

## NEWS RELEASE

### **New Study Demonstrates that SL-NAD+ delivers NAD+ into Cells**

- ✓ Sublingual NAD+ is the new gold standard for daily NAD+ supplementation, without the need for precursors

**Singapore, 2 September 2024** — iX Biopharma Ltd. (the “**Company**”), a specialty pharmaceutical company specializing in drug delivery systems and a leader in innovative healthspan nutraceuticals, has announced groundbreaking results from a pharmacokinetic study evaluating the sublingual absorption of a novel NAD+ wafer, SL-NAD+. This study is the first to provide compelling evidence that NAD+ can directly enter cells, offering a promising new approach to NAD+ supplementation.

The study consisted of 3 parts: 2 single-dose PK studies and a multiple-dose PK study, conducted in 18 Sprague-Dawley rats, examining the plasma and red blood cell NAD+ levels following sublingual administration of NAD+. Assessment of NAD+ levels were done via the LC-MS/MS method, one of the most advanced and reliable methods to test for NAD+.

The results revealed several important findings:

- 1) **First evidence of direct cellular entry:** The study strongly suggests that NAD+ can be transported in and out of cells directly (NAD+ flux), most probably via connexin 43 hemichannels and other solute carrier channels. This is the first in-vivo study to provide evidence supporting this capability.
- 2) **Rapid sublingual absorption:** Mean peak plasma concentration, a 2-fold increase in plasma NAD+ levels, was achieved within 10 minutes of dosing. This underscores the effectiveness of sublingual delivery through the mucosa.
- 3) **Significant bioavailability:** The findings suggest a sublingual bioavailability of SL-NAD+ at 22% compared to intravenous (IV) administration. This provides a promising alternative to IV NAD+ therapy, with the potential for more convenient and sustained NAD+ delivery.

**Dr. Janakan Krishnarajah**, Chief Operating Officer and Chief Medical Officer of iX Biopharma, said: "This study's findings provide strong evidence that our innovative sublingual freeze-dried technology delivers NAD+ rapidly into plasma and then directly into cells, challenging the previously held belief that its large size prevents cellular penetration. Along with the positive data from our recent human clinical study, this breakthrough positions direct NAD+ supplementation as the new gold standard for boosting NAD+ levels, removing the need for precursors."

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## About NAD<sup>+</sup> and SL-NAD<sup>+</sup>

NAD (nicotinamide adenine dinucleotide) is a critical molecule in our body responsible for vital cellular functions in the body. It is crucial for energy production, cellular metabolism, DNA repair, regulating sleep cycles and promoting healthy aging. NAD<sup>+</sup> levels decrease as we age, with levels typically dropping to half by the time we reach 50. The decline in NAD<sup>+</sup> levels with age is linked to various age-related health concerns and metabolic disorders. In recent years, NAD<sup>+</sup> has become an important focus in scientific research on aging, with maintenance of adequate NAD<sup>+</sup> levels being linked to healthy aging and longevity. Clinical trials have also been conducted to investigate the potential of NAD<sup>+</sup> in treating various age-related diseases, such as Type 2 Diabetes, Non-Alcoholic Fatty Liver Disease, neurodegenerative diseases like Parkinson's disease, cardiovascular and skeletal muscle diseases.

Despite its potential, NAD<sup>+</sup> has been challenging to utilise effectively, other than through IV. Alternative ways to boost NAD<sup>+</sup> levels with NAD precursors, like NMN and NR, may be inefficient due to bioavailability and other issues, such as inefficient conversion to NAD<sup>+</sup> due to age-related declines in enzyme activity.

SL-NAD<sup>+</sup> is a novel sublingual wafer that delivers NAD<sup>+</sup> directly into the bloodstream, bypassing the digestive system to ensure higher bioavailability and significantly boosting intracellular NAD<sup>+</sup> levels. The Company's proprietary freeze-drying process and patented wafer formulation stabilises NAD<sup>+</sup> and delivers them as nanoparticles, ensuring rapid disintegration, release, and absorption through the sublingual mucosa. SL-NAD<sup>+</sup> is available for purchase on <https://entity-health.com/product/sl-nad/> and through selected specialist clinics in Singapore.

## About iX Biopharma Ltd

iX Biopharma is a specialty pharmaceutical and nutraceutical company listed on the Catalist board of the Singapore Exchange Securities Trading Limited (SGX-ST), operating a fully integrated business model from drug development to manufacturing and supply, with facilities in Australia. The Group is focused on the development and commercialisation of pharmaceutical drugs and innovative nutraceuticals using novel, patent-protected formulations for sublingual delivery.

iX Biopharma has developed a number of drug delivery platform technologies, including WaferiX, WaferlogiX and NADiX, which deliver small molecule and biologics sublingually via the mucosa for better absorption, faster onset of action and predictable effect. The drug delivery platforms are particularly useful for drug repurposing, where existing approved drugs are developed into new drugs targeting different indications or a different route of administration, at a lower development cost and risk. iX Biopharma's portfolio includes among others, ketamine, dexmedetomidine, medicinal cannabis and nutraceuticals designed to improve healthspan and longevity.



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Contact for media:

Eva Tan  
Chief Commercial Officer  
T: +65 6235 3212  
E: [eva.tan@ixbiopharma.com](mailto:eva.tan@ixbiopharma.com)