



iX Biopharma Ltd

Phillip Securities Presentation - Jan 2022

DISCLAIMER

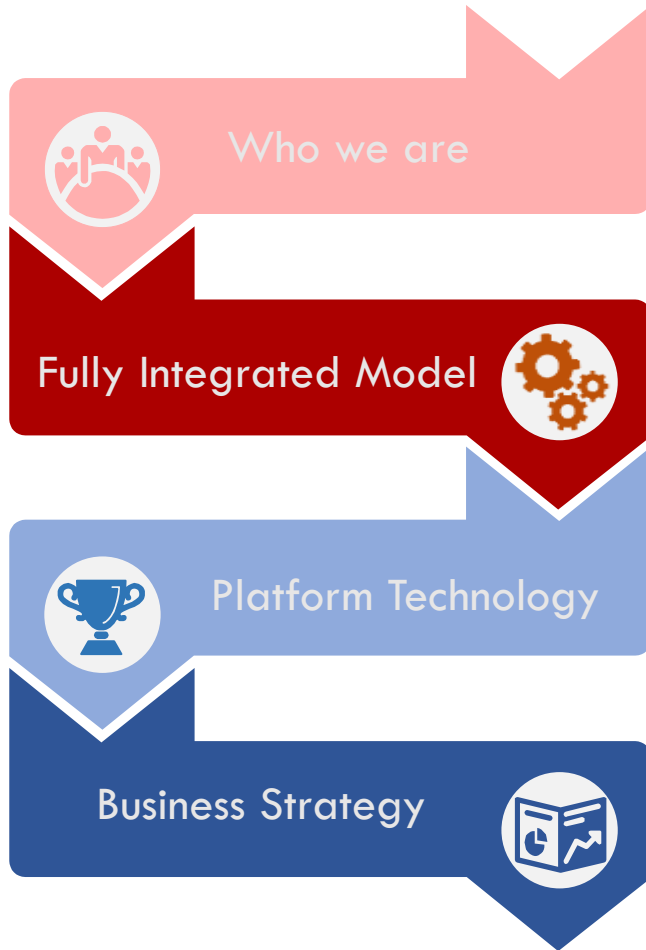


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Company Profile



- Specialty pharmaceutical company with expertise in drug delivery systems
 - Developed a novel proprietary sublingual delivery platform technology, WaferiX
-
- Drug formulation > Clinical studies > Regulatory > Manufacturing > Sales
 - Lower cost of sales, better operating efficiencies & quality control, speed to market & IP protection
-
- WaferiX is a multi-drug delivery platform technology
 - Excellent for drug repurposing for new indications and new dosage forms for better efficacy and side effect profile
-
- Leverage expedited development and regulatory pathways e.g. US FDA 505(b)2 to get repurposed drugs quickly to market at lower development costs & risks
 - Commercialise, either on our own or in partnership with third parties



WAFERIX TECHNOLOGY

Drug Delivery Systems ...



Transdermal



Intranasal



Inhalation



Suppositories



Injection



Oral

- ✓ Convenient/Inexpensive
- ✗ Low bioavailability; "first pass metabolism"
- ✗ Variability



Intravenous

- ✓ Fastest way to get drug into the system
- ✗ Invasive/Expensive
- ✗ Hospital setting



WaferiX Sublingual

- ✓ Rapid absorption; avoids "first-pass metabolism"
- ✓ Increased bioavailability
- ✓ Rapid therapeutic action & predictable effect

WaferiX Sublingual Wafer Technology



01 Patented technology,
Proprietary freeze-drying
manufacturing process



Rapid disintegration

Instant release of active for
immediate sublingual absorption

02

- ✓ Highly porous microstructure
- ✓ Contains super-disintegrants
- ✓ Amorphous, non-ionic matrix

02

03 Increased bioavailability
of actives

Oral v Sublingual Absolute Bioavailability

Administration	Ketamine ¹	Buprenorphine ²	Fentanyl ³
Oral	10 - 15%	10 - 15%	30 - 35%
WaferiX Sublingual	29%	45%	79%

