LUMOSA THERAPEUTICS CO., LTD.
(TPEX:6535)

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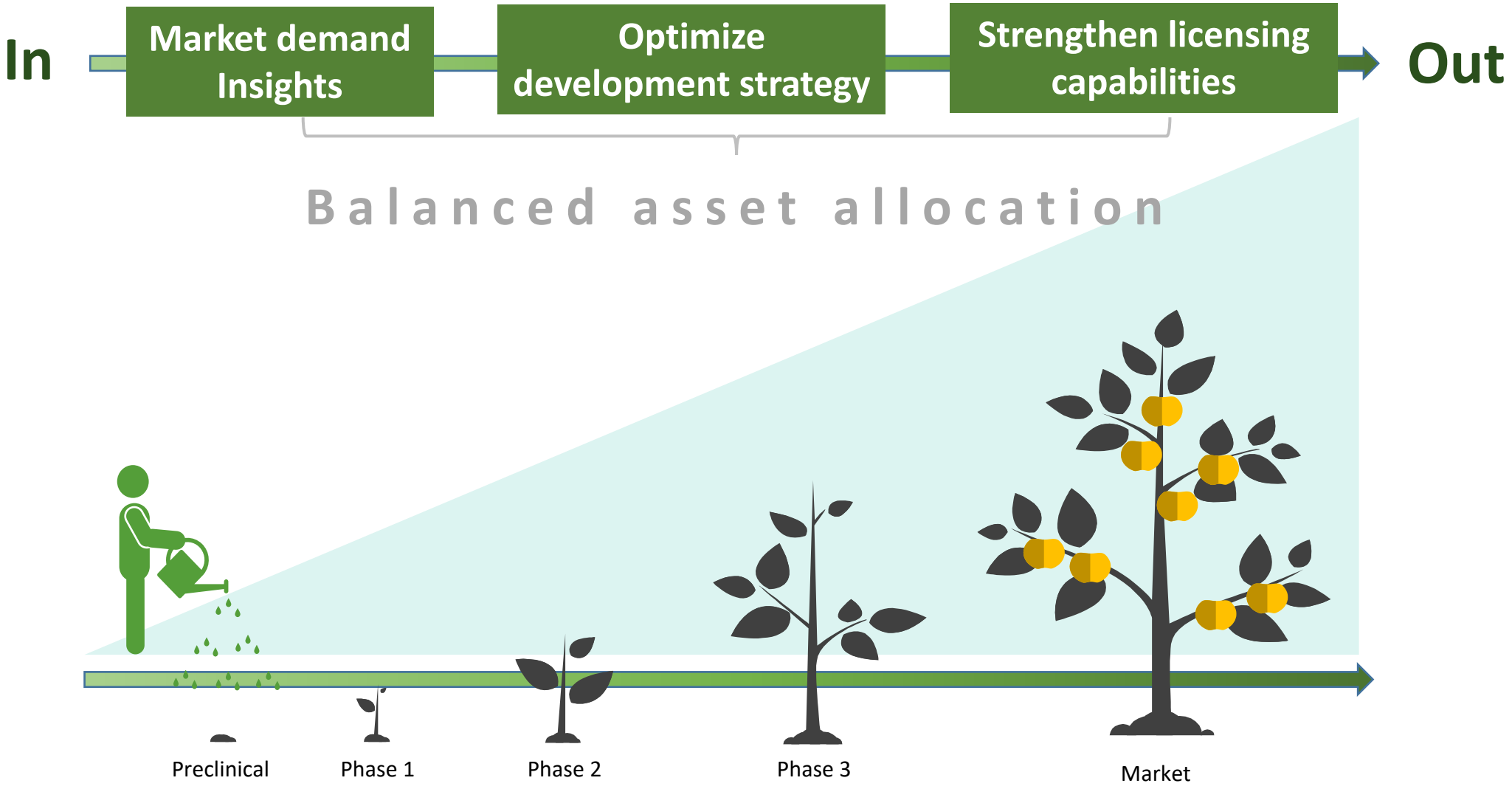
