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Unlocking the science of longevity to develop transformative therapies

Corporate Presentation • August 2024

Forward-looking statements

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Overview

Our lead asset bezisterim (formerly NE3107) modulates the production of TNF α . In clinical trials, many patients treated with bezisterim experienced:

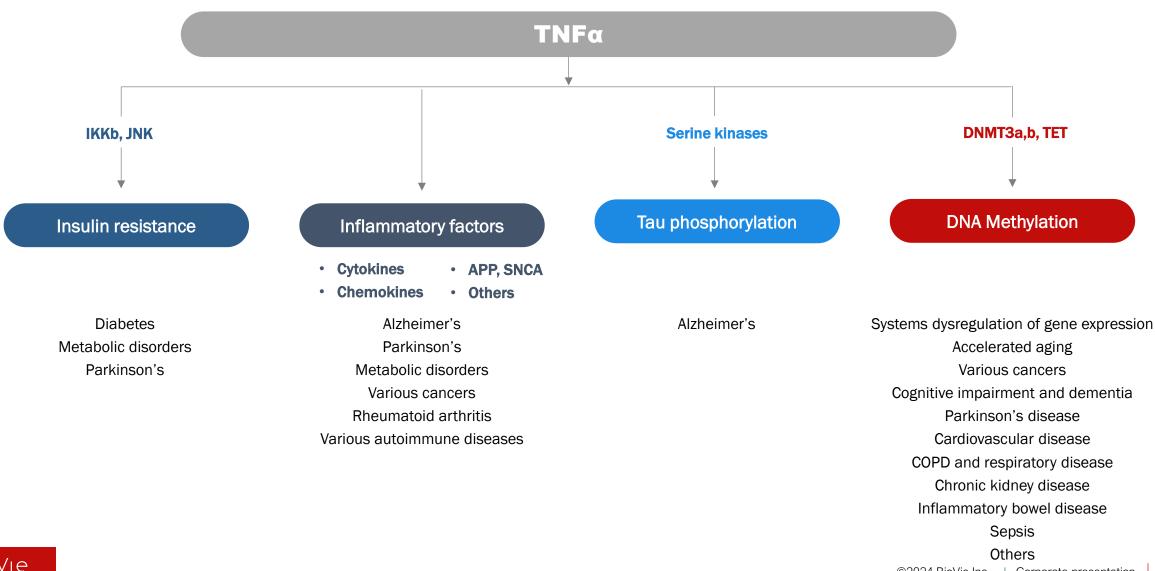
- Reduced inflammation and the associated insulin resistance
- Improved motor control and "morning on" symptoms in Parkinson's disease (PD)
- Improved cognition and function, lowered amyloid β and p-tau levels, and improved brain imaging scans in Alzheimer's
 Disease (AD)
- Lowered DNA methylation levels

BIV201 reduces fluid build up and has the potential to become the first therapeutic for ascites, a condition with 50% mortality rate within 12 months

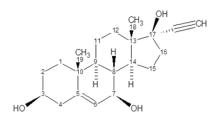
Our priorities:

- Launch Parkinson's Phase 2b trial Fall 2024
- Launch next Alzheimer's Phase 3 trial in mid-2025 using new once-daily formulation of bezisterim
- Continue partnering conversations for bezisterim (geographic rights)
- Launch ascites Phase 3 when partner identified

Far-reaching impact of TNFα-mediated chronic low-grade inflammation



Bezisterim's mechanism of action

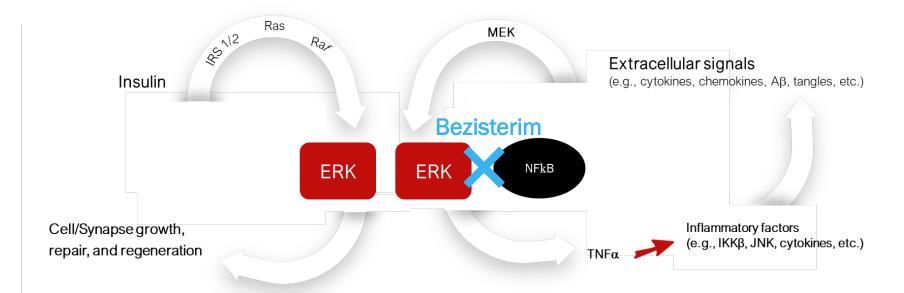


First-in-class molecule with desirable characteristics

Small molecule; orally bioavailable

Crosses blood-brain barrier, thus CNS and peripheral applications

No safety issues identified to date in pre-clinical and clinical trials (up to Phase 2)

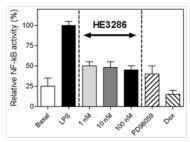


Bezisterim Reduces ERK Activation

p-ERK DMSO HE3286 DMSO DMSO

Lu 2010 Am J Physiol Endocrinol Metab 298 E1036

Bezisterim Reduces NFκB Activation



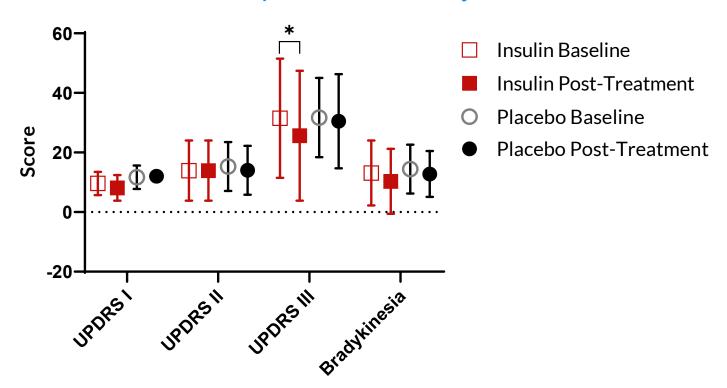
Wang 2010 J Pharmacol Exp Ther 333 70

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Bezisterim in Parkinson's Disease

