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Indo-French team identifies gene to treat fungal infection in immuno-compromised patients

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Scientists carried out a large-scale screen to identify regulators of chromosome stability in C. albicans, a clinically relevant fungal model system



In a recent collaborative study between Professor Kaustuv Sanyal's group at Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru, India and Christophe d'Enfert's group at Institut Pasteur, Paris, France, a new gene has been identified that can hold the key to prevent fungal infection Candidiasis that often affects intensive-care unit (ICU) patients, cancer patients and patients receiving immunosuppressive therapy.

The gene called *CSA6* has been identified in *Candida albicans* a fungal species infamous for causing high rates of morbidity and mortality under certain immuno-compromised conditions such as AIDS or during cancer treatment. The fungal species residing in mucosal linings of the gastrointestinal and urogenital tract of healthy individuals turns into a pathogen under immuno-compromised conditions breaching the host defense causing superficial as well as life-threatening systemic infection.

The study published in the journal *Nature Communications* represents the first-ever report of such an extensive screen in the human fungal pathogen *C. albicans*. It identifies and elucidates the functions of a novel regulator of chromosome stability that is exclusively present in a group of medically relevant human fungal pathogens.