

Curriculum Vitae

Heidi M.B. Lesscher, PhD

Department of Animals in Science and Society, Division of Behavioural Neuroscience
Faculty of Veterinary Medicine, Utrecht University
Yalelaan 2, 3584 CM Utrecht, The Netherlands
Phone: +31 30 2539876 | E-mail: H.M.B.Lesscher@uu.nl

Academic Positions

- 2013-present Assistant Professor, Department of Animals in Science and Society, Division of Behavioural Neuroscience, Faculty of Veterinary Medicine, Utrecht University
- 2011-2013 Junior Lecturer and Research Associate, Department of Animals in Science and Society, Division of Behavioural Neuroscience, Faculty of Veterinary Medicine, Utrecht University
- 2006-2011 Postdoctoral Fellow, Rudolf Magnus Institute of Neuroscience, Dept. Neuroscience and Pharmacology, UMC Utrecht
- 2004–2006 Postdoctoral Fellow, Ernest Gallo Clinic and Research Center, Neurology Department, University of California San Francisco. Advisor: Dr. Robert O. Messing
- 1999-2004 PhD Student, Rudolf Magnus Institute of Neuroscience, Department of Neuroscience and Pharmacology, University Medical Center Utrecht. Advisors: Dr. Mirjam A.F.M. Gerrits, Prof. Dr. J.Peter H. Burbach and Prof. Dr. Jan M. van Ree

Education

- 2013 Participant in Elevate – ‘Teaching an Online Course’ (5 wk course)
- 2013 Teaching qualification for Higher Education (Basis Kwalificatie Onderwijs)
- PhD in Neurosciences 2004, Utrecht University, The Netherlands.
Title: Vulnerability for cocaine dependence – Involvement of μ -opioid receptors
Thesis advisors: Prof. Dr. J.Peter H. Burbach and Prof. Dr. Jan M. van Ree
- 1999 MSc in Biopharmaceutical Sciences, Leiden University, The Netherlands

Research Support and awards

- 2015 Seed Grant from the UU Strategic Theme Dynamics of Youth (DoY) "The adolescent paradox: unravelling adolescent risk and resilience to alcohol use disorders" (€103,200)
- 2015 **TOP Grant from the Netherlands Organisation for Health Research and Development "Shining light on loss of control over substance and food intake" (€ 674,000)**
- 2014 UU Strategic Theme Dynamics of Youth (DoY) support for Theme Coordinator "An interdisciplinary collaborative network to study addictive behaviours in youth: prevention, treatment, and policy" (€ 9,654)
- 2014 Grant from the Neurological Foundation of New Zealand "Does a genetic alternation in serotonin transporter function predict compulsive alcohol use in rats?" (NZD 80,000)
- 2011 Grant from the Netherlands Organisation for Health Research and Development, Knowledge Utilisation Grant 91501007 "Specific 14-3-3 zeta complex modulators for the treatment of alcoholism" (€ 50,000)
- 2011 Neuroscience and Cognition Utrecht, "Controlling behavior using optogenetics" (€67,000)
- 2008 **VENI grant from the Netherlands Organisation for Health Research and Development, Innovative Research Incentives Scheme, Grant 91676134 "Involvement of the amygdala in the development of alcoholism" (€210,000)**
- 2007 & 2008 EBPS travel awards for the biennial EBPS meeting (2007, Germany) and the EBPS Workshop "Behavioral Genetics and its Relevance to NeuroPsychiatric Disorders" (2008, Ireland)
- 2007 Postdoctoral Fellow **Outstanding Young Investigator Award** from the International Behavioral and Neural Genetics Society
- 2007 **Fellowship from the Brain Foundation of the Netherlands, Grant H06.08 "Alcoholism: neurobiological mechanisms and genetic susceptibility" (€130,000)**
- 2004 **Outgoing International Fellowship, Marie Curie, Grant MOIF-CT-2004-002812 European Union "Amygdala CRF in reduced anxiety and alcohol consumption in PKCepsilon null mice" (€220,000)**
- 2002 Royal Netherlands Academy of Arts and Sciences Travel Award for short research project at the University of Surrey, Prof. Dr. I. Kitchen
- 2002 NIDA Travel Award for participation in "Frontiers in Addiction Research" at the Society for Neuroscience meeting (Orlando, Florida, USA).
- 1998 Nomination for Organon Young Research Talent Awards

