

**Putting Growth Strategies into Action**

**iX Biopharma Ltd**

**Shareholder Update, 17 October 2024**



# AGENDA

- 1) Our Growth Drivers
  - ✓ GLP-1 Wafer
  - ✓ Wafermine
  - ✓ Healthspan Product – SL-NAD+
- 2) Fast Track to Monetisation



# Our Growth Drivers

1) **iXB 401, GLP-1 sublingual wafer** to treat diabetes/obesity



2) Out-license **Wafermine** for Complex Regional Pain Syndrome (CRPS) and/or depression



3) Ramp up commercialisation of **Healthspan products**





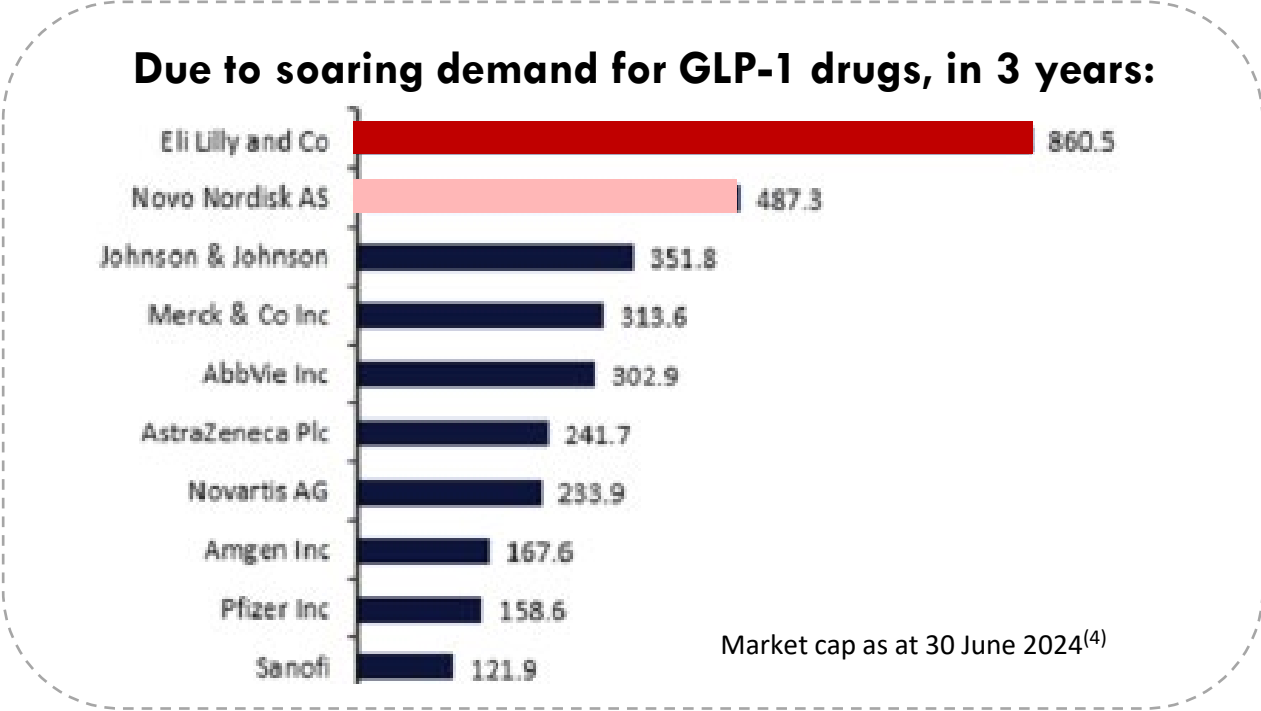
# Focusing on the Booming GLP-1 Drug Market

**GLP-1 peptides are hormones and neuromodulators.** Approved GLP-1 drugs like **Ozempic & Wegovy** (semaglutide), **Mounjaro** (tirzepatide) & **Trulicity** (dulaglutide) have numerous benefits: **Glucose control in type 2 diabetes, significant weight loss in obesity, and cardiovascular risk reduction**

**US\$125 Billion**  
Projected GLP-1 product sales by 2033 treating diabetes and obesity<sup>(1)</sup>

**9% of US population**  
or 30 million people projected to use GLP-1 drugs by 2030<sup>(2)</sup>

**200 million**  
Individuals in China dealing with obesity<sup>(3)</sup>



(1) <https://www.globaldata.com/media/pharma/glp-1r-agonists-type-2-diabetes-obesity-market-reach-125-billion-7mm-2033-forecasts-globaldata/>

