Lumosa Therapeutics

(TPEX:6535)

2026/5

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- Accordingly, these forward-looking statements involve risks and uncertainties. Users of this information should form their own judgments and assume responsibility for evaluating these risks. The Company undertakes no obligation to publicly update or revise these forward-looking statements, whether to reflect new information, subsequent developments, or changed circumstances. Actual results may differ materially from those contemplated by these forward-looking statements.

LT3001 (Odatroltide)–

A First-In-Class Small Molecule for the Treatment of Acute Ischemic Stroke

Phase 3 Ready Program

2026

Focal Point of the Conference

- **LT3001 Monotherapy**
  - **Data from the Phase 2 clinical trial demonstrated efficacy signals, showing more pronounced therapeutic potential in moderate-to-severe and disabling acute ischemic stroke (AIS) populations.**
  - **LT3001-301 trial** (Phase 2/3 study): protocol design completed; initiation planned for the second half of 2026 to **advance China market approval. The Company anticipates further enhancing global licensing and partnership potential** following the 300-patient analysis which is expected in 2027-2028.
  - **LT3001-206 trial** (Imaging study): the data will be used to analyze LT3001's mechanism of action in thrombus recanalization and microcirculation improvements, **strengthening product differentiation and licensing value.** The expected completion is in 2027.
- **Concomitant use of LT3001 with Endovascular Thrombectomy (EVT)**
  - **LT3001-203 trial** (Single dose, n=24): enrollment completed. Data Safety Monitoring Board (DSMB) safety review shows no concerns.
  - Concomitant use of LT3001 with EVT therapy is expected to improve reperfusion quality and clinical outcomes further. A second Phase 2 EVT trial (multiple doses, n~150) is planned for initiation in 2027 to expand product application value and indication portfolio.

Acute Ischemic Stroke – Limited Efficacy with Current Therapies, Urgent Need for Improved Treatment Options

	Large Vessel Occlusion	Medium Vessel Occlusion	Small Vessel Occlusion
Within 4.5 Hrs Post-Stroke Onset	IV tPA / TNK (intravenous thrombolytic agent)		
4.5~24 Hrs Post-Stroke Onset	② **EVT + LT3001** Improves outcomes by combining mechanical thrombectomy with LT3001	① **LT3001 monotherapy** Provides novel recanalization therapy for patients who are ineligible for tPA and EVT	

Current Treatment Limitations

IV tPA / TNK (intravenous thrombolytic agent)

- Administered in <20% AIS patients
- Increases symptomatic intracranial hemorrhage by 10x
- Only 30% patients achieve favorable outcome

IA EVT (intra-arterial endovascular thrombectomy)

- Administered in <10% AIS patients
- **Less than 50% of eligible patients achieve favorable outcome**

LT3001 Target

① **Monotherapy:** Provides novel treatment option for stroke patients beyond 4.5-hr window

② **Concomitant use with EVT:** Enhances therapeutic efficacy when combined with EVT

1. NINDS, N Engl J Med 1995; 333:1581-1588
2. HERMES meta-analysis. Lancet 2016; 387: 1723–31
3. Nationwide private health insurance database, 2012-2018, US. Neurosurg Focus. 2021 Jul;51(1):E2

1 Becoming a new treatment option for stroke patients beyond 4.5 hours post-stroke onset

LT3001-202: Meaningful Functional Recovery in High-Need AIS

Moderate to severe and disabled stroke patients > **Stroke population in urgent need of treatment**

