# **Indah Biotech**

Columbia University
Department of Pathology and Cell Biology
Taub Institute for Research on the Aging Brain

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## Industry:

\_\_\_\_\_Pharma
\_\_X\_\_Biotech
\_\_\_\_\_Medical Device
\_\_\_\_Diagnostic
Other (declare)

### Management:

- Executive Leadership TBD
- Board
   TBD
- Scientific Advisory Board TBD

# **Number of Employees:**

1-founder

### Finance:

- Auditor TBD
- Current Investors / Financing to Date NIH grants R21, K01
- Amount of Financing Sought Seed \$563,940 -\$913,940

# Legal:

- Corporate
   Columbia University
   Tech Ventures Office
   (CTV)
   General Council
   Baker Botts
  - IP
    US Provisional No.
    62/214,530, September
    4, 2015
    US Provisional No.
    62/299,289, February 24,
    2016
    US Provisional No.
    62/299,816, February 25,
    2016
    International Serial No.
    PCT/US16/050265,
    September 2, 2016

#### **Executive Summary**

#### Market Opportunity / Unmet Need:

An estimated 5.3 million people are living with Alzheimer's in the US. This population is projected to grow at an average of 3.23% reaching 13.8 million in 2050. Research has shown the brain pathology changes associated with Alzheimer's may start twenty or more years before symptoms appear, but no biomarkers are currently available. For prophylactic therapy during the prodromal AD stage, adults between the ages of 45-64 years old would be targeted, roughly 20% of the total population or 1,480 million people. Additional AD risk criteria could be used for marketing targets including smoking, obesity, diabetes, hypertension, high cholesterol, female and APOE  $\varepsilon$ 4 carriers. Data from the CDC showed 27.9% of adults over the age of 40 used cholesterol lowering therapies in 2012. The statin patient population evidences a behavioral willingness to take a daily preventative therapy, and an ideal market to target a daily preventative AD therapy.

### Products/Services – Launched & Pipeline:

We have identified a novel lipid target associated with AD pathology and have demonstrated in vitro binding using innovative plate binding assay platform amenable to high throughput screening. This specific lipid species binds to amyloid and is depleted in brain of a mouse model of AD. Aggressive supplementation though a novel route of delivery (non-oral) was capable of amelioration of AD associated behavioral phenotypes in a mouse model of AD. These animals have advanced pathology (12 months of age) and show behavioral deficits including impaired novel object recognition and contextual fear conditioning which was rescued in preliminary studies with initial treatment strategy for 1 month. Further optimization of lipid formulation and refinement of treatment paradigm is likely to result in complete behavior rescue. This novel route of administration has promise to bypass blood brain barrier and circulating lipid binding proteins allowing targeted delivery to the site of action in the brain. These preliminary data demonstrate in vivo proof of concept for the lipid based discovery platform to identify lipid target and route of delivery for amelioration of behavioral deficits in a mouse model of Alzheimer's disease.

**Commercial / Technical Milestones:** IND filing: Proof of concept in mouse models using behavioral outcomes and targeted and non-targeted lipidomic mass spectrometry to determine if lipid accrues in brain. ADME/Tox for IND enabling studies. Phase Ia safety: Scale-up for first in human Phase I studies (safety).

**Intellectual Property**: Proprietary formulation and route of delivery, proprietary high-throughput amenable plate assay, multiple indications.

Competition: Donepezil (Aricept), Rivastigmine (Exelon), Galantamine (Razadyne), Memantine (Namenda), Namzaric are used for symptoms at time of diagnosis, but lose effectiveness after 2-3 years of treatment. They have no disease modifying effect.

**Financial Projections (Unaudited):** Price modeled on statins (\$500/year) that penetrates 25% of the high-risk population and 75% of the AD population estimates a market opportunity of \$13 Billion.

Please indicate primary purpose of Presentation: Investment and Business Development

**Other:** (Please specify): Translational expertise and building management structure and team.