

Curriculum Vitae

Personal information Faiez Al Nimer

Work experience

09/2024 – Current: Clinical Investigator, Swedish Medical Products Agency, Sweden

02/2021 – 09/2024: 50% senior consultant in clinical neurology, Center for Neurology, Academic Speciality Center, Stockholm and 50% clinical research fellow at the Neuroimmunology Unit, Dept of Clinical Neuroscience, Karolinska Institutet; group prof. Maja Jagodic (research grant from the research council of Stockholm County), Sweden.

02/2019 – 01/2021: 50% senior consultant in clinical neurology, Center for Neurology, Academic Speciality Center, Stockholm and 50% postdoctoral research fellow at the Neuroimmunology Unit, Dept of Clinical Neuroscience, Karolinska Institutet; group prof. Fredrik Piehl (research grant from the research council of Stockholm County), Sweden.

01/2016 – 02/2019: 50% junior consultant in clinical neurology, Karolinska University Hospital and Center for Neurology and 50% postdoctoral research fellow (research grant from the research council of Stockholm County until 2021) at the Dept of Clinical Neuroscience, Karolinska Institutet, Sweden.

10/2013 – 10/2015: Postdoctoral research fellow at the Neuroimmunology and Multiple Sclerosis Research section, Neurology Clinic, University Hospital of Zurich, prof. Roland Martin (research grant from the Swedish Society for Medical Research), Switzerland.

12/2012 – 09/2013: Postdoctoral research fellow at the Section for Neuroimmunology, Department of Clinical Neuroscience, Karolinska Institutet, Sweden.

10/2009 – 10/2013: Neurologist, Department of Neurology, Karolinska University Hospital, Stockholm, Sweden.

09/2003 – 09/2009: Resident Physician in neurology, Department of Neurology, Karolinska University Hospital, Stockholm, Sweden.

Education and training

Currently: Main supervisor for PhD student Björn Evertsson and Team Leader at Department of Clinical Neuroscience, Karolinska Institutet, Sweden.

09/2006 – 11/2012: PhD Degree 2012, Dept Clinical Neuroscience, Karolinska Institutet (KI), Sweden. Thesis title: "Genetics in experimental traumatic brain injury". Supervisor: Prof. Fredrik Piehl.

09/2003 – 09/2009 Board certified specialist in Clinical Neurology 2009, Sweden.

09/1995 – 10/2001 Academic degree: Medical Degree, Aristotle University of Thessaloniki, Greece.

Additional information

Publications

1. Al Nimer F, Wennersten A, Holmin S, Meijer X, Wahlberg L, Mathiesen T. MHC expression after human neural stem cell transplantation to brain contused rats. *Neuroreport*. 2004 Aug 26;15(12):1871-5. PMID: 15305127
2. Rudehill S, Muhallab S, Wennersten A, von Gertten C, Al Nimer F, Sandberg-Nordqvist AC, Holmin S, Mathiesen T. Autoreactive antibodies against neurons and basal lamina found in serum following experimental brain contusion in rats. *Acta Neurochir (Wien)*. 2006 Feb;148(2):199-205. PMID: 16362182
3. Wennersten A, Holmin S, Al Nimer F, Meijer X, Wahlberg LU, Mathiesen T. Sustained survival of xenografted human neural stem/progenitor cells in experimental brain trauma despite discontinuation of immunosuppression. *Exp Neurol*. 2006 Jun;199(2):339-47. PMID: 16490195
4. Diez M, Abdelmagid N, Harnesk K, Ström M, Lidman O, Swanberg M, Lindblom R, Al-Nimer F, Jagodic M, Olsson T, Piehl F. Identification of gene regions regulating inflammatory microglial response in the rat CNS after nerve injury. *J Neuroimmunol*. 2009 Jul; 25;212(1-2):82-92. PMID:19525015
5. Al Nimer F, Beyeen AD, Lindblom R, Ström M, Aeiheband S, Lidman O, Piehl F. Both MHC and non-MHC genes regulate inflammation and T-cell response after traumatic brain injury. *Brain Behav Immun*. 2011 Jul; 25(5):981-90. PMID:20974248
6. Ström M, Al Nimer F&, Lindblom R&, Nyengaard JR, Piehl F. Naturally occurring genetic variability in expression of Gsta4 is associated with differential survival of axotomized rat motoneurons. *Neuromolecular Med*. 2012 Mar; 14(1):15-29. PMID:22160604
7. Günther M, Al Nimer F, Gahm C, Piehl F, Mathiesen T. iNOS-mediated secondary inflammatory response differs between rat strains following experimental brain contusion. *Acta Neurochir (Wien)*. 2012 Apr; 154(4):689-97. PMID:22362050
8. Al Nimer F&, Ström M&, Lindblom R, Aeiheband S, Bellander BM, Nyengaard JR, Lidman O, Piehl F. Naturally occurring variation in the Glutathione-S-Transferase 4 gene determines neurodegeneration after traumatic brain injury. *Antioxid Redox Signal*. 2013 Mar 1; 18(7):784-94. PMID:22881716

