



## Demetrios Vassilatis , PhD

Investigator C

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**Research** Molecular Pathophysiology of Parkinson's Disease

**Keywords** Genetics of PD; PD Animal models; Neuroprotection mechanisms; Target discovery; Target Validation; Pre-clinical neuroprotection evaluation; Lead development

**Links** PubMed: <https://pubmed.ncbi.nlm.nih.gov/?term=vassilatis&sort=date>  
Scholar: <https://scholar.google.com/citations?user=TLrfmCsAAAAJ&hl=el>  
LinkedIn: <https://www.linkedin.com/in/demetrios-k-vassilatis-68124b83/?originalSubdomain=gr>  
Webpage: <https://www.bioacademy.gr/faculty-details/Gcg/demetrios-k>

### Biography

Dr. Vassilatis earned a BSc in Biochemistry from New York University and a PhD in Genetics from Columbia University. As a Visiting Research Scientist at Merck Research Laboratories, he elucidated the mechanism of action of Avermectin , a "wonder drug" with transformative impact on global health protecting millions from parasitic diseases with a single annual dose. His research involved the expression cloning of the first Avermectin -sensitive glutamate-gated chloride channels in *Caenorhabditis elegans*. Utilizing reverse genetics with transposable element insertions as mutagens, he elucidated mechanisms of drug resistance, providing foundational insights into Avermectin's pharmacology and guiding future rational drug design. Dr. Vassilatis was recruited at the position of Assistant Professor at Baylor College of Medicine where he identified the first PD-associated mutations in the dopaminergic developmental factor Nurr1 and demonstrated that its downregulation is crucial for PD pathogenesis. In 2001, he co-founded Primal Inc., a functional genomics company, where he developed methodologies for high-throughput generation and screening of libraries of mouse embryonic stem (ES) cells with random retroviral or transposon insertions, facilitating the production of knockout mouse models. At BRFAA, Dr. Vassilatis co-established the Hellenic Biobank for Parkinson's Disease, and created mouse models of Nurr1 underexpression which replicated cardinal motor and neuropathological phenotypes. He led a multidisciplinary effort to develop synthetic Nurr1::RXR agonists, resulting in BRF110, a lead molecule demonstrating combined neuroprotective and symptomatic efficacy in preclinical PD models. This represents the first monotherapeutic approach targeting both neuroprotection and symptom management in PD. Dr. Vassilatis is an inventor of several granted patents.