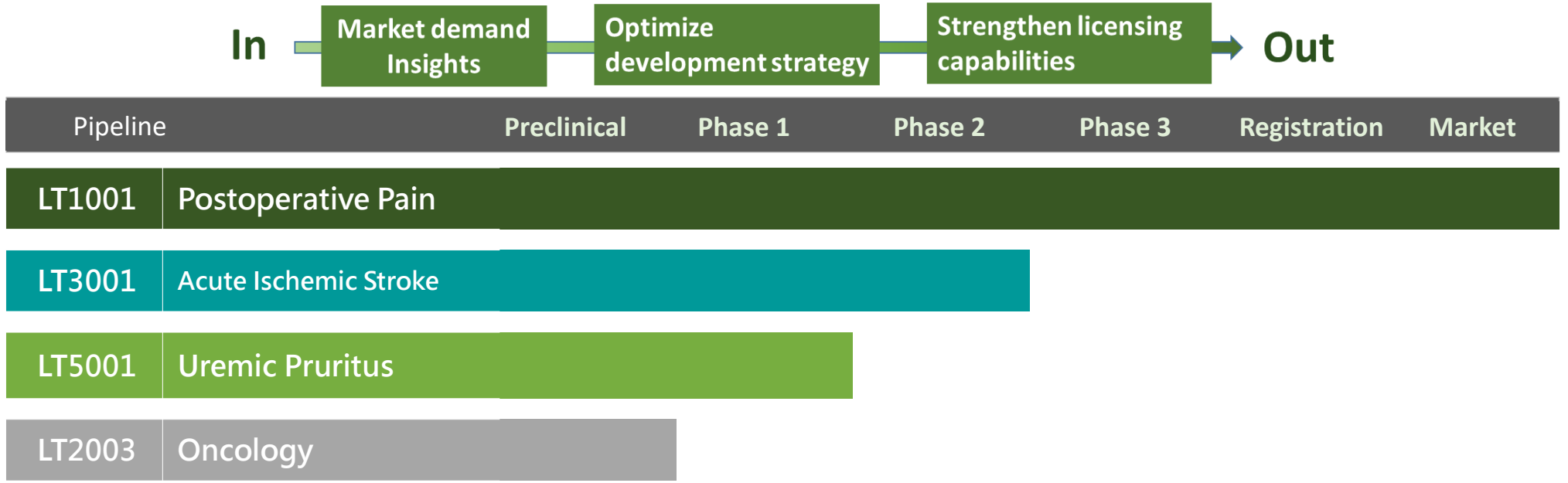
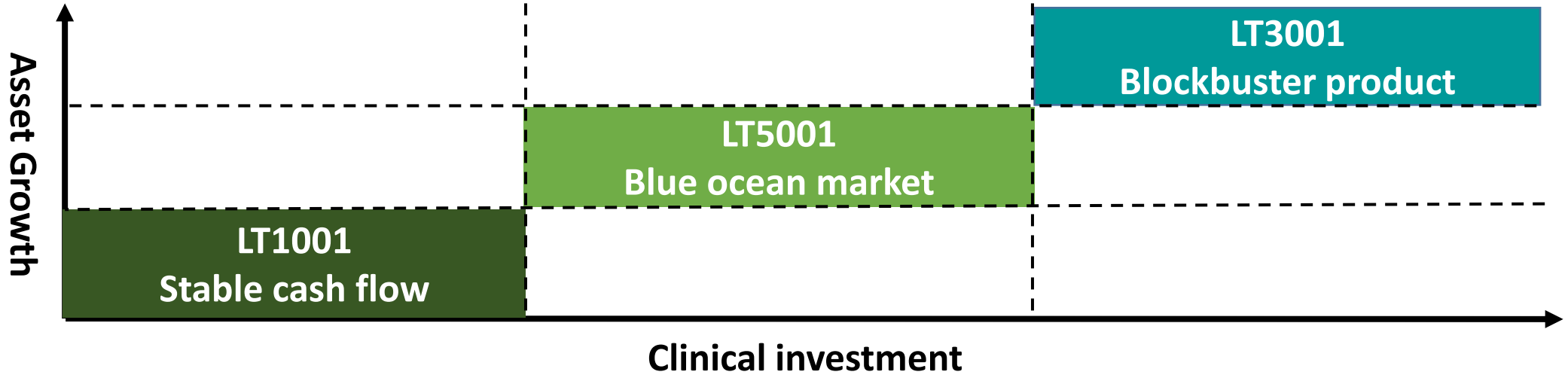
A business-oriented innovative drug R&D company



