

Interactive control of the lower urinary tract

Citation for published version (APA):

de Rijk, M. M. (2023). *Interactive control of the lower urinary tract: translational models in functional and neuro-urology*. [Doctoral Thesis, Maastricht University]. Maastricht University.
<https://doi.org/10.26481/dis.20230328mr>

Document status and date:

Published: 01/01/2023

DOI:

[10.26481/dis.20230328mr](https://doi.org/10.26481/dis.20230328mr)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain.
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

Stellingen behorende bij het proefschrift

Interactive control of the lower urinary tract:

Translational models in functional and neuro-urology

Mathijs de Rijk – 28 maart 2023

1. Mechanisms of cellular senescence and oxidative stress play a crucial role in aging-related deterioration of urothelial barrier and signaling properties. - *This thesis*
2. The increased expression of trophic factors VEGF and proNGF in the bladder neck in a model of Interstitial Cystitis/Bladder Pain Syndrome is associated with structural changes underlying perceived sensations of pain. - *This thesis*
3. The periaqueductal gray can be parcellated into clusters with distinct functional properties and interaction patterns with other brain areas. - *This thesis*
4. The periaqueductal gray functions as a major relay station in the hierarchical system of bladder control; measurement of activity patterns in this region enables delineation of the functional state of the larger system. - *This thesis*
5. More reliable predictors of therapeutic effectiveness for patients suffering from lower urinary tract dysfunction are necessary to improve patient care.
6. Preservation of proper lower urinary tract functioning in older adults is essential to maintain a high level of autonomy and quality of life.
7. Ultra-high field MRI facilitates assessment of human brain function in unprecedented resolution, enabling translation of invasive animal studies to the human situation.
8. Combining assessment of structural and functional changes related to lower urinary tract dysfunction at various levels is crucial for the development of a comprehensive theory on sensation and control of the lower urinary tract. - *This thesis*
9. In interdisciplinary research, it is essential to establish a common language by simplifying complex scientific concepts without compromising their integrity.
10. I have approximate answers, possible beliefs and different degrees of certainty about different things, but I'm not absolutely sure of anything. - *Richard Feynman*
11. The true beauty of science lies not just in its discoveries, but in the boundless potential for new ones waiting to be uncovered. - *ChatGPT*