
BRT
INNOVATIONS

Executive Summary

- 3RT Innovations is a start-up that develops technology for the treatment of neurological diseases
- We hold a license to the patent for 3RT-085653, a brain penetrating, single chain antibody that selectively targets the 3RTau isoform
- Removal of tau pathology to treat diseases such as Alzheimer's has been a major therapeutic goal with very limited success
- **However**, the problem our company hopes to address is a completely different, often overlooked, but extremely significant tauopathy, chronic traumatic encephalopathy
- Following successful pre-clinical studies, next steps include raising funds for IND-enabling studies, with an end goal of partnering with pharmaceutical companies to allow full commercialization of the technology

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The Problem

- Traumatic brain injury (TBI) contributes to one-third of all injury-related deaths in the United States
- Total direct and indirect costs in excess of $76 billion
- TBI is the leading environmental risk factor associated with chronic traumatic encephalopathy (CTE), a progressive neurodegenerative disorder
- Lack of any approved therapies for CTE represents a critical unmet need

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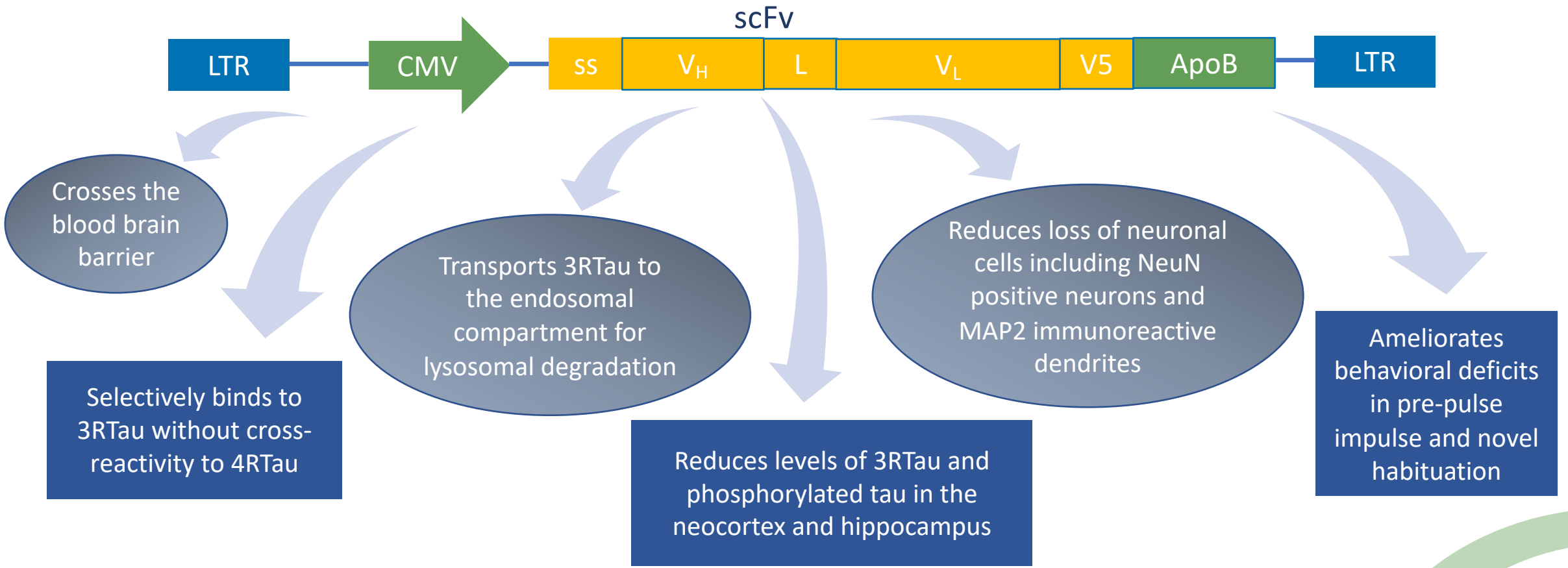
The Solution: 3RT-085653

- The neuropathology of CTE is characterized by abnormal aggregations of tau in the neocortex with an organized filament structure comprised of three repeat (3RTau) and four repeat tau (4RTau)
- **This organized structure represents a unique opportunity** as it is found only in CTE and not in other tauopathies such as Alzheimer's Disease
- Tau therapies have largely failed in Alzheimer's—however, it is possible that the failure was in choosing the wrong target
- ***Our hypothesis is that disrupting the formation of this organized filament structure through the removal of 3RTau will play a critical role in modifying the disease course of CTE***