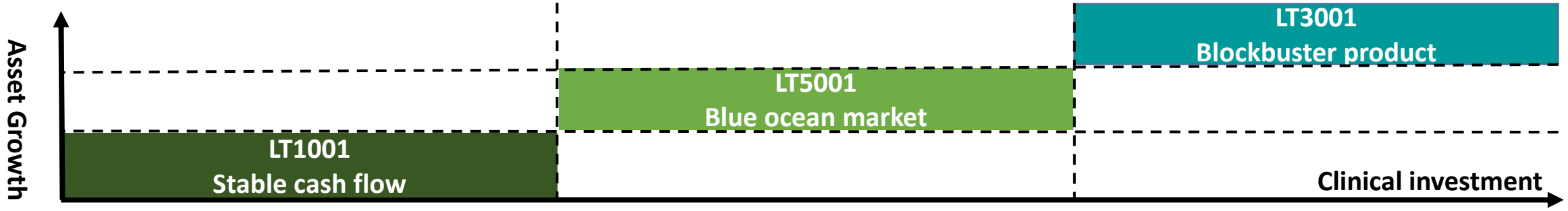
Balanced Asset Allocation





What have we done this year?

	LT1001 Stable cash flow	LT5001 Blue ocean market	LT3001 Blockbuster product
Development Progress	Market approval by Singapore HSA Advance to Southeast Asia NDA submission in Korea Est. time to market 2020 Initiation of Phase 3 trial in China Est. time to market 2024	Completion of Phase 1b trial To be unblinded in Q3	Completion of Phase 2a trial (US & TW; single dose) Good safety, efficacy trend Completion of Phase 1 trial (CN; multi-dose) Good safety, no ethnicity differences Completion of Phase 1 trial (US; multi-dose) Good safety
Licensing Progress	Successful out-licensing to Ukraine and Korea		

