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## Sex Differences in the Control of Adipose Tissue Function

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# Chapter 8

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## Appendix

- Authors' affiliations
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## Authors' Affiliations

Department of Internal Medicine, Erasmus MC, University Medical Center Rotterdam, Rotterdam, the Netherlands

Johanna C. van den Beukel  
Aldo Grefhorst  
Kasiphak Kaikaew  
Aart J. van der Lelij  
Anke McLuskey  
Sebastian J.C.M.M. Neggers  
Jacobie Steenbergen  
Axel P.N. Themmen  
Jenny A. Visser

Department of Pathology and Clinical Bioinformatics, Erasmus MC, University Medical Center Rotterdam, Rotterdam, the Netherlands

Sigrid M.A. Swagemakers

Department of Experimental Laboratory Medicine, Amsterdam University Medical Centers, Location AMC, Amsterdam, the Netherlands

Aldo Grefhorst

Department of Laboratory Medicine, University Medical Center Groningen, Groningen, the Netherlands

Theo H. van Dijk

Department of Physiology, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Kasiphak Kaikaew



## Publications in this Thesis

**Kaikaew K**, Steenbergen J, Themmen APN, Visser JA, Grefhorst A. Sex difference in thermal preference of adult mice does not depend on presence of the gonads. *Biol Sex Differ*. 2017;**8**(1):24.

**Kaikaew K**, van den Beukel JC, Neggers S, Themmen APN, Visser JA, Grefhorst A. Sex difference in cold perception and shivering onset upon gradual cold exposure. *J Therm Biol*. 2018;**77**:137–144.

**Kaikaew K**, Steenbergen J, van Dijk TH, Grefhorst A, Visser JA. Sex Difference in Corticosterone-Induced Insulin Resistance in Mice. *Endocrinology*. 2019;**160**(10):2367–2387.

## Manuscripts in this Thesis

**Kaikaew K**, Grefhorst A, Steenbergen J, Swagemakers SMA, McLuskey A, Visser JA. Sex Difference in the Mouse BAT Transcriptome Reveals a Role of Progesterone in BAT Function. *Submitted*

**Kaikaew K**, Grefhorst A, van der Lelij AJ, Visser JA. Sex Difference in Adipose Tissue Biology: Gonadal and Adrenal Steroid Perspectives. *Manuscript in preparation*

## Publications not in this Thesis

**Kaikaew K**. Paracetamol Poisoning: Review of Pathophysiology and Management. *Thai J Gastroenterol*. 2014;**15**(2):110–113.

Tasing P, Kulaputana O, Sanguanrungrasirikul S, **Kaikaew K**. Effects of Precooling with Cold Water Ingestion on Thermoregulatory Response of Obese Men during Moderate Intensity Exercise in Hot and Humid Environment. *J Med Assoc Thai*. 2016;**99**(2):197–205.



## PhD Portfolio

PhD student:	Kasiphak Kaikaew
Erasmus MC department:	Internal Medicine
Research school:	Molecular Medicine
PhD period:	April 2015 – January 2020
Promotor:	Prof. dr. Aart J. van der Lelij
Co-promotors:	Dr. ir. Jenny A. Visser Dr. Aldo Grefhorst

