

ANNOVIS BIO, INC.

FORM FWP

(Free Writing Prospectus - Filing under Securities Act Rules 163/433)

Filed 12/10/19

Address	1055 WESTLAKES DRIVE, SUITE 300 BERWYN, PA, 19312
Telephone	610-727-3913
CIK	0001477845
Symbol	ANVS
SIC Code	2834 - Pharmaceutical Preparations
Industry	Biotechnology & Medical Research
Sector	Healthcare
Fiscal Year	12/31



ANNNOVIS

Attacks Alzheimer's Disease and
Neurodegeneration by Improving the
Information Highway of the Nerve Cell
Axonal Transport

Proposed Symbol: **ANVS** (NYSE American)

December 2019

FORWARD-LOOKING STATEMENTS

This company presentation may include "forward-looking statements." All forward-looking statements are subject to a number of risks, uncertainties and assumptions, and you should not rely upon forward-looking statements as predictions of future events. You can identify forward-looking statements by words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "will," "plan," "potential," "predict," "project," "should," "would" or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes. Examples of forward looking statements contained in this presentation include, among others, statements regarding our ability to develop and commercialize ANVS401; our ability to develop other products in our pipeline; status, timing and results of preclinical studies and clinical trials; the potential benefits of ANVS401; the timing of seeking regulatory approval of ANVS401; our ability to obtain and maintain regulatory approval; our estimates regarding our capital requirements; our plans to develop and market ANVS401 and the timing of our development programs; our estimates of the size of the potential markets for ANVS401; sources of cash, including the proceeds from this equity issuance and contributions from grants; the rate and degree of market acceptance of ANVS401; our intellectual property position; our ability to maintain and protect our intellectual property rights; our results of operations, financial condition, liquidity, prospects, and growth strategies; our spending of the proceeds from this offering; the industry in which we operate; and the trends that may affect the industry or us. This presentation discusses product candidates that are under pre-clinical study and clinical trial and that have not yet been approved for marketing by the Food and Drug Administration. No representation is made as to the safety or efficacy of these product candidates for the therapeutic use for which they are being studied. All forward-looking statements are based upon current estimates and expectations about future events and financial and other trends. There is no guarantee that future results, performance or events reflected in the forward-looking statements will be achieved or occur. Except as required by law, we undertake no obligation to update any forward-looking statements whether as a result of any new information, future events, changed circumstances or otherwise.

FREE WRITING PROSPECTUS

We have filed a registration statement (including a preliminary prospectus) with the SEC for the offering to which this presentation relates. The registration statement has not yet become effective. Before you invest, you should read the preliminary prospectus in the registration statement (including the risk factors described therein) and other documents we have filed with the SEC for more complete information about us and the offering.

You may access these documents for free by visiting EDGAR on the SEC Web site at <http://www.sec.gov>. The preliminary prospectus, dated November 19, 2019, is available on the SEC Web site at <http://www.sec.gov>. Alternatively, we or any underwriter participating in the offering will arrange to send you the prospectus if you contact ThinkEquity, a division of Fordham Financial Management, Inc., located at 17 State Street, 22nd Floor, New York, New York 10004, by telephone at (877) 436-3673, or by email at prospectus@think-equity.com.

OFFERING SUMMARY

ISSUER: **ANNOVIS BIO, Inc.**

Proposed Aggregate Offering	\$ 10.0 Million
Price Range	\$6.00 -\$8.00
Proposed Symbol	ANVS – NYSE American
Shares Offered	1.4 million
Pre-IPO Common Shares as Converted	4.5 million
Post-IPO Common Shares Outstanding	5.9 million
Use of Proceeds	To advance the clinical development of ANVS401, our lead compound
Sole Book Runner	ThinkEquity, a division of Fordham Financial Management, Inc.





