

# DECK

## THERAPEUTICS

**Imagining the future: A standard, emergency treatment for stroke**

# Stroke: A debilitating disease & a large, unmet need

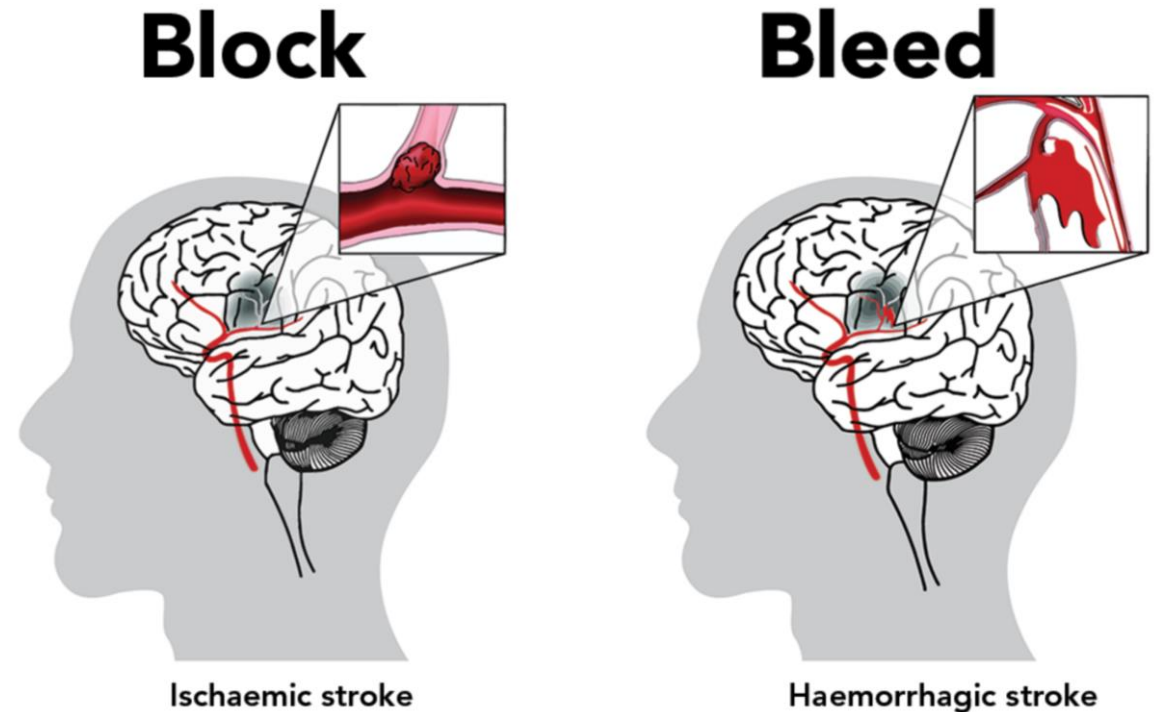
## Facts & Figures

800,000 stroke patients every year in US

The leading cause of long term disability

Direct and indirect costs/year: \$102B  
(projected to reach \$240B by 2030)

Only one FDA approved drug for treatment (t-PA)  
(received by <8% of stroke patients)



<https://enableme.org.au/Resources/Types-of-stroke>



Multiple Mechanisms of Action

Excellent safety profile

Potentially administered to **ALL**  
stroke patients

# THDG3: A novel omega-3 Diglyceride(DG) molecule

DeckTherapeutics team has over 20 years of experience in Omega-3 related research



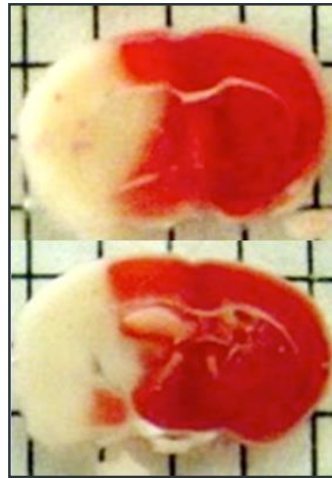
- ✓ Synthesized an omega-3 DG molecule (THDG3)
- ✓ Formulated as an omega-3 “emulsion” (vs tablets/oils)
- ✓ Administered intravenously, as a bolus (as against orally/as supplements)
- ✓ Injected after stroke, as an ACUTE therapeutic agent