Main Research Accomplishments during the past 8 years

- After my postdoctoral training at the Ernest Gallo Clinic and Research Center, supported by a Marie Curie Fellowship, I returned to the Rudolf Magnus Institute of Neuroscience in Utrecht in 2006, where I started a new research line to identify the genetic and neurobiological processes that underlie the development of excessive alcohol use and alcohol dependence. I **showed** that **C57BL/6J mice rapidly develop two important behavioural characteristics of alcoholism** (*Lesscher et al, Alcoholism: Clin. Exp. Res., 2010*).
- With a grant from the Brain Foundation of the Netherlands I investigated genetic susceptibility loci for alcohol consumption in mice using chromosome substitution strains. I identified an **important locus on mouse chromosome 2 for alcohol preference, which was dependent on the grandparental origin** (*Lesscher et al, Pharmacogenetics and Genomics, 2009*).
- With a VENI grant (ZonMw), I studied the regulation of genes in the amygdala during the development of high alcohol consumption. This study revealed that **gene expression changes in the amygdala occur in particular during the transition from low to high alcohol consumption**, thus stressing the role of the amygdala in escalation of alcohol intake. Functional analysis of one of the candidate genes, 14-3-3 zeta confirmed involvement of this novel candidate gene in the development of alcoholism, at least in mice (*Lesscher et al, PLoS One, 2012*).

In 2010 I started to co-supervise a PhD student, Marcia Spoelder, with whom I set up a study looking at individual differences in alcohol consumption in rats. The project is now completed and Marcia will defend her thesis (containing 8 experimental chapters) in march 2016. In 2013, I was **appointed Assistant Professor** and I continued to extend my own research group that focuses on neurobiological and behavioural aspects that determine individual variation in the risk for alcohol addiction. Since the summer of 2015 two PhD students joined my team. They will address the neural circuits involved in the development of loss of control over alcohol and cocaine use, a key characteristic of human addiction. Moreover, in march 2016 a postdoc will be appointed to work on a joint project, funded by the strategic theme Dynamics of Youth, with the Faculty of Social Sciences to compare the impact of alcohol consumption in adolescents versus adults.

Collaborations

Optogenetics: Identification of Neural circuits involved in reward processing and addiction. Collaboration with Dr. R.A.H. Adan and Dr. G.M. Ramakers, Brain Center Rudolf Magnus, UMC Utrecht and Dr. G. Stuber, UNC Neuroscience Center, Chapel Hill, NC, USA.

In an ongoing collaboration, the neural circuits involved in substance and food seeking are studied using optogenetics tools.

Attentional Bias and alcoholism: from humans to rats and back. Collaboration with Dr. Th. Gladwin and Prof. Dr. R. Wiers, University of Amsterdam.

In this ongoing collaboration, we aim to determine whether rats – like humans - develop attentional bias for alcohol-associated cues. This would allow, in the long-term, to unravel the neurobiological processes that underlie this phenomenon.

Adenosine involvement in alcoholism. Collaboration with Dr. A. Bailey, University of Surrey, Guildford, UK.

In this collaboration we aim to join our expertise with alcohol consumption models and the expertise of Dr. A. Bailey on adenosine pharmacology and genetics. We have performed experiments focusing on adenosine deaminase and A2A receptor effects on alcohol consumption and preference using genetic mouse models.

Serotonin reuptake transporter: involvement in alcohol addiction. Collaboration with Prof. dr. B. Ellenbroek (University of Wellington, New Zealand), Dr. J. Olivier (University of Groningen, Netherlands) and Dr. E. Comasco (University of Uppsala, Sweden).

In this collaboration, we aim to determine the role of the serotonin reuptake transporter (SERT) in alcohol addiction using SERT knockout rats. Moreover, we aim to assess the effects of early life events on the propensity to develop alcohol addiction and the role of the SERT in this process.

Adolescence and alcohol addiction. Collaboration with Prof. dr. L. Kenemans (Faculty of Social Sciences), Dr. J. Cousijn (University of Amsterdam).

In this collaborative effort, human neuropsychological research will be paralleled by neurobehavioural research in rodents to unravel age-related differences in the mechanisms underlying heavy alcohol use in adolescents versus adults.

Reviewing activities

International journals

2015 - now Member of the editorial board for Behavioural Pharmacology

Frequent referee for multiple journals including:

Alcohol Research - Current Reviews, Behavioural Pharmacology, Biological Psychiatry, British Journal of Pharmacology, European Addiction Research, European Journal of Neuroscience, European Neuropsychopharmacology, Genes Brain and Behaviour, Genetics, PLoS One, Psychoneuroendocrinology, Translational Psychiatry.

