University of Groningen

Regulation of protein homeostasis in acute and chronic stress

Wu, Di

DOI:
[10.33612/diss.96277662](https://doi.org/10.33612/diss.96277662)

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:
2019

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

Citation for published version (APA):
Wu, D. (2019). *Regulation of protein homeostasis in acute and chronic stress*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.96277662>

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.

Regulation of protein homeostasis in acute and chronic stress

Di Wu

The work described in this thesis was performed in:

Laboratory of Immunopathogenesis, College of Veterinary Medicine, Nanjing Agricultural University, Nanjing, China

Department of Biomedical Sciences of Cells and Systems (Previous Department of Cell Biology), University Medical Center Groningen, University of Groningen, Groningen, The Netherlands

The printing of this thesis was financially supported by

University of Groningen
University Medical Center Groningen (UMCG)

ISBN (printed version): 978-94-034-1964-0

ISBN (digital version): 978-94-034-1963-3

Copyright

All right reserved. No part of this publication may be reported or transmitted in any form or by any means without the permission of the author and the publisher holding the copyright of the published articles.

Cover and Layout: Di Wu

university of
 groningen

Regulation of protein homeostasis in acute and chronic stress

PhD thesis

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

This thesis will be defended in public on

23rd Sep., 2019 at 12:45

by

Di Wu

Born on 29th April, 1990
In JiangSu, China

Supervisors

Prof. Dr. H. H. Kampinga

Prof. Dr. Endong Bao

Co-supervisor

Dr. S. Bergink

Assessment Committee

Prof. Dr. Dineke Verbeek

Prof. Dr. Willem van Eden

Prof. F. M. Reggiori

Contents

Chapter 1

Introduction and aim.....	5
---------------------------	---

Chapter 2

Aspirin pretreatment reduced heat stress injury to chicken myocardial cells	35
---	----

Chapter 3

The N-terminus of HSPB7 drives its activity to suppress polyQ aggregation	49
---	----

Chapter 4

FOXO1 prevents polyQ aggregation by inhibiting protein synthesis in a STAU1 and DDX18 dependent manner	69
--	----

Chapter 5

Insulin-like growth factor 2 (IGF2) protects against HD through the extracellular disposal of protein aggregates.....	95
---	----

Chapter 6

General discussion and perspectives	141
---	-----

Appendices	151
-------------------------	-----

Samenvatting in het Nederlands.....	152
-------------------------------------	-----

Summary in English.....	155
-------------------------	-----

Acknowledgements.....	157
-----------------------	-----

Curriculum Vitae	159
------------------------	-----

List of Publications	159
----------------------------	-----