



Universiteit  
Leiden  
The Netherlands

## Lifting the fog of neuropsychiatric lupus

Monahan, R.C.

### Citation

Monahan, R. C. (2023, March 30). *Lifting the fog of neuropsychiatric lupus*. Retrieved from <https://hdl.handle.net/1887/3589784>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3589784>

**Note:** To cite this publication please use the final published version (if applicable).

## Curriculum Vitae

Rory Caitlin Monahan was born on the 25th of July 1994 in The Hague, the Netherlands. In 2012 she obtained her high school diploma summa cum laude at the Stedelijk Gymnasium Haarlem and started medical school at Leiden University. During her second year of medical training, curiosity drew her to research in the field of immunology and she was accepted in the MD/PhD track, allowing her to combine her studies and research. Under supervision of amongst others prof Huizinga and prof van der Maarel, a collaboration was started. Using immunohistochemistry, the presence of the binding of antibodies of patients with neuropsychiatric lupus to brain antigens was studied. After working in the lab parttime for several years, her focus shifted to a more clinical side of research. During her bachelor- and masters' degree, she successfully completed honours programs, including the International Leiden Leadership Program (2018).

After finalizing her medical studies cum laude, she received a competitive grant in 2018 from the LUMC Board of Directors, allowing her to do 3-year fulltime PhD research. In February 2019, she started as PhD student in the Department of Rheumatology under supervision of prof Huizinga, prof Kloppenburg and dr Steup-Beekman, in which many clinical aspects of neuropsychiatric lupus were studied. Triggered by a previous research internship and the Department of Clinical Epidemiology, her interest for epidemiological matters and thinking became clear. At the beginning of her PhD, she was accepted in the training program to become an epidemiologist and during her PhD, she received extensive epidemiological training. With the completion of her PhD, she will also complete her training as clinical epidemiologist (Epidemiologist B).

In March 2022 she started to work as postdoctoral researcher at the Department of Clinical Epidemiology of the LUMC, which she has combined with clinical work as ANIOS internal medicine since September 2022.



## List of publications

1. Monahan RC, Beart-van de Voorde LJJ, Fronczek R, *et al.* Clinical outcome in patients with suspected inflammatory neuropsychiatric lupus treated with immunosuppression: an observational cohort study. *Lupus Science & Medicine* 2023;10:e000850.
2. Monahan RC, Middelkoop HAM, Beart-van de Voorde LJJ, *et al.* High prevalence but low impact of cognitive dysfunction on quality of life in patients with lupus and neuropsychiatric symptoms. *Arthritis Care Res.* 2022 Apr 26. Online ahead of print.
3. Monahan RC, van den Beukel MD, Borggreven NV, *et al.* Autoantibodies against specific post-translationally modified proteins are present in patients with lupus and associate with major neuropsychiatric manifestations. *RMD Open.* 2022 Apr;8(1):e002079.
4. Monahan RC, Blonk AME, Huizinga TWJ, *et al.* To treat or not to treat with immunosuppressive therapy: psychiatric disorders in patients with systemic lupus erythematosus. *Lupus Sci Med.* 2022;9:e000629.
5. Monahan RC, Blonk AME, Baptist E, *et al.* Dissociation in SLE: A part of lupus fog? *Lupus.* 2021 Nov;30(13):2151-2156.
6. Monahan RC, Inglese F, Middelkoop HAM, *et al.* White matter hyperintensities associate with cognitive slowing in patients with systemic lupus erythematosus and neuropsychiatric symptoms. *RMD Open.* 2021 Jul;7(2):e001650.
7. Inglese F, Kant IMJ, Monahan RC, *et al.* Different phenotypes of neuropsychiatric systemic lupus erythematosus are related to a distinct pattern of structural changes on brain MRI. *Eur Radiol.* 2021 Nov;31(11):8208-8217.
8. Monahan RC, Inglese F, Middelkoop HAM, *et al.* White matter hyperintensities associate with cognitive slowing in patients with systemic lupus erythematosus and neuropsychiatric symptoms. *RMD Open.* 2021 Jul;7(2):e001650.
9. Monahan RC, Beart-van de Voorde LJJ, Eikenboom J, *et al.* Fatigue in patients with systemic lupus erythematosus and neuropsychiatric symptoms is associated with anxiety and depression rather than inflammatory disease activity. *Lupus.* 2021 Jun;30(7):1124-1132.
10. Inglese F, Kant IMJ, Monahan RC, *et al.* Different phenotypes of neuropsychiatric systemic lupus erythematosus are related to a distinct pattern of structural changes on brain MRI. *Eur Radiol.* 2021 Apr 30.
11. Hassan S, Monahan RC, Mauser-Bunschoten EP, *et al.* Mortality, life expectancy, and causes of death of persons with hemophilia in the Netherlands 2001-2018. *J Thromb Haemost.* 2021 Mar;19(3):645-653.
12. Monahan RC, Fronczek R, Eikenboom J, *et al.* Mortality in patients with systemic lupus erythematosus and neuropsychiatric involvement: A retrospective analysis from a tertiary referral center in the Netherlands. *Lupus.* 2020 Dec;29(14):1892-1901.
13. Monahan RC, Beart HJL, Fronczek R, *et al.* Suspected Transverse Myelitis with Normal MRI and CSF Findings in a Patient with Lupus: What to Do? A Case Series and Systematic Review. *Neuropsychiatr Dis Treat.* 2020 Dec 22;16:3173-3186
14. Monahan RC, Fronczek R, Beart- van de Voorde LJJ, *et al.* Neuropsychiatrische systemische lupus erythematoses Een zeldzaam en veelzijdig ziektebeeld. *Nervus*, September 2020
15. Gegenava M, Beart HJL, Monahan RC, *et al.* Performance of the proposed ACR-EULAR classification criteria for systemic lupus erythematosus (SLE) in a cohort of patients with SLE with neuropsychiatric symptoms. *RMD Open.* 2019 Jun 5;5(1):e000895.
16. Monahan RC, Scholten EM. Nierven trombose als complicatie van membraan nefropathie. *Focus Vasculair*, Juni 2019
17. Monahan RC, Beart-van de Voorde LJJ, Steup-Beekman GM, *et al.* Neuropsychiatric symptoms in systemic lupus erythematosus: impact on quality of life. *Lupus.* 2017 Oct;26(12):1252-1259.
18. Monahan RC, Suttorp MM, Gabreëls BATF. A case of rivaroxaban-associated acute tubulointerstitial nephritis. *Neth J Med.* 2017 May;75(4):169-171.