DeckTherapeutics has proprietary knowledge and exclusive intellectual property

# Results: Acute, intravenous THDG3 in stroke treatment



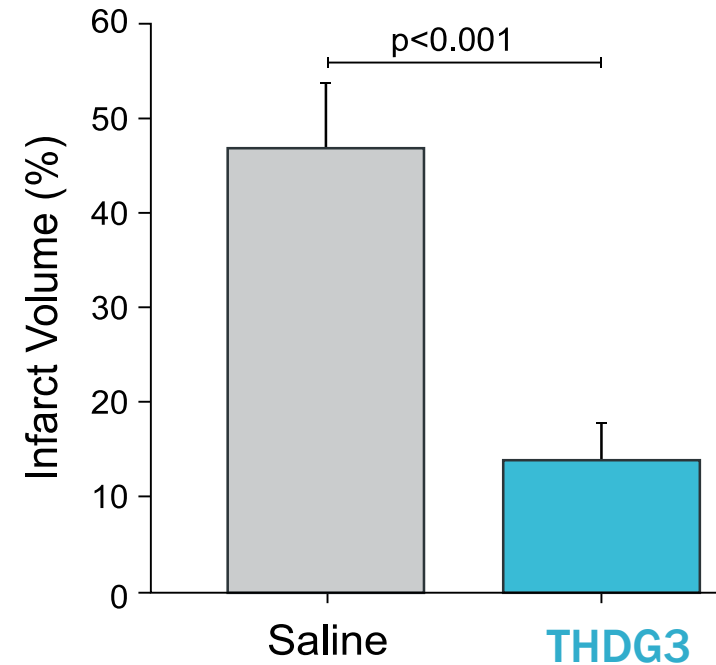
Saline



THDG3



Prevents brain cell death,  
preserves neuro-function\*



Consistent results in six animal models

\*studies on-going

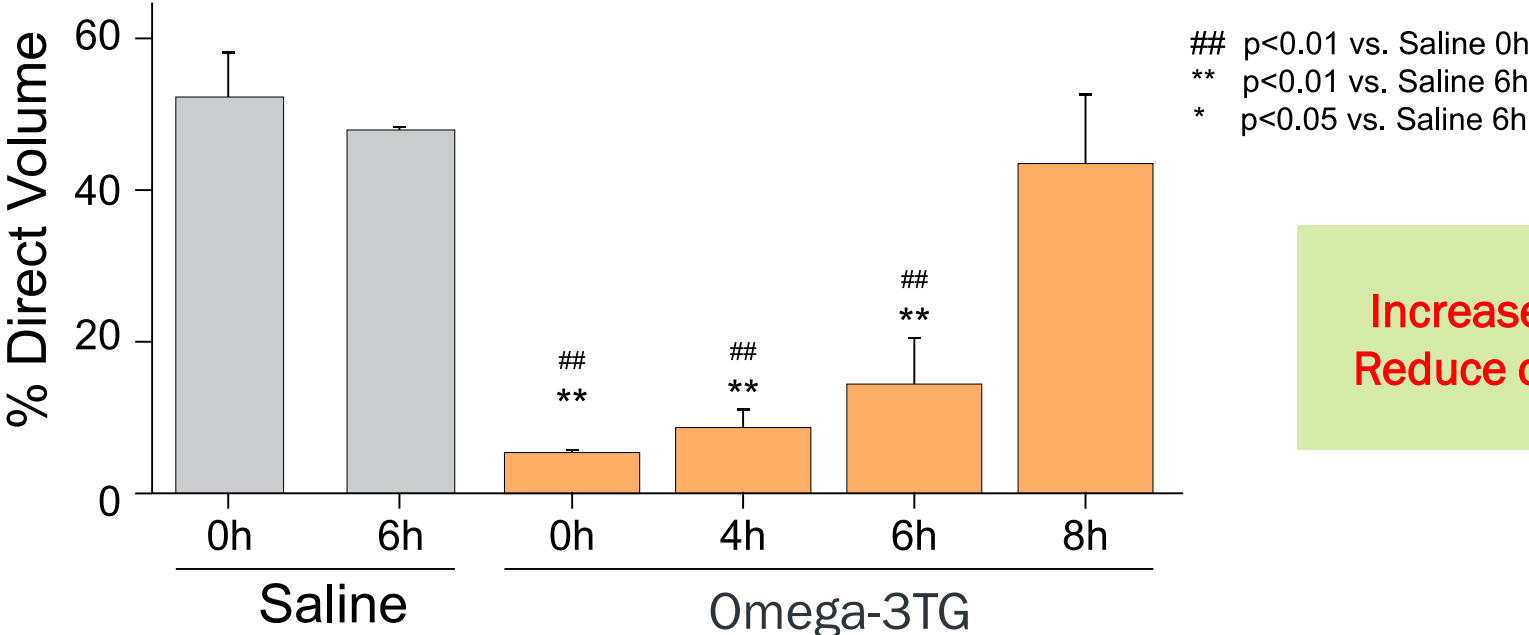
# Acute IV Omega-3 TG treatment window in stroke