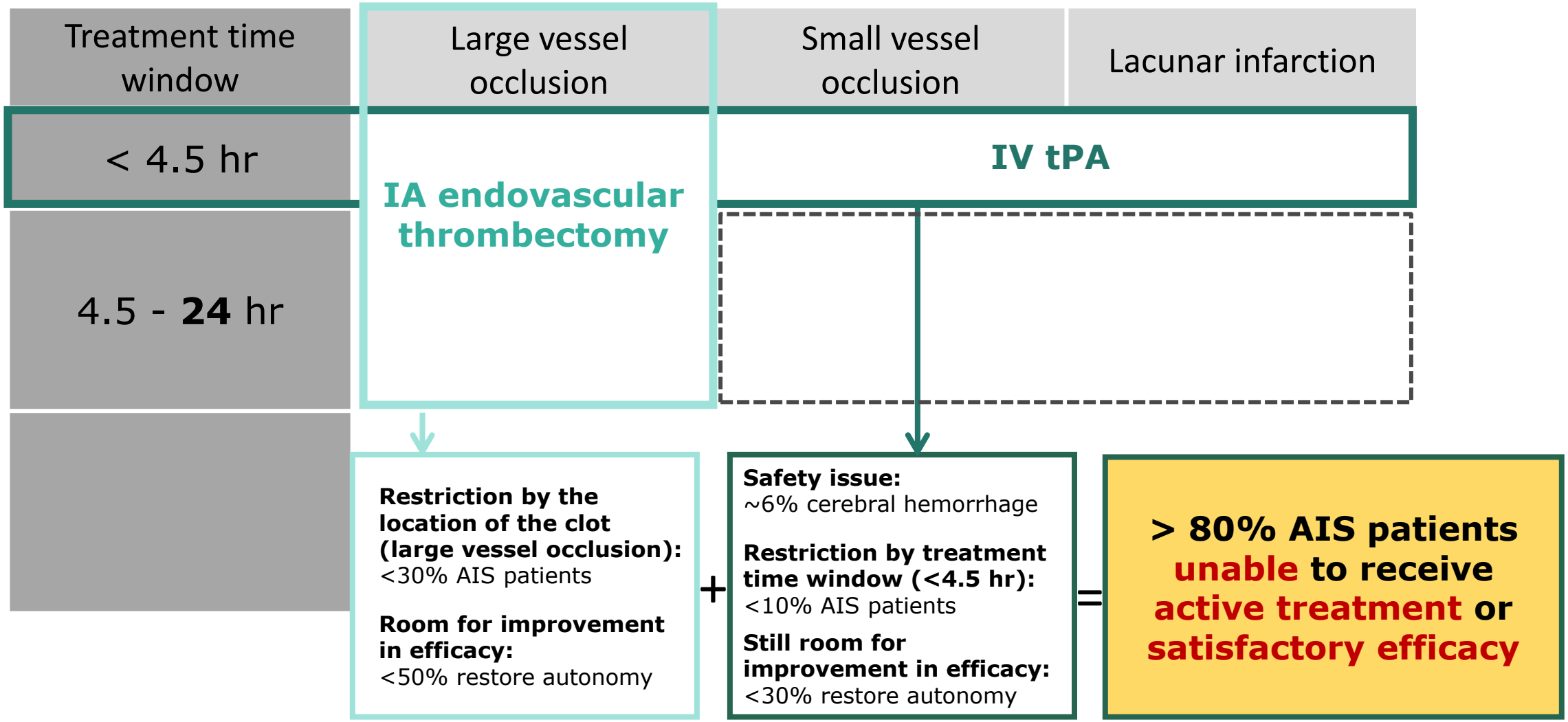


LT3001

Novel dual-function molecule for Acute Ischemic Stroke

Phase 2 a completed → Primary safety endpoint met, efficacy trend

Unmet Medical Need in AIS



LT3001大幅增加可治療中風族群

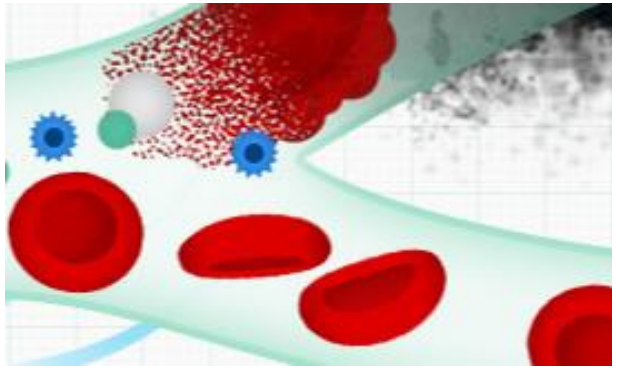
Treatment time window	Large vessel occlusion	Small vessel occlusion	Lacunar infarction
< 4.5 hr		**IV tPA**	
4.5 - **24** hr	**LT3001 combination with thrombectomy** Improve mechanical thrombectomy efficacy	**LT3001 only** Patients illegible for IV tPA and/or mechanical thrombectomy	

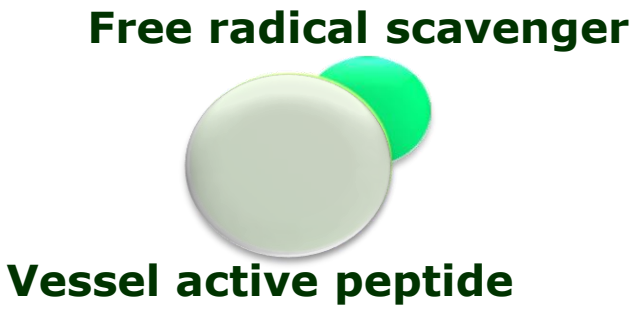
Vessel active peptide: restore blood blow

Free radical scavenger: reduce reperfusion injury →

> 80% AIS patients receiving active treatment or satisfactory efficacy

LT3001 : Novel Dual-Function Molecule





Targeted indication	Acute ischemic stroke
Administration route	Short infusion
Patent	2034 (composition)
Development status	**1) Phase 2a – completed** 2) Phase 2b – to be initiated in Q4/2021
Target population	1) Acute ischemic stroke patients with treatment time window < 24 hrs 2) Acute ischemic stroke patients receiving mechanical thrombectomy
Est. peak sale (global)	> USD 4.5 billion

LT3001-101 : Phase 1 clinical trial to prove safety

Study design

Phase 1 clinical trial completed (US; single dose):

LT3001-101: A double-blind, randomized, placebo-controlled, single-dose via IV infusion study on healthy adult subjects	
Sample size	16 (LT3001 x6 + placebo x2/ dose cohort; total 2 dose cohorts)
Target population	Healthy volunteers
Endpoint	• Safety and tolerability • PK assessment