(2) <https://www.jpmorgan.com/insights/global-research/current-events/obesity-drugs>

(3) <https://www.wsj.com/health/pharma/ozempic-is-taking-off-with-the-worlds-largest-obese-population-hint-it-isnt-the-u-s-a7c2498c>

(4) <https://www.globaldata.com/media/business-fundamentals/top-20-global-biopharmaceutical-companies-report-4-3-growth-in-market-capitalization-in-q2-2024-reveals-globaldata/>

# M&A Race as Leaders Seek to Consolidate



Industry giants Novo Nordisk and Eli Lilly are aggressively expanding their presence through strategic partnerships and investments<sup>(1)</sup>:

- ✓ Novo Nordisk has inked 37 partnerships focused on cardiometabolic diseases and obesity
- ✓ Eli Lilly has allocated \$1.4 billion for business development and equity investments in the first half of 2024; and \$4.4 billion to R&D, with 11 new molecules in development for obesity and 9 trials currently running.



News > Business

## Lilly and Novo Spend Billions to Expand Obesity Pipelines Beyond GLP-1s

September 25, 2024 | 10 min read | Annalee Armstrong



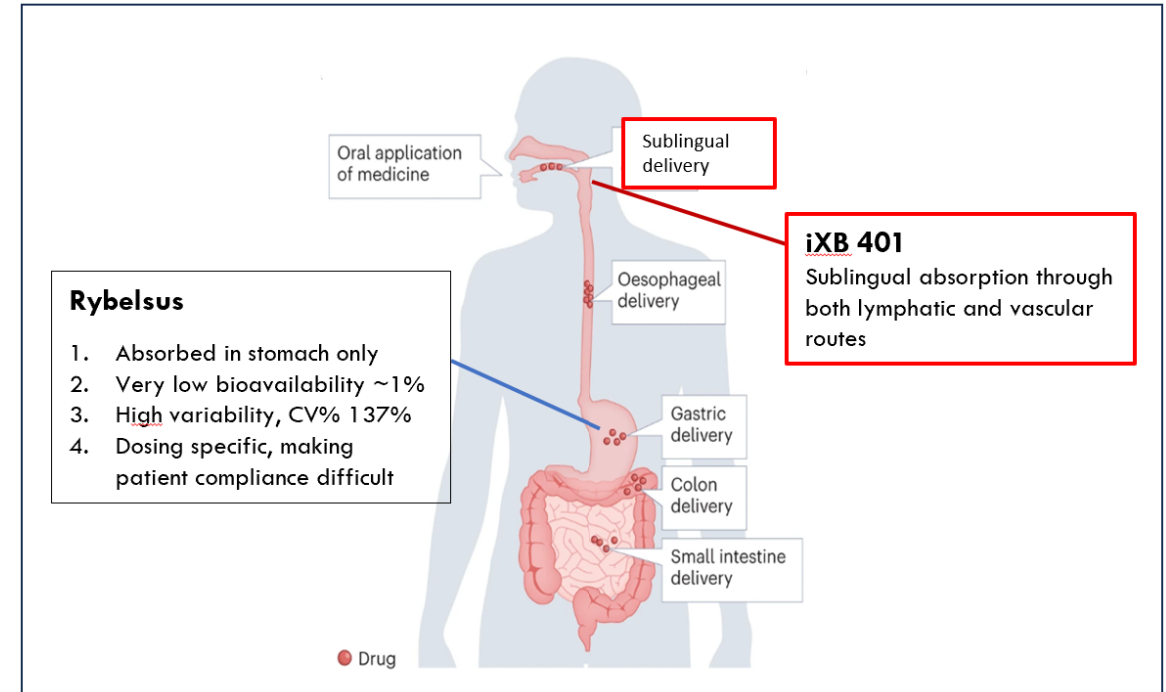
“In obesity, our strategy is to comprehensively address this global public health crisis, pursuing opportunities against every rational mechanism, indication, and dosage form,” – Eli Lilly CEO David Ricks, August 2024

(1) <https://www.biospace.com/business/lilly-and-novo-spend-billions-to-expand-obesity-pipelines-beyond-glp-1s>