Low Dopamine *and* inflammation are required to develop Parkinson symptoms in patients

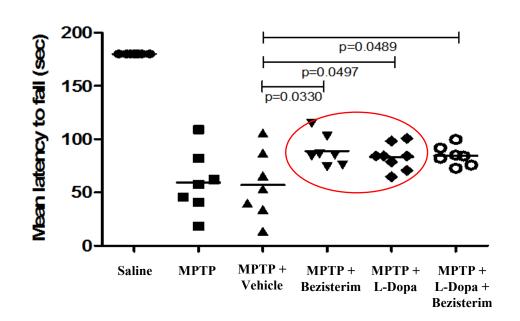
Intranasal Insulin treatment reduced inflammation and improved motor activity



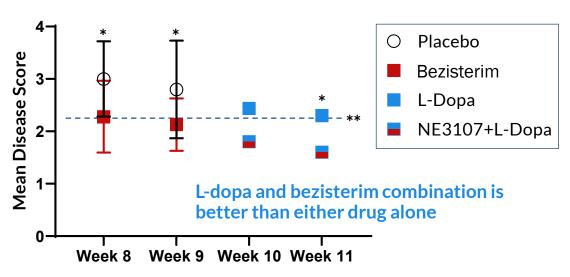
Bezisterim has similar promotoric activity to L-dopa in rodent* and marmoset* models



MPTP Mouse



MPTP Marmoset treated at Week 8



*p<0.001 compared to other treatment arm in time period

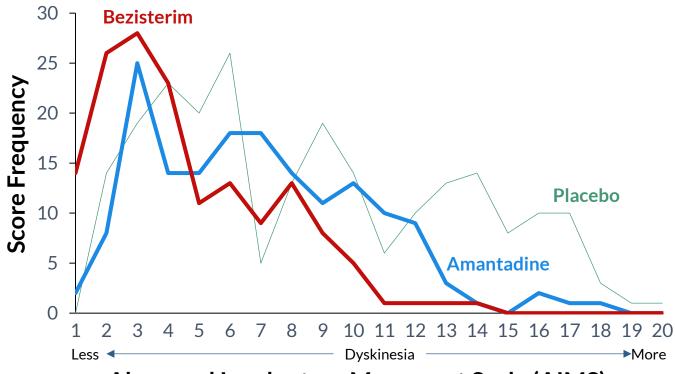
bezisterim's promotoric effects observed within 4 days of treatment

 $^{^{**}}$ L-Dopa at week 11 not statistically different from bezisterim at weeks 8 and 9

Bezisterim decreases L-Dopa-induced dyskinesia (LID) in marmosets*

Distribution of AIMS Scores

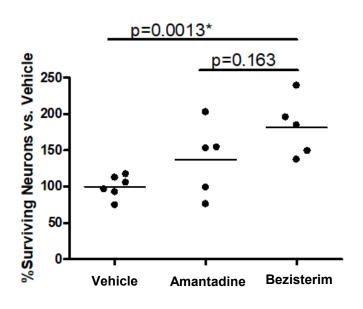


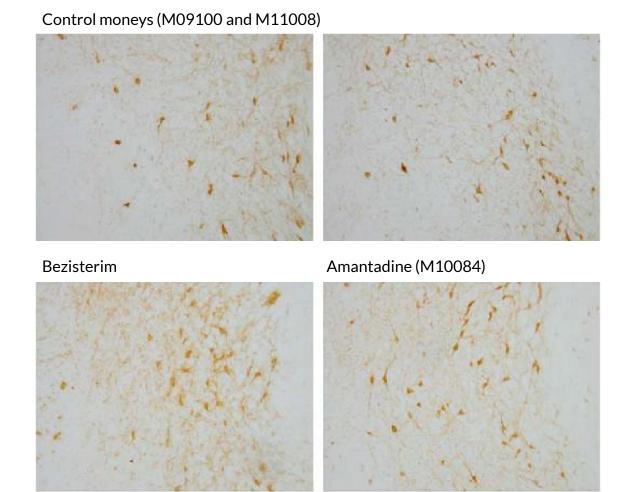


Abnormal Involuntary Movement Scale (AIMS)

Bezisterim preserved ~2X TH+ (dopaminergic) neurons in MPTP marmosets*







Parkinson's Disease Clinical Development Program

NM201 Phase 2

- Satisfying FDA requirement for drug-drug interaction study with L-dopa
- Detect efficacy signal for bezisterim's pro-motoric activity

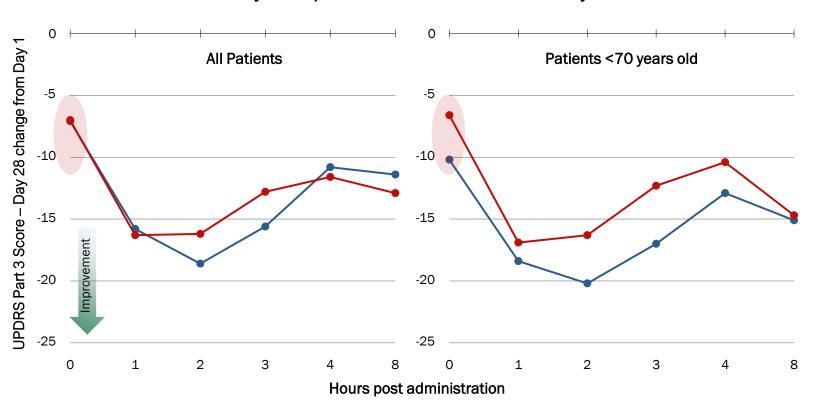
40 patients with defined L-dopa "off state", 1:1 active: placebo, 20 mg BID for 28 days