Stroke treatment is extremely time sensitive



32,000 neurons die every second

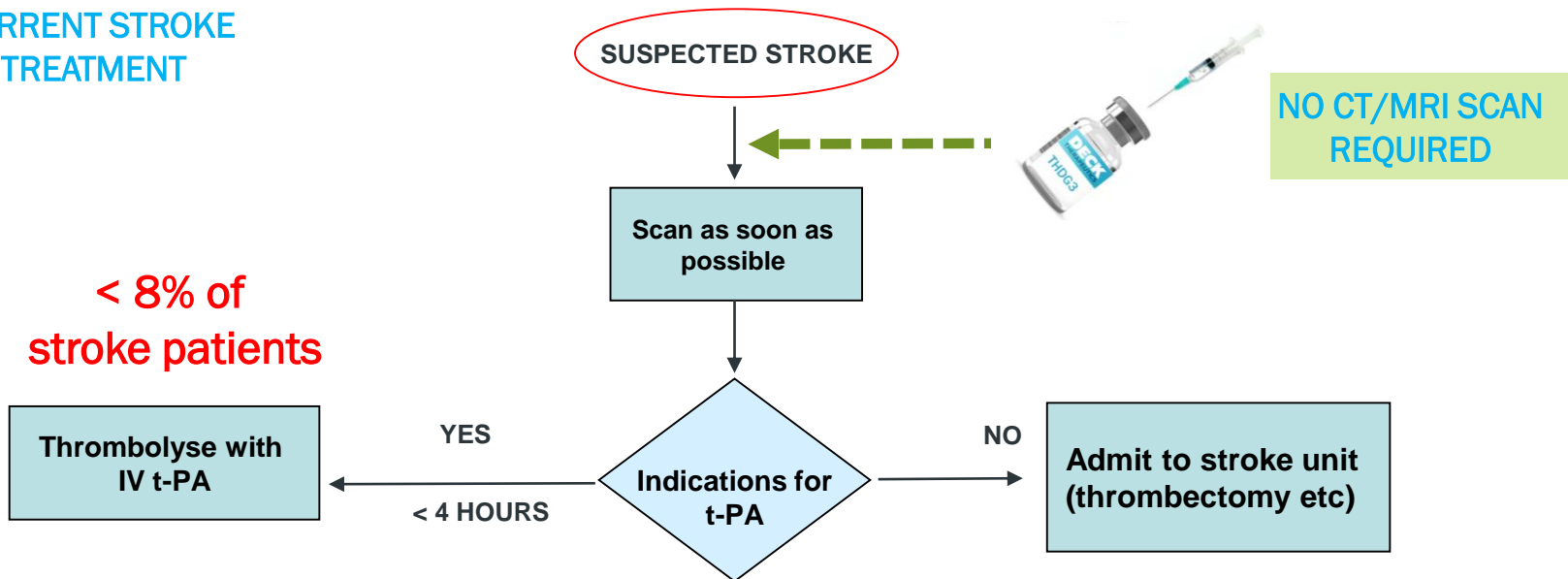
A 6-hour window in adult rats for I.V. n-3 FA injection  
Transient right middle carotid artery occlusion



Increase survival rates  
Reduce disability (costs)

