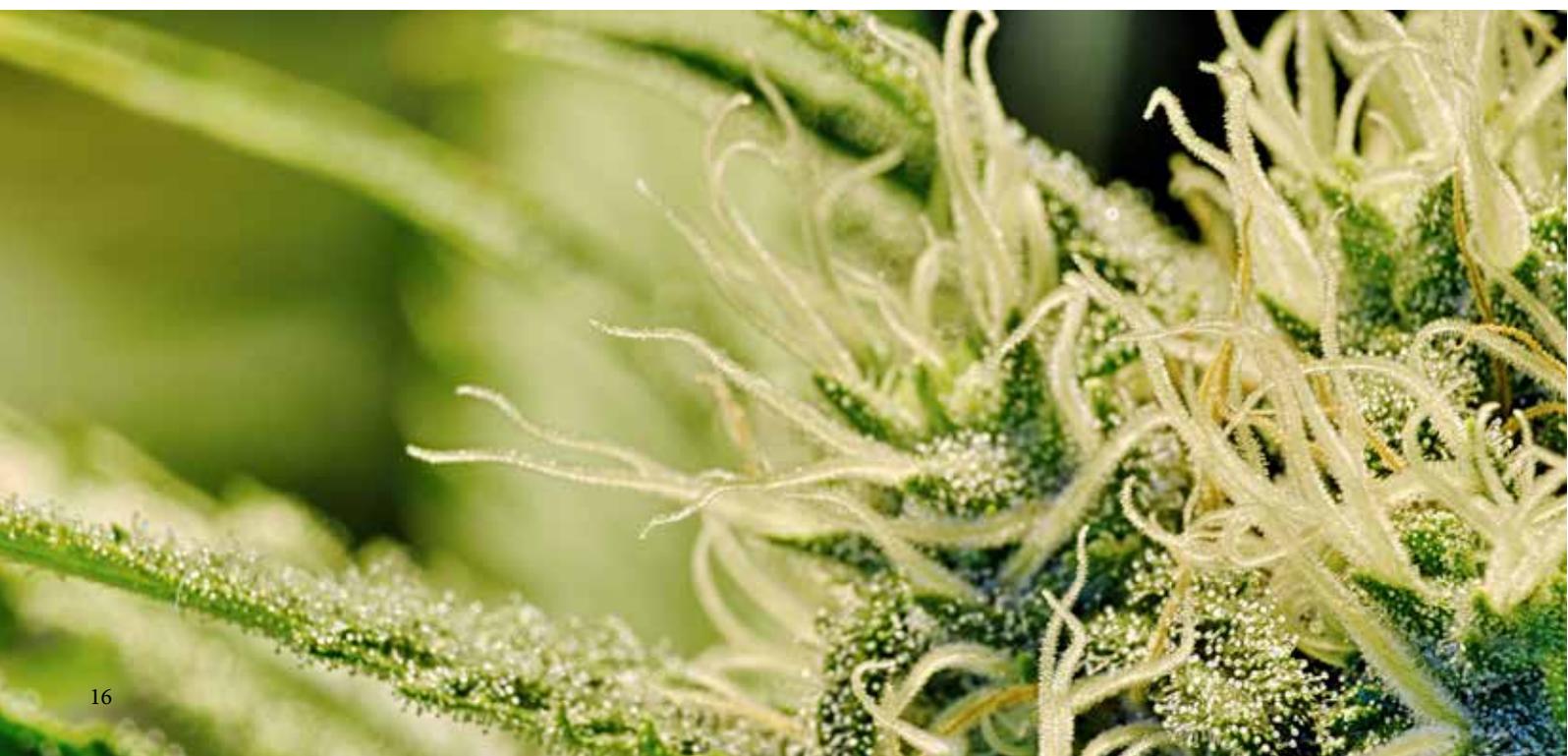
This research, originally initiated by Amanda, and recently published in the *Journal of Psychopharmacology*, is the first study using fMRI (functional magnetic resonance imaging) to gauge how different strains of cannabis impact brain function. The two strains have equal levels of tetrahydrocannabinol (THC), but one of them also has high levels of CBD while the other strain, a high-strength cannabis commonly known as skunk, contained negligible levels of CBD. Both strains are comparable to the different strains of cannabis in common usage.