- Safety assessments: Standard measures of patient health, Ldopa PK and DDI
- Efficacy assessments: MDS-UPDRS* parts 1-3, Hauser ON/OFF Diary, Non-Motor Symptom Scale

Bezisterim-treatment patients experienced fewer motor symptoms before morning drug administration

Levodopa alone

Day 28 Improvement in Motor Control vs. Day 1



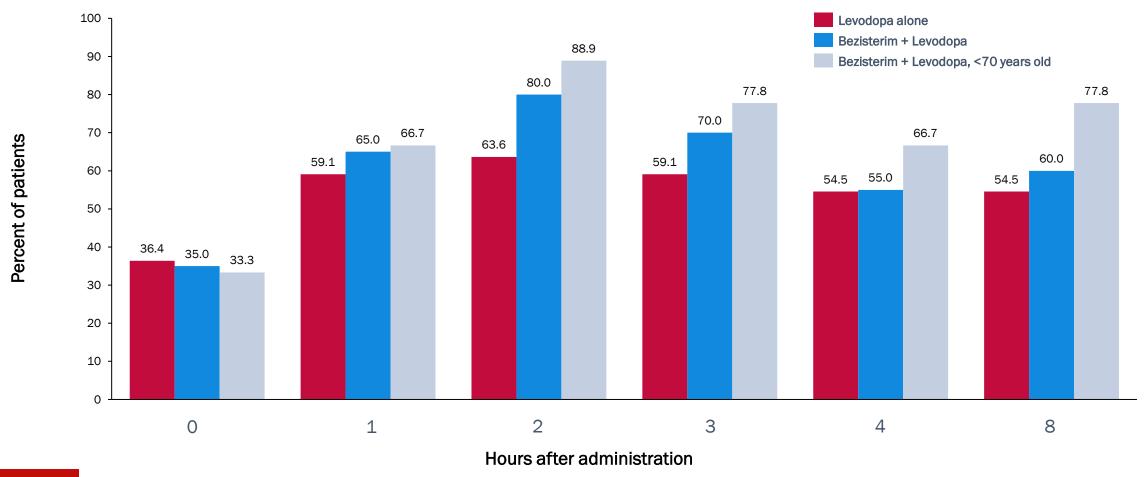
Bezisterim + Levodopa

	Bezisterim	Placebo
"On" at t=0	6	0
Total patients	20	19
P-value*	0.02	

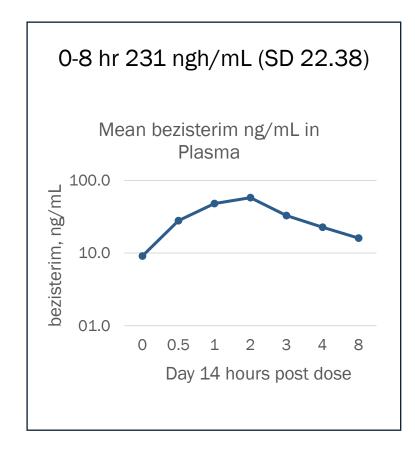
^{*} Fisher's exact test

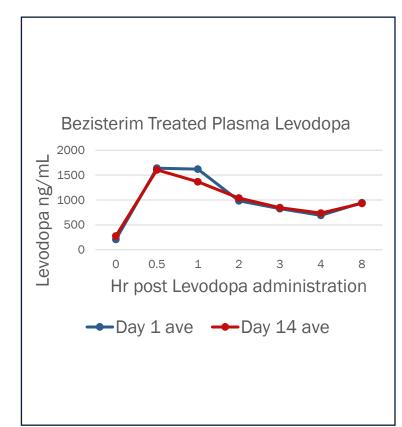
Larger proportion of patients treated with bezisterim had >30% improvements in motor control

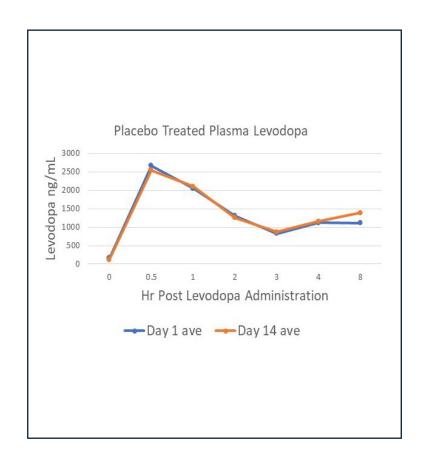
Percentage of patients experiencing >30% improvement at Day 28 vs. Day 0