9. Al Nimer F, Lindblom R, Ström M, Guerreiro-Cacais AO, Parsa R, Aeinehband S, Mathiesen T, Lidman O, Piehl F. Strain influences on inflammatory pathway activation, cell infiltration and complement cascade after traumatic brain injury in the rat. *Brain Behav Immun*. 2013 Jan; 27(1):109-22. PMID:23044177
10. Lindblom RP, Aeinehband S, Parsa R, Ström M, Al Nimer F, Zhang XM, Dominguez CA, Flytzani S, Diez M, Piehl F. Genetic variability in the rat Aplec C-type lectin gene cluster regulates lymphocyte trafficking and motoneuron survival after traumatic nerve root injury. *J Neuroinflammation*. 2013 May 8; 10:60. PMID:23656637
11. Khademi M, Dring AM, Githorpe JD, Wuolikainen A, Al Nimer F, Harris RA, Andersson M, Brundin L, Piehl F, Olsson T, Svenningsson A. Intense inflammation and nerve damage in early multiple sclerosis subsides at older age: a reflection by cerebrospinal fluid biomarkers. *PLoS One*. 2013 May 7; 8(5):e63172. PMID:23667585
12. Dominguez CA, Carlstrom KE, Zhang XM, Al Nimer F, Lindblom RP, Ortlieb Guerreiro-Cacais A, Piehl F. Variability in C-type lectin receptors regulates neuropathic pain-like behavior after peripheral nerve injury. *Molecular pain*. 2014; 10:78. PMID:25492810
13. Lindblom RP, Strom M, Heinig M, Al Nimer F, Aeinehband S, Berg A, Dominguez CA, Vijayaraghavan S, Zhang XM, Harnesk K, Zelano J, Hubner N, Cullheim S, Darreh Shori T, Diez M, Piehl F. Unbiased expression mapping identifies a link between the complement and cholinergic systems in the rat central nervous system. *Journal of immunology*. 2014; 192(3):1138-53. PMID:24353269
14. Aeinehband S, Lindblom RP, Al Nimer F, Vijayaraghavan S, Sandholm K, Khademi M, Olsson T, Nilsson B, Nilsson Ekdahl K, Darreh-Shori T, Piehl F. Complement component C3 and butyrylcholinesterase activity are associated with neurodegeneration and clinical disability in Multiple Sclerosis. *PloS one*. 2015 Apr 2; 10(4):e0122048. PMID:25835709
15. Al Nimer F&, Thelin E&, Nyström H, Dring AM, Svenningsson A, Piehl F, Nelson DW, Bellander BM. Comparative Assessment of the Prognostic Value of Biomarkers in Traumatic Brain Injury Reveals an Independent Role for Serum Levels of Neurofilament Light. *PLoS One*. 2015 Jul 2; 10(7):e0132177. PMID: 26136237
16. Lindblom RP, Berg A, Ström M, Aeinehband S, Dominguez CA, Al Nimer F, Abdelmagid N, Heinig M, Zelano J, Harnesk K, Hübner N, Nilsson B, Ekdahl KN, Diez M, Cullheim S, Piehl F. Complement receptor 2 is upregulated in the spinal cord following nerve root injury and modulates the spinal cord response. *Journal of Neuroinflammation*. 2015 Oct 26; 12:192.
17. Al Nimer F, Elliott C, Bergman J, Khademi M, Dring AM, Aeinehband S, Bergenheim T, Romme Christensen J, Sellebjerg F, Svenningsson A, Linington C, Olsson T, Piehl F. Lipocalin-2 is increased in progressive multiple sclerosis and inhibits remyelination. *Neurology Neuroimmunology and Neuroinflammation*. 2016 Jan 7; 3(1):e191.
18. Lindblom RP, Aeinehband S, Ström M, Al Nimer F, Sandholm K, Khademi M, Nilsson B, Piehl F, Ekdahl KN. Complement Receptor 2 is increased in cerebrospinal fluid of multiple sclerosis patients and regulates C3 function. *Clinical Immunology*. 2016 May; 166-167:89-95. PMID:26502875
19. Al Nimer F&, Jelcic I&, Kempf C, Pieper T, Budka H, Sospedra M, Martin R. Phenotypic and functional complexity of brain-infiltrating T cells in Rasmussen encephalitis. *Neurology Neuroimmunology and Neuroinflammation*. 2018; 5(1):e419. PMID:29259996
20. Günther M, Al Nimer F, Piehl F, Risling M, Mathiesen T. Susceptibility to Oxidative Stress Is Determined by Genetic Background in Neuronal Cell Cultures. *eNeuro*. 2018 Mar 19; 5(2). pii:ENEURO.0335-17.2018. PMID: 29568799
