

Alzeca Biosciences' ADx Imaging Technology Shows Positive Results in Early Detection of Alzheimer's

- ADx Could Identify Disease a Decade Before Symptom Onset
- Technology crosses the blood brain barrier
- Pivotal results in neurodegenerative disease research

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HOUSTON--(BUSINESS WIRE)--Alzeca Biosciences announced successful preliminary preclinical results for ADx, its innovative, proprietary diagnostic imaging technology, designed to enable diagnosis of Alzheimer's disease a decade or more before the onset of symptoms of cognitive decline.

"Alzeca has brought together incredible breakthrough science and a highly experienced leadership team to accelerate the company's strategy and address a huge unmet need for physicians and patients alike in neurodegenerative disease"

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Successful development of ADx would make early and reliable Alzheimer's testing broadly available, using magnetic resonance (MR) technology, at far lower cost and without the radiation of current positron emission (PET) scans. Earlier detection of Alzheimer's could revolutionize the treatment of the disease and vastly improve the efficiency of clinical trials for new therapies by identifying appropriate candidates.

"Alzeca is building a pipeline with a multi-modality and multi-disease approach using our proprietary technology platform ADx," said Carlo Medici, Chief Executive Officer, Alzeca Biosciences. "Following these positive results, we will aggressively bring this unique technology to the next phases of development and pursue partnerships that will enable us accelerate the company's strategy."

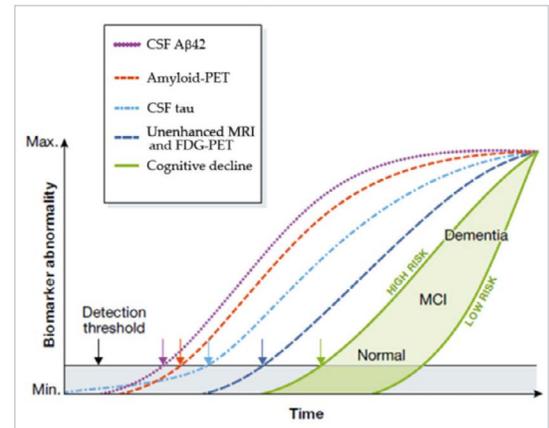
Alzeca is also exploring the significant additional potential of the underlying platform of ADx, which can be modified to bind to different targets in the brain. With these modifications, the platform could be used to image and diagnose other serious neurodegenerative diseases, and even be used as a drug delivery system for those diseases.

Related information: <http://www.alzeca.com/>

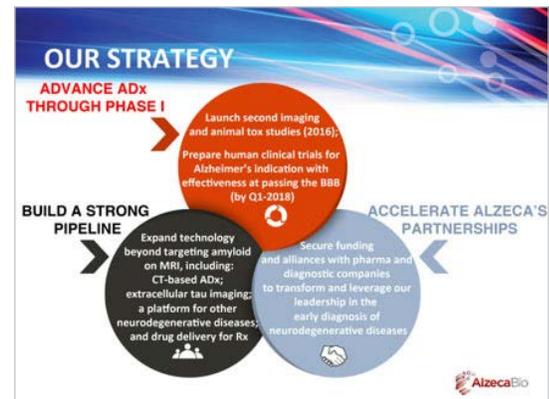
Initial Tests Yield Strong Preclinical Results

In peer-reviewed studies, ADx nanoparticles demonstrated the ability to carry an encapsulated imaging agent across the blood-brain barrier and bind precisely to amyloid plaques in the brains of test mice. Researchers were then able to obtain precise, high-resolution images of those plaques using ordinary MR equipment. These results, along with successful preliminary toxicity studies, have prompted Alzeca to accelerate the development and testing of ADx with the goal of beginning human clinical trials in 2018. Related information:

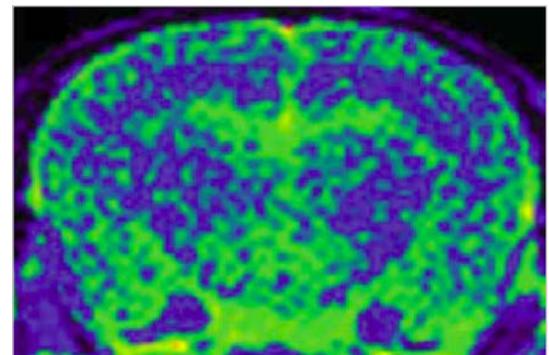
<http://content.iospress.com/articles/journal-of-alzheimers-disease/jad151124>



Modified from: Selkoe DJ, Hardy J. The amyloid hypothesis of Alzheimer's disease at 25 years. EMBO Mol Med. 2016 Mar 29. pii: e201606210. doi: 10.15252 (Graphic: Business Wire)



Alzeca's strategic direction (Graphic: Business Wire)



MRI image of transgenic mouse brain with ADx (Graphic: Business Wire)

Significant Unmet Need

More than 27 million people suffer from Alzheimer’s disease today globally, and it is the sixth leading cause of death in the US. By 2050, the disease could result in a \$1.1 trillion annual cost to the US healthcare system, in current dollars, not including the very high cost of unpaid care. Yet there is no cost-effective, readily available, reliable way to diagnose the disease before the onset of cognitive decline – which is when current Alzheimer’s therapies are most likely to be effective.