Desirable pharmacokinetics – no observed DDI



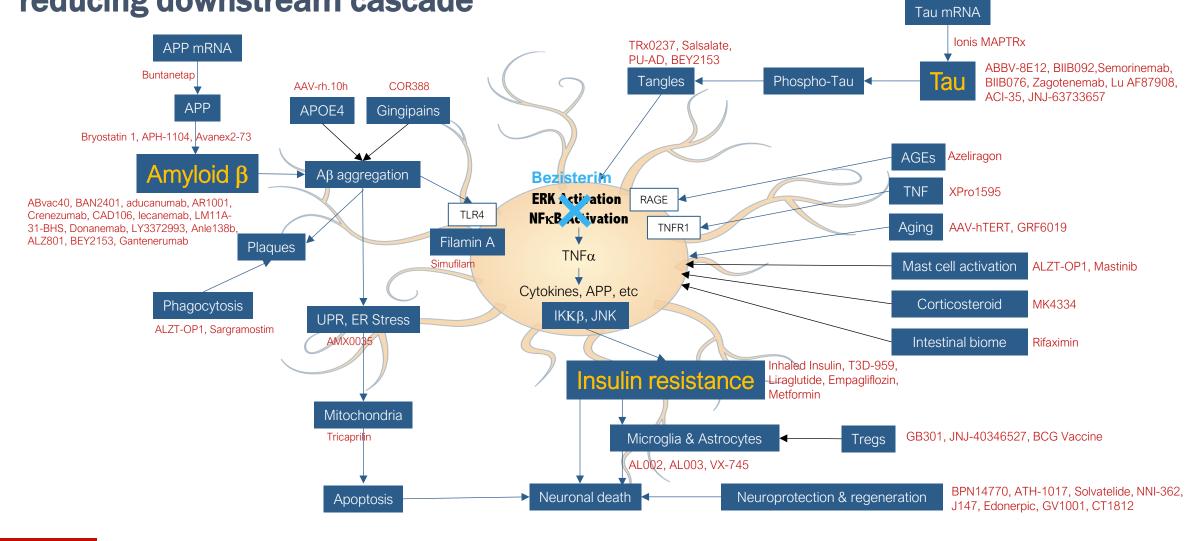




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Bezisterim in Alzheimer's Disease

Bezisterim modulates inflammation at the central hub, thereby potentially reducing downstream cascade



NM101 Phase 3 trial in Mild to Moderate Alzheimer's

A Phase 3, Double-blind, Randomized, Placebo-controlled, Parallel Group, Multicenter Study of bezisterim. Enrolled 439 Patients who have Mild to Moderate AD

- Pivotal study for Alzheimer's disease. Two weeks each of 5 mg and 10 mg BID dose titration followed by 26 weeks of 20 mg twice daily vs. placebo; 1:1 randomization; 80% power
- Diagnosed with probable AD and without evidence of a vascular contribution. Mild to moderate disease. CDR 1-2. MMSE 14-24.
- 60-85 years old, males and females
- Randomization stratified by MMSE and Homeostatic Model Assessment 2 Insulin Resistance (HOMA2)

Co-primary endpoints

- Mean change from Baseline to Week 30 in Dementia Rating-Sum of Boxes (CDR-SB) comparing the bezisterim group to the placebo group
- Mean change from Baseline to Week 30 in the twelve-question form of the Alzheimer's Disease Assessment Scale-Cognitive (ADAS-Cog 12) comparing the bezisterim group to the placebo group

Secondary endpoints

- ADCS-ADL (functional), Alzheimer's Disease Cooperative Study-Clinical Global Impression of Change (ADCS-CGIC), ADCOMS (4 Alzheimer's Disease Assessment Scale-cognitive subscale items, 2 Mini-Mental State Examination items, and all 6 Clinical Dementia Rating-Sum of Boxes items), NPI-12 (care-giver rating of behavioral changes), MMSE, CDR
- Glycemic control: HOMA2, Mean Amplitude of Glycemic Excursion (MAGE) using continuous glucose monitoring, fructosamine levels, post-prandial glucose and fasting blood glucose vs time.
- MRI total hippocampus volume change, baseline to end of treatment in a subset of active and placebo subjects
- Target engagement assessed in a small subset of active and placebo subjects using PET to quantify cortical glucose utilization

Trial Summary

- Bezisterim appears to be biologically active
- Cognitive, functional, biomarker efficacy signal suggest that bezisterim:
 - Has a treatment advantage equal to or greater than results reported from clinical trials from approved monoclonal antibody treatments;
 - Associated with a benign safety profile
- Unanticipated exclusion of 258 patients from 15 sites due to deviations led to study being underpowered

Week 30 Suggest bezisterim Advantage vs. Placebo is Comparable to or Better than **Results Reported from Clinical Trials by Approved Medications**

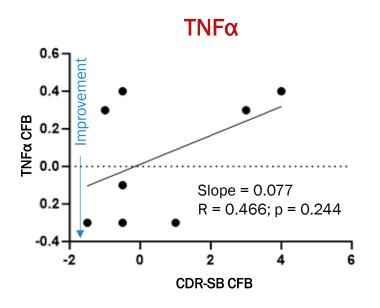
Change from baseline

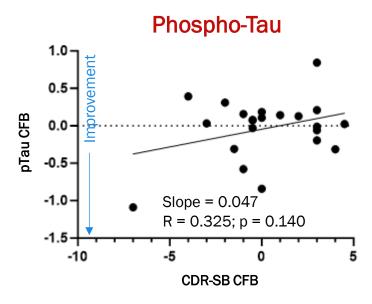
	Placebo Decline	Bezisterim	Bezisterim vs. Placebo	Comparator (18 mos)
CDR-SB (lower is improvement)	+1.39 (p=0.0125; n=26)	+0.44 (p=0.4522; n=24)	-0.95 (68%) (p=0.2278)	-0.45 (27%) ¹ -0.39 (22%) ²
ADAS-Cog12 (lower is improvement)	+3.64 (p=0.0545; n=23)	+2.70 (p=0.1618; n=24)	-0.94 (26%) (p=0.7212)	-1.44 (25%) ¹ -1.40 (27%) ²
MMSE (higher is improvement)	-2.54 (p=0.0007; n=26)	-1.52 (p=0.0547; n=24)	+1.02 (40%) (p=0.3181)	+0.6 (18%)2
ADCS-ADL (higher is improvement)	-6.54 (p<0.0001; n=27)	-3.46 (p=0.0435; n=24)	+3.08 (47%) (p=0.1620)	+2.0 (36%)1
ADCS-CGIC (lower is improvement)	+0.31 (p=0.2733; n=26)	-0.12 (p=0.6951; n=24)	-0.43 (139%) (p=0.2866)	
ADCOMS (lower is improvement)	+0.11 (p=0.0358; n=22)	+0.09 (p=0.1094; n=24)	-0.03 (27%) (p=0.7063)	-0.05 (23%) ¹