# iXB 401, Sublingual Semaglutide (GLP-1 agonist) wafer



1. iXB 401 is a Semaglutide wafer formulated with WaferlogiX wafer technology
2. WaferlogiX addresses poor oral bioavailability of Semaglutide (~1%), by adding sublingual absorption to **improve bioavailability and lower variability of absorption**
3. Potential for improved efficacy and side effect profile compared to approved oral drug
4. Convenient, non-invasive once-daily dosing with higher patient compliance



- ✓ Improved bioavailability
- ✓ Lower variability

# Repurposing Ozempic Lowers Development Risk and Cost



As R&D of obesity treatments accelerate, key trends within the GLP-1 RA class of drugs are:

- ✓ Shift from injections to oral formulations including new small molecule oral drugs
  - Cater to patients with aversion to needles, alleviate injectable shortage, reduce environmental waste
- ✓ Differentiation to reduce side effects
  - To minimise adverse effects like nausea, vomiting, and lean muscle loss



## iXB 401 Repurposing Advantage vs New Drugs

- ✓ By repurposing already approved Semaglutide, benefits include lower development risks, shorter runway to marketing approval, lower costs and faster speed to market
- ✓ iXB 401 perfectly aligns with industry trends and patient demand for oral formulations



# iX 401 – Rodent Study



- ✓ Rodent study commenced in September 2024
- ✓ 2-part study, comparing 3 formulations of iXB 401 v oral Rybelsus
  - a) **Part 1 (pK)** – single-dose PK study in wild type rodents (mice/rats)
  - b) **Part 2 (pD)** – multiple-dose 28-day study of glucose lowering effects (pD) in diabetic rodents
- ✓ Development timeline:

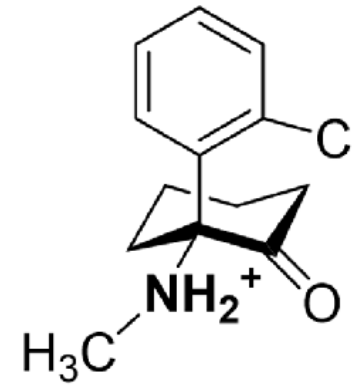
		2024		2025			
		Q3	Q4	Q1	Q2	Q3	Q4
<b>iXB 401</b> , sublingual <u>semaglutide</u>	a) Rodent study						
	b) Human <u>pK/pD</u> study						

\* Estimated timeline, subject to funding and regulatory approvals

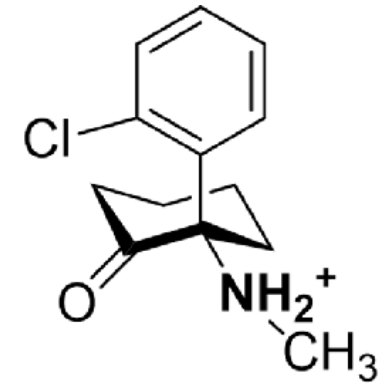


# Wafermine Product Profile

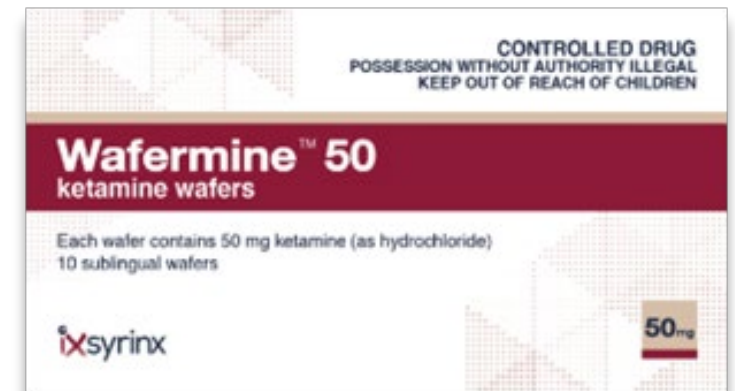
1. Wafermine™ is the world's first sublingual ketamine wafer.
  - a) Racemic ketamine wafer (25mg, 50mg, 75mg).
  - b) Non-opioid analgesic, anti-depressant via NMDA antagonist and AMPA Receptor Agonist, novel MOA for pain and depression.
  - c) Target indications: Complex Regional Pain Syndrome (CRPS) and depressive disorders.
2. Developed under US FDA IND for acute, moderate to severe pain.
  - a) Four Phase 2 studies in Acute Pain completed in USA
  - b) End of Phase 2 meeting with US FDA in 2019, EMA Scientific Advice received in 2020
  - c) **Obtained FDA Orphan Designation for CRPS, May 2021**
3. Leverages company's proprietary WaferiX technology to increase bioavailability and rapid onset of action.
4. Currently supply Wafermine™ to ~ 80 Australian hospitals under special access scheme to provide unapproved pain and psychiatric medicines to patients who need them.