# THDG3 : Market opportunity

## CURRENT STROKE TREATMENT



< 8% of stroke patients

THDG3: Potential to be administered to ALL stroke patients

Total addressable market for THDG3 as first line treatment for stroke: \$7B (US alone)

[7M stroke/year X \$1000/dose]  
[t-PA revenues in 2017 - 1.2B USD]\*

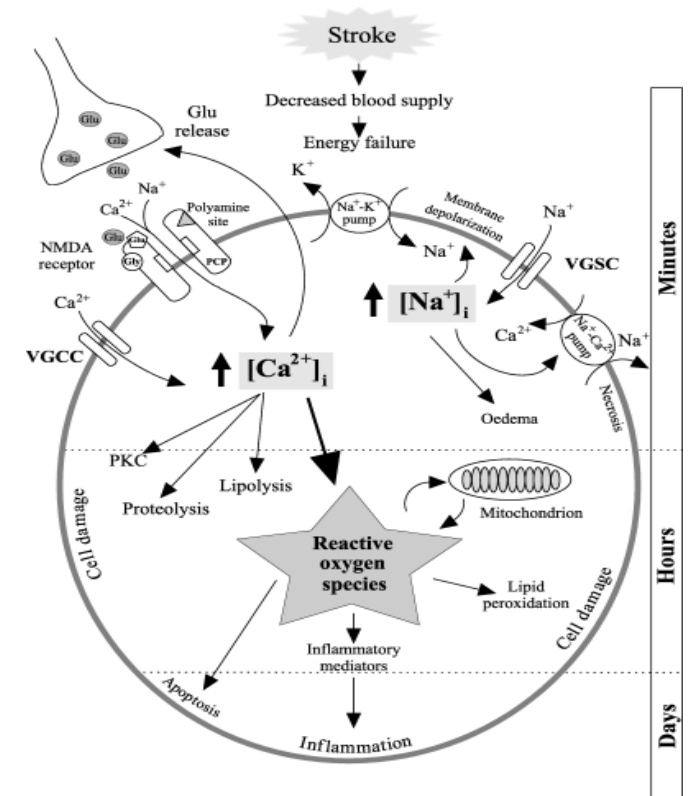
\* <https://www.roche.com/dam/jcr:78519d71-10af-4e02-b490-7b4648a5edb8/en/ar17e.pdf>

# Intellectual property

- 4 issued U.S. patents for **omega-3 diglyceride lipid-based emulsion** to provide protection and recovery in human organs following ischemic injury
- 2 issued US patents for omega-3 glycerides to protect donor organs and tissues for transplantation. Approved in US, China (pending in Europe).
- 1 issued U.S. patent on use of omega-3 glycerides in acute organ injury.

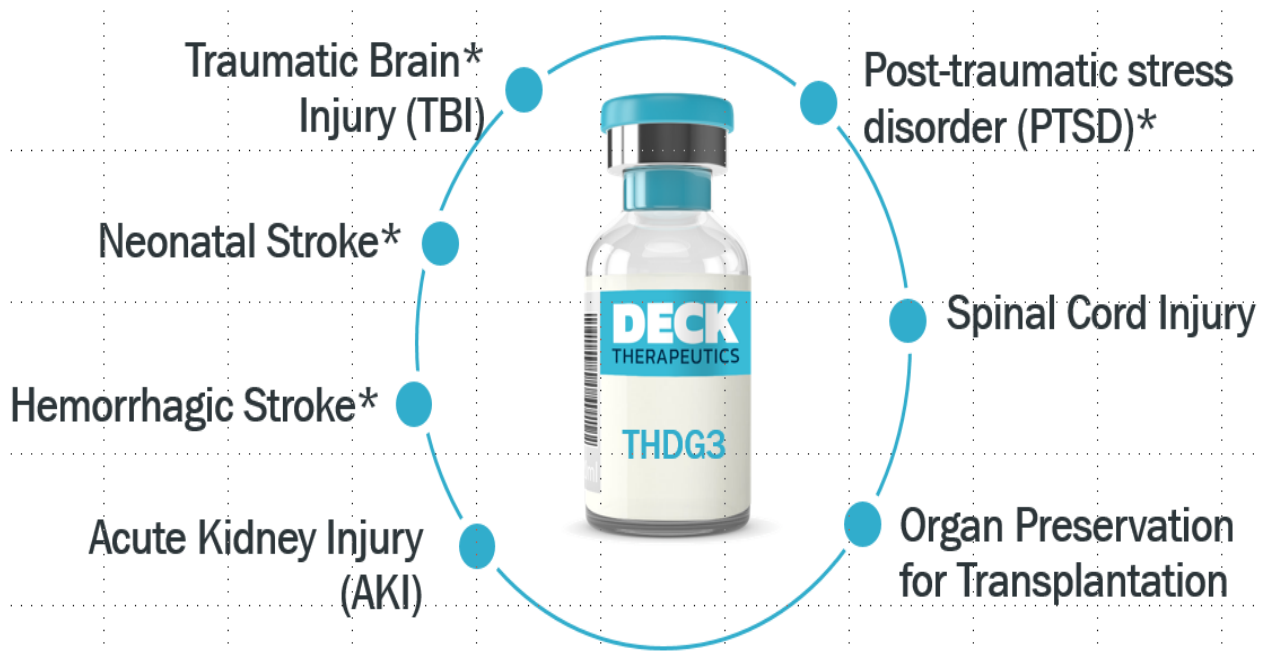
Option for exclusive licenses on above intellectual property from Columbia University