Study result

- LT3001 was **safe and well tolerated** in the treatment group.
- **No SAEs reported in LT3001 treated groups.** All 2 AEs were classified as mild in severity and were resolved.
- LT3001 was only measurable within the first half-hour in the plasma samples after the start of infusion. **The mean t1/2 was 0.1 hours. Tmax occurred between 6 and 18 minutes.**

LT3001-201 : Phase 2a clinical trial endpoints successfully achieved

Study design

Phase 2a clinical trial completed (TW, US; single-dose) :

LT3001-201 : A double-blind, randomized, placebo-controlled, single-dose via IV infusion	
Sample size	24 (LT3001 x16 + placebo x8)
Target population	AIS patient who has onset stroke symptoms within 24 hours and is not to be treated with rtPA or endovascular thrombectomy
Endpoints	• **Primary endpoint:** Patient safety, the ratio on the occurrence of sICH within 36 hours after dosing • **Secondary endpoints:** Efficacy (neurological outcome (NIHSS), functional outcome (mRS)); PK results

Target population

Treatment time window	Large vessel occlusion	Small vessel occlusion	Lacunar infarction
< 4.5 hr	IA endovascular thrombectomy	IV tPA	
4.5 - 24 hr			

Functional outcome mRS

0 ⟷ 5

No symptoms — Severe disability (bedridden, requiring nursing care)

Neurological outcome NIHSS
(language, movement, facial, consciousness)

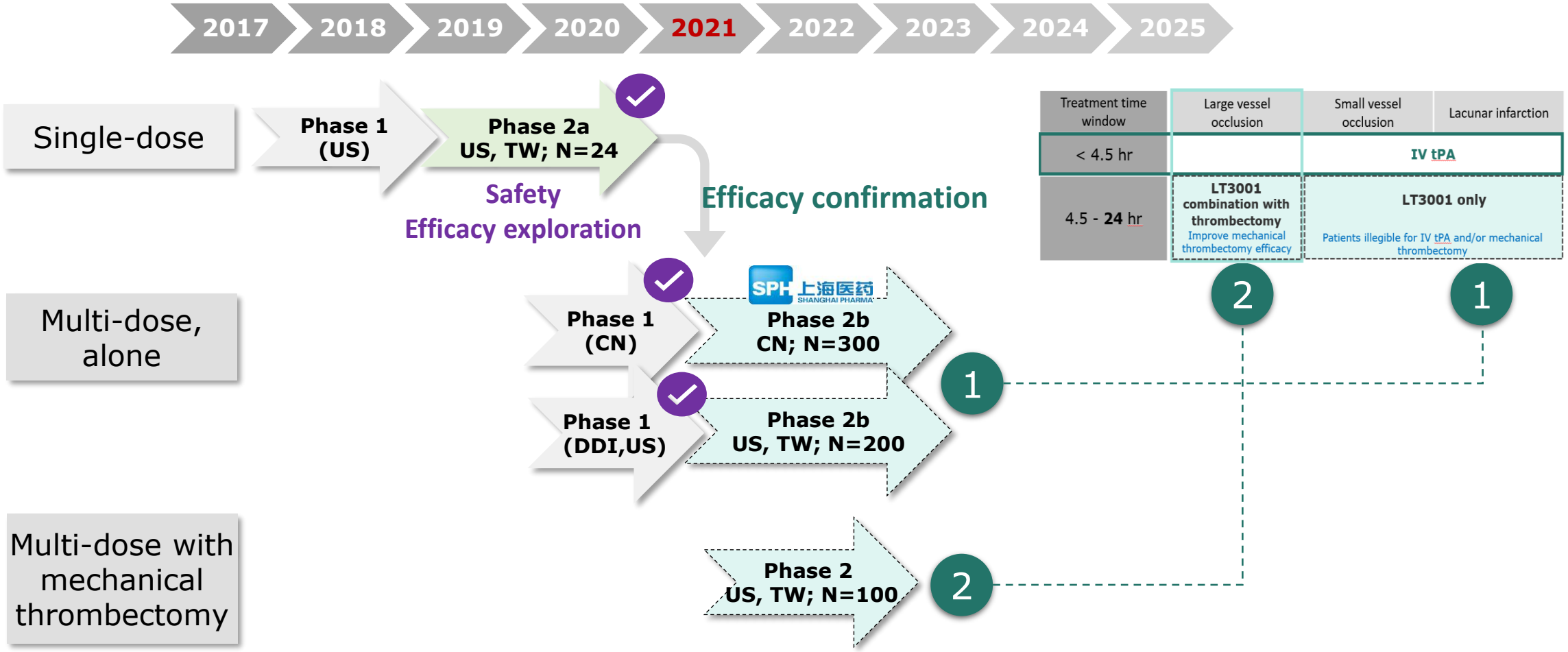
Mild (0 ← 4) Mod. (4 — 21) Severe (21 → 42)