S-ketamine



R-ketamine





# Wafertime, Out-licensing for CRPS

- ✓ CRPS is a rare condition where individuals experience excruciating, prolonged pain & inflammation of limbs or joints
- ✓ CRPS gained widespread attention after Netflix documentary *Take Care of Maya*, about a renowned US hospital's negligent misdiagnosis of a girl's CRPS condition which ended in tragedy. Maya won damages of US\$260 million against the hospital in 2023
- ✓ **No approved drug treatments available**; huge unmet clinical need with potential market size of >US\$1B <sup>(1)</sup>
- ✓ **Wafertime has potential to be the First Approved Treatment for CRPS**
- ✓ Ketamine is already recommended as a treatment option for CRPS by US pain specialists & anaesthesiologists, see Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Chronic Pain Management

## Status Update

- ✓ Appointed global advisory firm, Kybora, to assist in out-licensing process



### The New York Times

#### *Family in 'Take Care of Maya' Documentary Is Awarded \$261 Million*

A jury found that a Florida hospital, which had suspected child abuse, was liable for charges including medical negligence and false imprisonment in its treatment of Maya Kowalski in 2016.

(1)Independent valuation from Lighthouse BioPartners LCC

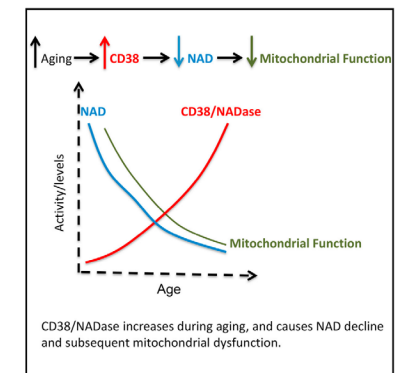
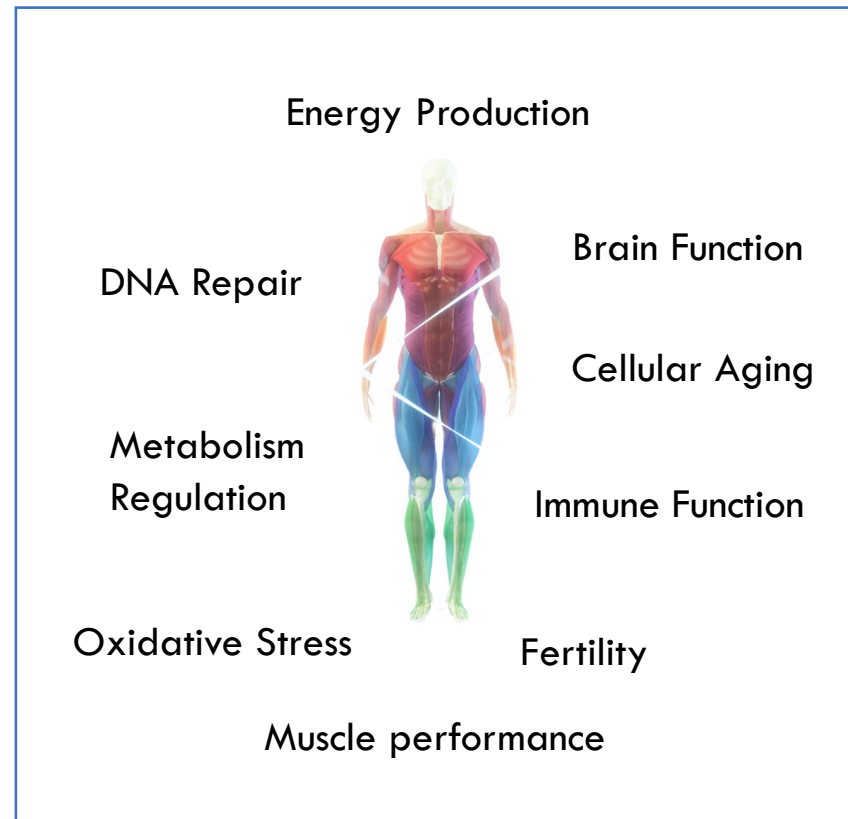
# NAD+ Wafers For Healthspan Enhancement



