

Scientific Curriculum Vitae

Johan Nils Lundström

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1. Personal data

Year of birth: 1973
Nationality: Swedish
Personal status: Unmarried

2. Academic degrees

- PhD in Psychology, Uppsala University, September 2005.
- B.Sc. in Psychology, Uppsala University, January 2001.
- B.Sc. in Governmental Science, Uppsala University, June 1998.

3. Academic positions / lengthy visits

- **April 2009 to present:** Adjunct Assistant Professor, Dpt. of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden.
- **May 2008 to present:** Adjunct Assistant Professor at the Dpt. of Psychology, University of Pennsylvania, Philadelphia, PA.
- **September 2007 to present:** Assistant Member at the Monell Chemical Senses Center, Philadelphia, PA.
- **October 2005 to September 2007:** Post-doctoral position at the Montreal Neurological Institute, McGill University, Montreal, Canada. (Supervisors: Professors **Marilyn Jones-Gotman** and **Robert J. Zatorre**).
- **February 2001 to September 2005:** Graduate student position at the Department of Psychology, Uppsala University. (Supervisors: Professors **Mats J. Olsson** and **Mats Fredrikson**).
- **September 2004 to March 2005:** Pre-doctoral visit at the Montreal Neurological Institute, McGill University, Montreal, Canada. Financed by a research grant from STINT (Supervisor: Professor **Marilyn Jones-Gotman**).
- **October 2003 to June 2004:** Pre-doctoral visit at the Institute of Mind and Biology at University of Chicago. Financed by Dr. Martha McClintock in collaboration with the American Scandinavian Foundation. (Supervisor: Professor **Martha McClintock**).
- **January 2002 to April 2002:** Pre-doctoral visit at the Department of Otorhinlaryngology, University of Dresden Medical School, Germany. Financed by the Karolinska Institute, Sweden. (Supervisor: Professor **Thomas Hummel**).

Completed Research Support (last five years)

Reseau de Bio-Imagerie du Quebec (RBIQ) Lepore (PI), Role: Co-investigator

Are there ventral and dorsal stream in chemosensory perception?

This project investigated the presence of information separation in the human brain for chemosensory stimuli.

Contract Research (PI initiated) Lundstrom (PI) 12/15/2009 – 10/01/2010

Effects on alcohol on cerebral processing of odor

This project investigated how the brain process odors containing small amounts of alcohol in comparison to pure odors.

Contract Research (PI initiated) Lundstrom (PI) 12/01/2009 – 04/01/2010

Meta-analyses of pain

This project investigated how the brain process pain by using a novel meta-analytical approach.

Bial-219974721 Esteves (PI) Role: Co-Investigator 1/1/2007 – 12/31/2009

Bial Foundation (Portugal)

Psychophysiological effects of human pheromones

The project will investigate different psychophysiological effects of an isolated putative human social chemosignal.

VR - 2005:960 Lundstrom (PI) 1/1/2006 – 12/31/2007

Swedish Research Council

Two year postdoctoral research grant

7. Publications**Bibliographic information:**

Number of published papers/chapters	32
Number of papers/chapters 'in press':	3
Number of papers/chapters 'submitted':	5
Average impact score:	4.87
H-index value	9

7.1. Publications in peer-reviewed journals

39. Frey, M., Weyers, P., Pauli, P., **Lundström, J. N.** and Muhlberger, A. (Submitted). Androstadienone modulates attention-based reactions towards angry faces in men and women.
38. Boesveldt, S., McClintock, M.K., Yee, J. R., Tessler-Lindsay, S., Hummel, T., and **Lundström, J. N.** (Submitted). Olfactory function and social networks in older adults: a matter of sex.
37. Albrecht, J., Boesveldt, S., Gordon, A. R., Alden, E. C., Hernandez, M., and **Lundström, J. N.** (Submitted). The 40-item Monell Extended Sniffin' Sticks Identification Test (MONEX-40).
36. **Lundström, J. N.**, Mathe, A., Schaal, B., Frasnelli, J., Gerber, J., and Hummel, T., (Submitted). The body odors of newborns activate women's neuronal reward system.

