Alterity Therapeutics (NASDAQ:ATHE, ASX:ATH)

Geoffrey Kempler, CEO and Chairman
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Forward Looking Statements

This presentation may contain some statements that may be considered “Forward-Looking Statements”, within the meaning of the US Securities Laws. Thus, any forward-looking statement relating to financial projections or other statements relating to the Company’s plans, objectives, expectations or intentions involve risks and uncertainties that may cause actual results to differ materially. For a discussion of such risks and uncertainties as they relate to us, please refer to our 2020 Form 20-F, filed with US Securities and Exchange Commission, in particular Item 3, Section D, titled “Risk Factors.’’

Our Purpose

We exist to create an alternate future for people living with neurodegenerative diseases. An alternate, healthier life.

We're here to disrupt the trajectory for people with these diseases.

Year in Review

Allowance of US patent for next generation compounds to treat neurodegenerative diseases

Raises $35M in placement to international and Australian institutions and sophisticated investors

Commences enrolling Multiple System Atrophy patients in bioMUSE Study

ATH434 reduces α-synuclein pathology, preserves neurons, and improves motor performance

US FDA provides development pathway for ATH434

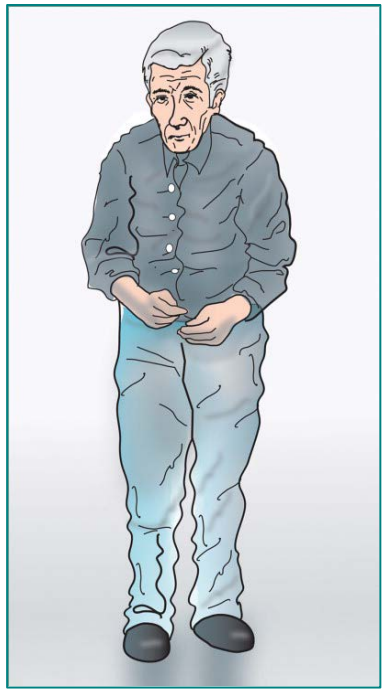
ATH434 crosses blood brain barrier in humans; clinically tested doses achieved concentrations in the brain

European Commission approves Orphan Designation

ATH434 clinical data presented at the 2019 MDS Congress

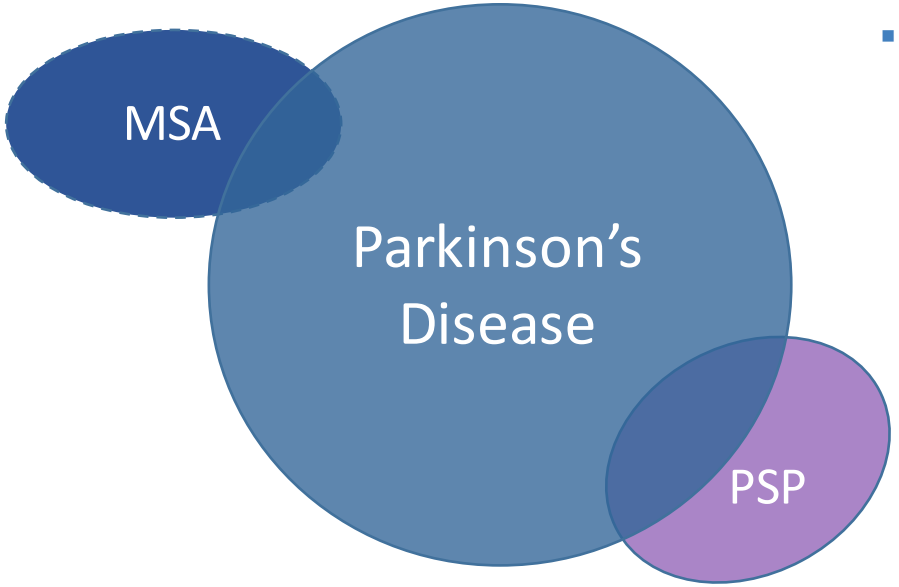
Completion of Phase 1 Clinical Trial

Parkinsonian Disorders – A Significant Unmet Need



Lees et al. Lancet 2009

- Parkinsonism is a syndrome of motor symptoms that includes slowness of movement, stiffness and tremor
  - Major source of disability



