

# PSILOCYBIN FOR TREATMENT-RESISTANT DEPRESSION: A FEASIBILITY STUDY

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## The burden of depression

- According to the WHO, depression is the leading cause of disability worldwide. It accounts for up to 50% of chronic sick leaves. 350 million people suffer from depression worldwide. In Europe, 1 in 15 people (about 7%) suffers from major depression, and if all forms of depression and anxiety are included, 4 out of 15 people are affected.
- There is an unmet need for addressing this issue, as only **50% of patients respond to antidepressants**, and about 20% do not respond to any treatment.

## Why did we do this study?

- This is the **first controlled investigation** of the safety and efficacy of psilocybin as a treatment for major depression.
- Recent studies have assessed the therapeutic potential of psilocybin for a variety of conditions, including: end of life anxiety, obsessive-compulsive disorder, and smoking and alcohol dependence, with promising preliminary results.
- **We wanted to know: Is psilocybin effective and safe for patients with treatment-resistant depression?**

## What did we do?

- We gave 12 patients with moderate to severe, treatment-resistant depression two separate doses of psilocybin (10mg and 25mg, orally) 7 days apart.
- On each day, they completed **brain imaging, clinical assessment** with a qualified psychiatrist and **self-report questionnaires**. Brain imaging data will be reported in a separate publication.
- Psychological support was provided before, during and after each session.
- Depressive symptoms were evaluated using standard assessments. The main outcome measures were Beck Depression Inventory (BDI), State-Trait Anxiety Inventory (STAI) and Quick Inventory of Depressive Symptoms (QUIDS) at 1 week and 3 months post-treatment.

## About the research team

Amanda Feilding is the founder and director of the Beckley Foundation. She and David Nutt are Co-Directors of the *Beckley/Imperial Research Programme*. Robin Carhart-Harris is the Programme's lead investigator.

## What did we find?

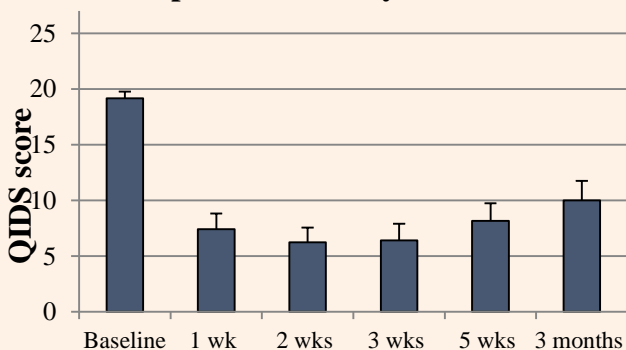
Psilocybin was well-tolerated and induced rapid and lasting reduction in the severity of depressive symptoms

- Only a small number of minor adverse events (such as transient anxiety, confusion, nausea, headache) were observed.
- We saw marked and sustained improvements in anxiety and anhedonia (inability to enjoy things).
- Relative to baseline, depressive symptoms were significantly reduced 1 week and 3 months post-treatment.

### Results Highlight

- Of the 12 participants who had suffered treatment resistant-depression for an average of 18 years, all showed some improvement after psilocybin
- 67% were in remission (depression-free) at 1 week post-treatment
- 42% were still in remission after 3 months

### Depression severity vs time



## Funding

This study was funded by the Medical Research Council.

## Why is it important?

- The results of this small feasibility study will help to promote further research into the efficacy of psilocybin as a treatment for major depression.
- Larger-scale randomised control trials are necessary to further examine the potential of psilocybin as a treatment option for this very common, disruptive and difficult to treat illness.
- More broadly, the present study should help to catalyse the re-emergence of a promising research area in psychiatry – psychedelic-assisted psychotherapy.

## What next?

We have recruited 8 additional participants to expand the study and are in the process of analysing the brain imaging data. This will provide invaluable insight into *how* psilocybin produces its remarkable effects.