We found that the low-CBD strain impaired functional connectivity in the brain's default mode (particularly in the posterior cingulate area) and salience networks, while the high-CBD strain caused only a minimal disruption to these regions, suggesting that the CBD counteracts some of THC's disruptive effects on the brain. Disruptions to the brain's salience network have been implicated with both psychosis and addiction, thus this study adds to the evidence that supports CBD's anti-psychotic potential observed in previous research.

EVALUATING THE POTENTIAL OF CBD FOR NICOTINE ADDICTION

Collaboration with Prof Celia Morgan, Exeter University

Cannabidiol (CBD) is one of the main non-psychoactive constituents of cannabis. Anecdotal evidence and preclinical trials suggest it has great potential to treat a number of conditions, including addiction, pain, and anxiety. This brain imaging study will investigate the potential of CBD to overcome addiction, and further our understanding of the brain mechanisms underlying the therapeutic benefits of this major cannabinoid.

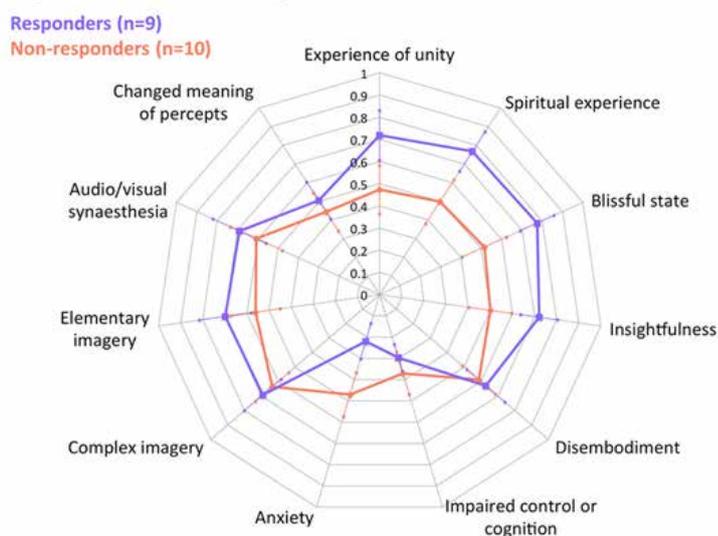


Insights from our Research Programme

PSYCHEDELICS: FROM THE ACUTE EXPERIENCE TO LONG-TERM CHANGES

The experience of self-transcendence and oneness with the universe, also known as 'ego-dissolution', is a key feature of the psychedelic experience and was reported by a majority of our research participants, who often described it as one of the most personally significant and spiritually meaningful experiences of their lives. Through these so-called 'peak' experiences, psychedelics appear to hit a 'reset button' allowing people to shift the trajectory of their lives, with the potential for long-lasting therapeutic benefits, as well as positive changes in mood, wellbeing, and personality. This observation has major implications for psychedelic-assisted psychotherapy, indicating ways in which psychedelic compounds enable patients to break free from the hyperactivity of rigid, maladaptive thought patterns that underlie hard-to-treat conditions such as depression, anxiety, and addiction.

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



THE NEURAL CORRELATE OF THE PSYCHEDELIC EXPERIENCE

Decrease in activity and functional integrity within the default-mode network (DMN), a collection of widespread brain areas that work together to control self-awareness;

Increase in communication between distinct brain networks (see p9);

More complex, less predictable, more fluid or 'plastic' state, which may allow the overcoming of rigid, maladaptive thoughts patterns which underlie psychological illnesses such as depression and addiction';

Increased flexibility and novelty in brain dynamics, resembling the difference between improvisation (LSD) and memorized play (placebo) of a musical piece;

Extended connectivity of the visual cortex to over twenty extra brain regions, including those involved in memory and emotional processing, which may be associated with participants reporting 'seeing' more complex visual imagery with their eyes closed (see p10).

Insights from our Research Programme

Much of the work of the Beckley Foundation is driven by a desire to clarify how psychedelics can ease psychological distress of all kinds. Our ground-breaking studies have played a pivotal role in the field, paving the way for modern research into psychedelic-assisted therapy for depression and addiction. Our research is also providing unique insights into the way psychedelics exert their therapeutic potential.