ADx has the potential to confirm an Alzheimer’s diagnosis, as well as to rule out such a diagnosis. Misdiagnosed dementia patients not only receive the wrong therapies, but the cost of treating a misdiagnosed patient adds as much as \$14,000 to the annual cost of treatment.

Related information: <http://www.alz.org/facts/overview.asp>

Powerful Technology

Alzeca’s innovative biodiagnostic platform is a nanoparticle that can encapsulate an imaging marker or other “payload” and pass through the normally impenetrable blood-brain barrier. The outside of each nanoparticle is designed to bind precisely to specific target substances in the brain, delivering the payload to that target.

ADx is the first product based on the platform. ADx carries an MR imaging agent as its payload and targets the amyloid plaques that are the hallmark of the onset of Alzheimer’s disease, developing ten or more years before cognitive impairment. Once ADx is bound to the plaques, they can be imaged in high resolution using a standard MRI scan.

Related information: <http://www.alzeca.com/technology>

Superior Modalities

MR scans are far less costly and far more readily available throughout the world than the only current alternative, a PET scan. PET scans also require the use of radioactive imaging agents that preclude routine use, while ADx would permit physicians to track the patient’s condition.

Building Strong, Experienced Leadership and Scientific Expertise

Based on the progress, Alzeca has assembled a world class team of senior executives, including:

- Scott W. Atlas, M.D., Chairman of the Board (former Chief of Neuroradiology at Stanford University Medical Center)
- Carlo Medici, Chief Executive Officer (former CEO of Bracco Diagnostics, a global leader in imaging agents)
- Thomas Hale, Chief Operating Officer (20 years with Abbott Laboratories and 10 years of additional experience in drug development)

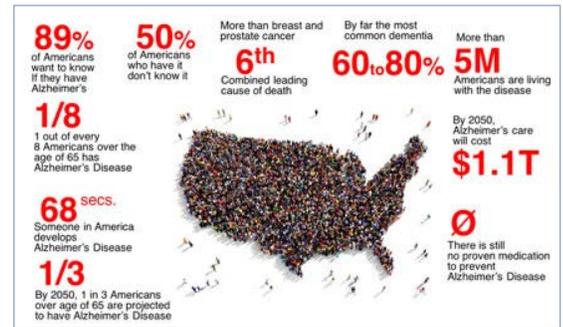
“Alzeca has brought together incredible breakthrough science and a highly experienced leadership team to accelerate the company’s strategy and address a huge unmet need for physicians and patients alike in neurodegenerative disease,” said Scott W. Atlas, M.D., Chairman. “We must greatly improve the standard of care as 98 percent of new treatments fail to be FDA-approved. Earlier detection of Alzheimer’s disease can help patients and their families make better life decisions.”

Direct link to leadership team page:

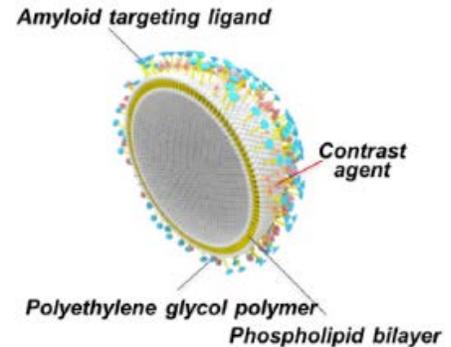
<http://www.alzeca.com/leadershipteam>

Alzeca Biosciences was founded on technology invented at the University of Texas-Houston, and is based in Houston. The company was formed specifically to develop the immense potential of ADx and its underlying technology platform. Alzeca’s leadership team includes world-renowned experts in diagnostic imaging innovation, clinical neuroscience, and commercial biotech development.

<http://www.businesswire.com/news/home/20160607005668/en>



The human and economic cost of Alzheimer’s disease (Graphic: Business Wire)



The structure of ADx (Graphic: Business Wire)

DIFFERENTIATOR	MRI w/ADx	PET
ACCESS POINTS	Widely available, routine in common practice world-wide	Limited to “Centers of Excellence”; rare outside select markets
MANUFACTURING, USAGE CONSIDERATIONS	Non-radioactive, long half-life, can be centrally manufactured and shipped globally	Short half-life, must be made locally and used immediately once synthesized
COST	Far less expensive	Very high (~2-5x MRI)
RADIATION EXPOSURE	Zero	7 mSv for one PET scan, equivalent to ~70 chest X-rays
RESOLUTION AND ACCURACY	High anatomic resolution routinely obtained; no evidence of false positives	Lower anatomic resolution; can have both false positives and false negatives
REPEATABILITY	Routine	Very uncommon

Comparison of MRI and PET Scanning (Graphic: Business Wire)



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