MYCETOS – OPEN SOURCE MYCETOMA PROJECT

What?

Launched in January 2018, the Mycetoma Open Source project (MycetOS) uses an Open Pharma approach to discover new treatments (new chemical entities, or NCEs) for fungal mycetoma (eumycetoma). The project will drive lead optimization of compounds targeting *Madurella mycetomatis*, the predominant causative agent of eumycetoma. Using this radically open approach, MycetOS will identify new drug candidates in a transparent and inclusive way.

Who?

The underlying and transformative principle of MycetOS is that anyone can be involved in discovering a new drug to cure fungal mycetoma, from retired drug discovery experts wishing to provide advice, to industrial and academic scientists in big pharma or research institutions contributing in-kind efforts from their laboratories, to neglected tropical disease advocates and interested members of the general public contributing to awareness-raising, identifying potential sources of funding, and other forms of non-scientific support. All MycetOS project needs are clearly identified and shared, with the aim of attracting specific expertise.

Core participants in MycetOS include the world-leading mycetoma lab of Associate Professor Wendy van de Sande from Erasmus University, the pioneering open source chemistry lab of Professor Mat Todd at the University College London (formerly at University of Sydney), and DNDi. However, no single participant or organization "owns" MycetOS.

How?

MycetOS will progress discovery efforts through community-driven, in-kind scientific contributions and a robust, fully transparent online presence. All ideas and results will be published immediately in real time to an open access database. Components of the platform will include free-to-use electronic laboratory notebooks (ELNs) for deposition of primary data and github for sharing data and key project files, as well as social media to encourage new contributors.

Why?

Eumycetoma is a neglected tropical infectious disease that attacks the skin, deep muscle and bone, causing devastating deformities and resulting in amputation and disability. There are no effective medicines for eumycetoma, which mostly affects agricultural workers, often young and male, in rural areas. The discovery of effective medicines would enable patients to resume daily activities and earn livelihoods, with a direct impact on the lives of patients and their families, as well as communities and economies.

An Open Pharma approach will maximize the speed of the research through more efficient collaboration and create a project momentum that is difficult to achieve by traditional means because of the commercial market failures associated with drug development for neglected tropical diseases.

Where?

All scientific activities will take place in the labs of MycetOS participants and be shared 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).

For further information, contact Dr Luiza Cruz: lcruz@dndi.org
Learn more: dndi.org/mycetos