



28 March 2022

PEZADEFTIDE'S NOVEL FUNGICIDAL MODE OF ACTION AT AMERICAN ACADEMY OF DERMATOLOGY ANNUAL MEETING

Hexima Chief Operating Officer, Dr. Nicole van der Weerden presents at AAD

MELBOURNE, AUSTRALIA (28 March 2022): Hexima Limited (ASX:HXL) a clinical stage biotechnology company developing pezadeftide (formerly HXP124), a potential new prescription topical treatment for onychomycosis, announces that its Chief Operating Officer Nicole van der Weerden presented pezadeftide's novel fungicidal mode of action at the annual meeting of the American Academy of Dermatology on March 25th 2022 in Boston, MA.

Pezadeftide is the first in a new class of anti-microbials and exhibits potent broad-spectrum antifungal activity with no known activity on human or bacterial cells. Its mechanism of action was discovered and characterised by Hexima. The World Health Organisation has recognized pezadeftide as the first in a new and distinct class of anti-fungal agent. Pezadeftide rapidly kills fungal cells via a mechanism that is unique to pezadeftide and has not been described previously.

Pezadeftide inhibits growth at low micromolar concentrations and is fungicidal at similar concentrations, suggesting that its primary mode-of-action is fungicidal. Pezadeftide rapidly enters fungal cells and causes a rapid mitochondrial response that results in hyperpolarization of the mitochondrial membrane. Fusion of the vacuoles and production of reactive oxygen species are observed prior to disruption of the plasma membrane and cell death.

The presentation describing the mode of action is now available to all stakeholders via Hexima's website at: <https://hexima.com.au/presentation-at-american-academy-of-dermatology-march-2022>.

In her presentation to attendees at AAD, Hexima COO, Dr Nicole van der Weerden made two important observations. "First, pezadeftide's novel fungicidal mechanism of action promises a fundamentally different approach to treating onychomycosis which has proven difficult to treat with traditional topical medications and secondly this new mechanism offers the potential to avoid resistance pathways which have developed to other agents and which represent a significant challenge to global public health."

Hexima's CEO and COO will host a webinar on 5th April 2022 at 9:00 AM AEST to discuss recent progress, upcoming milestones and the mechanism of action of pezadeftide against fungal pathogens. Register for the webinar here: <https://bit.ly/3CTn5fP>

Hexima CEO, Michael Aldridge said "We are pleased to have been invited to present pezadeftide's novel activity at AAD. Pezadeftide's powerful and broad spectrum anti-fungal mode of action, together with its unique ability to rapidly penetrate human nail underscores its potential as a new and powerful treatment for onychomycosis. Hexima is proud to be a leader in the global race to identify new solutions to the challenge of anti-microbial drug resistance."



ASX ANNOUNCEMENT

As previously announced Hexima expects to initiate its first US clinical trial in mid 2022, and the Company's overall timetable of development activities including the release of phase II data in Q2 2022 and the subsequent initiation of phase III remains on track.

This announcement is authorised for release to ASX by Michael Aldridge, Managing Director & CEO
Enquiries:

Dr Nicole van der Weerden
Chief Operating Officer
n.vanderweerden@hexima.com.au

To join our email database and receive company announcements please [click here](#)

ABOUT HEXIMA

Hexima (ASX:HXL) is a clinical stage, anti-infectives focused biotechnology company engaged in the research and development of defensin peptides for applications as human therapeutics. Our lead product candidate, pezadeftide (HXP124) applied in a topical formulation, is a potential new prescription treatment for toenail fungal infections (or onychomycosis). Hexima is currently conducting an Australian phase IIb clinical trial testing pezadeftide for the treatment of onychomycosis. Hexima holds granted, long-life patents protecting pezadeftide in major markets globally. For additional information please visit www.hexima.com.au. You can also find us on [Twitter](#) and [LinkedIn](#) or email us at info@hexima.com.au.

ABOUT ONYCHOMYCOSIS

Onychomycosis is a common fungal nail infection in the nail plate and nail bed. Prevalence of onychomycosis has been estimated at 10% (Japan) and 13.8% (USA).¹ Onychomycosis is an infectious disease and is difficult to treat with a significant healthcare burden. It causes pain in approximately 50% of patients and in the US results in close to four doctor's visits annually for treatment.² Onychomycosis impacts a patient's quality of life with 51% unable to wear the shoes they would prefer and 66% distressed by the appearance of their nail.³ It is important to treat onychomycosis as the fungi in the nail can be a source of secondary infection in other areas of the body or infect family members and spread to the environment.

Onychomycosis is the most common nail disorder accounting for 50% of all nail diseases. It is particularly prevalent in older, diabetic and immune compromised populations.² The global market for treatments for onychomycosis was approximately US\$3.7 billion in 2018.⁴

TREATMENT OF ONYCHOMYCOSIS

Approved prescription therapies for onychomycosis comprise either oral or topical medications. Oral medications are associated with adverse effects such as nausea, taste disturbance, and flatulence. They can also severely impact liver function and so often require liver function monitoring. The clinical and commercial success of topical medications has been constrained by an inability of anti-fungal agents to effectively penetrate the human nail and the lack of sufficient anti-fungal activity when in contact with the target pathogen.⁵

HEXIMA'S APPROACH

Hexima embraces the significant challenge of new product development for onychomycosis. Hexima has taken a very different approach, building on its many years of ground-breaking research into the



ASX ANNOUNCEMENT

evolutionary tools that plants use naturally to fight fungal infections. The result is pezadeftide, a new topical treatment for onychomycosis, with a novel and powerful fungicidal mode of action.

Historically, therapies for onychomycosis have generally focused on new forms of the traditional classes of antifungal agents or improving the topical delivery of systemic antifungal agents. Hexima's technology is a completely novel approach with fundamental differences that address the well-documented limitations of these traditional technologies.

Pezadeftide penetrates the nail more effectively than existing topical treatments and so can more readily target the fungal cells which proliferate in the nail bed. It is also more effective at rapidly killing fungal cells on contact. Together, these properties mean that pezadeftide has the potential to resolve the fungal infection more quickly, leading to faster and more complete clearing of the infected nail area. Consequently, pezadeftide offers the promise to capture significant value in a large and poorly served market.

¹ Tatchibana et al., Journal of Fungi, 2017

² Joseph et al, Supplement to Podiatry Today, 2013

³ Milobratovic et al., Mycoses, 2013

⁴ Persistence Market Research 2018

⁵ Wang et al., Onychomycosis: Diagnosis and Effective Management, 2018