

NopticBio

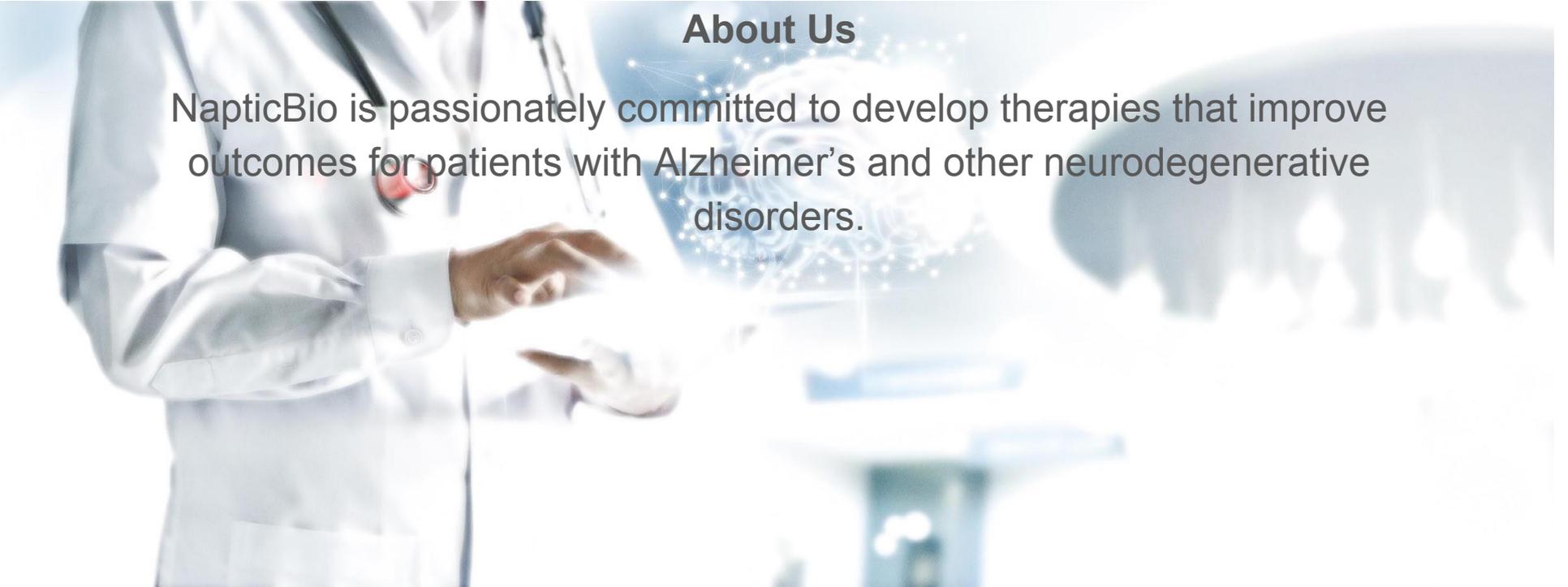
Novel-patented Therapies to Dramatically Improve Outcomes
for patients with Alzheimer's and other Neurological Disorders



NapticBio

About Us

NapticBio is passionately committed to develop therapies that improve outcomes for patients with Alzheimer's and other neurodegenerative disorders.



Current Problem

Few Alzheimer's therapies are effective and all have poor adverse effect profiles.

The last significant approval of an Alzheimer's drug was 2003 (Memantine).

History

Increase in Numbers

By 2050 there will be 13.4 million Americans with Alzheimer's, up from 5.3 million today

Cost to treat Alzheimer's will reach an unmanageable \$1 trillion, up from \$200 billion today.

Worldwide, the number of patients will more than double by 2050 to 100 million.

Effort to-Date

Massive efforts by the
bio-pharmaceutical industry

No breakthrough drugs to reach the
market because of failures due to
side effects and lack of efficacy.

Unique solution

NapticBio currently conducting phase II pre-clinical studies via a combination of $\Delta 9$ -THC and a COX-2 - our goal is to develop a treatment for early Alzheimer's with the following properties:

1. **Good Safety Profile:** Both have excellent records of safety in broad populations.
2. **Clinically Ready:** FDA approved in oral form and clinical experience.