## Multiple Mechanisms





# Indications: Development stages



\*RESEARCH ONGOING

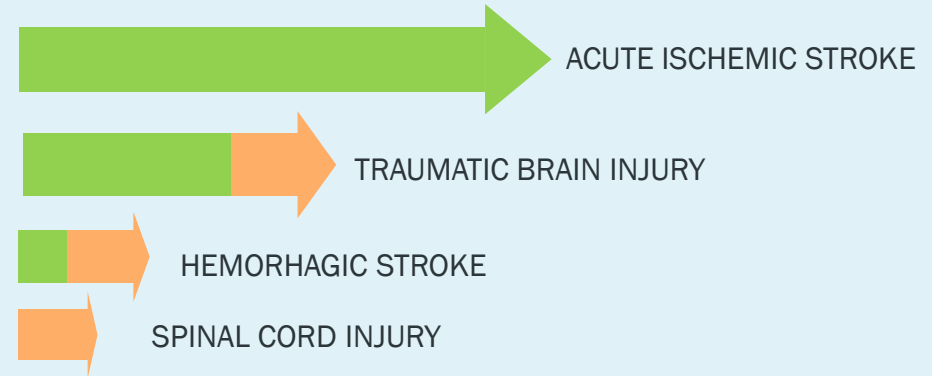
RESEARCH

DISCOVERY

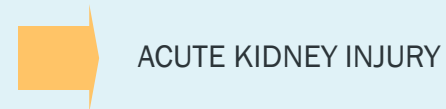
PHASE 1

PHASE 2

NEUROLOGY



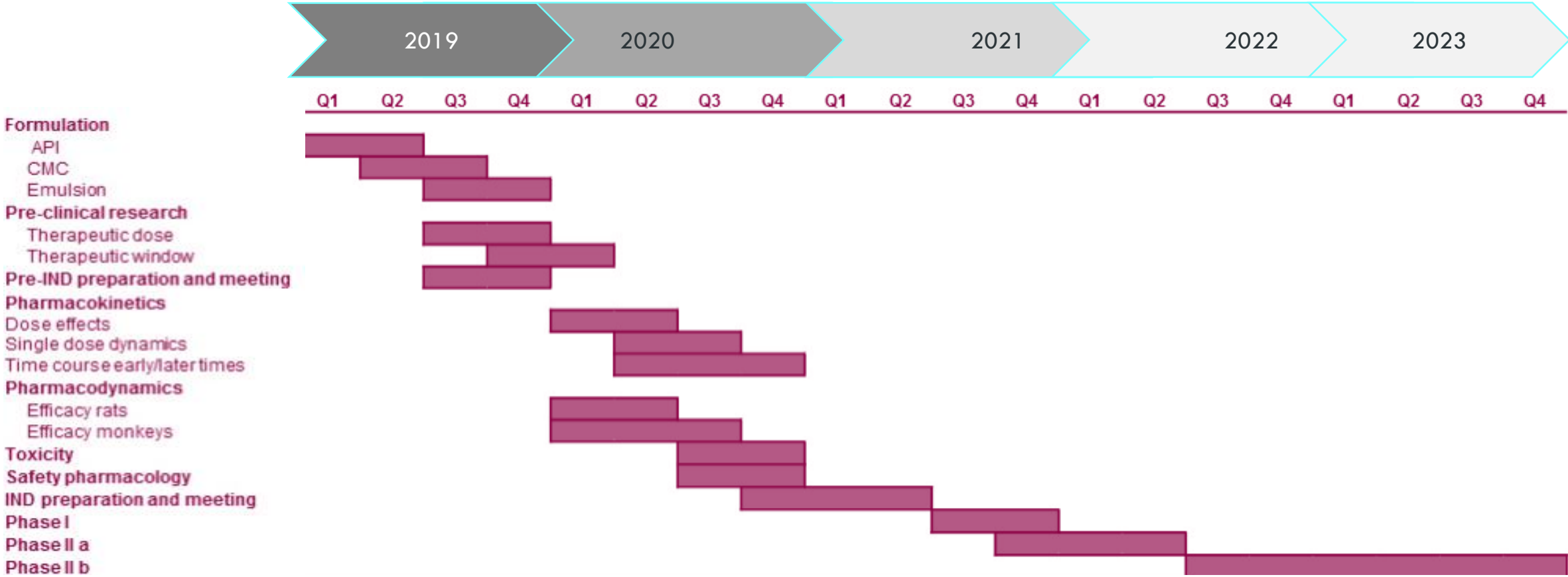
NEPHROLOGY



■ ACTIVE INDICATION/ONGOING STUDY

■ EXPANSION INDICATIONS/STUDY YET TO COMMENCE

# Clinical Development Plan (Stroke Indication)



# Financing & use of proceeds

**Equity financing:** US\$7M

**Use of proceeds:**

- Complete 18 months of additional pre-clinical safety and efficacy studies
- Expand intellectual property position
- Receive IND approval

Use of Proceeds	Year 1 (in USD)	Year 2 (in USD)
Pre-clinical [dosing studies/PK-PD]	\$1,500,000	\$1,100,000
Formulation (API/CMC/Emulsion)	\$850,000	\$750,000
Management & Regulatory consultants	\$500,000	\$700,000
Corporate & Intellectual Property	\$500,000	\$700,000
SG&A	\$200,000	\$200,000
<b>TOTAL</b>	<b>\$3,550,000</b>	<b>\$3,550,000</b>