Grant review

2011 Invited grant reviewer for the Brain Foundation of the Netherlands

2008 – 2009 Member of the Quality Workgroup II, Grant Programme 'Risk Behavior and Dependence' for ZonMw

PhD committees

2013 PhD reading committee Jelte Wouda "Alcohol studies in translational models: behavioural consequences of adolescent exposure and novel approaches to reduce the propensity to relapse", VU, Amsterdam

Society affiliations and activities

Society for Neuroscience (SFN)
Member

European Behavioural Pharmacology Society

Member

Research Society on Alcoholism

Member

- 2014 Organizer and chair of symposium "Individual differences in alcoholism? A multidisciplinary approach" at the ISBRA/RSA Joint Congress June 21-25, 2014, in Bellevue, Washington, USA.

Dutch Neurofederation

Member

- 2014 Organizer and chair of symposium "Natural Rewards and Addiction" at the Dutch EndoNeuroPsychoMeeting, Lunteren, The Netherlands
- 2012 Organizer and chair of symposium "New frontiers in alcohol research" at the Dutch EndoNeuroPsychoMeeting, Lunteren, The Netherlands
- 2008 Organizer and chair of symposium "What happens when the amygdala rules?" at the Dutch EndoNeuroPsychoMeeting, Doorwerth, The Netherlands
- 2009 Organizer and chair of symposium "Alcoholism: cause and consequences" at the Dutch EndoNeuroPsychoMeeting, Doorwerth, The Netherlands

Mediterranean Neuroscience Society

- 2015 Organizer and chair of symposium "Reward sensitivity from adolescence to adulthood" at the Mediterranean Neuroscience Meeting, Pula, Sardinia, Italy.

Teaching / Advising

- Co-Promoter of Janna Smeets and Maryse Minnaard, who started their projects on the neural circuitry of loss of control over substance and food seeking using optogenetics and state-of-the art models for compulsive alcohol, substance and food seeking.
- Co-Promoter of Marcia Spoelder, who started her project on individual differences in susceptibility for alcoholism in October 2010. Under my supervision, Marcia set up a rat model for alcohol use in Lister Hooded rats. She found prominent individual differences in these rats, which she has shown relate to differences in impulsivity, expression of specific proteins in the amygdala (PKCepsilon, 14-3-3zeta and GAD) and differences in pavlovian approach behavior. Moreover, the rats with the high alcohol drinking phenotype develop loss of control over alcohol use in that they become less sensitive to quinine adulteration.
- Co-advisor of multiple PhD students on mouse genetics, lentiviral RNA interference, gene expression arrays etc.
- Supervision of Master students > 30 undergraduate students during their internships, Utrecht University
 - M. Bossong
 - M. Hordijk
 - M. Rotte
 - D. Hartman

E. Hoogveld	J. Flores
L. Tabatabaie	C. ter Mors
L. van Kerkhof	C. de Git
M. Klanker	A. Turano
S. van der Elst	C. Garliss
S. Peters	D. de Kruijff
J. Houthuijzen	M. Kacaniku
K. Hydén	P. Groothuis
L. Kraak	B. Janssen
R. Mijnsbergen	E. Elshof
M. Styles	S. Pol
M. van der Lee	M. Weeda
R. Zwiers	K. van Zouwen
L. Jolink	J. Bedier-de Prairie
K. Green	

- Supervision of > 20 Bachelor and Master theses
- Coordinator of the elective bachelor course "Comparative Ethology" at the Faculty of Veterinary Medicine.
- Initiator and Coordinator of the elective Master course "Neurobiology of Behavior" at the Faculty of Veterinary Medicine.
- Initiator and Coordinator of the online course [Behavioural Pharmacology](#) (Elevate)
- Organisator and Coordinator for the [Summerschool Addiction](#)
- Lecturing and supervision of research projects:
 - Topics include the neurobiology of drug addiction, animal models for addiction, neurogenetics, neuropsychopharmacology in the following courses:
 - Introduction Neuroscience (Biomedical Sciences)
 - Advanced Neuroscience (Biomedical Sciences)
 - Functional Neuroscience (Biomedical Sciences)
 - Neuroscience (Medicine)
 - Master orientation: writing a research proposal (Biomedical Sciences)
 - Laboratory Animals Science course: practicals and research projects
 - Fundamentals in Neuroscience (Master Neuroscience and Cognition, Utrecht University), *guest lecturer*
 - Elective course on Addiction (bèta Faculty, Pharmacy, Utrecht University), *guest lecturer*
 - Elective course on Addiction (Public Health, Medical School, Utrecht University), *guest lecturer*
 - Master in Addiction Medicine, postgraduate course, 1st and 2nd module (SPON), *guest lecturer*

Other activities

- 2013 Member of the Programme and Organizing Committee for the Veterinary Science Day 2013 (Faculty of Veterinary Medicine, Utrecht University)