INVESTMENT HIGHLIGHTS

A novel approach to treat neurodegeneration is desperately needed

- **Annovis is developing drugs** for Alzheimer's (AD) and Parkinson's disease (PD), including the orphan indication Alzheimer's in Down Syndrome (AD-DS)
- **Three patented families of compounds**
ANVS401 ANVS405 ANVS301
- **Lead compound, ANVS401**, is the only drug to improve axonal transport, the information highway of the nerve cell, by attacking multiple neurotoxic proteins
- **Two phase 2a studies**
 - AD trial already underway
 - PD trial to be initiated
- **Successful completion of the two phase 2a** will allow start of two phase 3 studies
 - AD-DS
 - PD
- **Highly experienced and respected management team, great board and world renowned scientific advisory board**



THE STATE OF ALZHEIMER'S DISEASE

- Alzheimer's is the most common cause of dementia, a general term for memory loss and other cognitive abilities serious enough to interfere with daily life. **Alzheimer's disease accounts for 60 to 80 percent of dementia cases.**
- **1 in 6 females and 1 in 11 males** have the chance to develop Alzheimer's during the remainder of their lives at age 65.
- **From 1998 to 2018 there have been over 500 failed attempts at developing Alzheimer's drugs.**
- **The sector needs to rethink dementia**, develop new approaches and create new drugs.



ALZHEIMER'S DRUG TRIAL FAILURES

Have researchers been on the wrong track with amyloid?

STAT+

“ *The idea that sticky brain plaques cause Alzheimer's disease began as an interesting hypothesis and eventually became drug industry dogma. Now, after a string of clinical trial failures, that hypothesis looks less credible than ever. But how did nearly two decades of failure not convince the brightest minds in pharma that it was time to move on?* ”

Damian Garde & Alex Hogan

Amyloid Plaque and A β is NOT The Only Answer

After amyloid failures, it's time to take a new tack for treating Alzheimer's

Raymond J. Tesi STAT News April 30, 2019



Aducanumab's failure puts pressure on field to look beyond amyloid

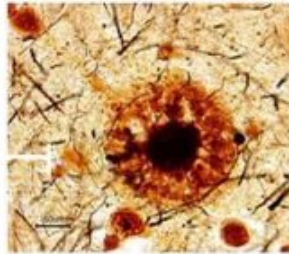
Med Pagliarulo March 22, 2019

ANNOVIS' NEW, 3-PRONG APPROACH TO ATTACK AD AND PD

Chronic and acute brain insults lead to high levels of neurotoxic proteins and to neurodegeneration

