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MEDIA UPDATE • MEDIA UPDATE • MEDIA UPDATE

New Novartis data show that neuronal and glial filaments, biomarkers of disease activity, have the potential to support decision making in the management of multiple sclerosis (MS) patients

- *Monitoring disease activity and treatment effectiveness in MS patients in real-time is a serious challenge for physicians*
- *New data show how the use of two central nervous system-derived proteins in blood as real-time biomarkers for MS could support MS treatment management*[1,2]
- *New FREEDOMS post hoc analyses on relapsing-remitting MS patients treated with Gilenya® (fingolimod) show a higher long-term risk of disease worsening when blood neurofilament light (NfL) levels were persistently high compared to patients who had consistently low NfL levels*[1]
- *New post hoc data from EXPAND show glial fibrillary acidic protein (GFAP) concentrations were reduced from baseline with Mayzent® (siponimod) compared with placebo, supporting GFAP as a candidate biomarker of advancing disease and treatment response in active and non-active secondary progressive MS patients*[2]
- *Data from both studies were presented at the 35th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS), in Stockholm, Sweden*
- *Novartis, a global leader in neuroscience, is deciphering the biosignatures of MS, which could support informed, personalized treatment strategies and improve long-term outcomes for people with MS*

Basel, September 13, 2019 – "In MS, physicians are constantly looking for ways to improve treatment outcomes and patient management," said Danny Bar-Zohar, Global Head, Neuroscience Development, Novartis Pharmaceuticals. "We are excited to see the data presented at ECTRIMS strengthen the scientific evidence that neurofilament light and glial fibrillary protein in blood as biomarkers potentially reimagine the way MS patients are assessed. These data further support the use of neuronal and glial filaments as guides to help physicians and patients with disease management."

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1. Kuhle J, et al. Elevated levels of plasma neurofilament light at months 6 and 12 after fingolimod treatment initiation predict disability worsening in patients with relapsing-remitting multiple sclerosis. 35th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS), September 2019.
2. Kuhle J, et al. Plasma Glial Fibrillary Acidic Protein correlates with characteristics of advanced disease and treatment response in secondary progressive multiple sclerosis. 35th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS), September 2019.

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