Arm Weakness

Leg Weakness

Aphasia

LT3001-202
Data from CN Phase 2 trial

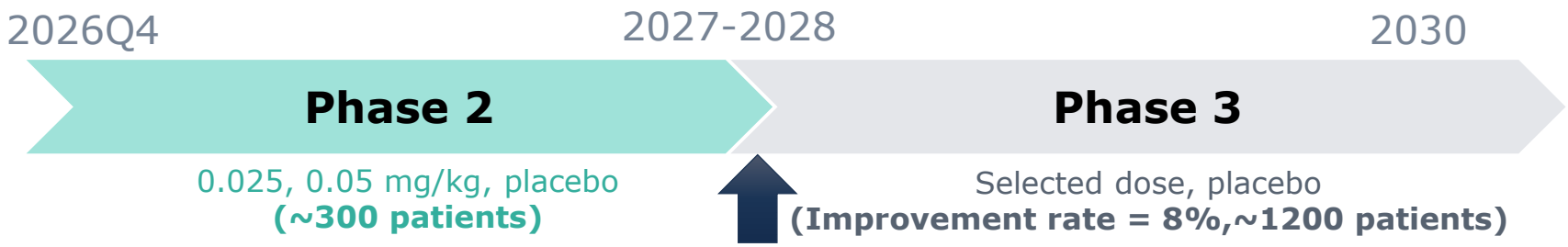
Study Population & Summary

- AIS (LKN<24h), NIHSS 4–25; IVT/EVT-ineligible *(**patients with no reperfusion options**)*
- Apr 2023 ~ Sep 2024; 34 sites (China)
- Well tolerated (6-dose regimen); ***0 drug-related ICH*** *(**good safety profile**)*
- Efficacy signals enriched in ***high-burden, high-unmet-need*** populations (disabling, large arterial atherosclerotic, moderate-to-severe stroke) *(**consistent therapeutic signal throughout**)*

Disabled Feature	Outcome at Day-90	Phase 2 result (Disabling subgroups)						
		0.025 mg/kg	0.05 mg/kg	Placebo	0.025 – Placebo Diff.	0.025 – Placebo RR (95%CI)	0.05 – Placebo Diff.	0.05 – Placebo RR (95%CI)
Arm motor drift	n	30	30	31				
	mRS 0-1	53%	37%	29%	24%	1.59 (0.86-2.97)	8%	1.13 (0.56-2.29)
	mRS 0-2	63%	63%	42%	21%	1.31 (0.82-2.09)	21%	1.36 (0.86-2.15)
Leg motor drift	n	35	38	37				
	mRS 0-1	57%	47%	43%	14%	1.21 (0.78-1.89)	4%	1.00 (0.62-1.61)
	mRS 0-2	69%	71%	57%	12%	1.11 (0.80-1.54)	14%	1.14 (0.84-1.56)
Language/ Aphasia	n	41	51	45				
	mRS 0-1	68%	63%	56%	13%	1.18 (0.87-1.60)	7%	1.07 (0.78-1.46)
	mRS 0-2	76%	78%	62%	13%	1.17 (0.90-1.50)	16%	1.19 (0.94-1.51)

mRS 0-1: no or minor deficit; **mRS 0-2**: functional independence, able to look after own affairs without assistance.

LT3001-301: Phase 2/3 Seamless Bridging Trial
Regulatory approval in China x Global licensing



1. Optimal dose selection
2. Confirmation of patient sample size required for statistical significance (n = 900 ~ 1,200)

Target Patients
• Acute ischemic Stroke • Symptom onset within 24 hrs • Ineligible for IV tPA/TNK, mechanical thrombectomy • ASPECTS >6 • Disability symptoms (motor/physical disability, aphasia) • Imaging-confirmed cerebral vessel occlusion

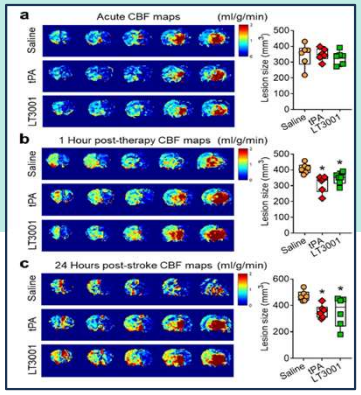
Study Endpoints
Efficacy endpoint **1. 90-day mRS 0-1** **2. 90-day mRS 0-2** 3. mRS shift, NIHSS, BI 75-100, EQ-5D **Safety endpoint** • sICH, SAE