- 2008 / 2010 Invited author for the Scientific Calendars 2009 and 2011 (Veen Magazines). Subject: alcoholism and addiction.
- 2007 / 2008 Organizer of weekly scientific meetings in the department Neuroscience and Pharmacology
- 2002 – 2004 Member of the PhD Student Committee of the Rudolf Magnus Institute of Neuroscience

Invited lectures

11/2016 Invited speaker for the Science Café KICK, organized by Studium Generale of the Utrecht University, 21st November 2016, TivoliVredenburg, Utrecht, the Netherlands. <https://www.sg.uu.nl/agenda/2016/science-caf%C3%A9-kick>

6/2016 "Addiction" Invited speaker for the SUMMA (Selective Utrecht Medical MAster) symposium "MIND OVER MATTER: THE UNEXPLORED TERRITORY OF THE SOMATO-MENTAL CONNECTION", 14th June 2016, Utrecht, the Netherlands.

4/2016 "ALCOHOL - VAN GEBRUIK NAAR VERSLAVING". Invited speaker for the Cultural Sunday, 3rd April 2016, Academy Building, Utrecht University, the Netherlands.

6/2015 "Compulsive cocaine and alcohol seeking and its limbic corticostriatal substrates". Invited speaker for the symposium "New animal models of drug addiction: behavioral and neurobiological perspectives" at the 5th Meeting of the Mediterranean Neuroscience Society (MNS), June 12-15 2015, Sardinia, Italy.

6/2015 "Social play deprivation in adolescence enhances alcohol consumption in adulthood". Invited speaker for the symposium "Reward sensitivity from adolescence to adulthood" at the 5th Meeting of the Mediterranean Neuroscience Society (MNS), June 12-15 2015, Sardinia, Italy.

5/2014 "Amygdala mechanisms underlying escalation of alcohol use". Invited speaker for the symposium "Exploring stress as a multi-system, multi-dimensional response: Sex specificity and treatment implications" at the Volterra meeting on Alcoholism and Stress, May 6-9 2014, Volterra, Italy.

4/2014 "Alcoholverslaving. Wat is het en hoe ontstaat het? Een neurobiologisch perspectief." Invited speaker for the Brain week benefit dinner organized by MFLS, the the student association of the medical students at Leiden University, the Netherlands.

12/2013 "Alcoholverslaving. Wat is het, Hoe komen we er aan en Wat kunnen er aan doen?". Invited speaker for the Utrecht University alumni meeting series, Meppel, The Netherlands.

01/2013 "De Amygdala en Alcoholverslaving". Invited speaker for the series of Lunch Meeting organized by the Leiden Biologist Association, Leiden, The Netherlands.

10/2012 "New challenges and opportunities in alcoholism research". Invited speaker for the Nacht van Descartes "Geestverruimend", organized by Studium Generale, Utrecht, The Netherlands.

05/2012 "Moleculaire mechanismen van Alcoholverslaving". Invited speaker for the conference "Cold Turkey: Breaking the Habit" organized by the Dutch Pharmaceutical Student Association K.N.P.S.V., Apeldoorn, The Netherlands.

11/2011 "Neurogenetisch alcoholonderzoek en de neurobiologie van verslaving". Invited speaker for the Symposium on Addiction organized by the Pharmaceutical student association U.P.S.V. 'Unitas Pharmaceuticorum', Utrecht, The Netherlands.

08/2011 "Amygdala genes and escalation of alcohol intake in mice". Invited to speak at the 14th EBPS meeting, Amsterdam, The Netherlands.

11/2010. "Novel amygdala mechanisms of alcoholism: a neurogenetic approach in mice". Invited by Dr. Cathy Fernandes, Institute of Psychiatry, London, UK.

04/2010. "Neurogenetics of alcoholism in mice". Invited to speak at the annual local meeting on Behavioural Genetics, Amsterdam.

10/2007. "PKCepsilon signaling new evidence for amygdala control of anxiety and alcohol consumption". Invited by Dr. Shirley Pullan, Johnson & Johnson PRDBE CNS Research, Beerse, Belgium.

10/2007. "Amygdala PKCepsilon regulates corticotrophin releasing factor, anxiety-like behavior and alcohol consumption". Invited to speak at the 20th ECNP Congress, Vienna, Austria.

10/2007. "PKCepsilon signaling: new evidence for amygdala control of alcohol consumption". Invited by Dr. Tamás Kozicz, Dept. Cellular Animal Physiology, Faculty of Science, Donders Centre of Neuroscience, Radboud University Nijmegen.