Training / Activities	Year	Workload (ECTS)
<b>Courses and Workshops</b>		
Laboratory Animal Science (Utrecht University)	2015	3.0
Introduction in GraphPad Prism	2015	0.3
Annual Course on Molecular Medicine	2016	0.7
Biostatistical Methods I: Basic Principles Part A (NIHES, CC02A)	2016	2.0
6 <sup>th</sup> Course and Workshop Basic and Translational Endocrinology	2016	1.0
Biomedical Research Techniques XV	2016	1.5
Research Integrity	2017	0.3
Biomedical English Writing and Communication	2017	3.0
Course on R	2017	1.8
Microscopic Image Analysis from Theory to Practice	2018	0.8
Ensembl Browser Workshop	2018	0.6
Workshop on NCBI, PubMed & other open source software	2018	1.0
<b>Conferences (Presentations and Participation)</b>		
Endo Retreat (Newark/Athens/Rotterdam/Copenhagen/Paris) 2015, Rotterdam, Netherlands (attending)	2015	1.0
Chulalongkorn/Erasmus International Symposium 2015: Nephrology, Dermatology, Endocrinology and Immunology, Bangkok, Thailand (attending)	2015	1.0
Wetenschapsdagen (Science Days) 2016, Antwerp, Belgium <i>Corticosterone reduces glucose uptake in brown adipose tissue via GLUT4 expression and translocation</i> (oral presentation)	2016	1.0
Dutch Endocrine Meeting 2016, Noordwijkerhout, the Netherlands <i>Corticosterone disturbs glucose uptake in brown adipose tissue via GLUT4 translocation</i> (oral presentation)	2016	1.0
20 <sup>th</sup> Molecular Medicine Day 2016, Rotterdam, the Netherlands <i>Corticosterone disturbs glucose uptake in brown adipose tissue via GLUT4 translocation</i> (poster presentation)	2016	0.3
3 <sup>rd</sup> JNVE conference, Leiden, the Netherlands <i>Sex difference in thermal preference in adult mice is not affected by gonadectomy</i> (oral presentation)	2016	1.0



Training / Activities	Year	Workload (ECTS)
Wetenschapsdagen (Science Days) 2017, Antwerp, Belgium <i>Sex difference in thermal preference in adult mice is not affected by gonadectomy</i> (poster presentation)	2017	1.0
Dutch Endocrine Meeting 2017, Noordwijkerhout, the Netherlands <i>Tissue-specific effects of corticosterone on glucose homeostasis in male mice</i> (oral presentation)	2017	1.0
Adipocyte-Brain Crosstalk Symposium, Lübeck, Germany <i>Sex difference in thermal preference in adult mice is not affected by gonadectomy</i> (poster presentation)	2017	1.0
Sex and Gender Factors Affecting Metabolic Homeostasis, Diabetes and Obesity (Keystone Symposium), Tahoe City, California, USA <i>Sex difference in thermal preference in adult mice is not affected by gonadectomy</i> (poster presentation)	2017	1.0
ENDO 2017, Orlando, Florida, USA <i>Tissue-specific effects of corticosterone on glucose homeostasis in male mice</i> (poster and short oral presentation)	2017	1.0
4 <sup>th</sup> JNVE conference, Leiden, the Netherlands <i>While women feel cold, men may not</i> (oral presentation)	2017	1.0
10 <sup>th</sup> NRRN (Nuclear Receptor Research Network) meeting, Leuven, Belgium (attending)	2017	1.0
Wetenschapsdagen (Science Days) 2018, Antwerp, Belgium <i>While women feel cold, men may not</i> (oral presentation)	2018	1.0
Dutch Endocrine Meeting 2018, Noordwijkerhout, the Netherlands <i>While women feel cold, men may not</i> (oral presentation)	2018	1.0
Erasmus/Ohio Collaborative Activities in Endocrinology, Rotterdam, the Netherlands (attending)	2018	0.3
22 <sup>nd</sup> Molecular Medicine Day 2018, Rotterdam, the Netherlands <i>While women feel cold, men may not</i> (poster presentation)	2018	0.3
20 <sup>th</sup> European Congress of Endocrinology (ECE) 2018, Barcelona, Spain <i>Sex differences in glucocorticoid-induced metabolic disturbances in mice</i> (poster presentation)	2018	1.0
Wetenschapsdagen (Science Days) 2019, Sint-Michielsgestel, the Netherlands <i>Dose-dependent effect of progesterone on T37i brown adipocyte differentiation</i> (poster presentation)	2019	1.0
Dutch Endocrine Meeting 2019, Noordwijkerhout, the Netherlands <i>Dose-dependent effect of progesterone on T37i brown adipocyte differentiation</i> (oral presentation)	2019	1.0
23 <sup>rd</sup> Molecular Medicine Day 2019, Rotterdam, the Netherlands <i>Dose-dependent effect of progesterone on T37i brown adipocyte differentiation</i> (poster presentation)	2019	0.3
Early Career Forum and ENDO 2019, New Orleans, Louisiana, USA <i>Dose-dependent effect of progesterone on T37i brown adipocyte differentiation</i> (poster presentation)	2019	1.0
Wetenschapsdagen (Science Days) 2020, Sint-Michielsgestel, the Netherlands (attending)	2020	1.0