Phase 2 Data	mRS Improvement Rate	Estimated Sample Size for Statistical Significance
Moderate disability, LAA stroke	**mRS 0-1: + 8%** **mRS 0-2: +10%**	**~1,200**
Moderate-severe, LAA stroke	**mRS 0-1: +13%** **mRS 0-2: +15%**	**< 900**

LT3001-206: Imaging-Centric Mechanistic Research
Adding Value for Global Licensing

LT3001 enhances effective reperfusion:

- **Market opportunity:** Most AIS patients are ineligible for IVT/EVT; IV tPA is constrained by a narrow therapeutic window and hemorrhage risk, resulting in inadequate reperfusion and poor outcomes.
- **Therapeutic Breakthrough:** LT3001 combines thrombolytic and neuroprotective mechanisms, offering the potential to achieve safe recanalization within an extended therapeutic window while expanding the treatable patient population.
- **Preclinical evidence:** LT3001 demonstrates immediate and sustained improvement in cerebral blood flow recanalization and reduction in infarct volume.



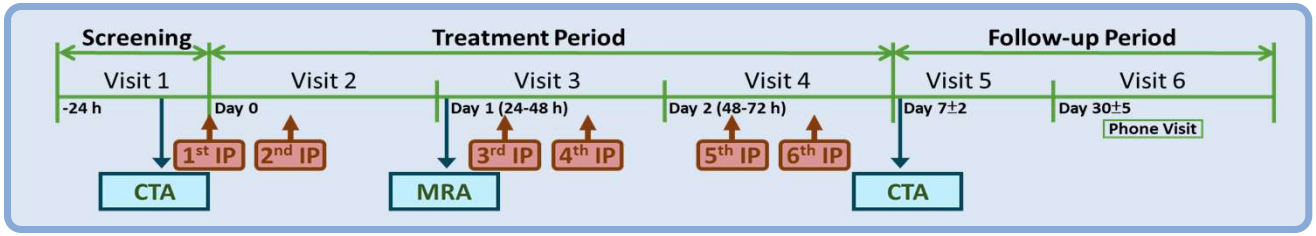
Jiang Y et al.. Transl Stroke Res. 2024

Study Goal:

Serial imaging assessments to evaluate intracranial vascular recanalization and analyze LT3001's thrombolytic MOA

Study Design:

- Open label, single-arm study, with multiple-dose administration
- Trial period: 2026~2027



Population:

- Acute ischemic stroke
- <24-hr stroke onset
- Ineligible for IVT/EVT
- Intracranial arterial occlusion confirmed by imaging

Sample Size:

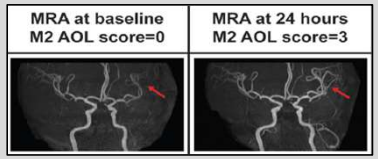
- ~10 subjects

Treatment:

- IV 30min; twice daily for three consecutive days

Primary Endpoint

- AOL score improvement
- Reflecting intracranial vascular recanalization



Stroke 2024; 55(12):2786-2794.

AOL Grades	Definitions
Grade 0	Complete occlusion of the target artery
Grade 1	Incomplete occlusion or partial local recanalization at the target artery with no distal flow
Grade 2	Incomplete occlusion or partial local recanalization at the target artery with any distal flow
Grade 3	Complete recanalization and restoration of the target artery with any distal flow

AOL indicates arterial occlusive lesion.

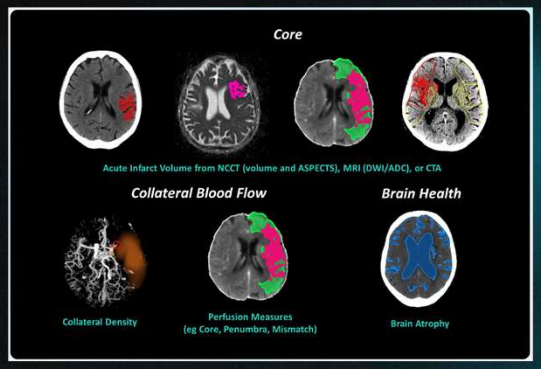
Stroke. 2013;44:2650-2663.