35. **Lundström, J. N.** Albrecht, J., and Djordjevic, J. (Submitted). The location of human olfactory cortex: an ALE meta-analysis of functional neuroimaging studies.
34. Frasnelli, J., Albrecht, J., Bryant, B., and **Lundström, J. N.** (In press). Perception of specific trigeminal chemosensory receptor agonists. *Neuroscience*.
33. Boesveldt, S., Tessler-Lindsay, S., Schumm, L. P., McClintock, M.K., Hummel, T., and **Lundström, J. N.** (In press). Olfactory and gustatory function in a representative sample of older Americans. *Rhinology*.
32. Veldhuizen, M. G., Albrecht, J., Zelano, C., Boesveldt, S., Breslin, P., and **Lundström, J. N.** (In press). Identification of human gustatory cortex by activation likelihood estimation. *Human Brain Mapping*.
31. Frasnelli, J., **Lundström, J. N.**, Boyle, J. A., Katsarkas, E. and Jones-Gotman, M. (2011). The vomeronasal organ is not involved in the perception of endogenous odors. *Human Brain Mapping*. 32(3), 450-460.
30. **Lundström, J. N.**, Boesveldt, S., and Albrecht, J. (2011). Central Processing of the Chemical Senses: an Overview. *ACS Chemical Neuroscience*. 2 (2), 5-16.
29. **Lundström, J. N.** & Olsson, M.J. (2010). Functional neuronal processing of human body odors. *Vitamins and Hormones*. 83, 1-23.
28. **Lundström, J. N.**, Gordon, A. R., Albrecht, J., Alden, E. C., and Boesveldt, S. (2010). Methods for building an inexpensive computer-controlled olfactometer for temporally precise behavioral experiments. *International Journal of Psychophysiology*. 83, 1-23.
27. Boesveldt, S., Olsson, M.J., and **Lundström, J. N.** (2010). Carbon chain length and the stimulus problem in olfaction. *Behavioral Brain Research*. 215(1), 110-3.
26. Boesveldt, S., Frasnelli, J., Gordon, A. R., and **Lundström, J. N.** (2010). The fish gone bad: negative food odors elicit faster and more accurate reactions than other odors. *Biological Psychology*. 84(2), 313-7.
25. Frasnelli, J., Reden, J., Landis, B. N., and **Lundström, J. N.** (2010). Comment on “Olfactory hallucinations as a manifestation of hidden rhinosinusitis”. *Journal of Clinical Neuroscience*. 17(4), 543.
24. Albrecht, J., Kopietz, R., Frasnelli, J., Wiesmann, M., Hummel T., and **Lundström, J. N.** (2010). The neuronal correlates of intranasal trigeminal function – An ALE meta-analysis of human functional brain imaging data. *Brain Research Review*. 62(2), 183-96.
23. Frasnelli, J., **Lundström, J. N.**, Boyle, J. A., Djordjevic, J., Zatorre, R. J., and Jones-Gotman, M. (2010). Neuroanatomical correlates of olfactory performance. *Experimental Brain Research*. 201(1), 1-11.

22. Schumm, L. P., Williams, S., Leitsh, S., **Lundström, J.**, Hummel, T., McClintock, M., and Tessler-Lindsay, S. (2009). Assessment of Sensory Function in the National Social Life, Health and Aging Project. *Journal of Gerontology: Social Sciences*. 64B(S1), i76 - i85.
21. **Lundström, J. N.**, Boyle, J. A., Zatorre, R. J. and Jones-Gotman, M. (2009). The neuronal substrates of human olfactory based kin recognition. *Human Brain Mapping*. 30(8):2571-80.
20. **Lundström, J. N.**, and Jones-Gotman, M. (2009). Romantic love modulates women's identification of men's body odors. *Hormones and Behavior*. 55(2), 280-4.
19. Boyle, J. A., Djordjevic, J., **Lundström, J. N.**, Olsson, M. J. and Jones-Gotman, M. (2009). The brain distinguishes single odorants and binary mixtures. *Cerebral Cortex*. 19(1), 66-71.
18. **Lundström, J. N.**, Wysocki, C. J., Olsson, M. J., Preti, G., and Yamazaki, K. (2008). Biological basis of the third-cousin crush. *Science*. 320(5880):1160-1.
17. **Lundström, J. N.**, Boyle, J. A., Zatorre, R. J. and Jones-Gotman, M. (2008). Functional neuronal processing of body odors differs from that of similar common odors. *Cerebral Cortex*. 18(6), 1466-1474.
16. Djordjevic, J., **Lundström, J. N.**, Clément, F., Boyle, J. A., Pouliot, S., and Jones-Gotman, M. (2008). A rose by any other name: Would it smell as sweet? *Journal of Neurophysiology*. 99(1), 369-393.
15. **Lundström, J. N.**, Boyle, J. A., and Jones-Gotman, M. (2008). Body position-dependent shift in odor percept present only for perithreshold odors, *Chemical Senses*. 33(1), 23-33.
14. Olsson, M. J., **Lundström, J. N.**, Diamantopoulou, S., and Esteves, F. (2006). A putative female pheromone affects mood in men differently depending on social context. *European Review of Applied Psychology*. 56, 279-284.
13. Boyle, J. A., **Lundström, J. N.**, Knecht, M., Jones-Gotman, M., Schaal, B., & Hummel, T. (2006). On the trigeminal percept of androstenone and its implications on the rate of specific anosmia. *Journal of Neurobiology*. 66(13), 1501-10.
12. **Lundström, J. N.**, Seven, S., Olsson, M. J., Schaal, B., and Hummel, T. (2006). Event-related potentials reflect individual differences in odor valence perception. *Chemical Senses*. 31(8), 705-11.
11. **Lundström, J. N.**, Olsson, M. J., Schaal, B., and Hummel, T. (2006). A putative social chemosignal elicit faster cortical responses than perceptually similar odorants. *NeuroImage*. 30(4), 1340-1346.
10. **Lundström, J. N.**, Boyle, J. A., & Jones-Gotman, M. (2006). Sit-up and smell the roses better: olfactory sensitivity is dependent on body position. *Chemical Senses*. 31(3), 249-52.
9. **Lundström, J. N.**, and Hummel, T. (2006). Sex-specific hemispheric differences in cortical activation to a bimodal odor. *Behavioural Brain Research*, 166, 197-203.