## Acknowledgements





This PhD would not have been possible without the help, support and kindness of many people that have surrounded me in the past years.

I would like to start by thanking everybody involved in the NPSLE clinic of the LUMC, both patients and medical professionals, including Jeroen, Huub, Rolf, Gisela, and Liesbeth. Liesbeth, your heart of gold is unique, and you bring patient care to the next level. Thank you for being my paranymp.

Also an important part of the NPSLE clinic are two of my supervisors, Tom and Margreet, who I would like to thank separately.

Tom, my promotor: as a second-year medical student I approached you about research in the field of immunology and without hesitation, you sent me to everyone you thought might have an interesting project for me. However, with your enthusiasm – both then and throughout my entire PhD- you drew me to NPSLE, for which I am grateful.

Margreet, my co-promotor: our weekly meetings always brightened my week. For the past nearly ten years I have had the joy to work with you professionally, but also on a personal level you have inspired me with your kindness.

Margreet K, my promotor: you adopted me as strange soul in your osteoarthritis team and have been a guardian for the epidemiological aspects of my research.

In addition, I would like to thank the board of directors of the LUMC, that gave me the opportunity for this PhD through the MD/PhD grant.

I would also like to thank my colleagues from the Department of Epidemiology, especially Frits and Rolf, for the interesting discussions and their support. Heather, thank you for making me feel welcome at the epi-department.

There have been many people with whom I have collaborated on research projects, that I would like to thank as well, including Hannelore, Francesca, Jeroen, Itamar, Leendert, Michelle, Anne, César and Els. Jozé, thank you for all the (personal) discussions whilst puzzling with the NPSLE databases.

I would also like to thank my colleagues from the Department of Rheumatology, with whom it was a pleasure to work, laugh and debate with. A special mention to the osteoarthritis team, Marieke, Sietse and Lotte for their input on my completely different topic. In addition, I would like to especially mention several colleagues that have become dear friends over the past years. Sophie, you have been my systemic autoimmune disease buddy along the way and have made every day work and normal life joyful. Coen, our discussions on amongst others epidemiological ponderings and cooking always make me smile. Marc, thank you for meticulously reading all my

manuscripts and the extensive debates about English, research and life over the last years. I am very happy that you are my paranymp.

I also owe a debt of gratitude to my family and friends, who have stood by me, in good and difficult times. My parents, who raised me to be a critical thinker. Mum, you are my role model and Dad, I still miss you and your remarks every day. My loving sisters, Katja and Jessica, that deal with being (r)organized regularly. Jessica, thank you for all your work on designing my thesis, I admire your creativity. Emma, thank you for always being there and correcting my Dutch summary. Carlijn, Rand, Dora, Pien, Auke, Karin- I am honoured to have you as friends and our talks always brighten my day.

And of course, last but not least, my dear Marc, my partner and in COVID-times even my day-to-day colleague- this PhD would not have been here without you. Your everyday love and support have been and are invaluable.