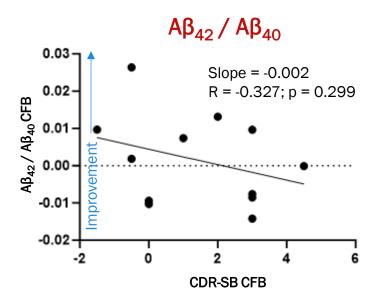
¹ Lecanamab after 18 months; van Dyck et al. *N Engl J Med* 2023;388:9-2

² Aducunumab after 18 months; Haeberlein et al. *J Prev Alz Dis* 2022;2(9):197-210

Bezisterim-treated Patients' Changes in CDR-SB Appears Correlated with Key Biomarkers

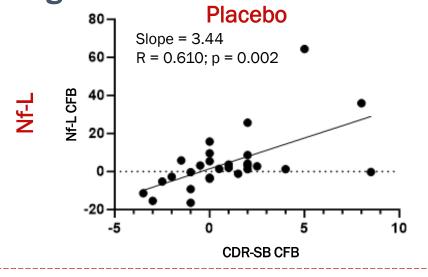


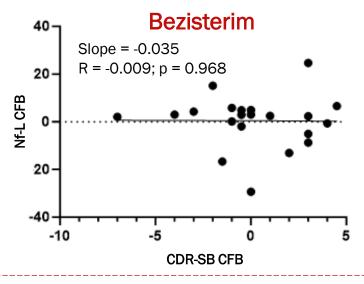


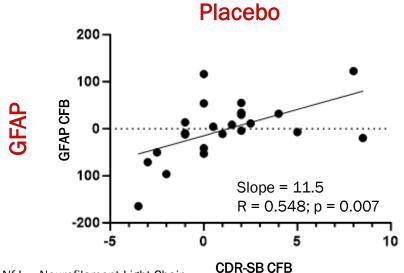


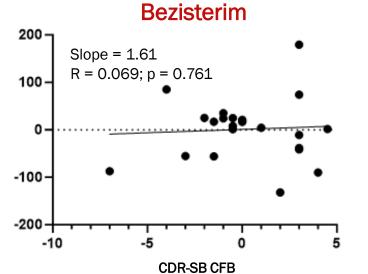
Bezisterim Appears to Decrease the Neuroinflammatory Processes that Link Nf-L and

GFAP to Cognitive Decline









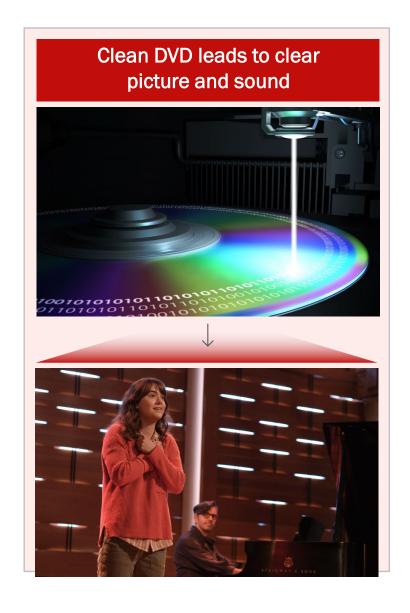
Safety Profile

	NE3107	Placebo	Total
COVID-19	9.5%	17.6%	13.2%
Urinary tract infection	7.1%	8.8%	7.9%
Blood thyroid stimulating hormone increased	7.1%	2.9%	5.3%
Fall	2.4%	8.8%	5.3%
Headache	9.5%	0.0%	5.3%
Diarrhoea	4.8%	2.9%	3.9%
Dizziness	2.4%	5.9%	3.9%
Hypertension	2.4%	5.9%	3.9%
Nausea	4.8%	2.9%	3.9%
Pneumonia	4.8%	2.9%	3.9%
Vomiting	2.4%	5.9%	3.9%
Blood testosterone decreased	0.0%	5.9%	2.6%
Gastroenteritis viral	0.0%	5.9%	2.6%
Nasopharyngitis	4.8%	0.0%	2.6%
Rash	0.0%	5.9%	2.6%
Thyroxine decreased	2.4%	2.9%	2.6%
Tri-iodothyronine decreased	2.4%	2.9%	2.6%
Abdominal pain	0.0%	2.9%	1.3%
Abdominal pain upper	0.0%	2.9%	1.3%
Accelerated idioventricular rhythm	2.4%	0.0%	1.3%
Agitation	0.0%	2.9%	1.3%
Aortic valve replacement	2.4%	0.0%	1.3%

NE3107	Placebo	Total
2.4%	0.0%	1.3%
0.0%	2.9%	1.3%
0.0%	2.9%	1.3%
2.4%	0.0%	1.3%
2.4%	0.0%	1.3%
0.0%	2.9%	1.3%
0.0%	2.9%	1.3%
0.0%	2.9%	1.3%
0.0%	2.9%	1.3%
2.4%	0.0%	1.3%
2.4%	0.0%	1.3%
0.0%	2.9%	1.3%
0.0%	2.9%	1.3%
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	NE3107	Placebo	Total
Hypothyroidism	2.4%	0.0%	1.3%
Нурохіа	0.0%	2.9%	1.3%
Incontinence	0.0%	2.9%	1.3%
Increased appetite	2.4%	0.0%	1.3%
Influenza	0.0%	2.9%	1.3%
Insomnia	2.4%	0.0%	1.3%
International normalised ratio increased	0.0%	2.9%	1.3%
Lethargy	2.4%	0.0%	1.3%
Lipase increased	0.0%	2.9%	1.3%
Muscle spasms	2.4%	0.0%	1.3%
Nephrolithiasis	0.0%	2.9%	1.3%
Nightmare	0.0%	2.9%	1.3%
Obsessive-compulsive disorder	2.4%	0.0%	1.3%
Oesophageal food impaction	0.0%	2.9%	1.3%
Optic ischaemic neuropathy	2.4%	0.0%	1.3%
Orthostatic hypotension	2.4%	0.0%	1.3%
Papilloedema	2.4%	0.0%	1.3%
Paranasal sinus discomfort	0.0%	2.9%	1.3%
Patient elopement	0.0%	2.9%	1.3%
Pelvic fracture	0.0%	2.9%	1.3%
Pharyngitis streptococcal	2.4%	0.0%	1.3%