8. **Lundström, J. N.**, McClintock, M. K., and Olsson, M. J. (2006). Effects of reproductive state on olfactory sensitivity suggest odor specificity. *Biological Psychology*, 71(3), 244-247.
7. **Lundström, J. N.** and Olsson, M. J. (2005). Subthreshold amounts of social odorant affect mood, but not behavior, in heterosexual women when tested by a male, but not a female, experimenter. *Biological Psychology*. 70, 197-204.
6. **Lundström, J. N.**, Frasnelli, J., Larsson M., and Hummel, T. (2005). Sex differentiated responses to intranasal trigeminal stimuli. *International Journal of Psychophysiology*. 57(3), 181-186.
5. Hummel, T., Krone, F., **Lundström, J. N.**, and Bartsch, O. (2005). Androstadienone odor thresholds in adolescents. *Hormones and Behavior*, 47, 3, 306-10.
4. **Lundström, J. N.** , Hummel, T, and Olsson, M. J. (2003). Individual differences in sensitivity to the odor of 4,16-androstadien-3-one. *Chemical Senses*, 28, 643-650.
3. **Lundström, J. N.**, Goncalves, M., Esteves, F., and Olsson, M. J. (2003). Psychological effects of subthreshold exposure of the putative human pheromone 4,16-androstadien-3-one. *Hormones and Behavior*, 44(5), 395-401.
2. Knecht, M., **Lundström, J.N.**, Witt, M., Hüttenbrink, K-B., Heilmann, S., and Hummel, T. (2003). Assessment of olfactory function and androstenone odor thresholds in humans with or without functional covering the vomeronasal duct. *Behavioral Neuroscience*, 117(6), 1135-1141.
1. **Lundström, J.N.** (2001). Review of: Psychophysiological recording, 2nd edn. by Stern et al. *Scandinavian journal of behaviour therapy*, 30(4), 202-203.

7.2. Published Books / Book Chapters

1. **Lundström, J. N.** (2005). *Human Pheromones: Psychological and Neurological Modulation of a Putative Human Pheromone*. Acta Universitatis Upsaliensis: Summaries of Uppsala dissertations from the faculty of social sciences, 7. (pp. 115) [Book]

8. Review and Editorial Activities

Served as ad-hock grant reviewer for the **Wellcome Fund, UK**.

Serving as **Associate editor** for the journal **Perception** 2010- present

Serving as **Review Editor** for the journal **Frontiers in Integrative Neuroscience** 2010-present

Served as *ad hoc* reviewer for the following journals:

- Acta Oto-Laryngologica
- Behavioral Brain Functions
- Behavioral Ecology and Sociobiology
- Biological Psychology
- Brain Research
- Brain Structure and Function
- Climacteric
- Cerebral Cortex
- Chemical Senses
- Chemosensory Perception
- Current Biology
- Human Brain Mapping
- Hormones and Behavior
- International Journal of Psychophysiology
- Journal of Chemical Ecology
- Journal of Neurophysiology
- NeuroImage
- Neuroscience letters
- Pain
- Physiology and Behavior
- Proceedings of the Royal Society: Biology
- Psychological Sciences
- Psychoneuroendocrinology
- Scandinavian Journal of Psychology.