# Leadership Team



**Richard Deckelbaum, MD**  
Lead scientist & Founder,  
Professor at Columbia University



**Suman Lal, MBA, MD/PhD**  
CEO



**Glenn Mattes**  
Sr. level pharma exec (30+ years)



**Chezy Barenholz, PhD**  
Lipid biochemist, Start-up  
successes++



**Yvon Carpentier, MD/PhD**  
Lipid emulsion specialist,  
International opinion leader



**Larry Deckelbaum, MD**  
Cardiologist, Big pharma (new  
drug discovery) & clinical trials



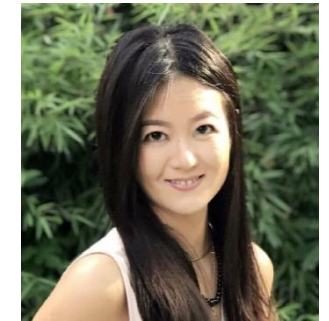
**Mitchel Elkind MD, MPH**  
Stroke neurologist, Clinical trials



**Ken Cheung PhD**  
Professor of Statistics at Columbia  
University. Stroke trial expert



**Hilde Zirpoli, PhD**  
Expert in stroke and  
myocardial infarction models



**C. Liz Chang, PhD**  
*In vitro/in vivo* animal  
molecular & regulatory  
scientist

# Summary

THDG3: A NOVEL  
MOLECULE

STROKE: A LARGE  
GLOBAL NEED/MARKET

TECHNOLOGY WITH  
MULTIPLE INDICATIONS

INTELLECTUAL PROPERTY  
PROTECTION

INVESTMENT  
OPPORTUNITY

**Thank you**