Δ 9-THC

The effects of Δ 9-THC

Slows Buildup of neural plaques; toxic aggregation of peptides in the neural tissue is one of the characterizing pathological markers of Alzheimer's.

Δ 9-THC

The effects of Δ 9-THC

- Could prevent cell death through its neuroprotective, anti-oxidative, and anti-apoptotic properties, reducing neurotoxicity caused by amyloid buildup.
- Potential to stimulate appetite in Alzheimer's patients, aide in weight control, motor function and potentially reduce agitation.

COX-2

The effects of COX-2

COX-2 inhibitor blocks Δ 9-THC's negative effects on cognitive function.

Company's Objective

Focus on patients with mild cognitive impairment (MCI) and early stage Alzheimer's.

Leverage existing regulatory approval of drugs, partner with pharma or other entities to help speed our product to market.

Via pharma - access 50% of the \$6.9B Global Market by 2024;
Capture 10% of the market for \$815M in revenues (2022-24)

Mission Statement

Develop a therapy that can slow down or reverse disease progression. With an effective treatment option, overall frequency of the disease would be decreased by nearly 50% if we could delay the onset of disease by 5 years.

*Alzheimer's Association. Changing the Trajectory of Alzheimer's Disease: How a Treatment by 2025 Saves Lives and Dollars. Chicago, IL: Alzheimer's Association; 2015

Our Current Evidence

Who's behind it?

- Our pre-clinical research is backed by LSU and financed by an \$1.8M NIH grant

Data behind it?

- Our pre-clinical findings were published in **Cell**:
“D9-THC-Caused Synaptic and Memory Impairments Are Mediated through COX-2 Signaling”: Chu Chen, et al;

Product/Research/ Resources

NapticBio Alzheimer's therapy combines two approved molecules that work synergistically:

Δ 9-THC (Marinol) & Cox-2 (Celebrex) inhibitors. Δ 9-THC, as well COX-2 are FDA approved.

Product/Research/ Resources

Solid IP

Broad Utility Patents covering
combination therapy licensed from
LSU (US Patent No:US 9,763,912
B; US Patent Pending No:
15/672,817)

Where we are today

We have proof of concept in a pre-clinical study funded by the NIH and are preparing for a successful IND and Phase I studies

Next Steps

1. Complete Preclinical studies for oral dosing
2. Apply for Fast Track designation for FDA approval.

Team



**Dr. Nick Poullos, PhD, PhM
CEO**

Responsible for setting company direction-corporate strategy, market access, corporate partnerships.

Nick is a seasoned life sciences executive with over 25 years of increasing responsibility and achievements in the pharmaceutical and diagnostics industries in the areas of corporate value, market access, strategic pricing, public policy and business development.

Prior to joining NapticBio, Nick founded and lead several global corporate & market access functions for Roche Pharma, Baxter Bioscience, Elan Pharma, as well as diagnostics companies such as Gen-Probe and Roche Molecular Diagnostics.

Nick is a frequent speaker at scientific and professional conferences and has over 40 publications on health outcomes research, budget impact, cost-effectiveness, quality of life, productivity, strategic pricing and reimbursement in peer review journals, such as: ATS, Blood, BSH, BJ Hematology, WFH, ISTH, Pharmacoeconomics, ISPOR, ASLD, AMCP, etc.

Nick holds PhD, PhM degrees from the City University Of New York; MA from Virginia Commonwealth University/Medical College of Virginia and BA from the University of Richmond, Virginia. Dr. Poullos received postdoc training at the Harvard School of Public Health, Department of Biostatistics.



George Simeon, MBA, MPH VP - Investor Relations

George has over 25 years of experience in the healthcare sector working with multinational firms, start-ups and not-for-profits. He has worked in pharmaceuticals, medical devices, IVD, and healthcare convergence technologies.

In 2014, George went to South Korea to work with SK Telecom's Healthcare Division in M&A and global strategic alliances. Since then, he has been involved in a number of cross-border transactions and advised large firms and start-ups on global business strategy and fundraising. Before coming to Korea, he worked across Europe and the USA as an executive with Johnson & Johnson as Vice-President for Cordis Neurovascular Europe and with GHX Europe as a commercial Vice-President. He also spent 3 years with Novartis Global Headquarters in Switzerland working on projects in their CNS portfolio in Health Economics and Pricing. He has also founded two start-ups and advised GS1 on their global entry and expansion into the Healthcare sector.