## What is NAD+?

- ✓ A critical molecule produced by the body required for the functioning of all living cells
- ✓ It powers energy production, DNA repair, activates sirtuins which are key to extending lifespan, regulates circadian rhythm and rejuvenates stem cells
- ✓ NAD+ levels decline by half by age 50, leading to cellular dysfunction and chronic diseases
- ✓ Scientific research shows that replenishing NAD+ may combat age-related decline and reduce the risk of chronic diseases like diabetes and heart disease

## Key Functions:

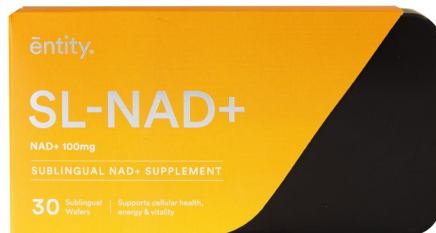


# Sublingual NAD+ v NAD Precursors v IV NAD+



## iX's sublingual NAD+ wafers

- ✓ Leverage WaferiX patented technology to stabilise and deliver pure NAD+ directly as nanoparticles into the body
- ✓ Demonstrated to significantly increase intracellular NAD+ levels
- ✓ Avoid the need for IV infusion or high doses of precursors like NMN and NR, which must absorb and convert to NAD+



	SL-NAD+	NAD Precursor Supplements	IV NAD
Absorption	<ul style="list-style-type: none"> <li>✓ Bypasses degradation in GI tract</li> <li>✓ Direct absorption into bloodstream</li> <li>✓ Consistent, predictable dosing</li> </ul>	<ul style="list-style-type: none"> <li>✗ GI absorption poor</li> <li>✗ Highly variable due to enzymatic deprivation</li> </ul>	<ul style="list-style-type: none"> <li>✓ Direct absorption into bloodstream</li> <li>✓ Consistent, predictable dosing</li> </ul>
Conversion to NAD	<ul style="list-style-type: none"> <li>✓ Contains NAD molecule, NO conversion required</li> <li>✓ NAD immediately available to cells</li> </ul>	<ul style="list-style-type: none"> <li>✗ Conversion to NAD required in the cells</li> <li>✗ Conversion variable due to enzyme activity, which declines with age &amp; health</li> </ul>	<ul style="list-style-type: none"> <li>✓ Contains NAD molecule, no conversion required</li> <li>✓ NAD immediately available to cells</li> </ul>
Administration	<ul style="list-style-type: none"> <li>✓ Non invasive</li> <li>✓ Daily, convenient</li> </ul>	<ul style="list-style-type: none"> <li>✓ Non invasive</li> <li>✓ Daily, convenient</li> </ul>	<ul style="list-style-type: none"> <li>✗ Invasive</li> <li>✗ Infrequent high dosing</li> <li>✗ Inconvenient</li> </ul>

# NAD-002 – UK NAD+ Study



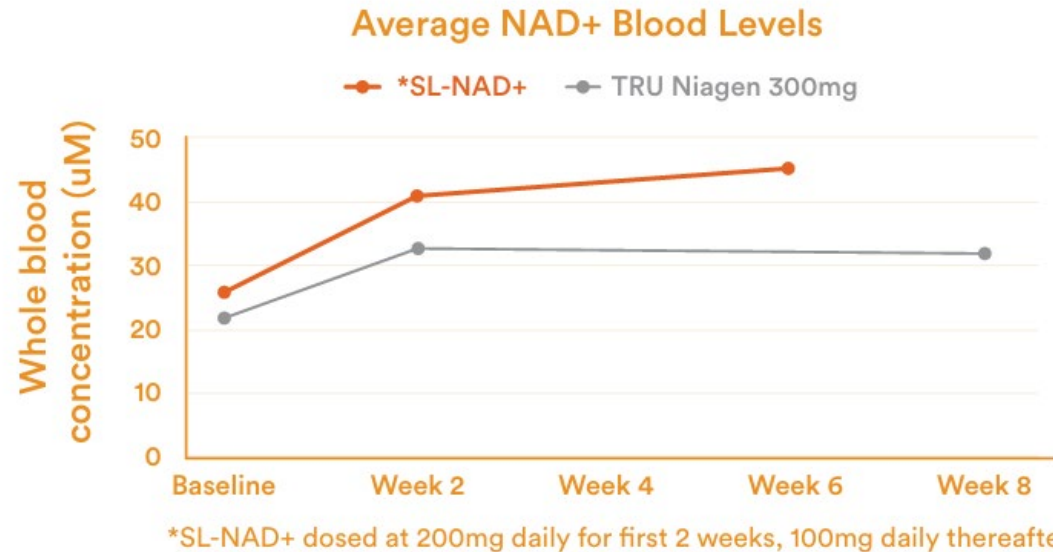
1. Independent study conducted by NAD Laboratory in London, UK
2. Healthy volunteers (n=9) took SL-NAD+ wafers over a 6-week period (200mg daily for first 2 weeks, followed by 100mg daily thereafter)
3. Intracellular NAD+ levels were measured using LC-MS analytical method on venous blood