Ideal for drug
repurposing

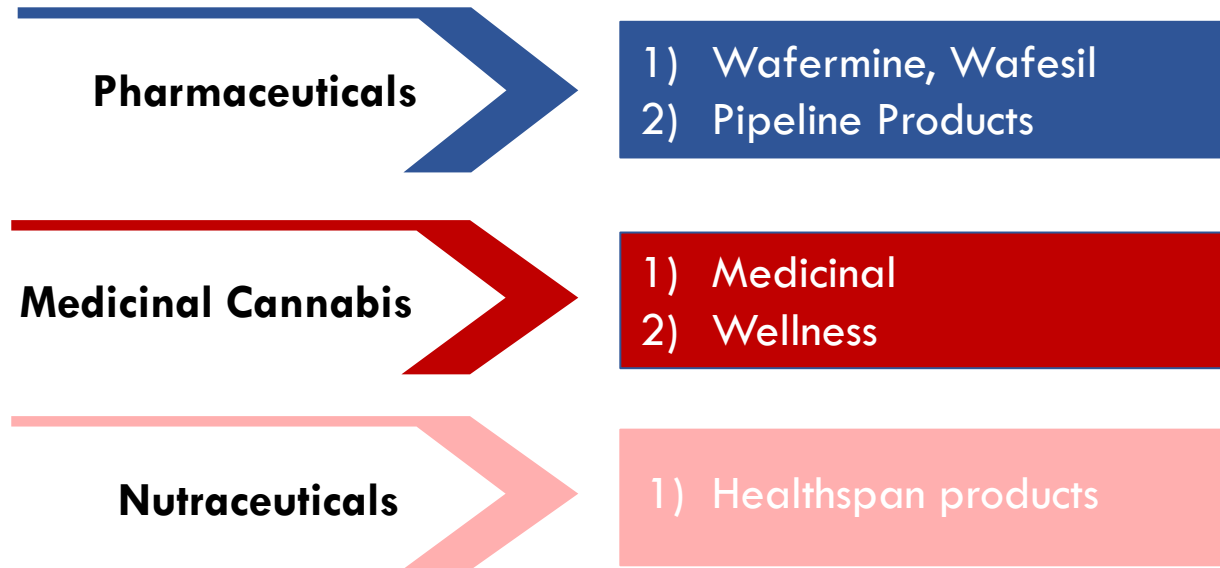
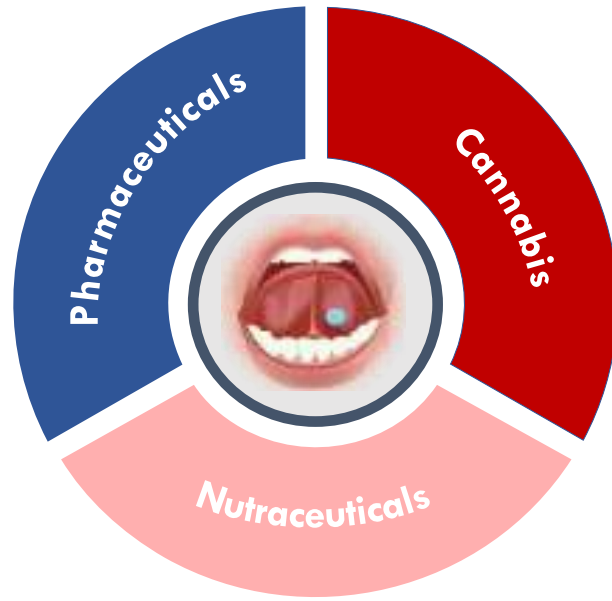
04

- ✓ Develop products at lower risk & cost
- ✓ Speed to market, 3-5 years v 10-15 years

04

1. The absolute bioavailability of racemic ketamine from a novel sublingual formulation, British Journal of Clinical Pharmacology, 2013
 2. The Pharmacokinetics & Local Tolerability of a Novel Sublingual Formulation of Buprenorphine, Oxford Journal on Pain Medicine, 2017
 3. A Phase I Pharmacokinetic & Bioavailability Study of a Sublingual Fentanyl Wafer in Healthy Volunteers, Anesthesia & Analgesia, 2012

WaferiX to power 3 growth engines



Competitive advantages of sublingual wafer;

✓ fast disintegration ✓ better absorption ✓ rapid onset of therapeutic action ✓ easy to use



Revenue Model



1) Outlicensing

- Early monetisation, free up funds for other pipeline development
- Licensing fees
 - ✓ recurring income stream
 - ✓ minimal/limited cost
- Lower cost model
 - 1) lower drug development cost
 - 2) capital light (save on manufacturing)
 - 3) save on sales & marketing expense

2) Distribution

- Partner established companies with large distribution & sales network
- Speed to market & greater market access
- Save on sales & marketing expense