George is a graduate of INSEAD (MBA), Yale University (MPH), Bocconi (PhD ABD) and the University of Ottawa (Economics).

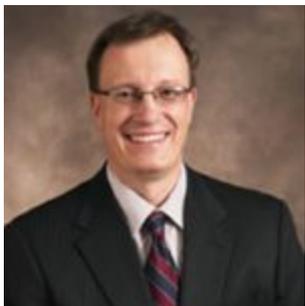


Dr. Benjamin Hoehn, MD, PhD
Advisor Medical Affairs

Responsible for medical affairs and clinical programs strategy. He is also assisting NapticBio pursue a series of IND's, and Phase I-III clinical trials for FDA as well as planning for post-market surveillance.

In 2010, Benjamin left the Neurosurgery clinics of UVA to start his industry career in Korea with Genomictree, a startup diagnostic company targeting blood based rapid testing for colon, lung and bladder cancer, as well as consulting for Crystal Genomics Pharma in Pongyo with their first in class COX 2 inhibitor. He then transitioned to Johnson & Johnson Medical where he led their North Asia, Clinical, and Safety organizations for their medical device sector. In this role he covered Korea, Hong Kong, and Taiwan. He then moved to a Global role as CMO of Codman Neuro. His Academic and Professional experience spans multiple industries and regions of the world. In Asia he has developed and maintained strong relationships with leaders that understand the importance of building a stronger future in healthcare. He has and continues to make important contributions to the rapidly expanding fields of neuroscience, neurosurgery, and healthcare.

Dr. Hoehn has an MD and PhD degrees in Neuroscience from Stanford University.



Dr. Alex Zubkov, MD, PhD
Advisor Medical Strategy

Responsible for NapticBio medical affairs and clinical programs strategy and making sure NapticBio pursues a series of successful IND's, and Phase I-III Clinical trials for FDA approvals through to post-market surveillance.

Dr. Alexander Zubkov is a very experienced neurologist who received initial neurosurgical training in Russia, followed by PhD in Physiology and neurology residency at the University of Mississippi Medical Center. Subsequently, Dr. Zubkov completed his training in Mayo Clinic, Rochester, MN, specializing in stroke and neurocritical care. Dr. Zubkov has a large practice covering all areas of neurology, including headaches, dementia and of course vascular neurology. He published over 60 peer-reviewed papers and participated in multiple studies. His current practice is in Minneapolis Clinic of Neurology in Edina, MN.



Anastassios D. Retzios, Ph.D.
Advisor Regulatory Affairs

Founder and President of Bay Clinical R&D Services, Anastassios has extensive experience in clinical operations and pharmaceutical development. In his early career, in an academia/industry collaborative environment, he participated in the discovery and development of biologic therapeutic agents; later, he served in a variety of leading roles in the industry: as a Clinical Project Manager and Associate Director of Clinical R&D at Alpha Therapeutic Corporation; Senior Director of Clinical R&D at Questcor Pharmaceuticals; Global Director of Clinical Development at Baxter and Vice President of Clinical Development at AP Pharma, Inc.

Scientific Data

Our pre-clinical findings were published in Cell:“D9-THC-Caused Synaptic and Memory Impairments Are Mediated through COX-2 Signaling”; Chu Chen, et al: Cell 155, 1154–1165, November 21, 2013

A chronic low dose of 9-tetrahydrocannabinol (THC) restores cognitive function in old mice: Andras Bilkei-Gorzo, et al: Nature Medicine, VOLUME 23 | NUMBER 6 | JUNE 2017, pp 782-787

The Burden of Neurological Disease in the United States: A Summary Report and Call to Action: Annals of Neurology, 2017, pp 479-484

Alzheimer’s disease drug development pipeline: 2017: J. Cummings et al. / Alzheimer’s & Dementia: Translational Research & Clinical Interventions 3 (2017) 367-384

Contact Us

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