2 Concomitant use with EVT to enhance treatment effect

LT3001-203 Part A (n=24, US&TW) single dose LT3001 + EVT

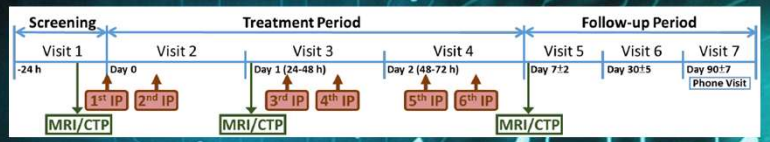
Status: Jan 2026 Recruitment completed; Apr 2026 DSMB suggestion: Safe to proceed

Supporting Evidence: Potential Effect on Large Vessel Occlusion (LVO) AIS



BRAINOMIX

AI Enabled Precision Medicine for Better Decisions



	Metric	All	Placebo	LT3001
NCCT	%(n)	78.95% (30/38)	76.47% (13/17)	80.95% (17/21)
CTA	%(n)	73.68% (28/38)	76.47% (13/17)	71.43% (15/21)
CTP	%(n)	76.32% (29/38)	82.35% (14/17)	71.43% (15/21)
DWI	%(n)	7.89% (3/38)	5.88% (1/17)	9.52% (2/21)

Summary table of the imaging available and analysable at Visit 1 (baseline).

AI imaging analysis | LT3001-205 Phase 2 trial

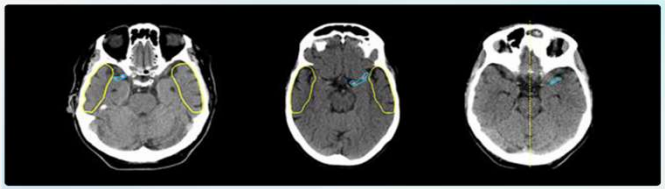
(Phase 2 trial in US, EU, TW, n=88, early termination in 2025)

BRIGHT Report
Lumosa Therapeutics

AI Imaging Analysis: LT3001 Efficacy Signal in Large Vessel Occlusion-Like (LVO-like) Stroke

AI imaging analysis | LT3001-205 (Phase 2 trial)

- **AI imaging biomarkers:** Serial cross-timepoint tracking of infarct volume, perfusion status, and thrombus morphology
- **Efficacy signal:** LT3001 demonstrates greater efficacy in more severe stroke patients, significantly **reducing infarct volume** and **improving 90-day mRS outcomes**.



Brainomix360 automatically detects the presence of **hyperdense clot** in the **anterior circulation** arteries and provides an estimate of its length.

AI imaging showing patients with LVO

Imaging biomarkers:

Follow-up V3: **24h**

Variable	Metric	All	Placebo	LT3001
Tmax > 6s	n	7	2	5
	Mean (SD)	47.73 (51.29)	117.77 (12.44)	19.71 (21.76)
	Median (IQR)	24.15 (10.81 to 80.87)	117.77 (113.37 to 122.16)	21.63 (0 to 24.15)
Hypoperfusion Change	n	7	2	5
	Mean (SD)	78.52 (20.14)	54.73 (12.76)	88.04 (13.11)
	Median (IQR)	85.21 (66.01 to 93.36)	54.73 (50.22 to 59.24)	86.72 (85.21 to 100)
HIR	n	7	2	5
	Mean (SD)	0.19 (0.22)	0.49 (0.13)	0.07 (0.07)
	Median (IQR)	0.14 (0.02 to 0.27)	0.49 (0.44 to 0.53)	0.04 (0 to 0.14)

