Multiple sclerosis (MS) affects 2.3 million persons globally, diagnosis after age 50 means rapid deterioration and few treatments to slow the disease progression. A chronic demyelinating disease, MS is marked by progressive loss of neuronal function and arise from attacks of the immune system on myelin sheaths responsible for the conduction of neuronal impulses. The pathology of MS is driven by chronic inflammation and oxidative stress; features common to all age-related neurodegenerative disorders in the CIBS portfolio.

Current MS therapeutics target the immune system to reduce injury to the myelin sheath but have side effects due to their non-specific modulation of immune function.

**WE HAVE DEVELOPED A SUITE OF COMPOUNDS THAT TARGET BOTH INFLAMMATION AND OXIDATIVE STRESS, WHILE SIMULTANEOUSLY STIMULATING THE BRAIN’S OWN REGENERATIVE MECHANISMS.**

In preclinical animals studies our peptides were able to reduce inflammation, lesion size, and clinical symptoms of MS.

Building on our legacy of translation with A(1-7) and Nle3-(1-7) that includes the preclinical characterization, manufacturing, preclinical safety through to Phase 2 and Phase 3 clinical trials, we are expecting to launch a clinical trial for MS in less than 3 years.

In parallel, together with other CIBS faculty we are pioneering the development of patient specific nucleic-acid aptamers capable of neutralizing pathological antibodies and T cells in MS.

Targeting common initiating mechanism across diseases showcases how the power of systems level thinking inherent to the CIBS mission is allowing us to broaden the therapeutic horizon of these drugs.