21. Brenner P, Granqvist M, Königsson J, Al Nimer F, Piehl F, Jokinen J. Depression and fatigue in multiple sclerosis: Relation to exposure to violence and cerebrospinal fluid immunomarkers. *Psychoneuroendocrinology*. 2018; 89:53-8. PMID:29324301
22. Jelcic I&, Al Nimer F&, Wang J, Lentsch V, Planas R, Jelcic I, Madjovski A, Ruhmann S, Faigle W, Frauenknecht K, Pinilla C, Santos R, Hammer C, Ortiz Y, Opitz L, Grönlund H, Rogler G, Boyman O, Reynolds R, Lutterotti A, Khademi M, Olsson T, Piehl F, Sospedra M, Martin R. Memory B Cells Activate Brain-Homing, Autoreactive CD4(+) T Cells in Multiple Sclerosis. *Cell*. 2018; 175(1):85-100 e23. PMID: 30173916
23. Sveinsson O, Al Nimer F, Piehl F. Morvan's syndrome treated successfully with rituximab and lacosamide. *BMJ Case Reports*. 2019 Feb 13; 12(2). PMID:30765442
24. Minta K, Cullen NC, Al Nimer F, Thelin EP, Piehl F, Clarin M, Tullberg M, Jeppsson A, Portelius E, Zetterberg H, Blennow K, Andreasson U. Dynamics of extracellular matrix proteins in cerebrospinal fluid and serum and their relation to clinical outcome in human traumatic brain injury. *Clinical Chemistry and Laboratory Medicine*, 2019 Sep 25; 57(10):1565-1573. PMID:30980710
25. Carlström KE, Ewing E, Granqvist M, Gyllenberg A, Aeinehband S, Enoksson SL, Checa A, Badam TV, Huang J, Gomez-Cabrero D, Gustafsson M, Al Nimer F, Wheelock CE, Kockum I, Olsson T, Jagodic M, Piehl F. Therapeutic efficacy of dimethyl fumarate in relapsing-remitting multiple sclerosis associates with ROS pathway in monocytes. *Nature Communications*, 2019 Jul 12; 10(1):3081. PMID:31300673
26. Galli E, Hartmann FJ, Schreiner B, Ingelfinger F, Arvaniti E, Diebold M, Mrdjen D, van der Meer F, Krieg C, Al Nimer F, Sanderson N, Stadelmann C, Khademi M, Piehl F, Claassen M, Derfuss T, Olsson T, Becher B. GM-CSF and CXCR4 define a Thelper cell signature in multiple sclerosis. *Nature Medicine*. 2019 Aug; 25(8):1290-1300. PMID:31332391
27. Thelin E&, Al Nimer F&, Frostell A, Zetterberg H, Blennow K, Nyström H, Svensson M, Bellander BM, Piehl F, Nelson DW. A Serum Protein Biomarker Panel Improves Outcome Prediction in Human Traumatic Brain Injury. *Journal of Neurotrauma*. 2019 Oct 15; 36(20):2850-2862. PMID:31072225
28. Juto A, Fink K, Al Nimer F, Piehl F. Interrupting rituximab treatment in relapsing remitting multiple sclerosis; no evidence of rebound disease activity. *Multiple Sclerosis and Related Disorders*. 2019 Oct 24; 37:101468. PMID:31300673
29. Carlström KE, Chinthakindi PK, Espinosa B, Al Nimer F, Arnér ESJ, Arvidsson PI, Piehl F, Johansson K. Characterization of More Selective Central Nervous System Nrf2-Activating Novel Vinyl Sulfoximine Compounds Compared to Dimethyl Fumarate. *Neurotherapeutics*. 2020 Jul; 17(3):1142-1152. PMID: 32394330
30. Duell F, Evertsson B, Al Nimer F, Sandin Å, Olsson D, Olsson T, Khademi M, Hietala MA, Piehl F, Hansson M. Diagnostic accuracy of intrathecal kappa free light chains compared with OCBs in MS. *Neurology Neuroimmunology and Neuroinflammation*. 2020 Jun 11; 7(4):e775. PMID:32527760
31. Minta K, Brinkmalm G, Al Nimer F, Thelin EP, Piehl F, Tullberg M, Jeppsson A, Portelius E, Zetterberg H, Blennow K, Andreasson U. Dynamics of cerebrospinal fluid levels of matrix metalloproteinases in human traumatic brain injury. *Scientific Reports*. 2020 Oct 22; 10(1):18075. PMID:33093584
32. Minta K, Brinkmalm G, Thelin EP, Al Nimer F, Piehl F, Tullberg M, Jeppsson A, Portelius E, Zetterberg H, Blennow K, Andreasson U. Cerebrospinal fluid brevicin and neurocan fragment patterns in human traumatic brain injury. *Clinical Chimica Acta*. 2021 Jan; 512:74-83. PMID:33275942