Normal

Study result

- **Primary endpoint achieved – occurrence of sICH not increased**
- **Efficacy trends in neurological outcome (NIHSS) and functional outcome (mRS),** especially in AIS patients with baseline NIHSS≥6
- Data support LT3001 having the potential of becoming a **standardized therapy for AIS patients with stroke onset within 24 hrs**

LT3001 Clinical Development Plan



Global KOL: Advisory Board

Consultants

World Stroke Organization

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Professor, Harvard Medical School

Stanford

Dr Gregory Albers

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CHI Memorial Medical Group

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Dr Yongjun Wang

Deputy superintendent, Beijing Tiantan Hospital
Executive Vice President, China National Clinical Research Center for Neurological Diseases

LT5001

Topical Ointment for Uremic Pruritus

Phase 1b Enrollment Completed

LT5001 : World's first Topical Ointment for Uremic Pruritus

Unmet medical needs

End-stage CKD or Under dialysis
>7m

Uremic pruritus
~3m

"Nothing seems to work very well. An important area of an unmet need"
Nephrologist, and Professor at University of Alberta Department of Medicine, Division of Nephrology

"About 80% of the patients we have are complaining about uremic pruritus. It is a huge issue and we need something that is effective bot also safe"
Pharmacist & Clinician Scientist, University Health Network, Hemodialysis Unit/Nephrology

Blue ocean market

Only one medication available in Japan and Korea (Remitch); 5 companies currently at clinical stage of development

Product	Target	Company	Stage	Route
Korsuva	K-receptor agonist	Cara Therapeutics	Phase 3	Oral
			NDA	IV
HSK21542		Haisco Pharmaceutical	Phase 2 (CN)	IV
SK-1405	Not disclosed	Sanwa Kagaku Kenkyusho	Phase 2 (JP)	Oral
LT5001	K-receptor agonist/μ-receptor antagonist	Lumosa Therapeutics	Phase 1b/2	Topical
EP-547	MRGPRX4 antagonist	Escient Pharmaceuticals	Phase 1	Oral

Development progress

Recruitment for Phase 1b study completed, unblinding by Q3

LT5001: The only topical formulation at clinical stage

Effective
Clinically proven target

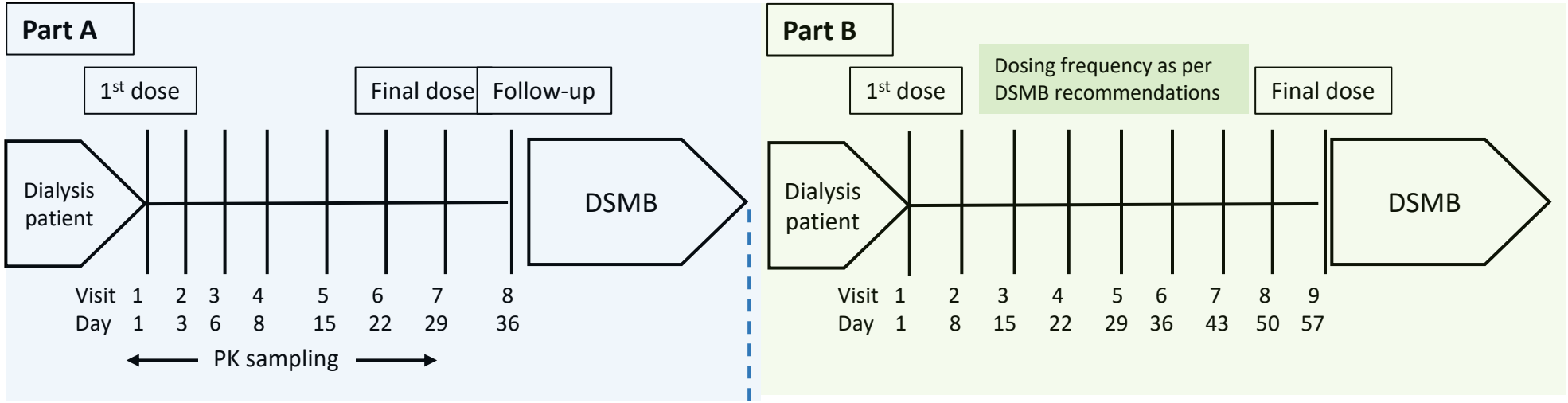
Safe
Topical application, no systemic side effects