PHARMACEUTICALS

Wafermine



- Wafermine out-licensed in Nov 21
- Licensee will develop the licensed products for both pain & depression indications concurrently
- Deal terms:
 - ✓ US\$9M – upfront payment since received
 - 1) US\$3.5M in cash
 - 2) 2.57M shares in Seelos
 - 3) US\$1.2M in additional cash as reimbursement of the shortfall¹ amount
 - ✓ Licensee will fund all future development & commercialisation of licensed products
 - ✓ Up to US\$239M – development and sales milestones
 - ✓ Double digit percentage royalties on future product sales
 - ✓ Territories - worldwide rights ex China for Wafermine



¹ Defined as the difference in value in the event that the aggregate value of the upfront shares is less than US\$5.5M when calculated in accordance with the stock agreement

Ideal Out-licensing Partner



- 1) Experience/Expertise
 - ✓ ketamine development
 - ✓ clinical studies for pain and depression
 - ✓ navigate regulatory environment for successful registration
 - 2) Distribution capabilities
 - 3) Strong balance sheet
- Seelos ticks all the above boxes...
- ✓ Experienced R&D team with portfolio including ketamine for suicidal depression in P2/3 stage
 - ✓ Management team have developed and registered more than 20 CNS drugs with US FDA
 - ✓ Based in USA, has local knowledge advantage & access to potential distributors
 - ✓ Strong balance sheet, raised US\$157M in last 12 months
 - Backed by impressive list of institutions shareholders
 - BlackRock ~6.2% equity (AUM US\$9.5T)
 - Vanguard ~ 5% (AUM US\$7.2T)
 - State Street Corp ~ 1.5% (AUM US\$3.2T)

Wafesil Sublingual Sildenafil



- Registered with Australia TGA for the treatment of male erectile dysfunction
- Partnered with China Resources Pharmaceutical Group (CRPCG) Sep 2021 for the China market
 - ✓ CRPCG will fund the registration of Wafesil in China and exclusively distribute product in China following registration
- CRPCG distributes directly through an extensive network of more than 50,000 hospitals and medical centres and 97,000 pharmacies
- CRPCG, the main profit centre of China Resources and top 3 pharmaceutical companies in China, generated RMB 151B in revenue in FY2020
- In discussion with a major distributor for Australian market



Pharmaceutical Pipeline



S/N	Active	Indication	Stage					Remarks
			Pre Clinical	P1	P2	P3	Approval	
Pharmaceuticals								
1	Wafesil	Male Erectile Dysfunction						Approved in AU; Out-licensed to China Resources Pharmaceutical Group in Sep 21
2	Wafermine	Acute Pain						Out-licensed to Seelos Therapeutics (NASDAQ: SEEL) in Nov 21
		Complex Regional Pain Syndrome	US FDA Orphan Designation					
		Treatment Resistant Depression						
3	BnoX	Opioid Addiction						
4	Dexmedetomidine	Acute agitation in Dementia						
5	IXB-420	Parkinson's Disease						
6	IXB-320	Chemo Induced Nausea & Vomiting						
7	IXB-321	Vaccine delivery						
8	IXB-521	Viral prophylaxis						

Sublingual Dexmedetomidine



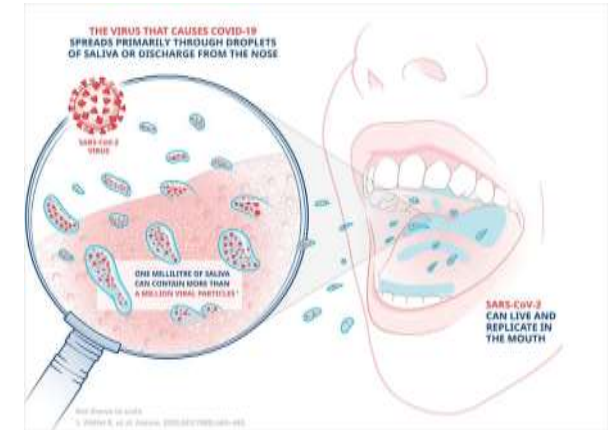
- Dexmedetomidine can be repurposed for multiple indications, including Alzheimer's disease related agitation
 - ✓ 5.8M Alzheimer's disease patients in U.S. in 2020, to double by 2040
 - ✓ Up to 70% experience agitation ~100M agitation episodes per year in the U.S.
- Unmet need: No FDA-approved therapies for the treatment of dementia-related agitation
 - ✓ Current options are suboptimal – physical restraint, over-sedating therapies such as antipsychotics and benzodiazepines with adverse effects particularly severe for elderly
- Dexmedetomidine has a novel mechanism of action with a better side effect profile
 - ✓ Currently approved for procedural sedation in IV form, IV not suitable for agitated patients
 - ✓ Sublingual wafer is non-invasive, non-traumatic, easy to administer and can be taken as out-patient
- Global market size for agitation is ~US\$4.1B in 2020¹
- Development timeline:
 - 1) Formulation and animal PK study completed
 - 2) Phase 1 human study to commence in 1Q 2022
 - 3) US FDA IND to be filed in 2H2022