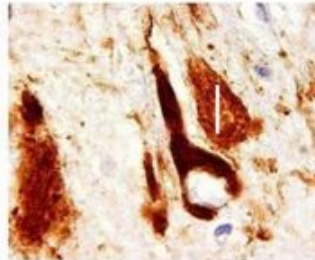
Amyloid β

Alzheimer's - Parkinson's
A β Targeting Compounds



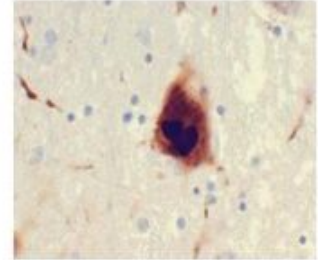
Tau

Tauopathies - Alzheimer's
Tau Targeting Compounds



α Synuclein

Parkinson's - Alzheimer's
 α SYN Targeting Compounds



Attacking one neurotoxic protein results in minimal effect

ANVS401 is the only drug to attack multiple neurotoxic proteins simultaneously



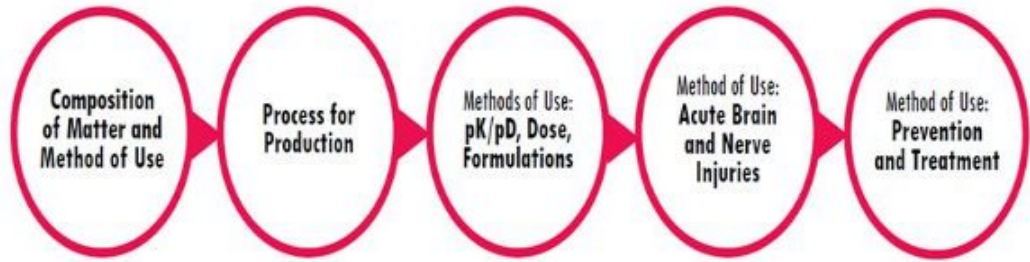
PIPELINE

	DISEASE	NEUROTOXIC PROTEIN TARGET	PRE-CLINICAL	IND	PHASE 1	PHASE 2
ANVS401 Oral drug for chronic indications	AD	APP, tau, αSYN	▶			
	AD-DS	APP, tau, αSYN	▶			
	PD	αSYN, APP, tau	▶			
ANVS405 injectable drug for acute traumatic events	TBI	tau, APP, αSYN	▶			
ANVS301 oral drug for advanced AD and dementia	Advanced AD	BChEi	▶			