- Parkinsonian disorders also include atypical variants such as Multiple system atrophy (MSA) and Progressive supranuclear palsy (PSP)
  - Atypical forms have prominent non-motor symptoms and a limited response to available treatments
  - Lead indication is MSA, a highly debilitating disease with no approved treatments

Excellent Progress with Lead Drug Candidate ATH434

- Robust efficacy in animal models of disease
  - Evidence of neuroprotection with ATH434 treatment
  - Findings corroborated in multiple labs
- Completed Phase 1
  - Orally bioavailable, brain penetrant
  - ATH434: safe and well tolerated
  - Achieved brain levels of ATH434 comparable to efficacious levels in animal models of MSA
- Qualitative research with U.S. neurologists completed
  - 15 movement disorder specialists and 15 general neurologists

- Selected MSA as lead indication
- Orphan Designation granted in US and EU in 2019
  - US Food and Drug Administration (FDA): 7 years of market exclusivity
  - European Commission: 10 years of market exclusivity
  - Estimated U.S. prevalence of MSA is 11,000 to 14,000 patients
- Preparation for Phase 2 underway
  - Natural history/P2 optimization study commenced
  - Long term toxicology ongoing
  - GMP manufacturing of API and tablets progressing to plan
  - FDA meeting to set development path

bioMUSE Natural History Study

- Design: Observational (no treatment)
- Objective: De-risk Phase 2 study
  - Identify biomarker(s) suitable for endpoint in treatment study
  - Evaluate the change in biomarkers and clinical manifestations in patients with early MSA to track disease progression
- Population: Early MSA patients similar to Phase 2 population
- Observation period: 12 months
- Initial cohort: 10
- Biomarkers
  - MRI: Iron content, neuromelanin, oxidative stress, regional blood flow/metabolism
  - Protein: neurofilament light protein (CSF, plasma), Aggregating α-synuclein (CSF), phos-α-synuclein (skin)
  - Wearable movement sensors
- Clinical Endpoints
  - Clinical: Motor exam, function/ADL inventory, global assessments of severity and change (clinician, patient)
  - Functional: Timed Up and Go, 2 min Walk Test

Phase 2 Study Design

- Design: Randomized, double-blind, placebo controlled
- Objectives
  - Assess target engagement and preliminary efficacy of ATH434
  - Evaluate safety and tolerability of ATH434
- Population: Early MSA patients (parkinsonian variant) with motor symptoms ≤ 3 years
- Sample size: 60
- Treatment: 6 months duration
  - ATH434 high dose
  - ATH434 low dose
  - Placebo
- Biomarkers
  - MRI: Iron content, neuromelanin, oxidative stress, regional blood flow/metabolism
  - Protein: neurofilament light protein (CSF, plasma), Aggregating α-synuclein (CSF), phos-α-synuclein (skin)
  - Wearable movement sensors
- Clinical Endpoints
  - Clinical: Motor exam, function/ADL inventory, global assessments of severity and change (clinician, patient)
  - Functional: Timed Up and Go, 2 min Walk Test
- Safety Endpoints: AEs, clinical laboratory parameters, 12-lead ECGs