9. Invited presentations

General: Several invited presentations (about 15 – not listed here) have been given at larger global consumer companies' research centers regarding my research and the latest developments in the field.

24. Instituto Neurologico Carlo Besta, Milan, Italy. 20th of April, 2011.
23. Dept of Clinical Neuroscience, Karolinska Institute, Stockholm Sweden. 22nd February, 2011.
22. Human Chemosensation Meeting Dresden, 2-4 December, 2010. Invited Speaker.
21. American Chemical Society's workshop on flavor chemistry at their annual meeting, 20-22nd of August 2010, Boston. Invited Speaker.
20. John B. Pierce Laboratory, Yale University, New Haven. 2nd of March, 2010.
19. International Life Sciences Institute's Annual Meeting, 22-27th of January 2010, San Juan, Puerto Rico. Invited Speaker.
18. Beijing International Meeting on Research in Taste and Smell, 15-17th of November 2009, Beijing, China. Invited Speaker.
17. Innovating for Continence: The Engineering Challenge, 8th of April 2009, Chicago, IL. Invited Speaker.
16. Department of Psychology, Université de Montréal, 13th of March 2009, Montreal, Canada.
15. Price lecture at the annual meeting of the National Swedish Psychological Association, 26th of October 2007, Stockholm, Sweden.
14. Unilever's Sensory Science Group meeting, 22nd of October 2007, Liverpool, UK.
13. Royal Swedish Academy of Sciences – Psychology Section, 30th of March 2007, Stockholm, Sweden.
12. Unilever's Sensory Science Group meeting, 26th of February 2007, Barcelona, Spain.
11. Montreal Neurological Institute's Brain Imaging Center seminar series, 19th of February 2007, Montreal, Canada.
10. Biannual Conference of European Chemoreception Research Organization, 4th of September 2006, Granada, Spain. Invited panel member
9. Montreal Neurological Institute. 6th of February, 2005. Montreal, Canada
8. Global Workshop of Biomarker Collection in Population Based Research. 6th of June, 2004. Chicago. Invited Speaker

7. Swedish National Psychologists Organization's convention. 2nd of April, 2003. Stockholm, Sweden.
6. Adventure Dog Conference. 7th of December, 2002. Stockholm, Sweden. Invited Speaker
5. Uppsala Biomedical Centre. 2nd of October, 2002. Uppsala, Sweden.
4. Department of Otorhinolaryngology, University of Dresden Medical School, 19th of February, 2002. Dresden, Germany.
3. Department of Psychology, University of Uppsala, 10th of November, 2001. Uppsala, Sweden.
2. Department of Psychology, University of Stockholm, 20th of September, 2001. Stockholm, Sweden.
1. Department of Psychology, University of Uppsala. 15th of September, 2001. Uppsala, Sweden

10. Press coverage

10.1 Formal press service

- Scientific adviser to the Swedish broadcasting corporation science unit (SVT; similar to the BBC) on a TV documentary series about the new emerging field Biological Psychology and how the interaction mind – body affects our lives. (Season 2005 – 2006)

10.2 Popular scientific press coverage

My research has been covered in a full 30 minutes long episode on the **National Geographic's** channel, several articles in **Scientific America** and **New Scientist**, a cover story in **Readers Digest**, numerous appearances/mentioning in shows/news from **National Swedish Radio** and the **National Swedish Television**, as well as numerous articles in several newspapers around the world (among other countries: Canada, Denmark, Germany, India, New Zealand, Sweden, UK, & USA)

11. Teaching experience

11.1 Lectures

To date, I have taught classes on the topics psychophysics, neurobiology, and perception on both undergraduate and graduate levels. My classroom teaching until now totals roughly 110 hours. Anonymous feedback of teachers is mandatory in Swedish universities and my average feedback over classes was 4.2 [on a five point scale with five as the highest score].

I have also taught a graduate student class entitled “Neuroimaging methods and application” at the Department of Psychology, McGill University during the fall semester of 2006.

11.2 Tutoring of postdoctoral fellows and of undergraduate students

I am currently supervising two postdoctoral fellows and have served as the main supervisor of **14** undergraduate theses. This means that I have been responsible for all steps of the process ranging from the creating of the experiment to the final thesis. In addition, I have served as an associate supervisor for **6** undergraduate theses and have supervised **1** undergraduate summer student.