biovie Bezisterim in Longevity





Impact of wear & tear on a laser's ability to decode DVDs

Quality of picture is dependent on the laser's ability to clearly decode the disk ...

The same thing happens in our body

DNA methylation

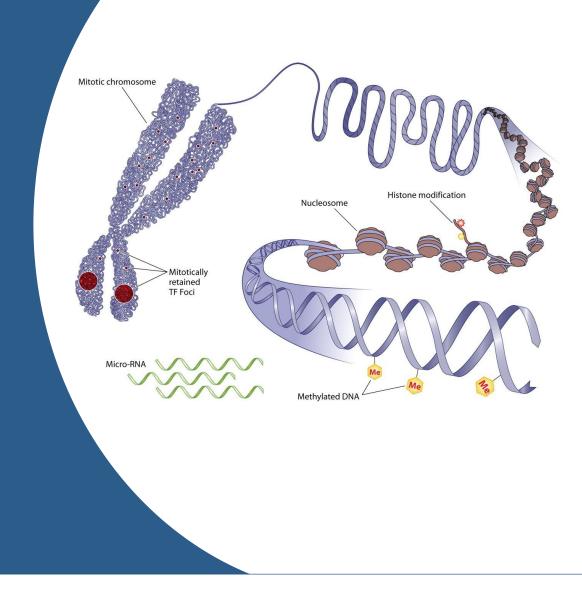
DNA methylation happens when methyl groups are added to our DNA

- DNA methyltransferases add methyl groups to DNA
- Functionally the equivalent of scratches and smudges on a DVD surface
- The methyl groups interfere with RNA polymerase's ability to decode DNA

DNA methylation may happen where a cytosine is positioned next to guanine and is separated by a phosphate group (CpG)

28 million CpGs in genome

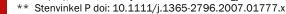
Hypermethylation of DNA is associated with many disease conditions



Observations about DNA methylation

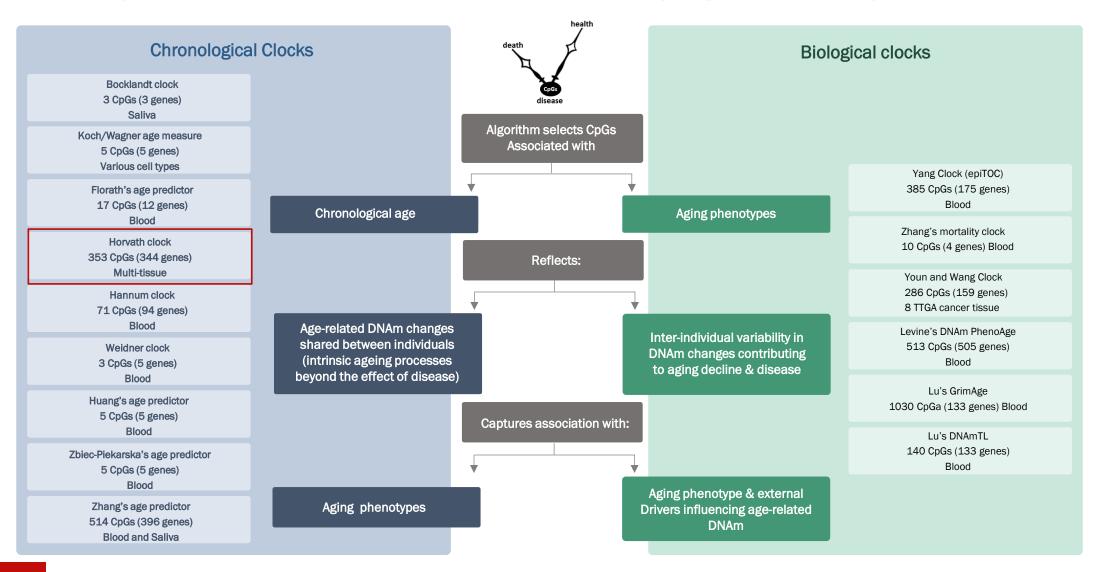
- DNA methylation increases as we age
- DNA methylation can be affected by behavioral (diet, exercise) and environmental factors
- DNA hypermethylation is associated with a large number of disease conditions, including various forms of cancers, age-related cognitive impairment and dementia, Parkinson's disease, cardiovascular disease, COPD and respiratory disease, chronic kidney disease, inflammatory bowel disease, sepsis, and many others*
- Inflammation has been shown to be a driver of hypermethylation of DNA**
- Extent of DNA methylation can be measured by various "clocks"

Wang Z Nucleic Acids Research, 2020, Vol. 48, No. 5; Sugden K Neurology 2022;99:e1402-e1413; Tang X DOI: 10.1002/mds.29157; Tabaeia S Artificial Cells, Nanomedicine, and Biotechnology, 47:1, 2031-2041; Qiu W Am J Respir Crit Care Med Vol 185, Iss. 4, pp 373–381, Feb 15, 2012; Rysz C Int. J. Mol. Sci. 2022, 23(13), 7108; Kraiczy J Mucosal Immunology volume 9, pages 647–658 (2016); Rump K Sci Rep 9, 18511 (2019)