33. Evertsson B, Hoyt T, Christensen A, Al Nimer F, Foley J, Piehl F. A comparative study of tolerability and effects on immunoglobulin levels and CD19 cell counts with ocrelizumab vs low dose of rituximab in multiple sclerosis. *Multiple Sclerosis Journal-Experimental, Translational and Clinical*. 2020 Oct 12; 6(4):2055217320964505. PMID: 33110619
34. Lindblad K, Pin E, Just D, Al Nimer F, Nilsson P, Bellander BM, Svensson M, Piehl F, Thelin EP. Fluid Proteomics of CSF and Serum Reveal Important Neuroinflammatory Proteins in Blood-Brain Barrier Disruption and Outcome Prediction following Severe Traumatic Brain Injury: a Prospective, Observational Study. *Crit Care*. 2021 Mar 12; 25(1):103. PMID: 33712077
35. Zheleznyakova G, Piket E, Needham H, Hagemann Jensen M, Ekman D, Khademi M, Al Nimer F, Scicluna P, Faridani OR, Olsson T, Piehl F, Jagodic M. Profiling of small non-coding RNAs across cellular and biofluid compartments: implications for multiple sclerosis immunopathology. *Proc Natl Acad Sci U S A*. 2021 Apr 27; 118(17): e2011574118. PMID: 33879606
36. Needham EJ, Stoevesandt O, Thelin EP, Zetterberg H, Zanier ER, Al Nimer F, Ashton NJ, Outtrim JG, Newcombe VFJ, Mousa HS, Simrén J, Blennow K, Yang Z, Hutchinson PJ, Piehl F, Helmy AE, Taussig MJ, Wang KKW, Jones JL, Menon DK, Coles AJ. Complex Autoantibody Responses Occur following Moderate to Severe Traumatic Brain Injury. *J Immunol*. 2021 Jul 1; 207(1):90-100. PMID: 34145056
37. Asplund Högelin K, Ruffin N, Pin E, Månberg A, Hober S, Gafvelin G, Grönlund H, Nilsson P, Khademi M, Olsson T, Piehl F, Al Nimer F. Development of humoral and cellular immunological memory against SARS-CoV-2 despite B cell depleting treatment in multiple sclerosis. *iScience*. 2021 Sep 24; 24(9):103078. PMID: 34490414
38. Bronge M, Asplund Högelin K, Thomas OG, Ruhrmann S, Carvalho-Queiroz C, Nilsson OB, Kaiser A, Zeitelhofer M, Holmgren E, Linnerbauer M, Adzemovic MZ, Hellström C, Jelcic I, Liu H, Nilsson P, Hillert J, Brundin L, Fink K, Kockum I, Tengvall K, Martin R, Tegel H, Gräslund T, Al Nimer F, Guerreiro-Cacais AO, Khademi M, Gafvelin G, Olsson T, Grönlund H. Identification of four novel T cell autoantigens and personal autoreactive profiles in multiple sclerosis. *Science advances*. 2022 Apr 29; 8(17): eabn1823. PMID: 35476434
39. Bedri SK, Evertsson B, Khademi M, Al Nimer F, Olsson T, Hillert J, Glaser A. Copy number variations across the blood-brain barrier in multiple sclerosis. *Annals of Clinical and Translational Neurology*. 2022 Jul; 9(7):962-976. PMID: 35560551.
40. Asplund Högelin K, Ruffin N, Pin E, Hober S, Nilsson P, Starvaggi Cucuzza C, Khademi M, Olsson T, Piehl F, Al Nimer F. B cell repopulation dynamics and drug pharmacokinetics impact SARS-CoV-2 vaccine efficacy in anti-CD20-treated multiple sclerosis patients. *European Journal of Neurology*. 2022 Jul 8. PMID: 35808856.