<b>Training / Activities</b>	<b>Year</b>	<b>Workload (ECTS)</b>
<b>Seminars and Work Discussion</b>		
Sex and Gender Differences in Metabolism (COEUR)	2015	0.2
Internal Medicine Research Symposium (June, September)	2016	0.4
Internal Medicine Research Symposium (April, June, September)	2017	0.6
Internal Medicine Research Symposium (April, June, September)	2018	0.6
Internal Medicine Research Symposium (April, June)	2019	0.4
Lecture Series on Endocrinology	2015–2019	1.6
Endocrinology & Internal Medicine Work Discussion	2015–2019	3.6
Centrum Gezond Gewicht (Obesity Clinic CGG) lab meeting	2016–2019	1.7
<b>Teaching and Supervision</b>		
Supervision Junior Med School (JMS) students 2015	2015	2.0
Supervision Junior Med School (JMS) students 2016	2016	2.0
Supervision Junior Med School (JMS) students 2017	2017	2.0
<b>Grants and Awards</b>		
Erasmus Trustfonds for ENDO 2017	2017	
ESE Basic Science Meeting Grant (The European Society of Endocrinology)	2018	
EndoCareers Travel Awards (The Endocrine Society)	2019	
Erasmus Trustfonds for ENDO 2019	2019	



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Performing PhD research is challenging, but also sometimes very tough. Without these supports, I could not have accomplished this long PhD journey. Thereby, I would like to express my gratitude to all supporters.

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I would like to express my gratitude to my first co-promotor and daily supervisor, **Dr. J.A. Visser**. Dear Jenny, I could not have been writing this acknowledgement if you are not my supervisor. I am very grateful that I can always interrupt you at any time (even in the evenings or the weekends) if I have any questions or problems, and you will find the solutions for any issues mostly immediately. You always believe in my lab skills and results, find a way to interpret and present the data in a scientifically sound concept, and guide me to proceed on with the next step. Not only work-related aspects, you did also support me in my personal issues, e.g. the accommodation problems that I faced in my first year. Also, thanks to John for helping me with this issue as well.

My PhD research might have not been able to start without the support of my second co-promotor and daily supervisor, **Dr. A. Grefhorst**. Dear Aldo, I am very glad that you have been my supervisor since the beginning. You are my first hands-on teacher and a great role model of basic science researchers. You always help me tackle all lab-related problems, are optimistic for my results, and finally come up with new creative ideas for following experiments. When you sat next to me in the office, I could turn around at any time to ask any simple or complicated questions and you were always happy to answer. Although you are my remote mentor for the last two years, you still reply to my emails super quickly, mostly in minutes or hours, and are willing to come to Rotterdam whenever we need you. I really appreciate that.

I appreciate the PhD promotion committee for accepting our invitation to be assessors for my thesis, especially the other two reading committees: **Prof. dr. O.C. Meijer** and **Prof.dr. E.F.C. van Rossum**. Dear Onno, thank you for your valuable feedback on my thesis and your inputs for my corticosterone work during my PhD period. It was my honor to collaborate with you during my PhD. Dear Liesbeth, thank you for assessing my thesis and also your feedback and ideas on my projects during the fruitful CGG meetings.