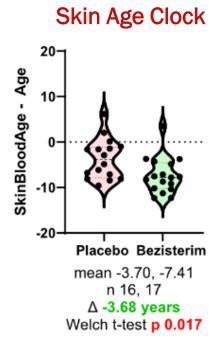
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DNA methylation "clocks" measure extent of aging and biological function

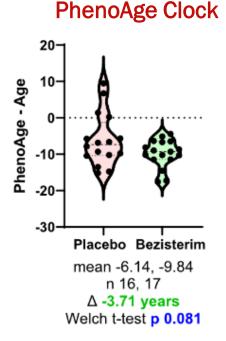


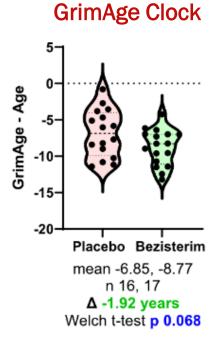
Bezisterim-treated subjects showed a lower biological age than placebo subjects

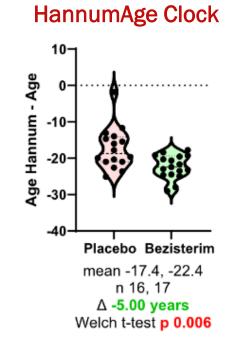
Age Deceleration¹ is used by longevity researchers² to measure the difference between a person's biological age and the actual chronological age.

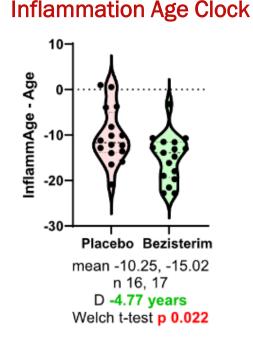


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¹ Biological age as measured by the various "clocks" - Chronological Age

² Yusupov et al. Neuropsychopharmacology vol 48, 1409–1417 (2023)

biovie BIV201 in Ascites

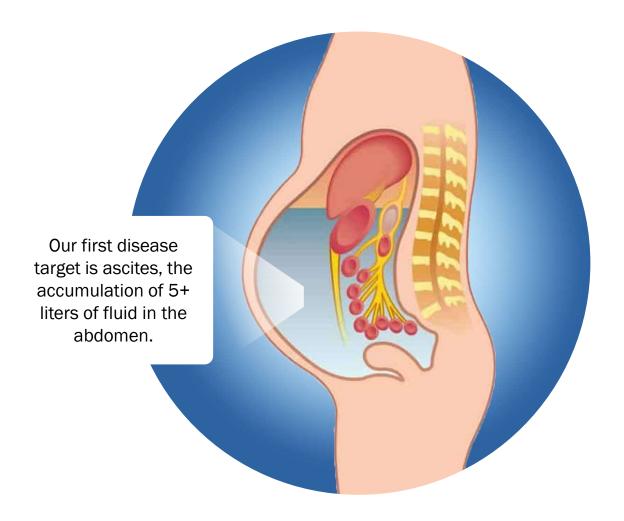
BIV201 Disease Target: Refractory Ascites

Refractory ascites patients typically undergo paracentesis to remove ascites fluid every week to 10 days

Paracentesis:

- Withdrawal of 5–10L of ascites fluid (on average) from abdomen using a large bore needle
- Provides a few days of symptomatic relief
- The kidneys are "burning out" by retaining massive quantities of salt and water
- Patients suffer frequent life-threatening complications
- No remaining options except for TIPS¹ surgery or liver transplant
- Estimated \$1.6 billion addressable US market with 20,000² targeted patients

No drugs ever approved by FDA to treat ascites



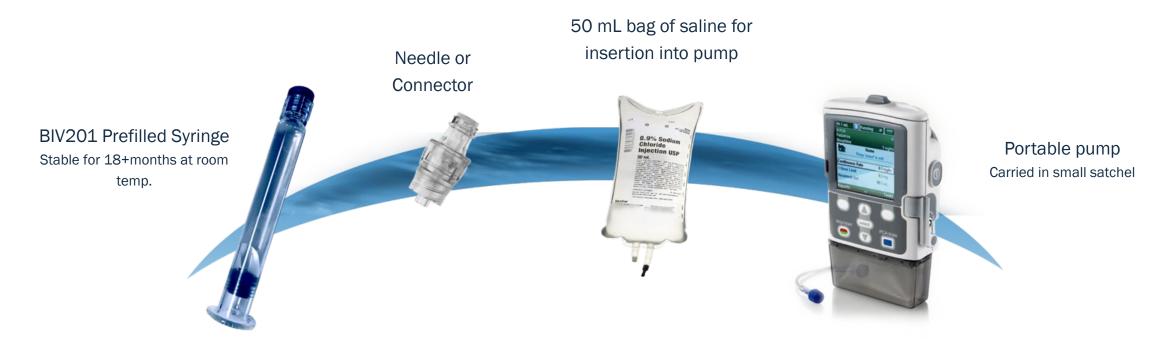
Prefilled Syringe with Patent-pending Liquid Formulation

Accurate dosing

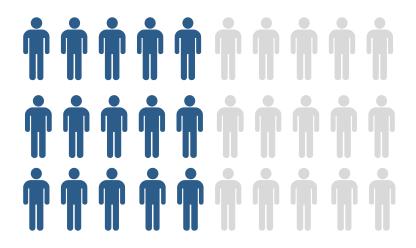
Eliminates mixing minute quantities of powder terlipressin that could result in medication errors or sterility loss