## Results

1. NAD+ levels **increased by 59% after 2 weeks and 76% after 6 weeks from baseline**
2. Improvements in **energy (6/9), mood (5/9), sleep quality (4/9), mental clarity (4/9)** and **physical strength (3/9)** were reported

## Results

NAD+ levels increased by **59% after 2 weeks** and by **76% after 6 weeks** compared to the initial baseline levels.



Reference: Conze, D., Brenner, C., & Kruger, C. L. (2019). Safety and metabolism of long-term administration of NIAGEN (nicotinamide riboside chloride) in a randomized, double-blind, placebo-controlled clinical trial of healthy overweight adults. Nature Scientific Reports, 9:9772.

# SL-NAD+, Marketing Update



- ✓ Developed new SL-NAD+ 100mg dosage
- ✓ Listed with ARTG in September 2024, ready for commercialization

## 1. Sales channels in Singapore, UK and USA (1Q2025)

B2C online, B2B via medical/wellness clinics and distributors

## 2. Target consumers

### a) Longevity and Biohacking communities

- Early adopters of cutting-edge health science, data-driven, research-focused and highly engaged with the latest advancements in anti-aging, cellular health, and supplements.

### b) Health-Conscious Consumers

- Proactive about maintaining overall health and wellness through supplementation or exercise, open to trying new supplements if they align with their health goals