05/2007. "Amygdala PKCepsilon regulates corticotrophin releasing factor, anxiety-like behavior and alcohol consumption". Invited to speak at the 9th annual Genes, brain and behavior meeting of the International Behavioural and Neural Genetics Society, Doorwerth, The Netherlands.

09/2006. "The amygdala in control of alcohol consumption". Invited by Prof. Dr. Taco de Vries, Dept. Molecular and Cellular Neurobiology, CNCR, VU University, Amsterdam.

03/2003. "Changes in μ -opioid receptors after chronic naltrexone in mice". Invited to speak at the ECNP Workshop on Neuropsychopharmacology, Nice, France.

09/2003. "Endogenous opioid systems and behavioural effects of cocaine: evidence from μ -opioid receptor knockout and chronic naltrexone treated mice". Invited to speak at the 16th ECNP Congress, Prague, Czech Republic.

6/2/2002. "Mu-opioid receptors - a role in sensitivity to addiction?". Invited by Prof. Dr. Ian Kitchen, Faculty of Health and Medical Sciences, University of Surrey, Guildford, Surrey.

26/3/2002. "μ-opioid receptors: a role in sensitivity to addiction?". Invited by Dr. Declan Jones, Behavioural Neurobiology, Psychiatry CEDD, GlaxoSmithKline plc, Harlow, UK.

Publications

updated May 2016

Total number of papers: 25

Number of first-author papers: 12

Number of last-author papers: 3

Average Impact Factor: 4.03 (field median for Neuroscience: 2.9)

Total cites: 665

Cites per paper: 26.6

H-factor: 13

25. M. Spoelder, P. Hesseling, M. Styles, A.M. Baars, J.G. Lozeman-van 't Klooster, **H.M.B. Lesscher**, L.J.M.J. Vanderschuren, 2016. Dopaminergic neurotransmission in ventral and dorsal striatum differentially modulates alcohol Reinforcement. *European Journal of Neuroscience*. doi: 10.1111/ejn.13358.
24. M. Spoelder, A.M. Baars, M.D. Rotte, L.J.M.J. Vanderschuren, **H.M.B. Lesscher**, 2016. Dopamine receptor agonists modulate voluntary alcohol intake independently of individual levels of alcohol intake in rats. *Psychopharmacology*. 233(14):2715-25.
23. M. Spoelder, P. Hesseling, A.M. Baars, J.G. Lozeman-van 't Klooster, M.D. Rotte, L.J.M.J. Vanderschuren, **H.M.B. Lesscher**, 2015. Individual Variation in Alcohol Intake Predicts Reinforcement, Motivation, and Compulsive Alcohol Use in Rats. *Alcoholism: Clinical and Experimental Research*. 39 (12): 2427–2437.
22. **H.M.B. Lesscher**, M. Spoelder, M.D. Rotte, M.J. Janssen, P. Hesseling, J.G. Lozeman-van 't Klooster, A.M. Baars, L.J.M.J. Vanderschuren, 2015. Early social isolation augments alcohol consumption in rats. *Behavioural Pharmacology*. 26(7 Spec No):673-680
21. M. Spoelder, **H.M.B. Lesscher**, P. Hesseling, A.M. Baars, J.G. Lozeman-van 't Klooster, R. Mijnsbergen, L.J.M.J. Vanderschuren, 2015. Altered performance in a rat gambling task after acute and repeated alcohol exposure. *Psychopharmacology*. 232(19):3649-62.
20. M. Spoelder, K.T. Tsutsui, **H.M.B. Lesscher**, L.J.M.J. Vanderschuren, J.J. Clark, 2015. Adolescent Alcohol Exposure Amplifies the Incentive Value of Reward-Predictive Cues through Potentiation of Phasic Dopamine Signaling. *Neuropsychopharmacology*. 40(13):2873-2885.
19. F.W. Hopf, **H.M.B. Lesscher**, 2014. Rodent models for compulsive alcohol use. *Alcohol*. 48(3): 253-264.
18. H. Boleij, J. Willems, M. Leijten, J.V. Klooster, **H.M.B. Lesscher**, S. Kirchhoff, M. Lavrijsen, S.S. Arndt, F. Ohl, 2014. Chronic social stress does not affect behavioural habituation in male CD1 mice. *Behav Brain Res*. 273C: 34-44.
17. **H.M.B. Lesscher**, L.J.M.J. Vanderschuren, 2012. Compulsive drug use and its neural substrates. *Rev. Neurosci*. 23: 731-745.