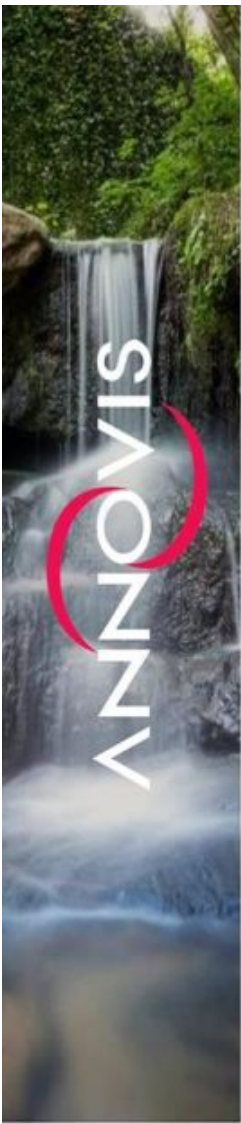


CORPORATE PATENT ESTATE

Multi-layer strategy

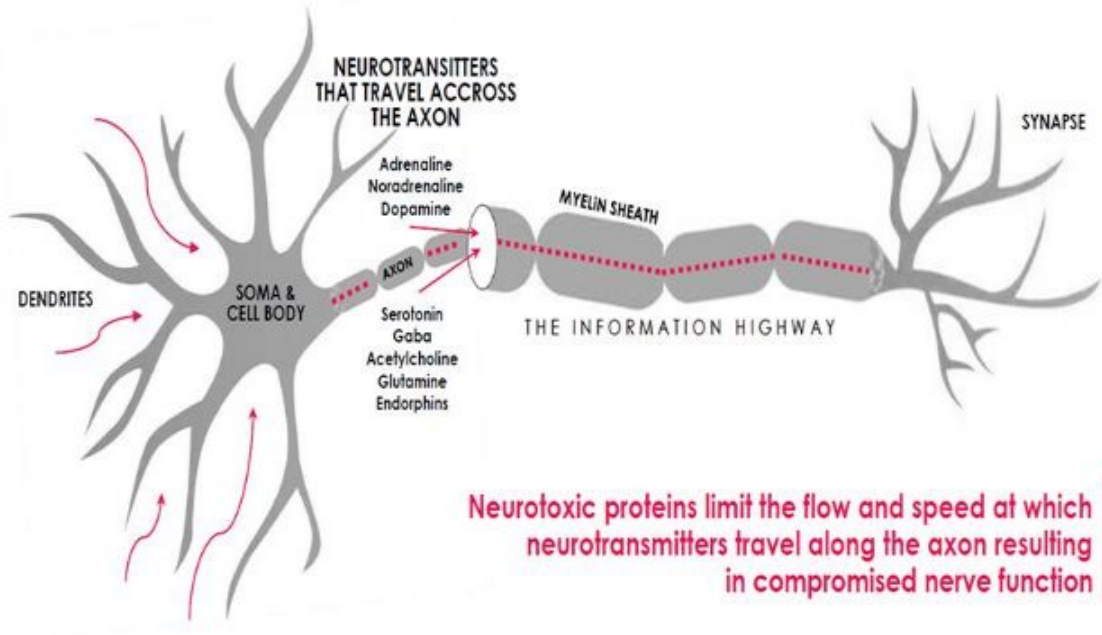


Patent/Application	Subject Matter	Status US	Expiry US
PCT	ANVS401 and 405 - Method of use of MOA for prevention and treatment of diseases	Pending	2038
PCT	ANVS405 - Acute brain and nerve injuries	Pending	2036
PCT	ANVS401 - pK/pD, low doses, formulations Neurodegenerative Diseases	US 10,383,851 Issued August 2019	2031
In-licensed patents	Composition of matter, manufacturing, method for treating AD and DS	Granted	2022-25



HOW NERVE CELLS WORK

In **healthy nerve cells** little packages containing neurotransmitters or nerve growth factors travel unimpaired from the cell body through the axon to the synapse.



Neurotoxic proteins limit the flow and speed at which neurotransmitters travel along the axon resulting in compromised nerve function

NEUROTOXIC PROTEINS IMPAIR AXONAL TRANSPORT AND **CAUSE A TOXIC CASCADE**

HIGH LEVELS OF NEUROTOXIC PROTEINS

IMPAIRED AXONAL TRANSPORT

SLOWER SYNAPTIC TRANSMISSION

INFLAMMATION

DEATH OF NERVE CELLS

LOSS OF COGNITIVE AND MOTOR FUNCTION

ANVS401 LOWERS LEVELS OF NEUROTOXIC PROTEINS

IMPROVED AXONAL TRANSPORT

INCREASED SYNAPTIC TRANSMISSION

NO INFLAMMATION

HEALTHY NERVE CELLS

IMPROVED COGNITIVE AND MOTOR FUNCTION

ANVS401 IMPROVES AXONAL TRANSPORT AND **IMPEDES THE TOXIC CASCADE**





NEURODEGENERATION IS AN AXONAL TRANSPORT DISEASE

Axonal transport is responsible for:

- Neurotransmitters GABA (anxiety), ACh (cognition), dopamine (movement), serotonin (mood)
- Neurotrophic factors NGF, BDNF
- All communication within and between nerve cells

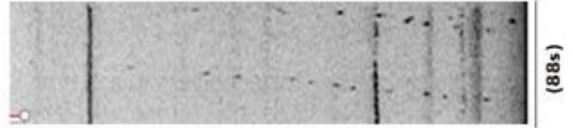
Newly published Nature Review Article (September 2019):

“Axonal transport disruption is linked to human neurological conditions.”

Retrograde (0.5 frame/sec) →

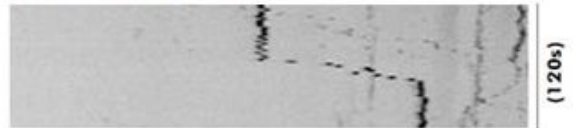
Normal Transport

The *Normal Flow and Speed* of vesicles carrying BDNF across the axon.



Abnormal Transport

Shows the *Blockage and Slowing* of BDNF across the axon. Black areas demonstrate where transport is slowed due to high levels of neurotoxic proteins.



TREATED WITH ANVS 401

The *Flow and Speed* of axonal transport is improved.



APP, Ab42, C99 – Mobley, UCSF; αSYN – Isacson, Harvard; Lee, U Penn;
Tau – U. Marek & Zuerich, Htt – Mobley, UCSF; TDP43 – Taylor, Northwestern



