

NOVEL ANTIDEPRESSANT COMPOUND WITH DUAL MOOD AND APPETITE REGULATION MECHANISM

A FIRST IN CLASS ANTIDEPRESSANT THAT IMPROVES MOOD, COGNITION AND APPETITE BALANCE FOR TREATMENT RESISTANT DEPRESSION

Problem / Market Need

Current antidepressants are limited by delayed onset of action, treatment resistance, and undesirable side effects such as weight gain, appetite disruption, and cognitive impairment. Approximately one-third of patients with major depressive disorder (MDD) show inadequate response to existing therapies, while many discontinue treatment due to metabolic or appetite-related effects. There is a critical need for new antidepressant mechanisms that address both mood and physiological imbalance associated with depression

Description of Solution / Technology

North-West University (South Africa) and the University of Ljubljana (Slovenia) have developed a new antidepressant compound that works in a different way from existing medicines.

The compound acts on brain pathways that influence both mood and appetite, helping to restore emotional balance while supporting healthy eating behaviour and cognitive function. In laboratory studies, it showed strong antidepressant effects comparable to leading treatments, with additional benefits for concentration and motivation.

Because it targets the biological links between mood, stress, and metabolism, this compound could offer a more complete treatment for depression, especially for patients who do not respond well to current therapies.

Key Benefits / Advantages

- Improves mood and cognitive function
- Balances appetite and energy levels
- Shows potential for patients who do not respond to current drugs
- Reduces common side effects seen with existing antidepressants
- Enhances overall wellbeing and motivation
- Acts through a new mechanism that targets mood and appetite regulation

Applications / Relevant Industries

This innovation is relevant to the pharmaceutical and biotechnology sectors developing treatments for mood and cognitive disorders. Potential applications include:

- Development of new antidepressant medicines for major depressive disorder
- Add-on therapy for treatment-resistant depression
- Use in disorders involving mood and appetite imbalance

Stage of Development

The compound has been tested in laboratory and preclinical studies (TRL 4).

Next steps include formulation development, pharmacokinetic and toxicity studies, and additional validation to prepare for early clinical testing.

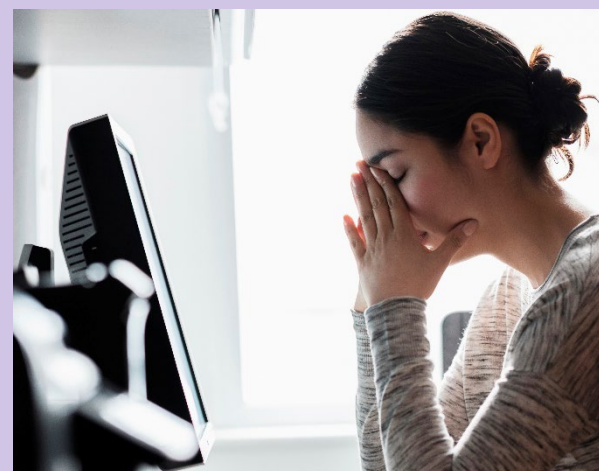
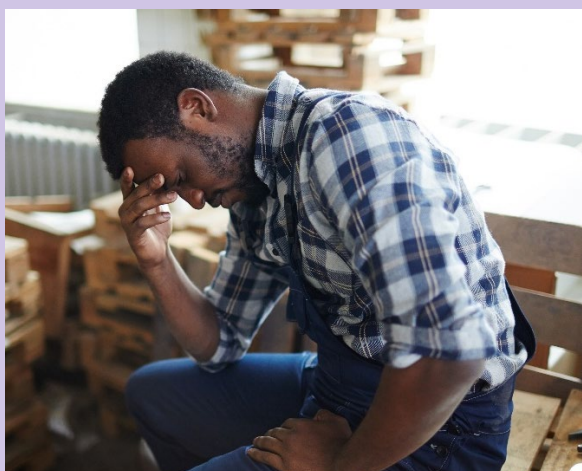
Intellectual Property Status

A PCT application has been filed (PCT/EP2025/070369) by North-West University and the University of Ljubljana. The application has received a positive International Search Report (ISR) confirming that the invention is novel and inventive.

Opportunity

This innovation is available for licensing or collaborative development with a pharmaceutical or biotechnology partner. It offers a promising opportunity to advance a first-in-class antidepressant that acts through a new biological mechanism affecting both mood and appetite regulation.

NWU and the University of Ljubljana are seeking partners to support further preclinical development, formulation work, and translation toward clinical studies.



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