¹ <https://www.transparencymarketresearch.com/acute-agitation-and-aggression-treatment-market.html>

Sublingual Wafer Vaccine



- 1) Most infectious agents infect the body via the mucosa (nose, mouth & throat)
 - 2) The mucosa is the first-line of defence, therefore a strong protective mucosal immunity is important
- Vaccines are administered by injection into the muscle or under the skin & generally produce poor mucosal immunity



The World is looking for a better way to deliver vaccines via the mucosa

Injection	Sublingual
Transport & storage	
<ul style="list-style-type: none"> ➤ Cold chain shipping ➤ Refrigerated/frozen storage 	<ul style="list-style-type: none"> ➤ Simple logistics ➤ Longer shelf life
Administration	
<ul style="list-style-type: none"> ➤ Requires trained personnel for administration ➤ Cost for needles/syringes & disposal ➤ Risk of needle-stick injuries 	<ul style="list-style-type: none"> ➤ Self-administration ➤ No additional administration costs
Compliance	
<ul style="list-style-type: none"> ➤ Poor compliance 	<ul style="list-style-type: none"> ➤ High compliance

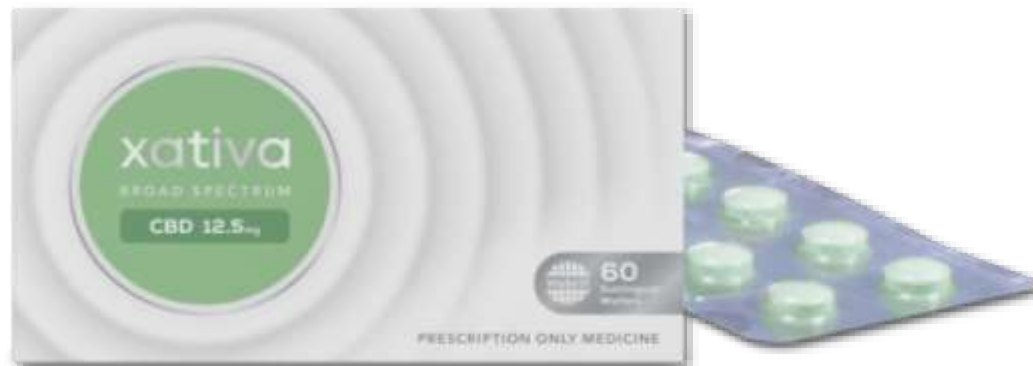


MEDICINAL CANNABIS

Medicinal Cannabis



- A phenomenon driven by consumer demand, global market size ~ \$37B¹ (2020)
 - Cannabinoids are oil-based and poorly absorbed orally
 - Currently products are mainly delivered via smoking, vaporising or oil tinctures, with significant limitations
 - WaferiX sublingual technology is a game-changer for cannabinoid delivery
- Australia
 - Selling under prescription
 - Regulatory change now allows for OTC sales
 - In Australia, there are ~5,500 pharmacies



¹ Prohibition Partners, The Global Cannabis Report Second Edition

² Prohibition Partners, The North American Cannabis Report Second Edition

US Market Opportunity



- US market size: US\$8.5B² ; California alone is larger than Australian market
- Strong interest from distributors; exploring market in 2022
- Pursue out-licensing opportunities



¹ Prohibition Partners, The Global Cannabis Report Second Edition

² Prohibition Partners, The North American Cannabis Report Second Edition



NUTRACEUTICALS

ēntity, Next Generation Nutraceuticals



- Entity Health - next generation condition-specific supplements
 - ✓ Sold in:
 - China via Tmall and JD cross border e-commerce
 - Australia via > 250 pharmacies and health food stores
 - Singapore via online stores, department stores and aesthetic clinics
- Primary market is China
 - ✓ Australian-made supplements are recognised as the gold standard among Chinese consumers
- Range of 12 products focused on healthspan, beauty and lifestyle segments
 - ✓ Flagship beauty product – LumeniX sublingual glutathione wafers for skin brightening and immunity
 - ✓ Comprehensive range of NAD supplements including novel, sublingual NAD+ wafers
 - Market size in China estimated at RMB 5.1B in 2020 and projected to grow to RMB 27B in 2023

