



# MycetOS – Open Source Mycetoma

## What?

Mycetoma is a neglected tropical infectious disease for which there are no effective medicines. The symptoms involve large, tumor-like lesions for which the treatment is often amputation. Mycetoma Open Source (MycetOS) was launched in late 2017 and aims to build a global network of scientists to drive lead optimization of new chemical entities (NCEs) targeting *Madurella mycetomatis*, the predominant causative agent of fungal mycetoma (eumycetoma). The urgent need is to find an effective, safe and affordable oral antifungal agent with a short duration of treatment. Using a radically open approach, MycetOS will progress drug candidates in a rapid, transparent and inclusive way.

## Who?

The underlying and transformative principle of MycetOS is that *anyone and everyone can be involved*. From retired drug discovery experts wishing to provide advice, to industrial and academic scientists in big pharma contributing in-kind efforts from their laboratories, to activists and members of the general public contributing to fundraising or other forms of non-scientific support. The MycetOS project will attract expertise from the community because all project needs are clearly identified and shared.

## How?

Based around a robust, fully-transparent online presence and publishing all ideas and results immediately (i.e. real-time) to an open-access database, MycetOS will progress discovery efforts through community-driven in-kind scientific contributions. The existing components of the platform are free-to-use electronic laboratory notebooks (ELNs) for deposition of primary data, advanced discussion forums for the sharing of key tasks and the use of social media to encourage new contributors.

## Why?

The discovery of effective medicines for mycetoma will have a **direct effect on the lives** of patients and their relatives. When eumycetoma can be managed properly, patients will be able to resume their normal daily activities and be able to earn a living. This will positively affect themselves, their community and their economy. An open source approach will maximize the speed of the research through more efficient collaboration, and creates a project momentum that is difficult to achieve by traditional means because of the “market failure” associated with drug development for neglected tropical diseases.

## Where?

Core participants in MycetOS include DNDi, the world-leading mycetoma lab of Associate Professor van de Sande (Erasmus university) and the pioneering open source chemistry lab of Associate Professor Todd (The University of Sydney). All scientific activities will take place openly online.

## What about IP?

All work generated by MycetOS will be published immediately and in real time to the public domain database and thus remain free of the constraints of intellectual property (IP).

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