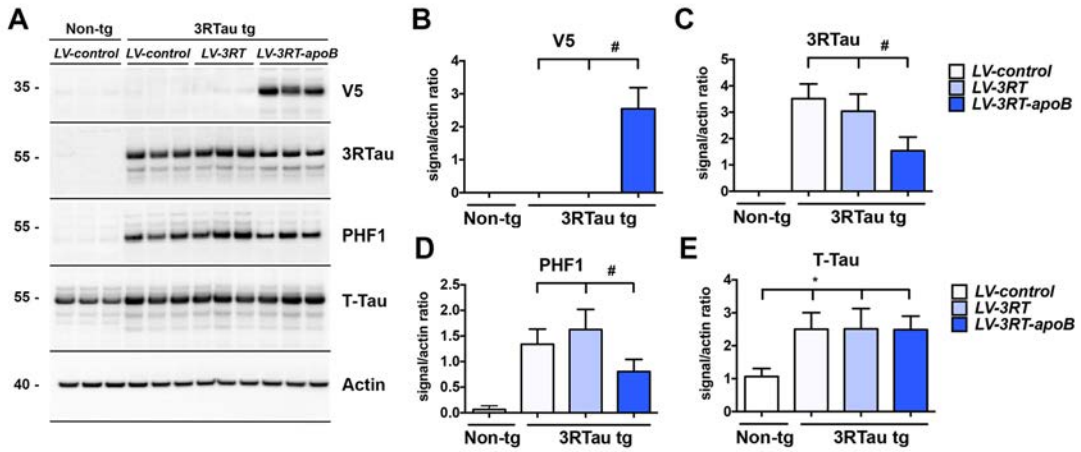
The Technology: Overview



3RT-085653: Protected by US Patent PCT/US17/59928

The Technology: Targeted Reduction

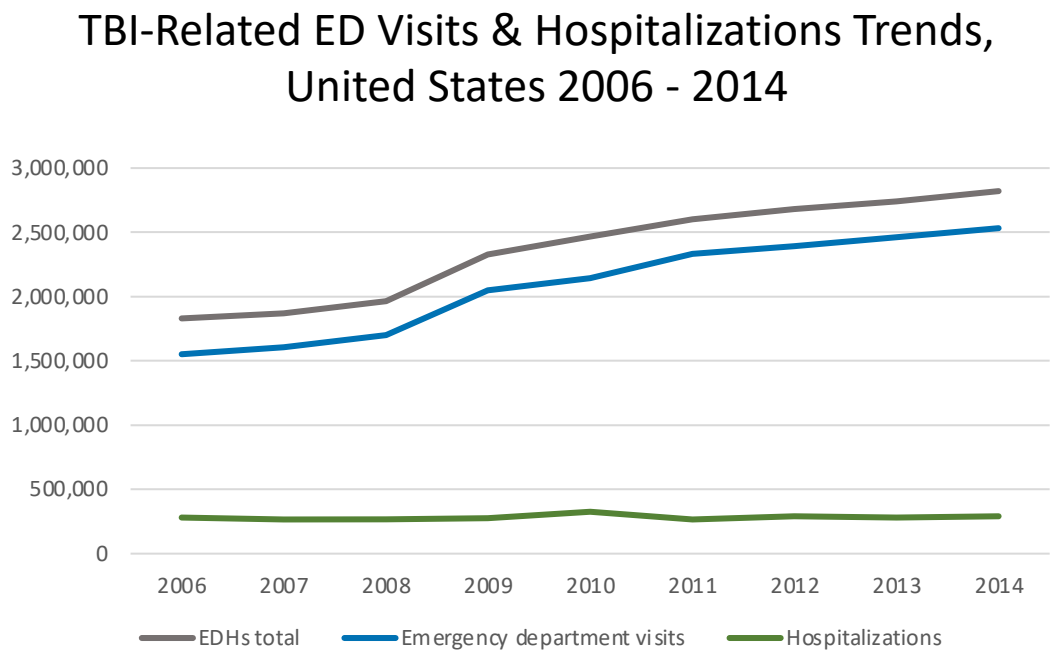
- Transgenic mouse model of tauopathy (3RTau tg) overexpresses 3RTau and also accumulates phosphorylated tau
- 3RTau not detected in non-transgenic mouse (Non-tg)
- Levels of phosphorylated tau (PHF1) and total tau (T-Tau) were higher in 3RTau tg mice vs. Non-tg mice
- After treatment with 3RT-085653 (LV-3RT-apoB), levels of 3RTau and phosphorylated tau were reduced **but levels of T-Tau were not altered**