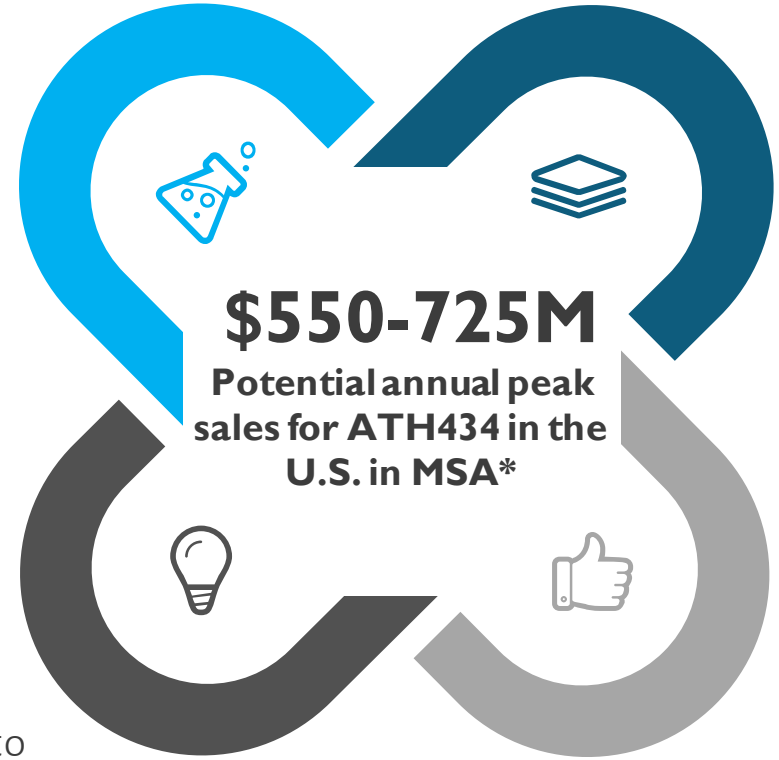
Commercial Opportunity – Multiple System Atrophy
Independent Analysis

SUBSTANTIAL UNMET NEED

Severely debilitating, fatal illnesses with no current treatments are ripe for new entrants targeting what may be the actual cause of the disease.

UNIQUE MOA

Inhibition of protein accumulation and aggregation is a novel mechanism of action that may ultimately prove in clinical practice to impact more than motor symptoms.



STRONG INTENT TO PRESCRIBE

Motivated by efficacy in treating the underlying disease and not just the symptoms, clinicians intend to offer ATH434 to most of their patients with MSA.

EASE OF USE

Given similar efficacy, clinicians will likely prefer ATH434's once or twice daily oral administration vs. the monthly IV infusions or injections required for alpha-synuclein antibodies that come to market.

*Does not include spontaneous use in PD

Leadership of 3 FDA Approvals in Neurology

David Stamler, M.D.
Chief Medical Officer

- 3 FDA Approvals in Neurology
  - Led FDA Advisory Committee and approval of Xenazine® in Huntington's disease in 2008
  - Led clinical development and approval of Austedo® in Huntington's disease and Tardive dyskinesia, both approved in 2017
- Former Chief Medical Officer, Auspex Pharmaceuticals and VP, Clinical Development & Therapeutic Head, Movement Disorders, Teva Pharmaceuticals
- Part of **Teva's US$3.5 billion acquisition of Auspex** in 2015
- Development leadership from **Auspex** (Nonclinical, CMC and Clinical operations) joined Alterity in 2017

BioSpace

FDA Advisory Committee Votes Unanimously to Recommend Approval of Tetrabenazine for Chorea Associated With Huntington Disease
Dec 7, 2007

FierceBiotech

XENAZINE® (Tetrabenazine) Approved by FDA for Patients with Chorea Associated with Huntington's Disease
Aug 15, 2008

PharmaTimes online

FDA approves Teva's Austedo® for Tardive Dyskinesia
Aug 31, 2017

Teva's Austedo is now the first and only therapy approved in the US to treat both tardive dyskinesia and chorea associated with Huntington's disease

Investment Summary

- ✓ Targeting Orphan disease with no approved treatments
  - ATH434 has potential U.S. peak sales up to US$ 725 million
- ✓ Development team with proven track record at FDA
- ✓ Lead drug candidate ATH434
  - Commenced natural history study to inform Phase 2 study
  - Completed Phase 1 with excellent safety profile
  - Achieved CSF concentrations associated with robust efficacy in MSA animal model
  - Novel mechanism targets α-synuclein aggregation and root cause of oxidative stress
- ✓ Phase 2 data 2H ‘22
- ✓ Strong pipeline potential with new patent family supporting next generation therapies
- ✓ Strong balance sheet

For further information please contact:
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