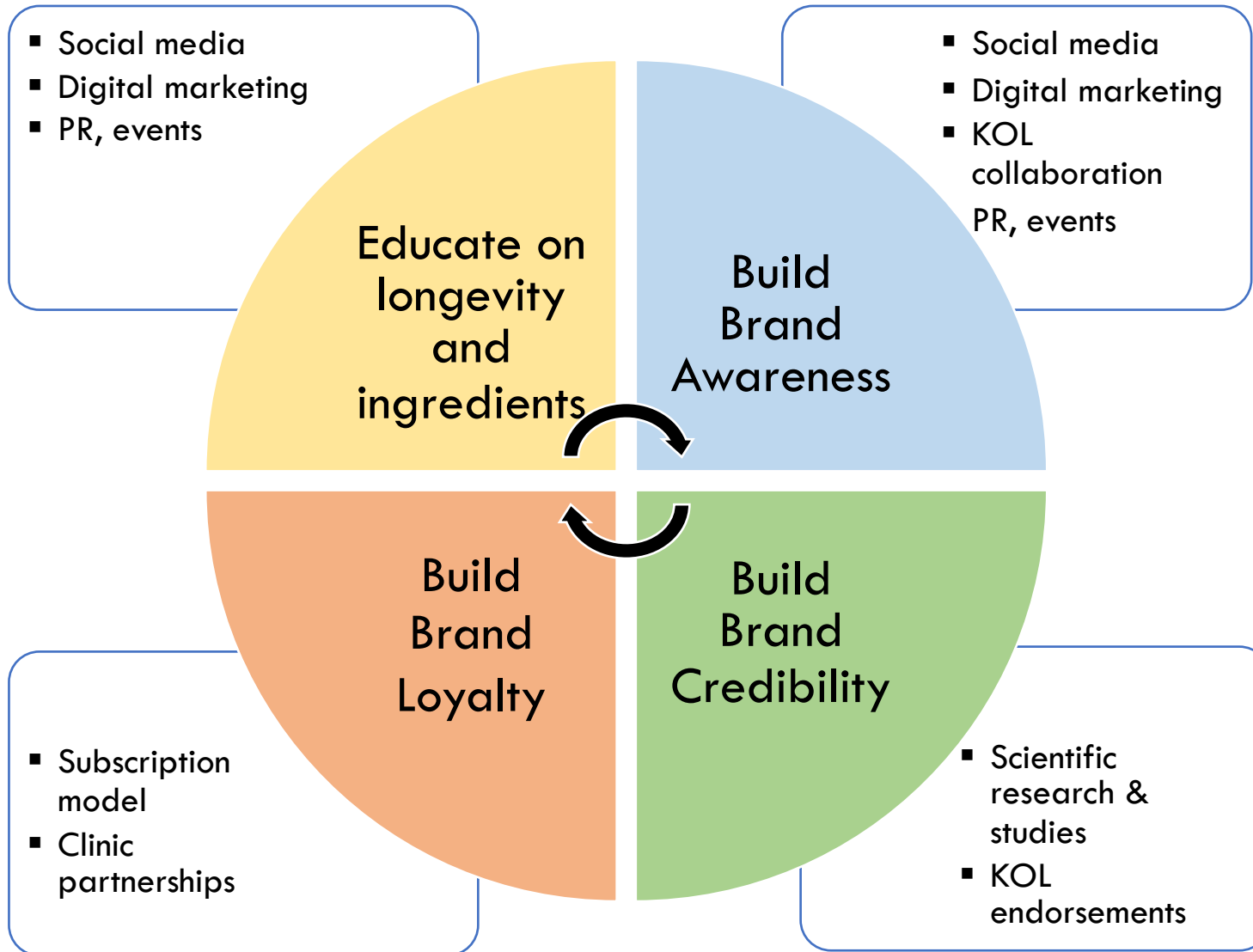
### c) Busy Executives

- High-pressure lifestyles with long work hours, focused on productivity, mental clarity, and maintaining energy despite a hectic schedule.



*The longevity market is poised for growth. Longevity therapies target the root causes of aging, shifting focus and spending from traditional disease treatments to proactive health solutions.*

# SL-NAD+, Marketing Plan



**FASHION & BEAUTY**

## Potent new anti-aging therapy hits Hollywood in hottest craze since Ozempic: 'Next frontier'

By Brooke Kato  
Published Aug. 3, 2024, 3:04 p.m. ET 64 Comments

**cia LIFESTYLE**

ENTERTAINMENT WOMEN WELLNESS LIVING STYLE & BEAUTY DINING TRAVEL BUYERS GUIDE

### All about NAD: This latest beauty ingredient is said to be the key to youthful skin – but is it all true?

New York Post  
<https://nypost.com/2024/08/03/lifestyle/nad-suppl...>  
NAD+ supplement craze sweeps Hollywood  
3 Aug 2024 — Jennifer Aniston, Hailey Bieber and Joe Rogan swear by NAD+ boosters, often available as IV drips, for its anti-aging properties.

Vogue  
<https://www.vogue.com/article/best-vitamins-for-imm...>  
Can Supplements Really Improve Your Immunity?  
19 Aug 2024 — NAD+, or nicotinamide adenine dinucleotide, is crucial for immune function and is depleted during stress. Bensley notes that ...

ELLE  
<https://www.elle.com/Beauty/Health&Fitness...>  
Meet NAD+, the Latest Celebrity Biohacking Trend  
13 Feb 2024 — Peptides like NAD+, small chains of amino acids that can help activate vital cellular functions in the body, are a wellness and beauty buzzword.

# Fast Track to Monetisation



## Out-Licensing Opportunities

### IMMEDIATE

**1) Wafermine,**  
sublingual ketamine wafer

- ✓ Out-license for CRPS and/or Depression

### NEAR-TERM

**2) iXB 401,**  
sublingual GLP-1 wafer for  
obesity and diabetes

- ✓ Complete rodent pK/pD study in Q1 2025,  
followed by human PK study
- ✓ Out-licensing potential after human pK study

### Benefits of out-licensing:

- ✓ Generate revenue (upfront fees, milestone development payments, sales royalties)
- ✓ Partner will fund additional studies up to registration
- ✓ Access local regulatory expertise
- ✓ Leverage partner's distribution channels and marketing resources

## NAD+ Commercial Strategy

**3) NAD+ wafer,**  
for Healthspan Enhancement

- ✓ Ramp up commercialisation of NAD+ products
- ✓ Develop new product lines
- ✓ Partner major distributors for key markets



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Thank You