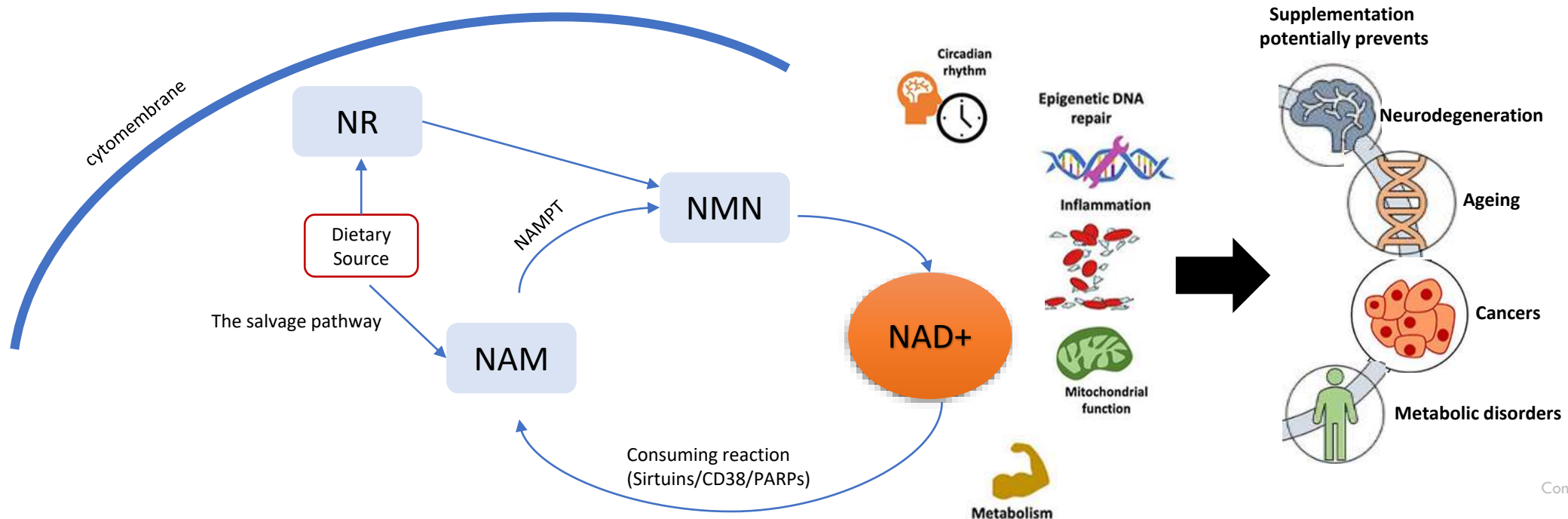


¹ <https://www.nutraingredients-asia.com/Article/2021/10/25/NMN-education-still-needed-in-China-Latvian-brand-partners-with-health-consultants-nutritionists-to-promote-category>,
<https://www.scmp.com/business/china-business/article/3154879/nasdaq-listed-chromadex-backed-li-ka-shing-eyes-chinas>

Increasing Healthspan with SL-NAD+



- NAD+ is found in every cell in your body, essential for hundreds of metabolic processes in the body
- NAD+ levels decline as we age
- Boosting NAD+ combats cellular ageing, protects DNA health, reduces inflammation, increases energy and vitality
➔ Described as the “closest thing to the fountain of youth”
- Current NAD supplements e.g. NR, NMN need to be converted to NAD+ in the body
 - ✓ NAD+ cannot be delivered orally
 - ✓ SL-NAD+ delivers pure and intact NAD+ sublingually direct to bloodstream



Investment Merits



1) **WaferiX sublingual delivery technology proven**

- ✓ patented, high barrier of entry
- ✓ ready for commercial scaling

2) **Experienced R&D, regulatory and commercial team**

- ✓ strong track record in drug development, product registration and out-licensing

3) **Medicinal cannabis – a unique opportunity**

- ✓ a phenomenon driven by consumer demand
- ✓ early mover, open field for drug registration

4) **Undervalued**

- ✓ Wafermine licensing deal terms greater than current market cap (S\$150M)
- ✓ Wafesil licensed to China Resources, in discussions in Australia
- ✓ Exciting pharma pipeline
- ✓ Massive US cannabis market opportunity



新年快樂
HAPPY
Chinese
NEW YEAR
2022
YEAR OF THE TIGER