Enhanced convenience

Simply inject fluid into the saline bag and attach to pump



BIV201 Phase 2b trial

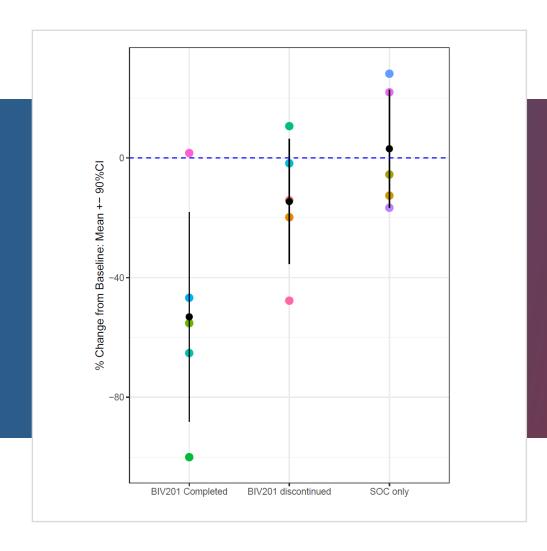


Originally targeted 30 patients randomized 2:1

Paused enrollment based on encouraging data from the first 15 patients informing next steps

- 10 randomized to BIV201; 5 randomized to standard of care
- 5 completed 2 X 28-day cycles
- 5 discontinued treatment during or at end of Cycle 1

Change in ascites volume 28d pre- vs post-treatment



53% reduction in ascites volume among patient completing BIV201 treatment

15% reduction among patients who started but did not complete treatment

3.1% increase for SOC patients

p<0.001

Next Steps: Phase 3 trial in participants with decompensated liver cirrhosis and ascites who have experienced a recent acute kidney injury

A Phase 3 randomized, open-label study evaluating the safety and efficacy of BIV201 continuous infusion compared to standard of care (SOC) alone to reduce further decompensation in participants with decompensated liver cirrhosis and ascites who have experienced a recent acute kidney injury (AKI).

- Male and female ≥ 18 years old diagnosed with cirrhosis and ascites
- Recent (within 2 weeks) recovery from an AKI experienced in outpatient or inpatient setting
- Required at least 2 paracenteses in previous 3 months.
- Randomized (1:1) to 3 months treatment with BIV201 (continuous intravenous infusion of terlipressin acetate) or SOC with 3 months follow-up for adverse events and outcomes and 6 months additional follow-up for major events from medical records. About 150 randomized participants to reach 80% power. 15-20 clinical sites (global)

Primary endpoint

Incidence of any new or repeated occurrence of Grade 3 ascites, SBP, HE, AKI (including HRS-AKI), portal-hypertension-related GI bleeding at 3 months

Secondary endpoints

- Time to any primary outcome event including death or transplant
- Incidence of Major Adverse Kidney Events at 3 and 6 months
- Change in total number of therapeutic paracenteses
- Days of hospitalization
- Ascites-related symptoms (novel BioVie PRO under development)
- Health related quality of life

Commercial potential in US market alone*

Alzheimer's

\$30B

Annual sales for every 1 million people treated

15% market penetration

\$30K/year much lower all-in cost vs. competition

Parkinson's

\$3B

Annual sales for every 100,000 people treated

10% market penetration

\$30K/year

Ascites

\$1.6B

US peak sales

45% market penetration

\$45K/year

2026 launch

2032 peak sales

Leadership Team

Deep expertise provides a strong foundation for success



Cuong Do, President & Chief Executive Officer

30+ years in biopharma & technology

President, Samsung Global Strategy Group

Chief Strategy Officer for Merck, Senior partner at McKinsey & Company



Joseph Palumbo, MD, EVP, R&D and Chief Medical Officer 30+ years treating patients; 25+ years in biopharma CMO, Zynerba Global Head of Medical Science & Translational Research, Global Head & Psychiatry Franchise Medical Leader, J&J



Chris Reading, PhD, Neurodegenerative Disease Program
40+ years in biopharma
Chief Scientific Officer, Hollis-Eden Pharmaceuticals
VP of Product and Process Dev. for Systemix
U Texas Dept. of Tumor Biology



Penelope Markham, Liver Cirrhosis Program
25 years in biopharma drug development
Lead Scientist Terlipressin (LATPharma/ BioVie 11 years)
Head Research Biology Protez Pharma
Co-founder/Director of Research Influx Inc.



David Morse, Chief Regulatory Officer

35 years experience Regulatory Affairs and multi-region product development strategy

Former VP with two top-5 international CRO's

Former Associate Director CDER, FDA



Clarence Ahlem, Operations
35+ years in biopharma
Vice President, Product Development Harbor Therapeutics
Director, Product Development, Hollis-Eden Pharmaceuticals
US San Diego



J. Wendy Kim, Chief Financial Officer

35 years in finance/ accounting

As CFO managed corporate finance and operations groups

Closed M&A transactions and secured financings

Combined 22 years at KPMG and BDO LLP

Capitalization Table

As of March 31, 2024 (Effected for reverse split 1:10))	
Common shares outstanding		6,116,552
Warrants (WAEP \$11.40)		1,932,029
Options (WAEP \$54.11)		403,276
Restricted Stock units		49,424
Fully dilluted shares outstanding		8,501,281
Market Cap (June 28, 2024 close price \$4.0/share)	\$	24,466,208

Recap

Our lead asset Bezisterim modulates the production of TNFα. In clinical trials, many patients treated with Bezisterim experienced:

- Reduced inflammation and the associated insulin resistance
- Improved cognition, lowered p-tau levels, and improved brain imaging scans in Alzheimer's Disease (AD)
- Improved motor control and "morning on" symptoms in Parkinson's disease (PD)
- Lowered DNA methylation levels

BIV201 reduces fluid build up and has the potential to become the first therapeutic for ascites, a condition with 50% mortality rate within 12 months

biovie

Thank You