Follow-up V4: **Day 2-7**

Variable	Metric	All	Placebo	LT3001
Tmax > 6s	n	7	3	4
	Mean (SD)	10.56 (13.42)	23.18 (10.74)	1.09 (2.19)
	Median (IQR)	4.38 (0 to 17.26)	20.4 (17.26 to 27.72)	0 (0 to 1.09)
Hypoperfusion Change	n	7	3	4
	Mean (SD)	94.77 (8.94)	87.8 (10.59)	100 (0)
	Median (IQR)	100 (91.21 to 100)	82.43 (81.7 to 91.21)	100 (100 to 100)
HIR	n	7	3	4
	Mean (SD)	0.05 (0.1)	0.03 (0.04)	0.07 (0.13)
	Median (IQR)	0.01 (0 to 0.04)	0.01 (0.01 to 0.04)	0 (0 to 0.07)

mRS-90 days:

Predictors	Odds Ratios	CI	P value
Placebo	0.21	0.03-1.10	0.087
Clot length	0.87	0.74-1.01	0.078
Placebo x Clot length	**1.34**	**1.09-1.67**	**0.013***

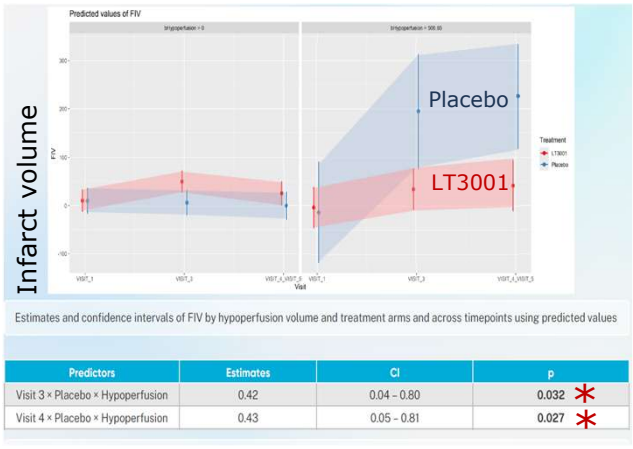
Ischemic stroke patients with more severe symptoms

Proximal LVO

Estimates and confidence intervals of FIV by clot length and treatment arms and across timepoints using predicted values

Predictors	Estimates	CI	p
Visit 3 × Placebo × Clot length	5.01	0.74 – 9.27	0.022 *
Visit 4 × Placebo × Clot length	3.63	-0.81 – 8.08	0.107

Extensive low-perfusion region



Estimates and confidence intervals of FIV by hypoperfusion volume and treatment arms and across timepoints using predicted values

Predictors	Estimates	CI	p
Visit 3 × Placebo × Hypoperfusion	0.42	0.04 – 0.80	0.032 *
Visit 4 × Placebo × Hypoperfusion	0.43	0.05 – 0.81	0.027 *

Longitudinal Changes: mixed-model analysis, which accounted for each patient's starting point and missing data.

LT3001-EVT: Enhancing EVT Efficacy Study – Developing a Second Indication

Status: Trial design in progress

Why LT3001 is needed after EVT:

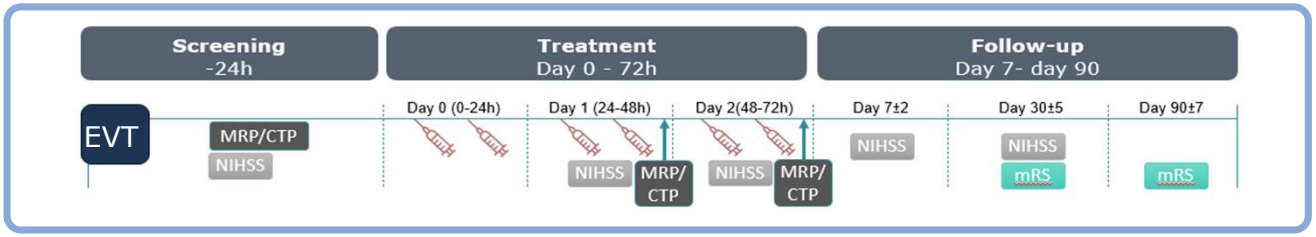
- **Recanalization ≠ Effective Reperfusion:** EVT restores large vessel patency, but microcirculation may remain occluded
- **Reperfusion Injury:** Restoration of blood flow can trigger oxidative stress, endothelial damage, and increased hemorrhage risk.
- **Unresolved Distal Microvascular Thrombi:** Residual or distal emboli persist, impairing overall blood flow recovery.
- **Limited Clinical Outcomes:** Despite successful mechanical recanalization, more than 50% of patients experience poor functional recovery.

