Parkinson's disease LRRK2 Assessment

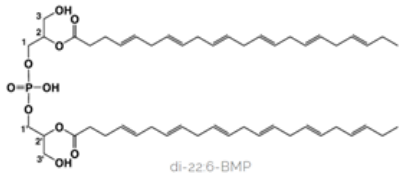
Urinary biomarker assay for Parkinson's disease with LRRK2 mutation

Nextcea's patented biomarker di-22:6-BMP for lysosomal autophagy storage disorders, such as Parkinson's disease (LRRK2 mutation) diagnostics, drug efficacy assessments, and therapeutic uses.

NextPD Assay

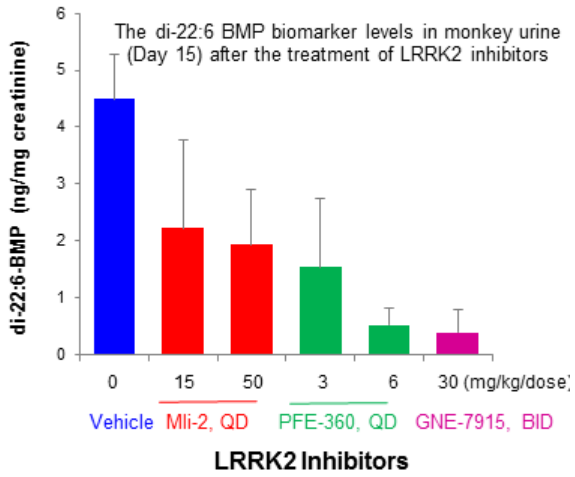
- Absolute quantitation of di-22:6-BMP in human urine

US 8,313,949, Japan 5,702,363, EU EP2419742



Parkinson's disease is linked to mutations in the leucine-rich repeat kinase 2 (LRRK2). These mutations impair endolysosomal/lysosomal function and are neurotoxic [1][2]. The phospholipid di-22:6 BMP (di-docosahexaenoyl (22:6)-bis(monoacylglycerol)phosphate) increases with lysosomal dysfunction associated with neurodegenerative diseases, including Parkinson's disease [3][4]. Decreased BMP is observed in LRRK2 knockout rodents and animals treated with LRRK2 inhibitors, reflecting LRRK2 kinase activity. The Michael J. Fox Foundation works with industry to identify inhibitors of LRRK2 capable of modifying its kinase activity and slowing the progression of Parkinson's disease. The di-22:6-BMP biomarker provides an important tool for researchers to evaluate the effectiveness of new drug candidates.

Urine di-22:6-BMP decreased following administration of LRRK2 inhibitors (MLi-2, PFE-360, and GNE-7915) in nonclinical animal studies [1][2].



About Nextcea, Inc.

Nextcea, Inc. is a drug development service company dedicated to optimizing efficacy and minimizing toxicity in all phases of drug development. In-house advanced technology platforms include UPLC-MS/MS (QTOF X500Bs, API-6500s, and TripleTOF 6600).

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1 Fuji RN, Flagella M, Baca M, Baptista MAS et al. (2015) Effect of selective LRRK2 kinase inhibition on nonhuman primate lung. Science Translational Medicine. 7(273): 273ra15. doi: 10.1126/scitranslmed.aaa3634

2 Baptista MAS, Merchant K, Bryce D, Ellis M, et al. (2015) LRRK2 kinase inhibitors of different structural classes induce abnormal accumulation of lamellar bodies in type II pneumocytes in non-human primates but are reversible an without pulmonary functional consequences. https://www.michaeljfox.org/files/foundation/LSIposter_SfN2015.pdf

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