

NorTrials Brain Health

Multiple Sclerosis

Norwegian neurologists, study nurses, and hospitals has a longstanding experience from participation in clinical treatment trials in multiple sclerosis since the early 1990's. The trials include disease-modifying therapies (DMT), symptomatic therapy, and rehabilitation, sponsored by academic funding bodies, health authority fundings, and most of all pharmaceutical industry.

In Norway, we also have a Centre of Excellence for Clinical Treatment Research in Neurology, including MS. The centre is funded by the Research Council of Norway (RNC), and is located at Haukeland University Hospital, co-localized with the NorTrials Brain Health Centre

Norwegian MS Clinical Treatment Trial experience:

Phase II:

1. Interferon alpha-2a vs. placebo in RRMS, the NOROC-MS trial Phase II, 1994, ([PMID:10102427](#) - DOI:[10.1212/wnl.52.5.1049](#)) (Roche), Norway - National coordinator (NC)=Haukeland University Hospital.
2. Siponimod or placebo Optimal Dose Finding Study in RRMS Phase II, 2009 Phase-II ([NCT00879658](#)) (Novartis) NC=Haukeland University Hospital
3. Siponimod or placebo in RRMS Phase III, 2010 ([NCT01185821](#)). Phase II. (Novartis) NC=Haukeland University Hospital
4. Firastegrist or placebo in RRMS Phase II, 2006 Phase-II ([NCT00395317](#)) (GSK) NC=Haukeland University Hospital

Phase III:

1. Interferon beta-1a sc. trice weekly versus Interferon beta-1a im. once weekly; the EVIDENCE-trial Phase III, 1996 ([PMID:12451188](#) - DOI:[10.1212/01.wnl.0000034080.43681.da](#)) (Merck Serono) NC=Haukeland University Hospital.
2. Interferon beta-1a sc. once weekly in SPMS Phase III, 1997 ([PMCID: PMC1763573](#)) (Merck Serono) NC=University Hospital of North-Norway.

3. Interferon beta-1a sc. trice weekly and methylprednisolone or placebo in RRMS, the NORMIMS trial Phase III, 2003 ([PMID: 19409854](#) - DOI:[10.1016/S1474-4422\(09\)70085-7](#)) (Merck Serono) NC=Haukeland University Hospital
4. Interferon beta-1b sc. every other day or placebo in clinical isolated syndrome (CIS), the BENEFIT trial Phase III, 2005 ([NCT00185211](#)) (Bayer) NC=Haukeland University Hospital
5. Interferon beta-1b sc. every other day (standard and high dose) versus glatiramer acetate in RRMS, the Beyond study Phase III, 2004 ([NCT00099502](#)) (Bayer) NC=Haukeland University Hospital
6. Glatiramer Acetate sc. once daily or placebo in clinical isolated syndrome (CIS), the PRECISE trial Phase III, 2008 ([NCT00666224](#)) (Teva) NC=Haukeland University Hospital
7. Oral cladribin or placebo in clinical isolated syndrome (CIS), the ORACLE MS study Phase III, 2008 ([NCT00725985](#)) (Merck Serono) NC=Haukeland University Hospital
8. Ocrelizumab vs Interferon beta-1a sc. trice weekly in RRMS, the OPERA trial Phase III, 2011 ([NCT01412333](#)) (Roche) NC=Haukeland University Hospital
9. Ocrelizumab vs placebo in PPMS, the ONTARIO trial Phase III, 2010, ([NCT01194570](#)) (Roche) NC=Haukeland University Hospital
10. A Rollover Study to Evaluate the Long-Term Safety and Efficacy of Ocrelizumab In Patients With Multiple Sclerosis (OLERO) - trial Phase III, 2022 ([NCT03085810](#)) (Roche) NC=Haukeland University Hospital
11. Ofatumumab Compared to Teriflunomide in RRMS, the ASCLEPIOS II study Phase III, 2016 ([NCT02792231](#)) (Novartis) NC=Haukeland University Hospital
12. Long-term Safety, Tolerability and Effectiveness Study of Orelizumab in Patients With Relapsing MS (ALITHIOS) - trial Phase III, 2018 ([NCT03650114](#)) (Novartis) NC=Vestre Viken Hospital Trust, Drammen.
13. An Open-label Study Evaluating Ofatumumab Treatment Effectiveness and PROs in Subjects With RMS Transitioning From Fumarate-based RMS Approved Therapies or Fingolimod to Ofatumumab (ARTIOS). Phase III, 2018 ([NCT04353492](#)) (Novartis) NC=Oslo University Hospital
14. Autologous Hematopoietic Stem Cell Transplantation Versus Alemtuzumab in MS, the RAM-MS study Phase III, 2018 ([NCT03477500](#)) (Haukeland University Hospital) (NC)
15. Vitamin D (VigantOL® Oil) or placebo as add on to interferon beta-1a sc. trice weekly in RRMS, the SOLAR study Phase III, 2011 ([NCT01285401](#)) (Merck Serono) NC=Akerhus University Hospital

16. Omega-3 fatty acids or placebo as add on to Interferon beta-1a sc. trice weekly, the OFAMS study Phase III, 2004 ([NCT00360906](#)) (Merck Serono) NC=Haukeland University Hospital
17. Linomide vs. placebo in RRMS Phase III, 1998; terminated due to side effects ([PMID: 10773855](#) - DOI:[10.1177/135245850000600208](#)) (Pharmacia) NC=Haukeland University Hospital

Phase IV:

1. Simvastatin as an Add-on Treatment to Interferon-beta-1a for the Treatment of Relapsing-Remitting Multiple Sclerosis (SIMCOMBIN), Phase IV. ([NCT00492765](#)) (Biogen) NC=Vestre Viken Hospital Trust, Drammen.
2. Interferon beta-1b sc. every other day or placebo in clinical isolated syndrome (CIS) Phase IV, Follow-up Study After 11 Years; the BENEFIT-11 trial, 2013 ([NCT01795872](#)) (Bayer) NC=Haukeland University Hospital
3. Interferon beta-1b sc. every other day or placebo in clinical isolated syndrome (CIS), Follow-up Study After 15 Years; the BENEFIT-15 trial Phase IV, 2017 ([NCT03269175](#)) (Bayer) NC=Haukeland University Hospital
4. Quality of Life, and Treatment Satisfaction With Avonex PEN, the PERSIST study Phase IV, 2011 ([NCT01405872](#)) (Biogen) NC=Norway
5. Interferon beta-1b sc. every other day (standard and high dose) in RRMS, the Beyond study follow-up Phase IV, 2009 ([NCT00459667](#)) (Bayer) NC=Haukeland University Hospital
6. Tysabri observation Trial in RRMS, Phase IV, 2007 ([NCT00493298](#)) (Biogen) NC=Haukeland University Hospital
7. MS-Related Fatigue During Treatment With Tysabri, in RRMS, the Tynergy study Phase IV, 2009 ([NCT00884481](#)) (Biogen) NC=Oslo University Hospital
8. Oral Cladribine or placebo in Early MS (CIS) – long term follow-up, the CLASSIC MS study Phase-IV, 2019 ([NCT03961204](#)) (Merck Serono) NC=Haukeland University Hospital
9. Prospective Effectiveness and Safety Study of Cladribine in Participants Who Change First-line DMD Treatments for multiple sclerosis (CLAD CROSS), Phase IV, 2021 ([NCT04934800](#)) (Merck) NC=Oslo University Hospital
10. Orelizumab (open label) in RRMS with suboptimal response to adequate course of DMT in RRMS, the CASTING study trial Phase IV, 2016 ([NCT02861014](#)) (Roche) NC=Haukeland University Hospital

11. Study to Evaluate the Effectiveness and Safety of Ocrelizumab Participants With Early Stage Relapsing Remitting Multiple Sclerosis (RRMS) the ESEMBLE study trial Phase III, 2017 ([NCT03085810](#)) (Roche) NC=Akershus University Hospital
12. Orelizumab (open label) in RRMS – safety and efficacy extension study, the LIBERTO study Phase IV, 2018 ([NCT03599245](#)) (Roche) NC=Haukeland University Hospital
13. Dimethyl Fumarate (DMF) Observational Study (ESTEEM), study Phase IV, 2005 ([NCT02047097](#)) (Biogen) NC=Namsos Hospital
14. Tecfidera and the GUT Microbiota in RRMS, the TECONGUT study Phase IV, 2005 ([NCT02471560](#)) (Biogen) NC=Akershus University Hospital
15. Patient Reported Outcomes to Evaluate Teriflunomide Treatment in RRMS Patients, the TERI-PRO study Phase IV, 2013 ([NCT01895335](#)) (Sanofi Genzyme)
16. Quality of life to Evaluate Teriflunomide Treatment in RRMS Patients, the TERI-LIFE study Phase IV, 2013 ([NCT01895335](#)) (Sanofi Genzyme)
17. Long Term Safety and Efficacy Study of Teriflunomide 7 mg or 14 mg in Patients With Relapsing-Remitting Multiple Sclerosis Phase III, 2008 ([NCT00803049](#)) (Sanofi) NC=Oslo University Hospital
18. A prospective, multicenter, observational, post-authorization safety study (PASS) to evaluate the long term safety profile of LEMTRADA® (alemtuzumab) treatment in patients with relapsing forms of multiple sclerosis (RMS), the Lemtrada PASS study, Phase IV, 2013 (-) ([OBS13434](#)) (Sanofi Genzyme)
19. A Nordic, observational, real life study to describe the effect of LEMTRADA® on fatigue, quality of life and other patient and caregiver reported outcomes in patients with relapsing-remitting multiple sclerosis. the Lemtrada Reality study, Phase IV, 2016 (-) (Sanofi Genzyme)
NC=Haukeland University Hospital
20. Fampyra to improve walking in MS - Used In Routine Medical Practice, the LIBERATE study Phase IV, 2011 ([NCT01480063](#)) (Biogen)
21. Ocrelizumab VErSUS Rituximab Off-Label at the Onset of Relapsing MS Disease (OVERLORD_MS), 2020 ([NCT04578639](#)) NC=Haukeland University Hospital
22. Norwegian Study of Oral Cladribine and Rituximab in Multiple Sclerosis (NOR-MS) (NOR-MS), 2019 ([NCT04121403](#)) NC=Oslo University Hospital

23. Nonrelapsing Secondary Progressive Multiple Sclerosis (NRSPMS) Study of Bruton's Tyrosine Kinase (BTK) Inhibitor Tolebrutinib (SAR442168) (HERCULES), 2020(-) ([NCT04411641](#)) (Sanofi)
NC= Haukeland University Hospital

24. Primary Progressive Multiple Sclerosis (PPMS) Study of Bruton's Tyrosine Kinase (BTK) Inhibitor Tolebrutinib (SAR442168) (PERSEUS), 2020 (-) ([NCT04458051](#)) (Sanofi)