Study Goal:

Evaluate multi-dose LT3001 efficacy in improving EVT treatment outcomes in AIS patients

Study Design:

- Double-blind, placebo-controlled, multi-national, multi-center phase 2 trial
- Trial period: 2027~2028



Target population:

- Acute ischemic stroke
- <24-hr onset
- Patients receiving EVT
- Exclude patients receiving IV thrombolysis
- **Imaging evidence of salvageable ischemic penumbra**
- **Post-procedure clinical symptoms without recovery**

Sample Size:

- ~150 Subjects (TBD)

Treatment:

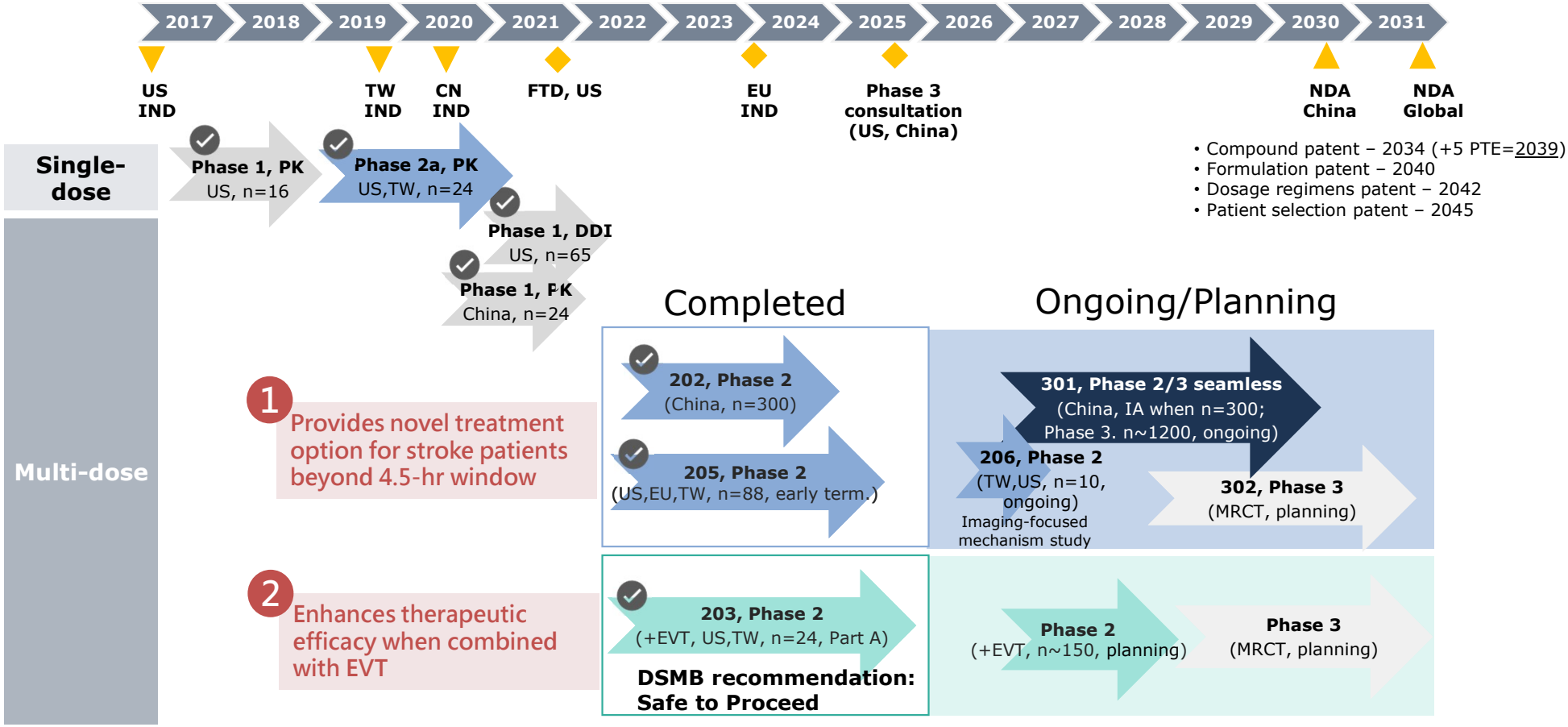
- IV 30min; twice daily for three consecutive days

