

University of Groningen

Effects of laboratory housing conditions on neurobiology of energy balance in mice

Karapetsas, Giorgio

DOI:
[10.33612/diss.182828078](https://doi.org/10.33612/diss.182828078)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2021

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Karapetsas, G. (2021). *Effects of laboratory housing conditions on neurobiology of energy balance in mice*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen.
<https://doi.org/10.33612/diss.182828078>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Effects of laboratory housing conditions on neurobiology of energy balance in mice

Giorgio Karapetsas



Effects of laboratory housing conditions on neurobiology of energy balance in mice

PhD thesis

to obtain the degree of PhD at the University of Groningen
on the authority of the
Rector Magnificus Prof. C. Wijmenga
and in accordance with
the decision by the College of Deans.

This thesis will be defended in public on

Friday 29 October 2021 at 11:00 hours

by

Giorgio Karapetsas

born on 23 March 1987
in Camerino - Italy

This work was financially supported by the Adaptive Life programme from the Groningen Institute for Evolutionary Life Sciences (GELIFES) and Nutricia Research (Utrecht, The Netherlands).

The printing of this thesis was financially supported by the University of Groningen and the Graduate School of Science and Engineering (GSSE).

©2021 Giorgio Karapetsas

Supervisors

Prof. G. van Dijk
Prof. J. Komdeur

Co-supervisor

Dr. A.L. Schipper

Assessment committee

Prof. R.H. Henning
Prof. R.A. Hut
Prof. T.H. Lutz

Table of contents

Chapter 1	
General introduction	7
Chapter 2	
Neurobiology of postnatal overfeeding by litter size reduction in rodents; considerations and perspectives	23
Chapter 3	
Post-weaning individual housing of C57BL/6J male mice affects growth trajectories and energy balance, irrespective of environmental temperature	51
Chapter 4	
Post-weaning individual housing of C57BL/6J female mice does not affect energy balance compared to social housing, but social status does	83
Chapter 5	
A new method for the assessment of meal parameters in laboratory mice exposed to different experimental and environmental conditions	115
Chapter 6	
General discussion	143
Appendix I	
English Summary	161
Appendix II	
Nederlandse Samenvatting	167
Acknowledgements	173