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Of course, there are also many PhD companions during my journey, **Margreet**, **Gido**, **Loes**, and **Karina**, who are all great officemates and friends. I will remember all wonderful and happy dinners and trips that we spent together. Dear Margreet, you are my first wonderful PhD buddy. Thanks for being very supportive during the time of our journey. I really enjoyed the time we spent in the lab and at our first-time-US congresses. Please don't forget the campaign Thailand 2020s. Dear Gido, you are a super supportive colleague and friend.

Thanks for always sharing fancy gadgets and funny clips with me. I hope you will hit your PhD goal in a real soon. Dear Loes, thanks for being such a good colleague and friend and accepting to be my paranymph. You are always super helpful to me in many ways, namely Dutch phone calls and bike issues. I must admit that you should be called a terrific toddler, who makes many of my working days more cheerful. I wish you a very successful PhD journey. Dear Karina, you are a very energetic and creative PhD friend of mine. Sitting next to you in the office is an enjoyable relaxing spot. Also, I wish you a successful PhD trajectory.

My lab work has also been assisted by all the Met&Repro lab members: **Patric, Anke, Bas, Martin, Rosinda, Piet, and Melitza**. Dear Patric, I am grateful for your valuable feedback and inputs for my research, and thanks for all the nice time at national and international congresses. Dear Anke, I really appreciate all your help, such as cell culture, mouse experiment, and finding information and quotations of all chemicals. And thanks for your frequent joyful laughs in the lab. Dear Bas, thanks for your assistance in the histological work. I will miss chatting with you in the evening before going back home. Dear Martin, thanks for your assistance in the flow cytometry and Victor-related issues, and nice discussions about movies and Thai foods. Dear Rosinda, thanks for your assistance during my last months, and for the cookies and fun moments during coffee breaks.

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I must say that I could not have survived abroad, >9,000 km from home, without these wonderful supports of Thai friends, the 'Hello Kariang' group. Dear **Dew<sup>+</sup>**, how can I thank you enough for your invaluable support since the med-school time? I truly appreciate it! My life in Rotterdam would not be pleasant without your presence. I am looking forward to continuing working with you at MDCU and you will always be one of my best friends. And special

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## About the Author

Kasiphak Kaikaew was born on 19 February 1988 in Kanchanaburi, Thailand. In 2006, he graduated from Triam Udom Suksa School in Bangkok and started his medical training at the Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand. During his medical study in 2010, he was elected a president of the Student Union of the Faculty of Medicine, Chulalongkorn University and obtained the award of Excellence in intellect, manner, extracurricular activity dedication, and collaboration to the university. He obtained the Doctor of Medicine Degree (2<sup>nd</sup> Class Honours) from Chulalongkorn University and the Thai Medical License in 2012. After graduation, he finished the one-year clinical internship at Hua Hin Hospital and Thap Sakae Hospital in Prachuap Khiri Khan and started working as an academic teaching assistant at the Department of Physiology, Faculty of Medicine, Chulalongkorn University and as a general practitioner at King Chulalongkorn Memorial Hospital in Bangkok. Since 2014, he has become an academic lecturer at Department of Physiology, Faculty of Medicine, Chulalongkorn University. In 2015, he obtained a doctoral scholarship from the Faculty of Medicine, Chulalongkorn University to start his PhD project entitled “Control of brown adipose tissue function by brain, temperature, and sexes” at the Laboratory Metabolism and Reproduction, Section of Endocrinology, Department of Internal Medicine, Erasmus MC, under supervision of Prof.dr.ir. A.P.N. Themmen (initially), Dr.ir. J.A. Visser, Dr. Aldo Grefhorst, and Prof.dr. A.J. van der Lelij. The results of his research are presented in this thesis entitled “Sex Differences in the Control of Adipose Tissue Function”. After graduation, he is going to continue his career as an academic lecturer and researcher at the Department of Physiology, Faculty of Medicine, Chulalongkorn University.