3RT-085653 selectively reduces abnormal 3RTau and phosphorylated tau without significantly affecting total tau levels

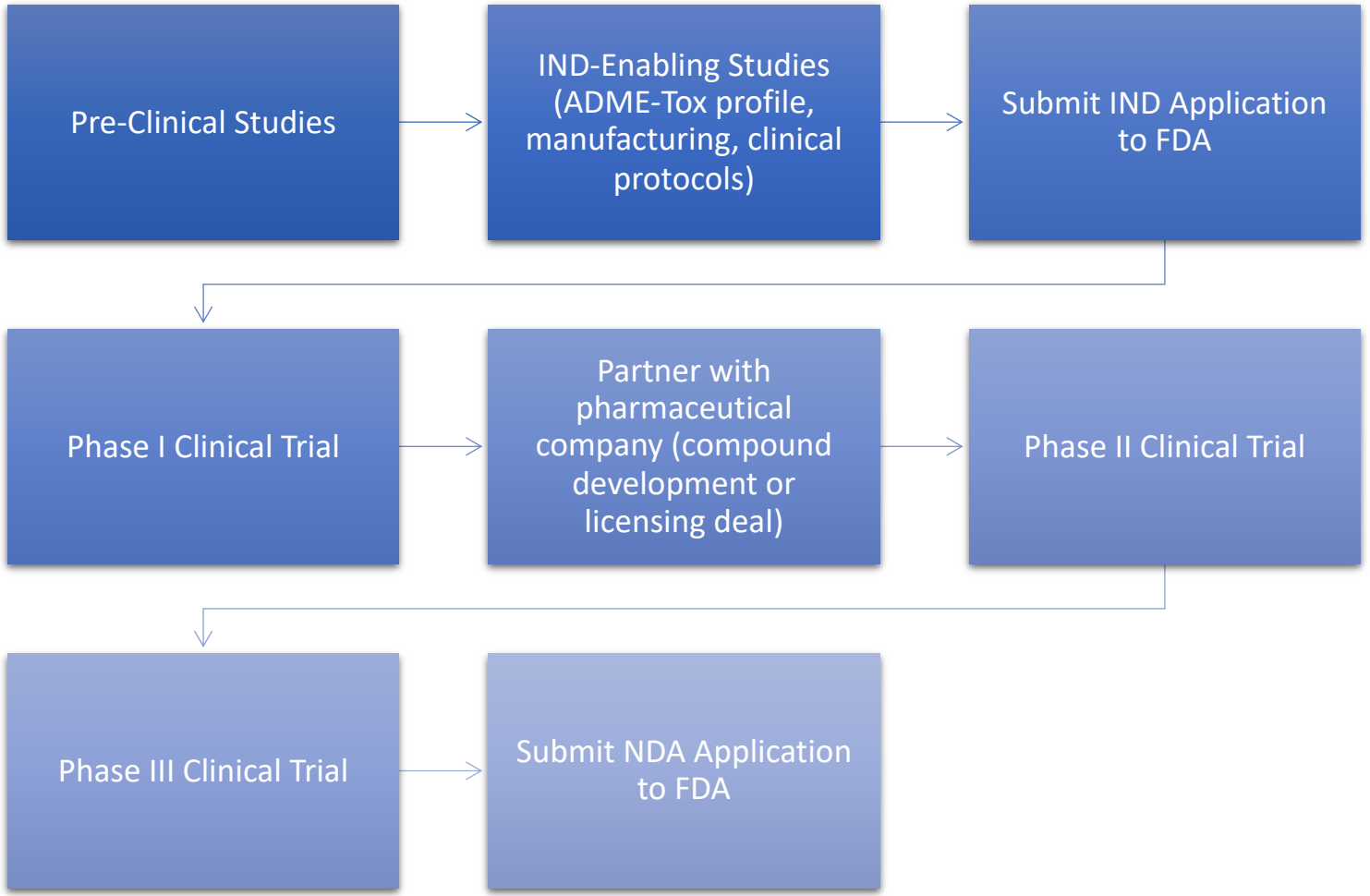
Market Size & Growth Potential

- TBI therapeutics market size estimated to reach 182.48 billion by 2027
- Expanding at a rate of 4.93% from 2020-2027
- 36% of growth expected to come from the Americas
- Key drivers for the market include the array of expected new drug approvals



