

ANTI-FUNGAL TREATMENT AND COMPANION DIAGNOSTIC FOR CROHN'S DISEASE

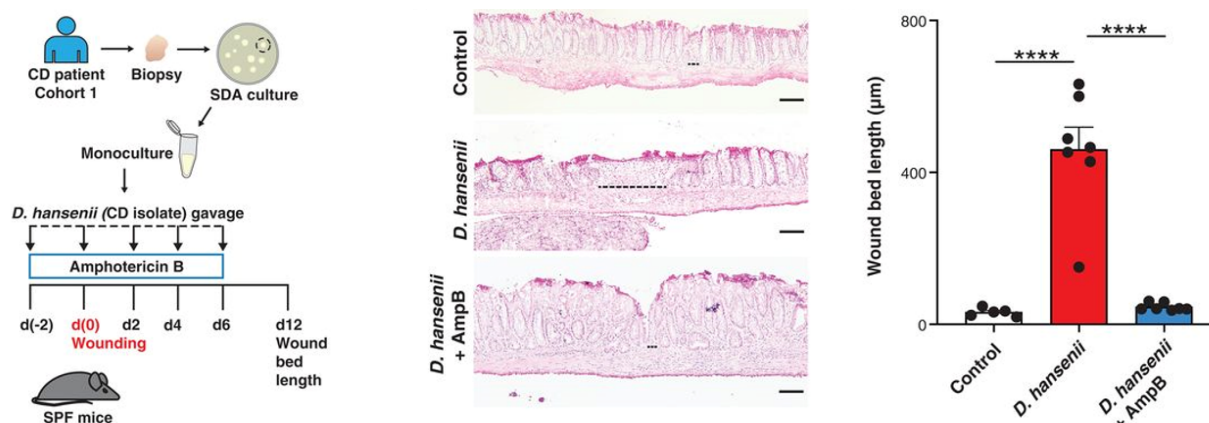
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Technology Description:

Researchers at Washington University in St. Louis have identified a new avenue for treatment of non-healing ulcers in patients with Crohn's disease by targeting *Debaryomyces hansenii*. While the cause of Crohn's disease is unknown, the fungus *D. hansenii* colonizes intestinal wounds and is associated with defective intestinal ulcer healing. While broad-spectrum anti-fungal agents appear to be effective, the researchers have identified a specific anti-fungal therapeutic that targets this pathogen. Crohn's disease patients can be screened for *D. hansenii* and treated with the identified anti-fungal agent to improve intestinal healing.



Proof of concept experiment outline and results. Patient cultures were administered to mice with wounded intestinal beds. Mice who did not receive anti-fungal treatment had defective repair of the damage.

Stage of Research:

The inventors have cultured *Debaryomyces hansenii* from inflamed tissue of Crohn's disease patients and confirmed its function by orally administering it to mice. Those mice saw defective intestinal repair that was improved by treatment with an anti-fungal agent.

Publications:

- Jain U, Ver Heul AM, Xiong S, Gregory MH, Demers EG, ... Stappenbeck TS. (2021). [Debaryomyces is enriched in Crohn's disease intestinal tissue and impairs healing in mice](#). *Science*, 371(6534): 1154-1159.

Applications:

- Companion diagnostic- screening for *D. hansenii* in Crohn's disease patients

- Therapeutic- anti-fungal agents can be used to treat patients with *D. hansenii*

Key Advantages:

- More effective treatment of Crohn's disease by promoting intestinal healing
- Companion diagnostic to identify patients that will benefit from this treatment

Patents: [WO2021119358](#)

Related Web Links: Stappenbeck [Profile](#); Jain [Profile](#)