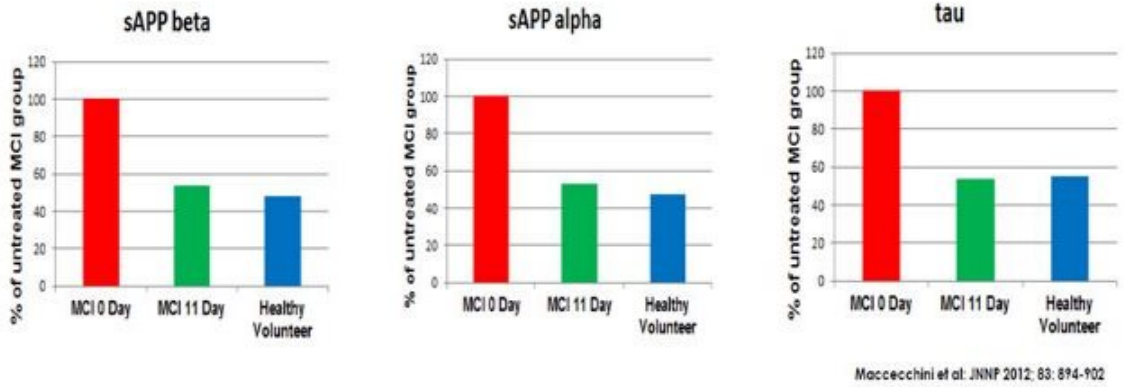
WHAT DOES IMPAIRED AXONAL TRANSPORT MEAN FOR YOUR HEALTH?

- **Everything we do is regulated by our brain.** The brain sends its directives via axon to the targets, be they in the brain or in the body
- **Therefore everything we do is regulated by neurotransmitters**
 - **Acetylcholine** stimulates cognition and low levels lead to memory loss and dementia – Alzheimer's disease
 - **Dopamine** is responsible for movement and low levels cause shaking and slow movements – Parkinson's disease
 - **GABA** calms us and is responsible for sleep and low levels cause agitation, anxiety and epilepsy
 - **Serotonin** keeps our mood up and low levels cause depression
- **Neurotransmitters are responsible for how we feel, think and act**



RESULTS IN HUMANS

ANVS401 Lowers Neurotoxic Proteins in Spinal Fluid of MCI Patients



- In this proof of concept study, ANVS401 lowers the levels of APP/A β , tau/p-tau and α SYN back to the levels seen in healthy volunteers
- It lowers the levels of the three neurotoxic proteins causing AD and PD

ANVS401 LOWERS NEUROTOXIC PROTEINS AND INFLAMMATORY MARKERS

CSF Biomarkers Significantly Decrease After 10 Days of Oral ANVS401 in MCI Patients

Human Biomarker	CSF % of Baseline	p-Value
sAPP α	-59.9%	0.0006
sAPP β	-57.7%	0.0001
A β 42	-51.4%	0.053
Tau	-46.2%	0.002
p-Tau	-61.0%	0.0005
α SYN	-41.2%	0.091

CSF Inflammatory Markers Significantly Decrease After 10 Days of Oral ANVS401 in MCI Patients

Inflammatory Protein	CSF % of Baseline	p-Value
Complement C3	-86.9%	0.0007
MCP-1	-87.5%	0.0007
YKL40	-72.7%	0.0113
sCD14	-26.1%	0.1159
Factor FH*	23.7%	0.4988

* Control Factor

Maccocchi et al: JINP 2012; 83: 894-902





TWO PHASE 2 CLINICAL TRIALS IN AD AND PD

PATIENTS

AD with 24 patients for one month (ongoing)
PD with 50 patients for one month (planned)

ENDPOINTS

Target Engagement

Decrease in neurotoxic protein levels

Pathway Engagement

Increase in neurotransmitters and neurotrophic factors

Lowering of inflammatory proteins

Lowering of neurodegeneration markers

Cognitive Outcomes and Functional Outcomes

TWO PHASE 3 CLINICAL TRIALS IN AD-DS AND PD

PATIENTS

AD-DS with 100 patients for
24 months

PD with 400 patients for
18 months

ENDPOINTS

Cognitive Outcomes

Functional Outcomes

RESULTS IN ANIMALS

19 animal studies showed that ANVS401 and ANVS405 improved the affected function

ANVS401

ANVS405

✓ **ANVS401 and ANVS405 increased memory and learning in three animal models:**

- AD tg mice
- DS trisomic mice
- TBI rats

ANVS401

- ✓ **Improved gut motility** in PD tg mice
- ✓ **Stabilized brain chemistry** in FTD tau tg mice