Source: Data Bridge Market Research and Technavio

Clinical Pathway



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Milestones

COMPLETED

MILESTONE 1: CONFIRMATION OF UTILITY IN MOUSE MODEL

Completion of this milestone provides justification for further animal toxicity studies

$700,000 - $1,000,000

MILESTONE 2: IND-ENABLING TOXICOLOGY STUDIES

Completion of this milestone will allow successful translation from pre-clinical work to clinical trials

$1,000,000 - $3,000,000

MILESTONE 3: PHASE I CLINICAL TRIALS

Completion of this milestone will demonstrate basic safety parameters and allow further testing in disease specific human subject groups

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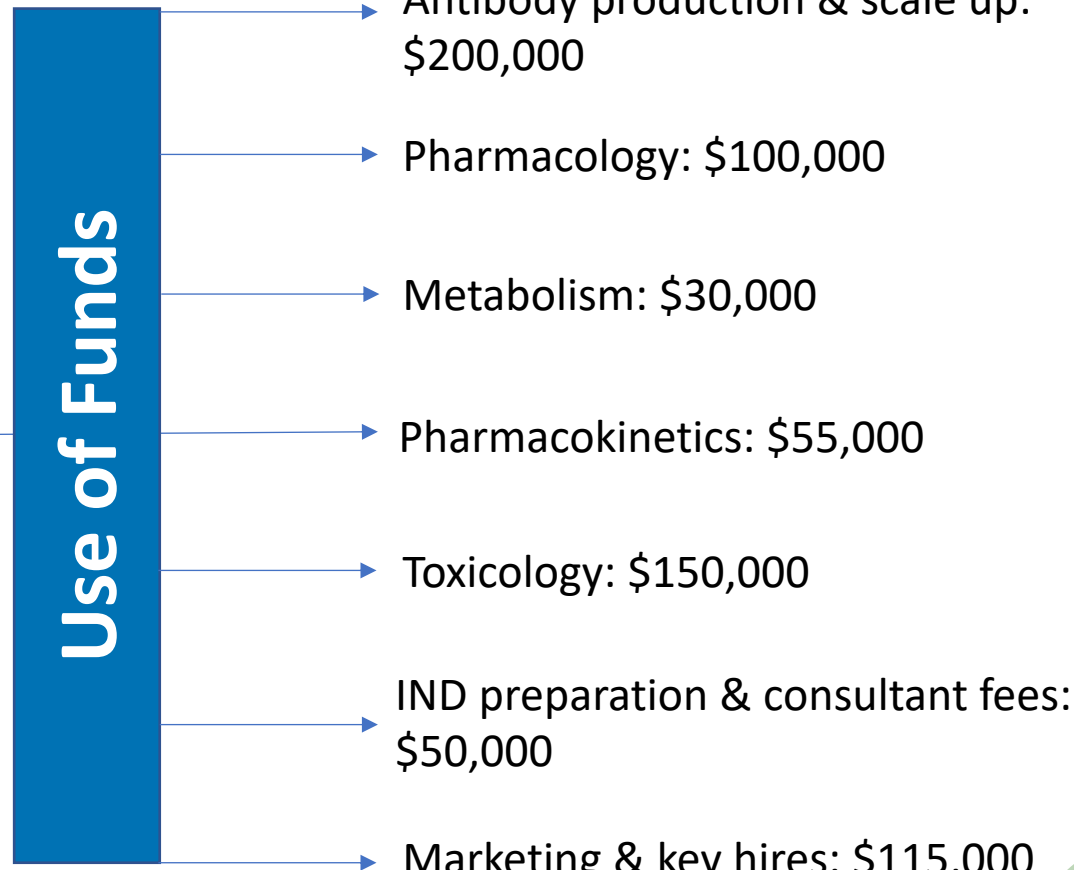
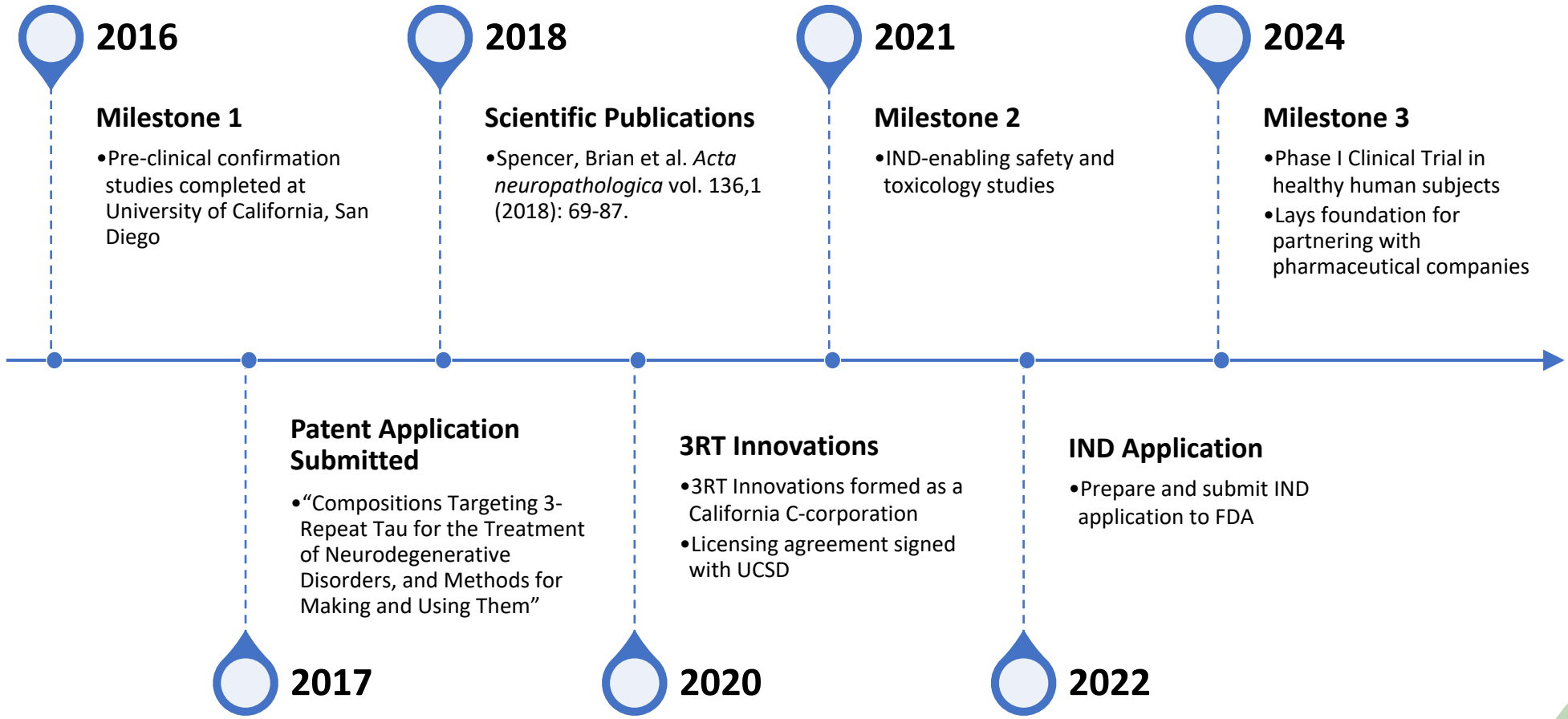
Use of Funds