Convenient
Apply locally to the affected site

LT5001 : Clinical Progress

Study design

LT5001-101	Part A (Phase 1b)	Part B (Phase 2)
Sample size	18 (LT5001:placebo : 2:1)	60- 90 (LT5001:placebo : 1:1)
Treatment period	4 weeks	8 weeks
Treatment frequency	BID	
Endpoint	1. Safety 2. Efficacy (WINRS, 5-D itch scale, Dermatology Quality of Life Index)	



Development Progress

Enrollment for Phase 1b completed

Unblinding by Q3

LT1001 (Naldebain®)

Week-long Postoperative Analgesic Injection

Approved in Taiwan and Singapore

LT1001 : World's first week-long extended-release postoperative analgesic injection

Unmet medical need

The abuse of opioids has created a crisis for mankind. There is a strong demand for postoperative analgesics that are less addictive with better safety profiles

Effective	Safe	Convenient
Comparable analgesic effect to morphine	No opioid-related side effects (respiratory depression, abuse)	Single-dose, reduce days of being hospitalized

Stable cash flow

Approved	Registration (est. 2021-22 approval)	Clinical Trial (est. 2023 approval)
Taiwan (2017) Singapore (2020)	Thailand Malaysia Korea Ukraine	China (Phase 3, >40% enrollment completed) Veterinary Medicine (Pivotal study)
Stabilize cash flow	Growth momentum	Max. product value

Peak sale

50k vials — 150k vials — 1.5m vials

LT1001 : World's first week-long extended-release postoperative analgesic injection

Global strategy

First goal: Market approval in China

Accelerate the enrollment of the Phase 3 study. Estimated completion by the end of 2021, MA by 2023

Second goal: Expansion to developing countries

MA submission using current data; successful licensing in Korea and Ukraine and MA package is to be submitted. Licensing in South America, Middle East expected by the end of the year

Third goal: Adjust EU and US strategy

Sought advice from US and Swiss authority and a costly Phase 3 clinical trial is needed. Lumosa to seek partners who are willing to invest in the development to balance Lumosa resources

LT2003

A First-in-class Target Therapy for the Treatment of Advanced Tumor

LT2003 : EGFR Target Therapy Tumor Fusion Protein

Product feature

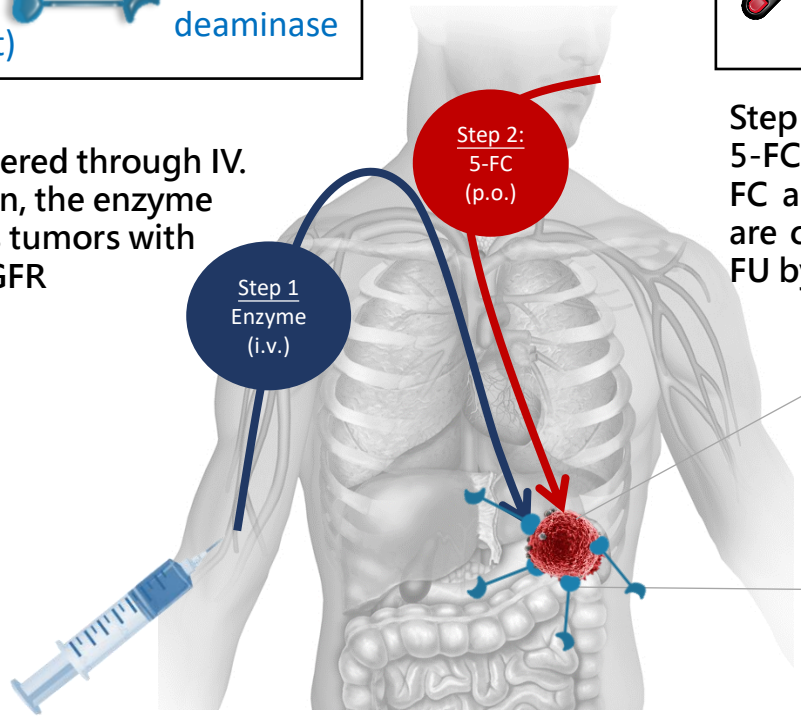
LT2003 (fusion protein)

