Dr. Karin de Punder

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Positions

Since 2021 — Postdoctoral Researcher, Institute of Psychology, Department of Clinical Psychology, University of Innsbruck, Innsbruck, Austria

Projects:

- *Investigating the biomolecular effects of electroconvulsive therapy on mitochondrial bioenergetics in treatment-resistant patients with major depressive disorder (MITO-ECT)*
- *Brain cytochrome-c-oxidase assessed by Near-infrared spectroscopy (NIRS) as a mitochondrial biomarker in depression (CCO-NIRS)*
- *Risk and resilience factors in the Intergenerational transmission of maternal stress and childhood adversity*
- *Cellular aging processes related to trauma and psychiatric disease risk*

2020-2021 — R&D Specialist, Naturafoundation, Numansdorp, The Netherlands

2018-2020 — Postdoctoral Researcher, Institute of Medical Psychology, Charité – Universitätsmedizin Berlin, Berlin, Germany

Projects:

- *Prenatal stress and programming of newborn and infant telomere biology and cellular aging*
- *Kids to Health (follow up BerlinLCS study)*

2014-2018 — Doctoral Student/Research Assistant, Institute of Medical Psychology, Charité – Universitätsmedizin Berlin, Berlin, Germany
Supervised by Prof. Dr. Sonja Entringer and Prof. Dr. Christine Heim

Projects:

- *Validation of a measure of in-vitro stimulated telomerase expression as a stress-related biomarker for human studies*
- *Immediate biological embedding of maltreatment in children: Berlin Longitudinal Children Study (BerlinLCS)*
- *Biological aging and inflammation in patients with major depression exposed to childhood adversity*

2008-2013 — Research Technician, Division of Cell Biology II, Netherlands Cancer Institute (NKIAVL), Amsterdam, The Netherlands
Studying the immunology and cell biology of host pathogen interactions using microscopy and immunological techniques

2005-2008 — Research Technician, Division of Animal Pathology, Netherlands Cancer Institute

(NKI, AVL), Amsterdam, The Netherlands
Performing immunohistochemistry, histology and in vitro hybridization on animal tissue

Education

2014-2018	Doctoral Degree at the Institute of Medical Psychology, Charité – Universitätsmedizin Berlin, Berlin, Germany (Summa cum laude) *Thesis: Characterization in humans of in vitro leukocyte maximal telomerase activity capacity (mTAC) and association with stress*
2010-2013	Master Course in Clinical Psychoneuroimmunology, University of Girona, Girona, Spain
2002-2004	M.Sc. Degree in Biomedical Sciences, Leiden University, Leiden, The Netherlands *Thesis: The MR/GR balance hypothesis in the pathogenesis of major depression*
1999-2002	B.Sc. Degree in Biomedical Sciences, Leiden University, Leiden, The Netherlands

Extra Training

2017	Workshop - Multilevel analysis using R, Humboldt University, Berlin, Germany
2014	Workshop - Measuring the cortisol diurnal profile, Arizona State University, Phoenix, AZ, USA
2009	Course on Clinical Psychoneuroimmunology, Natura Foundation, Numansdorp, The Netherlands
2008	Course on Nutrition, Natura Foundation, Numansdorp, The Netherlands
2003	Course on Laboratory Animal Science (article 9), Leiden University, Leiden, The Netherlands

Languages

- Dutch – Native proficiency
- English – Full professional working proficiency
- German – Professional working proficiency

Teaching Experience

Since 2022	Master Program in Psychology – Intergenerational transmission of psychiatric disease risk, Seminar, University of Innsbruck, Innsbruck, Austria
Since 2022	Master Program in Psychology – Scientific methods in Psychoneuroimmunology, Seminar, University of Innsbruck, Innsbruck, Austria
Since 2021	Master Program in Psychology – Biological embedding of early life stress in the context of psychiatric disease risk, Seminar, University of Innsbruck, Innsbruck, Austria
2016-2019	Supervisor − Bachelor and Master projects, Charité − Universitätsmedizin Berlin, Berlin, Germany
2018-2019	Model Curriculum Human Medicine − Early Life Programming of Disease Susceptibility, Seminar, Module 6, Charité − Universitätsmedizin Berlin, Berlin, Germany
2016-2019	Model Curriculum Human Medicine – Gene-Environment Interactions in Psychiatric Disorders, Seminar, Module 31, Charité − Universitätsmedizin Berlin, Berlin, Germany
2016-2019	Model Curriculum Human Medicine – Workshop - Measuring the cortisol diurnal profile in saliva, M07, Charité − Universitätsmedizin Berlin, Berlin, Germany
2017	Psychoneuroimmunology (PNI) Autumn School – PNI and prenatal programming, University Witten/Herdecke, Witten, Germany
2010-2013	Workshop − In the footsteps of Antoni van Leeuwenhoek Basic Course: introducing the basics of electron microscopy, Netherlands Cancer Institute (NKI/AVL), Amsterdam, The Netherlands

2011-2013 Instructor − Introducing new people in the laboratory to the basics of electron microscopy and other laboratory procedures, Netherlands Cancer Institute (NKI/AVL), Amsterdam, The Netherlands

Psychobiological and Laboratory Expertise

- Psychobiological stress assessment (Trier Social Stress Test, TSST), assessment of endocrine, immune and autonomic responses
- ELISA; stress and immune markers in blood, immune cells, hair and saliva
- Telomerase activity assay
- Mitochondrial respiratory function assessment
- Fluorescence and electron microscopy
- Glucocorticoid receptor sensitivity assays

