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**Christopher Reading**[1], Jiayan Yan[1], Varun Dwaraka[2]

[1]BioVie, Inc., Carson City NV, USA, [2]TruDiagnostics, Lexington, KY, USA

## Bezisterim Decreases Biological Age Acceleration in Alzheimer's Disease

Aging is associated with epigenetic changes in DNA methylation and gene expression, and diseases of aging show both stochastic changes associated with normal aging, as well as causal changes associated with diseases of aging. Bezisterim is an anti-inflammatory insulin sensitizer with a good safety profile to date that is in clinical development for neurodegenerative diseases including Alzheimer's, Parkinson's and Long Covid. Bezisterim showed epigenetic changes relating to biological age and clinical biomarker changes in a placebo-controlled study (Front Neurosci 19 1516745). Further analyses of multiple epigenetic clocks indicated that bezisterim decreased epigenetic age acceleration (EAA) as quantified by multiple epigenetic clocks quantifying the normal aging process (Stochastic.Zhang.EAA, Stochastic.Horvath.EAA, Stochastic.PhenoAge.EAA, SystemsAge.EAA, Heart.EAA), as well as age acceleration in epigenetic clocks associated with damage from diseases of aging (PCGrimAge.EAA, DamAge.EAA, IntrinClock.EAA). By studying the changes in DNA methylation of promoter regions of genes with significant changes in subjects treated with bezisterim, compared to placebo subjects, it may be possible to gain insight into pathways related to diseases of aging, and biomarkers to guide therapeutic assessments. In addition, the stochastic clocks suggest that bezisterim may improve healthspan for normal aging.

**Keywords:** Drug Development, Age-Related diseases, Dementia and Alzheimer's, Interventions, Healthspan, Mechanisms of Aging

### Biography

Ph.D. in Biochemistry (UC Berkeley), post-doctoral studies in cancer biology UC Irvine) Faculty (MD Anderson Cancer Center and the University of Texas, Graduate School of Biomedical Sciences in Houston for 13 years, Associate Professor of Medicine (Department of Developmental Therapeutics, joint appointment in the Department of Tumor Biology). V.P. Product and Process Development (Systemix / Novartis). EVP R&D (Harbor Therapeutics, 15 years on the bezisterim platform development). Over 35 years R&D experience, 130 peer-reviewed scientific publications, and numerous patents in the areas of monoclonal antibodies, cell separation technologies, stem cell transplantation, and sterol drug development.



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