41. Svenningsson A, Frisell T, Burman J, Salzer J, Fink K, Hallberg S, Hambræus J, Axelsson M, Al Nimer F, Sundström P, Gunnarsson M, Johansson R, Møllergård J, Rosenstein I, Ayad A, Sjöblom I, Risedal A, de Flon P, Gilland E, Lindeberg J, Shawket F, Piehl F, Lycke J. Safety and efficacy of rituximab versus dimethyl fumarate in patients with relapsing-remitting multiple sclerosis or clinically isolated syndrome in Sweden: a rater-blinded, phase 3, randomised controlled trial. *Lancet Neurol*. 2022 Aug; 21(8):693-703. PMID: 35841908
42. Starvaggi Cucuzza C, Longinetti E, Ruffin N, Evertsson B, Kockum I, Jagodic M, Al Nimer F, Frisell T, Piehl F. Sustained Low Relapse Rate With Highly Variable B-Cell Repopulation Dynamics With Extended Rituximab Dosing Intervals in Multiple Sclerosis. *Neuro Neuroimmunol Neuroinflamm*. 2022 Nov 21; 10(1):e200056. PMID: 36411076
43. Asplund Högelin K, Isac B, Khademi M, Al Nimer F. B cell activating factor levels are linked to distinct B cell markers in multiple sclerosis and following B cell depletion and repopulation. *Clin Immunol*. 2024 Jan; 258:109870. doi: 10.1016/j.clim.2023.109870. PMID: 38101497.
44. Neidhart S, Vlad B, Hilty M, Högelin KA, Ziegler M, Berenjeno-Correa E, Reichen I, Stridh P, Jelcic I, Khademi M, Kockum I, Sospedra M, Al Nimer F, Martin R, Jelcic I. HLA Associations of Intrathecal IgG Production against Specific Viruses in Multiple Sclerosis. *Ann Neurol*. 2024 Mar 29. doi: 10.1002/ana.26921. Epub ahead of print. PMID: 38551149.
45. Huang J, Tengvall K, Bomfim Lima I, Hedström AK, Butt J, Brenner N, Gyllenberg A, Stridh P, Khademi M, Ernberg I, Al Nimer F, Manouchehrinia A, Hillert J, Alfredsson L, Andersen O, Sundström P, Waterboer T, Olsson T, Kockum I. Genetics of immune response to Epstein-Barr virus: prospects for multiple sclerosis pathogenesis. *Brain*. 2024 Apr 17; awae110. doi: 10.1093/brain/awae110. Epub ahead of print. PMID: 38630618.
46. Hallberg S, Evertsson B, Lillvall E, Boremal M, de Flon P, Wang Y, Salzer J, Lycke J, Fink K, Frisell T, Al Nimer F, Svenningsson A. Hypogammaglobulinaemia during rituximab treatment in multiple sclerosis: A Swedish cohort study. *Eur J Neurol*. 2024 Aug; 31(8):e16331. doi: 10.1111/ene.16331. Epub 2024 May 25. PMID: 38794973

Projects

Memberships

- 2022 Grants from the Swedish Medical Association for research in MS
- 2019 and 2021 Grants from the Swedish Brain Foundation for research in MS
- 2020 Pfizer Prize Prize for best Clinical Research achievement in Clinical Immunology (Switzerland's most distinguished prize for junior researchers) together with PhD Ivan Jelcic for our study regarding the crosstalk between B- and T-cells in multiple sclerosis published in *Cell* 2018. The prize was awarded at a ceremony the 6th of February 2020 in Zurich
- 2019 Prize from Christer Lindgrens and Eva Fredholms Foundation for best project in neuroimmunology
- 2018 Prize from Max and Edit Follins Foundation for best project in neuroimmunology
- 2016 and 2017 Grants from the Swedish MS foundation for research in MS
- 2015 Received the Lennmalms prize 2015 for best thesis in Neuroscience in Sweden
- 2013-2015 Grant from the Swedish Society for Medical Research for post-doctoral studies in MS in Zurich.

Other Relevant Information