Fighting Multiple Sclerosis

2026 - YOUR DONATIONS IN ACTION

SPECIFIC RESEARCH PRIORITIES FOR 2026

ONLINE DONATION

Dear Donors,
Dear Friends of the Belgian Charcot Foundation,

On behalf of the Board of Directors, and in a personal capacity, I would like to express my deepest gratitude for your loyalty and continued trust. Thanks to your generosity, the Belgian Charcot Foundation is able to fulfil its core mission, namely to promote excellence in multiple sclerosis research in Belgium, always keeping it as close as possible to the needs of those living with the disease.

This new special edition presents six award-winning projects, rigorously selected by our scientific panel for their quality, originality and potential impact. A clear common theme emerges this year: the need to understand and better control inflammation "at the very heart of the nervous system," where the disease develops and progresses.

Several research teams are seeking to grasp what happens once inflammation reaches the brain: why immune cells that are meant to protect become dysregulated, how certain cells may aggravate lesions or, conversely, contribute to their repair, and how these inflammatory signals might be calmed through more precisely targeted treatments.

Other projects focus on identifying measurable indicators that could help predict the course of the disease more accurately, as well as on factors that influence multiple sclerosis — such as the Epstein–Barr virus or the relationship between the gut, the immune system and the brain so as to move towards more personalised care.

Behind each of these projects are dedicated researchers, bold hypotheses and a shared ambition: to turn knowledge into tangible solutions — to detect more effectively, to predict more accurately, to treat more precisely and to repair more successfully. Your support makes this possible. Year after year, you remain a vital link in this chain of progress and we thank you.

I hope that you will find the presentations and interviews that follow both enjoyable and enlightening, and would like to extend my warmest regards and sincere gratitude to you all.

Professor **Bénédicte Dubois**
PRESIDENT

FONDATION CHARCOT STICHTING

A non-profit organisation
Under the patronage of HM The Queen

Responsible Editor
Isabelle Bloem
Av. Huart Hamoir 48
1030 Brussels

Crédits photos
iStock - Shutterstock

Avenue Huart Hamoir 48
1030 Brussels
+32 (0)2 426 49 30
info@fondation-charcot.org

Bank account number
BE43 0001 6000 1601

National number
0468 831 484

WITH THE SUPPORT OF Degroof Petercam

THE JURY ANALYZED IN DEPTH THE 27 SUBMITTED RESEARCH PROJECTS AND SELECTED 6 LAUREATES

This year's projects highlight the complexity of immune mechanisms involved in multiple sclerosis and were selected with a commitment to supporting research with strong potential impact at both the fundamental and translational levels.

- Several projects focus on understanding how the innate and adaptive immune systems regulate inflammation in MS.
- Other projects investigate the role of viral infections (e.g. Epstein–Barr virus, EBV) and the gut–immune–brain axis in MS.
- Finally, one project focuses on novel therapeutic approaches.

JURY'S THOUGHTS

What gives hope right now

Mechanistic insights on EBV and the microbiome are opening promising new therapeutic avenues.
Prof. Anne-Katrin Pröbstel

Understanding smouldering, compartmentalized central nervous system inflammation is already shaping therapies that go beyond relapse control.
Dr. Serena Borrelli

Deeper fundamental knowledge of smouldering inflammation has already driven remarkable therapeutic advances — and will continue to do so.
Prof. Guy Laureys

What impressed the jury in the applications

Methodological breadth and translational approaches — linking basic science with clinical application — are impressive.
Prof. Anne-Katrin Pröbstel

The multidisciplinary approach... immunology, neurobiology, imaging, computational science... allows innovative solutions.
Dr. Serena Borrelli

The overall quality was outstanding; prioritizing was genuinely difficult.
Prof. Guy Laureys

JURY OF THE CHARCOT FUND 2026

Representing the Belgian Charcot Foundation

Dr. **Sarah Laurent** (Chair)
NEUROLOGIST AND MS EXPERT
CHU ST PIERRE, BRUSSELS

Representing the Foundation's Scientific Committee

Prof. Dr. **Guy Laureys**
NEUROLOGIST
UGENT, GHENT

Prof. Dr. **Pierre Coulie**
PROFESSOR OF IMMUNOLOGY
UCLOUVAIN, LOUVAIN-LA-NEUVE

Invited Experts

Prof **Anne-Katrin Pröbstel**
DIRECTOR OF THE CENTER FOR NEUROLOGY & CLINIC FOR NEUROIMMUNOLOGY
UNIVERSITY HOSPITAL BONN

Dr. **Serena Borelli**
NEUROLOGIST AND MS EXPERT
ERASME, BRUSSELS

Dr. **Pierrette Seeldrayers**
NEUROLOGIST AND MS EXPERT

WHY THEY SERVE ON THE JURY

Supporting high-quality research directly improves the lives of people with MS.
Dr Serena Borrelli