Monoclonal antibody targeting EGFR (switchable target) — Cytosine deaminase

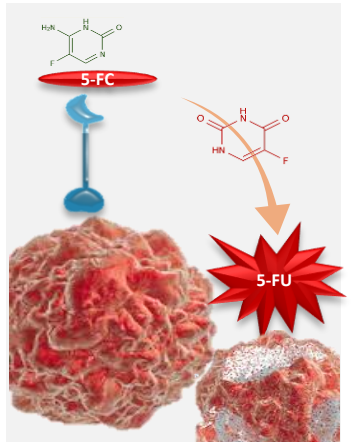
Non-cytotoxic prodrug

5-FC 5-FC

Step 1:
LT2003 is administered through IV. Through circulation, the enzyme specifically targets tumors with over-expressive EGFR



Step 2:
5-FC is administered orally. 5-FC arriving at the tumor site are converted to cytotoxic 5-FU by cytosine deaminase



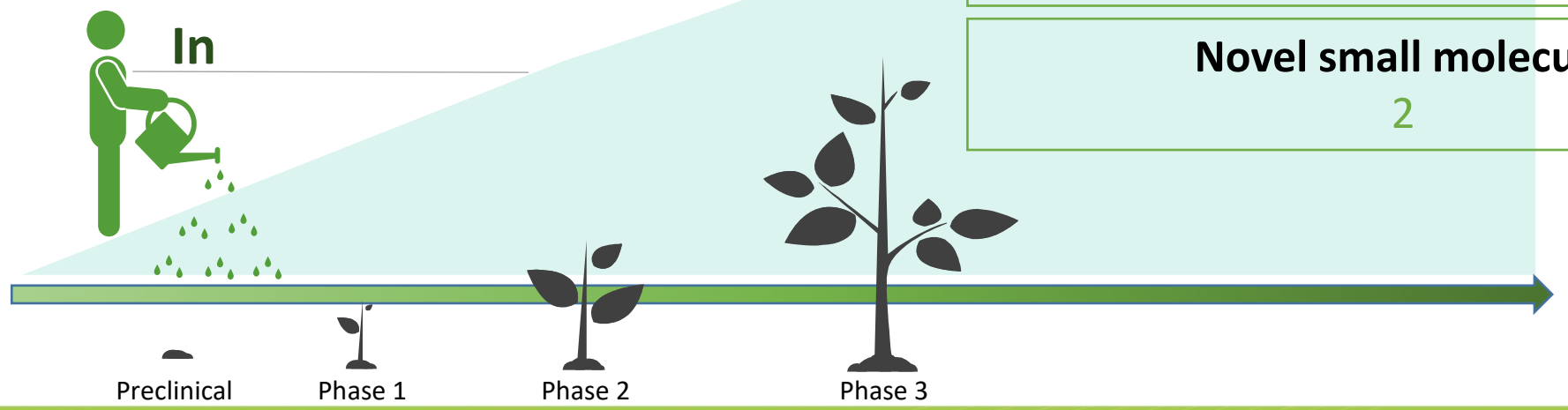
Development Progress

- Animal efficacy studies completed
- **Primate toxicology study completed** → NOAEL 10x that of human effective dose
- Targeted indication: **Rare, refractory cancers with highly expressive EGFR** (such as: peritoneal pseudomyxoma, cholangiocarcinoma, pancreatic cancer)

Future Pipeline Strategy

Collaboration with Academic to Quickly Obtain Development Projects

Commercial Value	Clinical Needs
Technological Breakthrough	Matching Strategy



New projects under assessment

Allogeneic cell therapy
Nucleic acid and peptide delivery system
3 Cell therapies
2 Delivery systems

Antibody–drug conjugate (ADC)
2

Innovative antibody drugs
1

Novel small molecule
2

Thank You