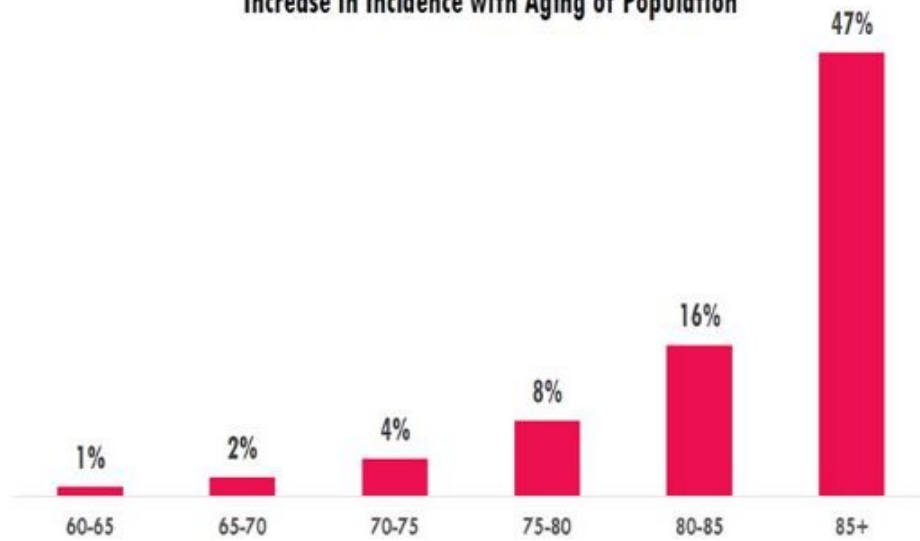
ANVS405

- ✓ **Protected retinal cells** in acute glaucoma in rats



MARKET PROJECTIONS

Increase in Incidence with Aging of Population



Source: Alzheimer's Association 2014; Incidence of AD in Relation to Age

Annual sales potential for US and worldwide are over \$100 billion dollars



PLANNED USE OF PROCEEDS

IPO Proceeds **\$10,000,000**

Use of Proceeds Through 2021

Phase 2a Trial in PD	\$3,000,000
Phase 2a Trial in AD	800,000
Chronic Toxicology Studies *	1,700,000
Commence Phase 3 Study in AD-DS	200,000
R&D	600,000
License Agreement Payments	700,000
Legal IP	700,000
G&A	1,400,000
	\$9,100,000

* In August 2019, Annovis received an NIH grant for \$1.7 million that fully covers the costs associated with the chronic toxicology studies

CHIEF EXECUTIVES AND CHIEF ADVISORS



Maria L. Maccacchini, PhD Founder, President & CEO

Founded Annovis in May 2008 to develop better therapeutics for Alzheimer's, Parkinson's and other neurodegenerative diseases. Was partner and director of two angel groups, Robin Hood Ventures and MidAtlantic Angel Group; Founder and CEO of Symphony Pharmaceuticals/Annovis a biotech company that sold in 2001 to Transgenomic; General Manager of Bachem Bioscience, the US subsidiary of Bachem AG, Switzerland and Head Molecular Biology Mallinckrodt; Dr. Maccacchini did one postdoc at Caltech and one at the Roche Institute of Immunology, her PhD in biochemistry is from the Biocenter of Basel with a two-year visiting fellowship at The Rockefeller University.



Jeffrey McGroarty, CPA, MBA, Chief Financial Officer

Jeff is a financial executive with experience in investor relations, working with analysts, creditors and financial institutions, planning and analysis, capital allocation, SEC communications and reporting, accounting, acquisitions and turnarounds. He is experienced in effectively managing complex projects, building professional relations and developing staff. Mr. McGroarty was previously employed as CFO of Safeguard Scientifics, Interim Controller at Cephalon, Inc., Vice President-Financial Planning and Analysis of Exide Technologies, Inc., and Senior Manager at PWC. Jeff's MBA is from the Wharton School of Business.