Requesting seed funding of $700,000

Funds are expected to last for 24 months through the submission of an IND application to the FDA



Timeline


2016
Milestone 1
•Pre-clinical confirmation studies completed at University of California, San Diego
2017
Patent Application Submitted
•"Compositions Targeting 3-Repeat Tau for the Treatment of Neurodegenerative Disorders, and Methods for Making and Using Them"
2018
Scientific Publications
•Spencer, Brian et al. *Acta neuropathologica* vol. 136,1 (2018): 69-87.
2020
3RT Innovations
•3RT Innovations formed as a California C-corporation
•Licensing agreement signed with UCSD
2021
Milestone 2
•IND-enabling safety and toxicology studies
2022
IND Application
•Prepare and submit IND application to FDA
2024
Milestone 3
•Phase I Clinical Trial in healthy human subjects
•Lays foundation for partnering with pharmaceutical companies

Leadership

President and CEO: Erin Saito, PhD, MSc

- Background in academic research
- Experience with pre-clinical development of novel small molecule alpha-7-nicotinic acetylcholine receptor modulators
- Obtained several years of funding through private foundation grants; intellectual property licensed to another company for the clinical phase of development

Medical Advisor: Aaron McMurtray, MD, PhD

- Board certified neurologist at the University of California, Los Angeles
- Medical Director for Dementia Clinics at UCLA
- Recognized national leader in the field of traumatic brain injury
- Serves on the Leadership Council for the NFL Concussion Settlement

Drug Development Consultant: TBD

Scientific Consultant: TBD

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Thank you!

Contact:

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