16. **H.M.B. Lesscher**, J.M. Houthuijzen, M.J. Groot Koerkamp, F.C. Holstege, L.J.M.J. Vanderschuren, 2012. Amygdala 14-3-3R as a novel modulator of escalating alcohol intake in mice. *PLoS One*. 7(5):e37999.
15. **H.M.B. Lesscher**, L.W.M. van Kerkhof, L.J.M.J. Vanderschuren, 2010. Inflexible and indifferent alcohol drinking in male mice. *Alcohol Clin. Exp. Res.*, 34(7): 1219-1225.
14. **H.M.B. Lesscher**, M.J. Kas, S. van der Elst, H.A. van Lith, L.J.M.J. Vanderschuren, 2009. A grandparent-influenced locus for alcohol preference on mouse chromosome 2. *Pharmacogenetics and Genomics*, 19(9): 719-729.
13. **H.M.B. Lesscher**, M.J. Wallace, L. Zeng, V. Wang, J.K. Deitchman, T. McMahon, R.O. Messing, P.M. Newton, 2009. Amygdala protein kinase C epsilon controls alcohol consumption. *Genes Brain and Behavior*, 8(5): 493-499.
12. D.S. Choi, W. Wei, J.K. Deitchman, V.N. Kharazia, **H.M.B. Lesscher**, T. McMahon, D. Wang, Z.H. Qi, W. Sieghart, C. Zhang, K.M. Shokat, I. Mody, R.O. Messing, 2008. Protein kinase C delta regulates ethanol intoxication and enhancement of GABA-stimulated tonic current. *Journal of Neuroscience*, 28(46): 11890-11899.
11. **H.M.B. Lesscher**, T. McMahon, A.W. Lasek, W.H. Chou, J. Connolly, V. Kharazia, R.O. Messing, 2008. Amygdala protein kinase C epsilon regulates corticotrophin-releasing factor and anxiety-like behavior. *Genes Brain and Behavior*, 7(3): 232-233.
10. D.S. Mathon, **H.M.B. Lesscher**, M.A.F.M. Gerrits, A. Kamal, J.E. Pintar, A.G.P. Schuller, M.P. Smidt, B.M. Spruijt, J.P.H. Burbach, M.P. Smidt, J.M. van Ree, G.M.J. Ramakers, 2005. Increased GABAergic input to ventral tegmental area dopaminergic neurons associated with decreased cocaine reinforcement in μ -opioid receptor knockout mice. *Neuroscience*, 130(2): 359-367 (shared first authorship).
9. **H.M.B. Lesscher**, M. Hordijk, N.P. Bondar, O.V. Alekseyenko, J. P.H. Burbach, J.M. van Ree, M.A.F.M. Gerrits, 2005. μ -Opioid receptors are not involved in acute cocaine-induced locomotor activity nor in development of cocaine-induced behavioral sensitization. *Neuropsychopharmacology*, 30(2): 278-285.
8. **H.M.B. Lesscher**, E. Hoogveld, J.P.H. Burbach, J.M. van Ree, M.A.F.M. Gerrits, 2005. Endogenous cannabinoids are not involved in cocaine reinforcement and development of cocaine-induced sensitization. *European Neuropsychopharmacology*, 15(1): 31-37.
7. M.J. Kas, R. van den Bos, A.M. Baars, M. Lubbers, **H.M.B. Lesscher**, J.J. Hillebrand, A.G. Schuller, J.E. Pintar, B.M. Spruijt, 2004. μ -opioid receptor knockout mice show diminished food-anticipatory activity. *European Journal of Neuroscience*, 20(6): 1624-1632.
6. Bailey, **H.M.B. Lesscher**, M. Kelly, C. Ledent, L. Davis, S.M.O. Hourani, I. Kitchen, 2004. Enhanced morphine withdrawal and μ -opioid receptor G-protein coupling in A_{2A} adenosine receptor knockout mice. *J. Neurochem.* 88(4): 827-834.

5. **H.M.B. Lesscher**, A. Bailey, J.P.H. Burbach, J.M. van Ree, I. Kitchen, M.A.F.M. Gerrits, 2003. Receptor selective changes in μ -, δ - and κ -opioid receptors after chronic naltrexone treatment in mice. *European Journal of Neuroscience*, 17(5):1006-12.
4. M.A.F.M. Gerrits, **H.M.B. Lesscher**, J.M. van Ree, 2003. Drug dependence and the endogenous opioid system. *European Neuropsychopharmacology*, 13(6): 424-434.
3. **H.M.B. Lesscher**, J.P.H. Burbach, J.M. van Ree, M.A.F.M. Gerrits, 2003. ERK1/2 activation in rat ventral tegmental area by the μ -opioid agonist fentanyl: an in vitro study. *Neuroscience*, 116: 139-144.
2. J.O. Workel, M.S. Oitzl, M. Fluttert, **H.M.B. Lesscher**, A.M. Karssen, E.R. de Kloet, 2001. Differential and age-dependent effects of maternal deprivation on the hypothalamic-pituitary-adrenal axis of brown norway rats from youth to senescence. *Journal of Neuroendocrinology*, 13(7): 569-580.
1. M.J.M. Schaaf, J.O. Workel, **H.M.B. Lesscher**, E. Vreugdenhil, M.S. Oitzl, E.R. de Kloet, 2001. Correlation between hippocampal BDNF mRNA expression and memory performance in senescent rats. *Brain Research*, 915: 227-233.