Jeffrey Cummings, MD, Chief Medical Advisor

Dr. Cummings completed Neurology residency and a Fellowship in Behavioral Neurology at Boston University, Boston, Massachusetts. US training was followed by a Research Fellowship in Neuropathology and Neuropsychiatry at the National Hospital for Nervous Diseases, Queen Square, London, England. Dr. Cummings was formerly Professor of Neurology and Psychiatry at UCLA, director of the Mary S. Easton Center for Alzheimer's Disease Research at UCLA, director of the Deane F. Johnson Center for Neurotherapeutics at UCLA and director of the Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas, Cleveland and Florida. He is past president of the Behavioral Neurology Society and of the American Neuropsychiatric Association. Dr. Cummings has authored or edited 30 books and published nearly 600 peer-reviewed papers.



William Mobley, MD, PhD Chief Scientific Advisor

Distinguished Professor, Department of Neurosciences Florence Riford Chair for Alzheimer Research and Associate Dean for Neurosciences Initiatives. He is a member of the National Academy of Medicine. His research focuses on the neurobiology of neurotrophic factor actions/signaling and on the hypothesis that malfunction of these mechanisms contribute to neuronal dysfunction in developmental and age-related disorders of the neurosystem.



SCIENTIFIC ADVISORY BOARD



Sidney Strickland, PhD, Chairman

Vice President and Dean for Educational Affairs and Research Professor, Patricia and John Rosenwald Laboratory of Neurobiology and Genetics at Rockefeller University. Dr. Strickland's laboratory investigates how dysfunction of the circulatory system contributes to Alzheimer's and other neurodegenerative disorders. He will serve as the Chairman of Annovis Bio's SAB.



Peter Davies, PhD

Peter Davies received his B.Sc. and Ph.D. both in Biochemistry from the University of Leeds. He was a post-doctoral fellow at the University of Edinburgh, Scotland before joining the staff of the Medical Research Council Brain Metabolism Unit in Edinburgh in 1974, where he began his research on Alzheimer's disease. He is presently the Director of the Litwin-Zucker Research Center.



William Mobley, MD, PhD

Dr. Mobley is Distinguished Professor, Department of Neurosciences Florence Riford Chair for Alzheimer Research and Associate Dean for Neurosciences Initiatives. He is a member of the National Academy of Medicine. His research focuses on the neurobiology of neurotrophic factor actions/signaling and on the hypothesis that malfunction of these mechanisms contribute to neuronal dysfunction in developmental and age-related disorders of the neurosystem.

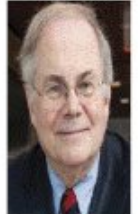
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Gregory Petsko, PhD

He is a member of the National Academy of Sciences, the National Academy of Medicine, the American Academy of Arts and Sciences and the American Philosophical Society. His research interests are directed towards understanding the biochemical bases of neurological diseases like Alzheimer's, Parkinson's, and ALS discovering treatments (especially by using structure-based drug design), that could therapeutically affect those biochemical targets, and seeing any resulting drug candidates tested in humans. He has also made key contributions to the field of protein crystallography.



Rudolph E. Tanzi, PhD

Dr. Tanzi has published over 500 research papers and has received the highest awards in his field, including the Metropolitan Life Foundation Award, Potamkin Prize, Ronald Reagan Award, Silver Innovator Award, and many others. He was named to TIME magazine's list of TIME100 Most Influential People in the World (2015), and received the Smithsonian American Ingenuity Award, the top national award for invention and innovation. He co-authored the popular trade books "Decoding Darkness", New York Times bestseller, "Super Brain", and international bestseller "Super Genes".