THE IMPORTANT SYNERGISTIC ROLE OF MUSIC

Music and psychedelics, when used together, evoke powerful emotions, allowing traumatic memories to be revisited. This is a process which, in an appropriate therapeutic setting, can carry great healing potential. Our Beckley/Imperial study looked at the way music and psilocybin interact with each other during psychedelic-assisted psychotherapy for depression. The findings indicate that positive therapeutic outcomes can stem from a synergistic interaction between psychedelics and music.

RECONNECTING WITH ONE'S EMOTIONS

Psilocybin-assisted psychotherapy can provide an amazing opportunity for a new approach to treating mental illness: rather than putting the patient on a daily drip of SSRIs, which like a plaster, hopefully suppresses the symptoms, but leaves the root-causes unaddressed, we found that psilocybin allowed depressed patients to reconnect with their emotions, so that the source of the illness can be exposed, integrated and dealt with.

ENHANCING CONNECTEDNESS

An increased sense of connectedness was reported by the participants in the Beckley/Imperial psilocybin for depression study as one of the major mediating factors of recovery. This sense of connectedness lasted for several weeks or months for many patients.



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. Carhart-Harris RL, Bolstridge M, Rucker J, ...Feilding A, ... Nutt DJ (2016). *The Lancet Psychiatry*, 3(7), 619-627

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

LSD modulates music-induced imagery via changes in parahippocampal connectivity. Kaelen M, Roseman L, ...,Feilding A, Muthukumaraswamy S, Nutt DJ, Carhart-Harris R (2016). *European Neuropsychopharmacology*, 26(7), 1099-1109

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

Psilocybin with psychological support for treatment-resistant depression: six-month follow-up. Carhart-Harris RL, ..., Feilding A, Taylor D, Curran HV, Nutt DJ (2017), (2018) *Psychopharmacology (Berl)*, 235(2):399-408

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

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

The entropic brain: a theory of conscious states informed by neuroimaging research with psychedelic drugs. Carhart-Harris RL, Leech R, Hellyer P, ..., Feilding A, Nutt DJ (2014). *Frontiers in Human Neuroscience*, 8(20), 1-22

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

The hidden therapist: Evidence for a central role of music in psychedelic therapy. Kaelen M, Giribaldi B, ..., Feilding A, Nutt D, Carhart-Harris R (2018). *Psychopharmacology*, 235(2):505-519

COLLABORATION WITH JOHNS HOPKINS UNIVERSITY

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

COLLABORATION WITH UCL LONDON

Investigating the interaction between schizotypy, divergent thinking and cannabis use. Schafer G, Feilding A, Morgan CJ, ..., Curran HV (2012). *Consciousness and Cognition*, 21(1), 292-298

Dissociable effects of cannabis with and without cannabidiol on the human brain's resting-state functional connectivity. Wall M, ..., Nutt D, Curran V, (2019) *J of Psychopharm*

BECKLEY/SANT PAU RESEARCH PROGRAMME

Co-directed by Dr Jordi Riba and Amanda Feilding

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Policy Programme

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, the Beckley Foundation has 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 Public Letter (2011) was signed by 9 Presidents, 13 Nobel Laureates, and a host of other international luminaries. It is considered a key milestone in the history of drug policy reform.

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 the *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.



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 it 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: by decriminalisation and the establishment of a legally regulated market.

Roadmaps to Reforming the UN Drug Conventions (2012) explains in detail how the UN Drug Conventions could be amended to give countries the freedom to tailor their drug policies to their individual needs i.e. full decriminalisation and regulation where appropriate.

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. The report demonstrated that the government could gain £1.25 billion in tax revenue.



Our Presence in the Media



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.



500,000+

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

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IN MEMORIAM

DR ALBERT HOFMANN, PhD

Discoverer of LSD and founding member of the Beckley Foundation's Scientific Advisory Board until he passed away in April 2008 at the age of 102.

DR ALEXANDER SHULGIN, PhD

Pharmacologist, chemist, and psychoactive drug researcher. Author of PiHKAL, TiHKAL, and The Shulgin Index.

DR RONALD SANDISON, MD

British psychiatrist, psychotherapist and pioneer for the clinical use of LSD in psychiatry.

PROF GUSTAV BORN, MA, DPhil, FRCP, FRS, FKC

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