Published main author abstracts

24. **H.M.B. Lesscher**, M. Spoelder, A.M. Baars, P. Hesselings, L.J.M.J. Vanderschuren (2014). 14-3-3 zeta and MAPK in the central nucleus of the amygdala contribute to escalation of alcohol intake. *Society for Neuroscience Meeting*, Abstract # 179.02.
23. **H.M.B. Lesscher**, M. Spoelder, Q.M.T. Janssen, M. Rotte, J.M. Baars, J. Lozeman-van 't Klooster, P. Hesselings, L.J.M.J. Vanderschuren (2014). Social play deprivation enhances the risk for high alcohol consumption. *Alcoholism Clinical and Experimental Research* 38(Suppl.1), 245A.
22. M. Spoelder, C.G. de Git, J.M. Baars, J. Lozeman-van 't Klooster, P. Hesselings, L.J.M.J. Vanderschuren, **H.M.B. Lesscher** (2014). Individual vulnerability to alcohol intake in relation to decision making and pavlovian approach. *Alcoholism Clinical and Experimental Research* 38 (Suppl. 1), 354A.
21. **H.M.B. Lesscher** (2014). Amygdala mechanisms underlying escalation of alcohol use. *Alcohol* 48(2): 166-167.
20. **H.M.B. Lesscher**, M.J. Groot Koerkamp, F.C. Holstege, L.J.M.J. Vanderschuren (2012). Amygdala genes and escalation of alcohol intake in mice. *Alcoholism Clinical and Experimental Research* 36 (Suppl. 1), 261A.
19. **H.M.B. Lesscher**, M.J. Groot Koerkamp, F.C. Holstege, L.J.M.J. Vanderschuren (2011). Amygdala genes and escalation of alcohol intake in mice. *14th EBPS meeting. Invited for oral presentation.* *Behavioural Pharmacology* 22 (Suppl.), E16.

18. **H.M.B. Lesscher**, L.W.M. van Kerkhof, M.J. Groot Koerkamp, F.C. Holstege, L.J.M.J. Vanderschuren (2010). Amygdala gene regulation during escalation of alcohol intake in mice. *7th FENS Forum of European Neuroscience*.
17. **H.M.B. Lesscher**, M.J.H. Kas, L.W.M. van Kerkhof, S. van der Elst, H.A. van Lith, L.J.M.J. Vanderschuren (2009). A grandparent-influenced locus for alcohol preference on mouse chromosome 2. *Society for Neuroscience Meeting*, Abstract #252.14.
16. **H.M.B. Lesscher**, M.J.H. Kas, S. van der Elst, H.A. van Lith, L.J.M.J. Vanderschuren (2009). A grandparent-influenced locus for alcohol preference on mouse chromosome 2. *Behavioural Pharmacology* 20 (Suppl. 1), S76.
15. **H.M.B. Lesscher**, M.J.H. Kas, L.J.M.J. Vanderschuren (2008). A locus for alcohol consumption on mouse chromosome 2. *European Behavioural Pharmacology Society, International Workshop on Behavioural Genetics and NeuroPsychiatric Disorders*.
14. **H.M.B. Lesscher**, J.K. Deitchman, J. Connolly, T. McMahon, R.O. Messing (2007). Amygdala PKCepsilon regulates corticotrophin releasing factor, anxiety-like behavior and alcohol consumption. *Annual meeting of the International Behavioural and Neural Genetics Society*.
13. **H.M.B. Lesscher**, J.K. Deitchman, J. Connolly, T. McMahon, R.O. Messing (2007). Amygdala PKCepsilon regulates corticotrophin releasing factor, anxiety-like behavior and alcohol consumption. *European Neuropsychopharmacology*, 17(Suppl. 4): S180.
12. **H.M.B. Lesscher**, M.J.H. Kas, L.J.M.J. Vanderschuren (2007). An important locus for alcohol consumption on chromosome 2. *Behavioural Pharmacology* 18 (Suppl. 1), S86.
11. **H.M.B. Lesscher**, J.K. Deitchman, J. Connolly, T. McMahon, R.O. Messing (2007). Amygdala PKCepsilon regulates corticotropin releasing factor, anxiety-like behavior and alcohol consumption. *European Neuropsychopharmacology*, 17(Suppl. 1): S12-S13.
10. **H.M.B. Lesscher**, J.K. Deitchman, J. Connolly, T. McMahon, R.O. Messing (2006). Amygdala PKCepsilon regulates corticotrophin releasing factor, anxiety-like behavior and alcohol consumption. *5th Forum of European Neuroscience (FENS)*. Abstract A165.14.
9. **H.M.B. Lesscher**, J. Connolly, T. McMahon, J.K. Deitchman, R.O. Messing (2006). Amygdala PKCepsilon regulates corticotrophin releasing hormone, anxiety-like behavior and alcohol consumption. *29th Annual Scientific Meeting of the Research Society on Alcoholism*.
8. D.S. Mathon, **H.M.B. Lesscher**, M. Marinelli, L.J.M.J. Vanderschuren, J.E. Pintar, G.M. Ramakers (2005). Hypoactivity of the mesolimbic dopamine system and reduced cocaine reinforcement in mice lacking μ -opioid receptors. *Society for Neuroscience Abstract #1029.14*.
7. **H.M.B. Lesscher**, T. McMahon, J. Connolly, R.O. Messing (2004). Amygdala CRF in PKC ϵ null mice. *Society for Neuroscience Abstract #914.10*.