BOARD OF DIRECTORS



Michael B. Hoffman
Chairman

Mr. Hoffman is the Founder and Managing Partner of Stone Capital Partners, a private equity firm focused on power and renewable energy. He was Partner of Riverstone, senior managing director at the Blackstone Group and managing director at Smith Barney, Harris Upham & Co. He serves as Chairman of Onconova, Annovis Bio, Curative and is on the Board of Rockefeller University.



Claudine E. Bruck, PhD

Pharmaceutical executive and scientist with strong entrepreneurial drive. Exhibited successes in building a therapeutic research unit de novo and leading discovery and clinical development of biological (vaccines, biopharmaceuticals) and small molecule medicines as well as an ophthalmic drug portfolio. With creativity and a strong results-focus, she is energized to challenge and lead teams. Extensive Pharmaceutical industry experience spans drug discovery and development across several therapeutic.



Maria L. Maccacchini, PhD
Executive Board Member

Founded Annovis in May 2008 to develop better therapeutics for Alzheimer's, Parkinson's and other neurodegenerative diseases. Founder and CEO of Symphony Pharmaceuticals/Annovis focused on protecting brain cells after stroke. It sold in 2001 to Transgenomic.

Mark White

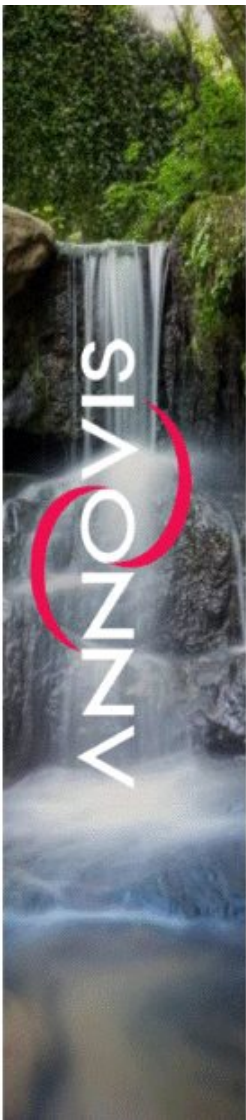
Mark is a biopharmaceutical executive with global marketing, business development and sales experience. Currently, Mark is an independent consultant and a member of Robin Hood Ventures, a Philadelphia based angel investor group. Previously, Mark held senior level roles at Pfizer in marketing and commercial development, where he led the successful global launches of Inspira, Revatio, Lyrica and Xeljanz. In his last position, he was Vice President Worldwide Marketing, with global responsibility for new product development and in-line marketing for Pfizer's Inflammation Therapeutic Area.



Robert M. Whelan, Jr.

Mr. Whelan brings over 35 years of corporate finance and investment banking experience to Annovis' Board of Directors. Since 2001, Mr. Whelan has been President of Whelan & Company, LLC, providing financial consulting, valuation and strategic services to public and private companies in the technology, healthcare and alternative energy industries. From 1999 to 2001, Mr. Whelan served as Vice Chairman, Prudential Volpe Technology Group. Prior to then, Mr. Whelan was a senior executive with Volpe Brown Whelan, a private technology and healthcare investment banking, brokerage and asset management firm.





INVESTMENT SUMMARY

A novel approach to treat neurodegeneration is desperately needed

- The markets for AD and PD drugs are in the multibillions of dollars and growing
- Annovis has a novel solution to stop the course of AD and PD
- ANVS401 improves axonal transport and homeostasis in the brain and recovers the affected function
- The successful completion of our two Phase 2a studies with the proceeds from this offering will provide optimal information on target and pathway engagement in AD and PD and allows us to move to two Phase 3 studies



ANNOVIS

Improves **THE FLOW** of Axonal Transport
in Alzheimer's Disease and
Neurodegeneration

ANVS401 **ANVS**405 **ANVS**301

Proposed Symbol: **ANVS** (NYSE American)

CONTACT US

1055 Westlakes Drive
Suite 300
Berwyn, PA 19312

+1 (610) 727 3913
info@annovisbio.com

www.annovisbio.com