Primary Endpoint

- Safety (SAE, sICH)
- Imaging: Jypoperfusion lesion volume, infarct volume
- Functional endpoints: mRS, NIHSS

LT3001: Clinical Development Program – Establishing a New Treatment Standard for Stroke

- INDs active across **US, EU, China, UK, and Taiwan**
- Fast Track Designation (FTD) granted by the US FDA



LT3001 Clinical Need x Commercial Value

Novel mechanism x established clinical PoC x de-risked development pathway - potential global blockbuster asset capable of transforming stroke treatment paradigms

Large Market × High Unmet Clinical Need	More than 7 million AIS patients globally; the majority lack access to effective existing therapies. Extended treatment windows present a substantial commercial opportunity. High probability of becoming a blockbuster product if approved as a marketed drug
Differentiated Innovation Mechanism	Cerebral blood flow restoration without hemorrhage + simultaneous neuroprotection → functional outcome improvement
Established Clinical PoC	Multiple Phase 2 datasets demonstrated strong safety, improved 90-day functional endpoints, and enhanced efficacy, especially in more severe patients
De-Risked Development Pathway	Enrichment + adaptive trial design; seamless Phase 2/3 progression in China accelerates development timeline
Global Positioning and Commercial Potential	Presence established in US/EU/China. Premium pricing potential (US ~$25K). Long-term competitive advantage through patent protection extending through 2039–2045

Lumosa Pipeline

Lumosa Business Model

Focus on innovative neurological disease therapies, accelerate clinical proof-of-concept (PoC) validation, drive global asset licensing and maximize company value

Lumosa collaboration partners:
Innovative programs, CMC development, early clinical validation

International pharma:
Regulatory validation, licensing partnerships, and global commercialization

Lumosa

- Provide early-stage funding
- Design clinical strategy with global licensing as the primary objective
- Connect international BD opportunities

- Integrate international pharmaceutical production and clinical resources
- Provide innovative PoC assets

Selection Criteria

- Focus on CNS indications with high unmet medical needs
- Blockbuster potential
- First/Best-in-class potential
- Biomarker or early-stage clinical PoC validation feasibility

Core Capabilities

- Accelerate IND-to-PoC development
- Generate licensable high-quality clinical PoC data
- **Integrate clinical, regulatory, and BD functions** to build an efficient development engine

Lumosa: Focused Development of Innovative Therapies for Neurological Diseases (FIC, BIC)

Asset	Indication	Modality	IND/ IIT	Phase 1	Phase 2	Phase 3	NDA	Market
LT-1001	Post-operative pain	Small molecule, 505B2	Taiwan, Singapore, Thailand, Malaysia, Ukraine					
LT-3001	Acute ischemic stroke	Peptide-small molecule	FIC, Co-d with Shanghai Pharma			2026 Q4 Phase 2/3; 2030 NDA		
LT-6001	Neurology indication	Small molecule induced MSC Exosome	BIC (IIT/ Passionate use, best-in-class)					
Pre-CS	Neurological diseases	mRNA	FIC (2027, CN IIT, first-in-class)					
Pre-CS	Neurological diseases	CRISPR	FIC (2028, CN IIT, first-in-class)					

First-in-Class, FIC: Novel mechanism or target
Best-in-Class, BIC: Superior efficacy or safety within therapeutic class

Lumosa – A new drug development company with global licensing capabilities focusing on the development of innovative therapies for neurological diseases

Thank You