6. **H.M.B. Lesscher**, J.M. van Ree, M.A.F.M. Gerrits (2003). Endogenous opioid systems and behavioural effects of cocaine: evidence from μ -opioid receptor knockout and chronic naltrexone treated mice. *European Neuropsychopharmacology* 13 (Supplement 4), S103. **Invited for oral presentation.**
5. **H.M.B. Lesscher**, M. Bossong, M. Hordijk, A.J.A. van der Linden, B.M. Spruijt, A. Bailey, I. Kitchen, JPH Burbach, JM van Ree, MAFM Gerrits (2003). Behavioral effects of cocaine and quantitative dopamine receptor autoradiography in MOR-1 knockout mice and chronic naltrexone treated mice. *European Neuropsychopharmacology* 13 (Supplement 1), S22-S23. Workshop "Neuropsychopharmacology of addiction".
4. **H.M.B. Lesscher**, M. Hordijk, A.J.A. van der Linden, B.M. Spruijt, A. Bailey, I. Kitchen, J.P.H. Burbach, J.M. van Ree, M.A.F.M. Gerrits (2002). Involvement of opioid receptors in the behavioral effects of cocaine: μ -opioid receptor deficient and chronic NTX treated mice. NIDA meeting "Frontiers in Addiction Research".
3. **H.M.B. Lesscher**, M. Bossong, A.J.A. van der Linden, B.M. Spruijt, I. Kitchen, A. Bailey, J.P.H. Burbach, J.M. van Ree, M.A.F.M. Gerrits (2002). Behavioral effects of cocaine and dopamine receptor autoradiography in MOR knockout mice and chronic naltrexone treated mice. Society for Neuroscience Abstract #806.2.
2. **H.M.B. Lesscher**, M. Bossong, J.P.H. Burbach, J.M. van Ree, B.M. Spruijt, M.A.F.M. Gerrits (2002). Behavioural effects of cocaine and quantitative dopamine receptor autoradiography in MOR-1 knockout mice and chronic naltrexone treated mice. *Behavioural Pharmacology* 13(5-6), 492.
1. **H.M.B. Lesscher**, J.P.H. Burbach, J.M. van Ree, M.A.F.M. Gerrits (2001). Extracellular signal-regulated protein kinase (ERK) activation in rat ventral tegmental area by the μ -opioid agonist fentanyl: an *ex vivo* study. 32nd International narcotics Research Conference.

Media publications

Sept 2013 Interview for article "Nog even genieten van de laatste zonnestralen" about rewarding aspects of late summer moments in monthly magazine Flair.

2011 Brief historical and popular scientific notes for the scientific calendar on aspects of alcoholism, e.g. "Living on the edge to obtain alcohol", "Definitions of alcohol use and alcoholism" and "Does chocolate addiction exist?"

2009 Brief historical and popular scientific notes for the scientific calendar on aspects of alcoholism, e.g. "Alcohol and emotions", "Why is alcohol not a harddrug?" and "Substance abuse – a longstanding human tradition"