Participating... is both a joy and a privilege — discussing rigour, feasibility and innovation with
Prof. Anne-Katrin Pröbstel

CHARCOT FUND 2026 LAUREATES

Prof. **Bieke Broux** and Dr. **Paulien Baeten**

Regulatory T cell – blood brain barrier interactions drive loss of remyelination capacity

UHASSELT € 50,000 2 YEARS

In healthy individuals, some immune cells called regulatory T cells normally act like the body's "brakes," calming inflammation and helping repair. This project asks why they lose that protective role specifically inside the brain in multiple sclerosis, after they cross the blood–brain barrier. The team will identify what triggers this switch in the MS brain — and test whether blocking those triggers can restore their reparative potential.

Prof. **Jennifer Vandooren**

Targeting proteolytic pathways in MS: modulating macrophage responses to myelin debris

KULEUVEN € 39,000 2 YEARS

In MS, macrophages are immune cells found in brain lesions. They swallow damaged myelin (the protective coating around nerves) and can become fat-loaded "foamy" cells, which may either worsen inflammation or help healing. This project studies a set of molecules these cells produce — proteases (enzymes that cut proteins) — to understand when they push damage versus repair, and whether adjusting them could reprogram macrophages toward recovery.

Prof. **Vincent van Pesch**

Unveiling the Role of FCRL5+ B Cells in the Immunopathogenesis of Multiple Sclerosis

UCLOUVAIN € 40,000 2 YEARS

This project focuses on a specific subgroup of immune cells — memory B cells — that may play an important role in MS. The team previously found that higher levels of a marker, known as FCRL5, in the fluid around the brain and spinal cord can predict the occurrence of new brain lesions. Now, they will study these FCRL5-positive B cells in detail — their abundance, localization, function and whether genes or certain viral exposures influence them — with the aim of turning this into a useful biomarker to follow disease activity and response to treatment.

Prof. **Bénédicte Dubois**

Defining the epigenetic fingerprint of EBV in MS through single-cell multiomic approach

UZ LEUVEN | € 47,700 | 2 YEARS

This project explores how the Epstein–Barr virus (EBV) may influence the immune system in a way that contributes to MS. The team will study immune cells from both the blood and the cerebrospinal fluid (the liquid around the brain and spinal cord) to see how EBV changes which genes are switched on or off in individual cells. They'll then test the most important control switches to understand how immune cells become more self-reactive, produce inflammatory signals and move toward the brain — aiming to identify new biomarkers and clearer mechanisms.

Dr. **Shauni Doms** and Prof. **Jerome Hendriks**

MSMacGut: Genetic Stratification of Gut-Brain Axis Dysfunction in Multiple Sclerosis

UHASSELT | € 53,978 | 2 YEARS

Many people with MS continue to worsen over time even with today's treatments. This project studies how a genetic variation (FUT2) may weaken the gut barrier and change the microbiome, allowing bacteria (or bacterial fragments) to leak into the body and trigger wider inflammation that can reach the brain. By testing this in genetically matched models, the team aims to identify which patients are genetically prone to gut-driven progression, opening the door to more personalized interventions that target a root cause.

Prof. **Anne des Rieux**

Targeted Nanomedicines for cGAS-STING Silencing in Multiple Sclerosis

€ 60,000 | 2 YEARS

This project targets a key "alarm system" inside brain immune cells that can keep inflammation going in MS: the cGAS–STING pathway. The team will use tiny, targeted particles (nanomedicines) carrying siRNA—a tool that can switch off a specific gene signal — to calm down overactive microglia (the brain's resident immune cells). The goal is to reduce inflammation in the brain and spinal cord and support recovery.

BECAUSE EVERY BREAKTHROUGH STARTS WITH YOU

Don't forget to provide us with your national number (found on the back of your ID card) by email at **privacy@fondation-charcot.org** or by phone at **02 426 49 30**

SUPPORT THE BELGIAN CHARCOT FOUNDATION

Make a donation
donation.sclerose.be

Run!
20km.sclerose.be

Make a bequest
legacy.sclerose.be