11.2.1 Supervised Doctoral Students (Co-Supervisor)

2010 – Present **Amy Gordon**
 2009 – Present **Malin Brodin**

11.2.2 Supervised Postdoctoral fellows (Main Supervisor)

2011- Present Dr. **Janina Seubert**
 2011- Present Dr. **Kathrin Ohla**
 2010 – 2010 Dr. **Johannes Frasnelli** (present: postdoc, University of Montreal, Canada)
 2008 – 2010 Dr. **Sanne Boesveldt** (present: faculty position, University of Wageningen, the Netherlands)
 2008 – 2010 Dr. **Jessica Albrecht** (present: faculty position, Aachen Medical University, Germany)

11.2.3 Supervised Students sorted according to academic year (Main supervisor)

2010-2011 **Susana Mitro** – Bachelor project on body odor processing
 2010 **Renée Mihail** – Summer project on lateralized odor processing
 2009-2010 **Monika Frey** – PhD student who did a 6 months project on body odors
 2009-2010 **Valentin Schreiver** – MD who did project on multimodal processing
 2009 **Renée Mihail** – Summer project on nasal volumes impact on perception
 2009 **Jessica Douthit** – Summer project on odor mixture perception
 2008 **Rebecca Lipinski** – Summer project on odor conditioning
 2006-2007 – **Magali Purcell-Lalonde** – Love or no love, it does not matter: Identifying the body odor of a loved one.
 2006-2007 – **Samantha Fuss** – Influence of cognitive factors on body position-dependent sensory inhibition.
 2005-2006 – **Lisa Lynch** - What's That Smell?: Olfactory Performance Sitting up Compared to Lying Down.
 2005-2006 – **Josie-Anne Bertrand** -- Effects of the Pheromone Androstadienone on Women's Cognitive Processing In The Presence Of a Man.
 2005-2006 – **Suzi Seven** - Event-related potentials reflects individual differences in odor quality.
 2004-2005 – **Veronica Warner** – Effects of androstadienone exposure on women's mood, attention, perceived attraction, and psychophysiology
 2004-2005 – **Anna Löfgren** – Do putative human pheromones affect the search for babes and babies?
 2004-2005 – **Anna Warensjö** – Effects of social environment and putative pheromones in the search for the opposite sex.
 2003-2004 – **Joana Lopes** – Individual differences in threshold for a putative human pheromone.
 2003-2004 – **Susanne Jarlborg** – Individual differences in olfactory sensitivity to a human steroid.
 2002-2003 – **Charlotte Edelberg** – Pheromones and chemical communication- an explorative investigation of androstadienone effects on women's mood.
 2002-2003 – **Catarina de Silva** – Psychological effects of the putative pheromone androstadienone.

2000-2001 – **Amanda Hicks** – An analysis of sensitivity levels in men and women to two putative human pheromones.

2000-2001 – **Miguel Goncalves** – The effects of the putative pheromone 4,16-androstadien-3-one on women's mood, state, and trait anxiety.

11.2.4 Supervised Students sorted according to academic year (co-supervisor)

2005-2006 - **Linn Ceffby** – Can pheromones modulate flirtation?

2005-2006 - **Pontus Cronberg** – Effects of pheromones and women's sexual phase on non-verbal sexual behavior.

2005-2006 - **Sara Kjellgren** – Can odors modulate social behavior?

2005-2006 - **Charlotta Hector** – Contextual dependent effects of human interaction is modulated by a putative human pheromone.

2003-2004 – **Karin Holmedal** – Psychological and psychophysiological effects of the putative pheromone estratetraenol in men.

2000-2001 - **Susanna Jernelöv** - Emotional and Psychophysiological Effects of Androsta-4,16-dien-3-one (Androstadienone) in Women.

11.3. Formal teaching education

I have completed a one week full time teaching course given by Uppsala University (2003). The course covered the complete didactic process.

12. University service

- Member of the Monell Center's Safety committee (2009 – to present)
- Member of the Monell Center's Internal grant review committee (2008 – to present)
- Member of the Monell Center's Postdoctoral Training Committee (2010 – to present)
- Member of the Monell Center's Personnel Committee (2011- to present)
- Served one year as chair of the Department of Psychology's graduate students association [Uppsala University].
- Served one year as graduate student representative on the faculty board [Uppsala University].
- Served two years as graduate student representative on the board of the department [Psychology, Uppsala University].
- Served one year as student representative on the Search committee for promoting/hiring of Professors and senior researchers at the faculty [Uppsala University].