Honours and Awards

2019 Travel Award, 49th International Society of Psychoneuroendocrinology (ISPNE) Conference, Milan, Italy
2018 Excellence in Salivary Bioscience Travel Award, 48th International Society of Psychoneuroendocrinology (ISPNE) Conference, Irvine, CA, USA

Memberships

- International Society of Psychoneuroendocrinology (ISPNE)
- The European Psychoneuroimmunology Network (EPN)
- German Brain-Immune Network (GEBIN)

Research interests

My research interests involve the consequences of psychological stress conditions (e.g. chronic stress in adults, childhood traumatic experiences and prenatal stress) on the aging of the immune system and the development of somatic and mental health problems. Additionally, it includes the identification of biomarkers of mental health problems and resilience and new targets for intervention, with a focus on the following biological mechanisms:

- The neuroendocrine system
- Immune system
- Telomere biology
- Mitochondrial function
- Metabolic function

Original and Review Articles

Impact

- Citations - 2,173
- h-index - 20

2022

Karabatsiakis A, **de Punder K**, Salinas-Manrique J, Todt M, Dietrich DE. Hair cortisol level might be indicative for a 3PM approach towards suicide risk assessment in depression: comparative analysis of mentally stable and depressed individuals versus individuals after completing suicide. *EPMA J.* 2022 Aug 30;13(3):383-395. doi: 10.1007/s13167-022-00296-z.

Karabatsiakis A, **de Punder K**, Doyen-Waldecker C, Ramo-Fernández L, Krause S, Gumpp AM, Bach AM, Fegert JM, Kolassa IT, Gündel H, Ziegenhain U, Buchheim A. Reactivity of the Oxytocinergic and Neuroendocrine System Following the Adult Attachment Projective Picture System in Men of Recent Fatherhood: Results from an Exploratory Pilot Study with a Cross-Sectional Design. *Brain Sci.* 2022 Sep 28;12(10):1314. doi: 10.3390/brainsci12101314.

Kuehl LK, **De Punder K**, Deuter CE, Martens DS, Heim C, Otte C, Wingenfeld K, Entringer S. Telomere length in individuals with and without major depression and adverse childhood experiences. *Psychoneuroendocrinology*. 2022 105762. doi:10.1016/j.psyneuen.2022.105762.

Kleih, TS, Entringer S, Scholaske L, Kathmann N, **de Punder K**, Heim CM, Wadhwa PD, Buss C. Exposure to childhood maltreatment and systemic inflammation across pregnancy: The moderating role of depressive symptomatology. *Brain Behav Immun.* 2022; Mar;101:397-409. doi: 10.1016/j.bbi.2022.02.004.

2021

Dammering F, Martins J, Dittrich K, Czamara D, Rex-Haffner M, Overfeld J, **de Punder K**, Buss C, Entringer S, Winter SM, Binder EB, Heim C. The pediatric buccal epigenetic clock identifies significant ageing acceleration in children with internalizing disorder and maltreatment exposure. *Neurobiol Stress*. 2021 Sep 11;15:100394. doi: 10.1016/j.ynstr.2021.100394.

Demeulemeester F, **de Punder K**, van Heijningen M, van Doesburg F. Obesity as a Risk Factor for Severe COVID-19 and Complications: A Review. *Cells*. 2021 Apr 17;10(4):933. doi: 10.3390/cells10040933.

Martins J, Czamara, D, Sauer, S, Rex-Haffner, M, Dittrich, K, Dörr, P, **de Punder, K**, Overfeld, J, Knop, A, Dammering, F, Entringer, S, Winter, SM, Buss, C, Heim, C, Binder, EB. Childhood adversity correlates with stable changes in DNA methylation trajectories in children and converges with epigenetic signatures of prenatal stress. *Neurobiol Stress*. 2021;15:100336. doi: 10.1016/j.ynstr.2021.100336.

2020

Entringer S*, **de Punder K***, Overfeld J, Karaboycheva G, Dittrich K, Buss C, Winter SM, Binder EB, Heim C. Immediate and longitudinal effects of maltreatment on systemic inflammation in young children. *Dev Psychopathol*. 2020 Dec;32(5):1725-1731. doi: 10.1017/S0954579420001686.

2019

de Punder K, Heim C, Entringer S. Association between chronotype and body mass index: The role of C-reactive protein and the cortisol response to stress. *Psychoneuroendocrinology*. 2019 Nov;109:104388. doi: 10.1016/j.psyneuen.2019.104388.

de Punder K, Heim C, Wadhwa PD, Entringer S. Stress and immunosenescence: The role of telomerase. *Psychoneuroendocrinology*. 2019 Mar;101:87-100. doi: 10.1016/j.psyneuen.2018.10.019.

de Punder K, Entringer S, Heim C, Deuter CE, Otte C, Wingenfeld K, Kuehl LK. Inflammatory Measures in Depressed Patients With and Without a History of Adverse Childhood Experiences. *Front Psychiatry*. 2018;9:610. doi: 10.3389/fpsyt.2018.00610.

2018

Entringer S, **de Punder K**, Buss C, Wadhwa PD. The fetal programming of telomere biology hypothesis: an update. *Philos Trans R Soc Lond B Biol Sci*. 2018 Mar 5;373(1741). doi: 10.1098/rstb.2017.0151.

de Punder K, Heim C, Przesdzing I, Wadhwa PD, Entringer S. Characterization in humans of in vitro leucocyte maximal telomerase activity capacity and association with stress. *Philos Trans R Soc Lond B Biol Sci*. 2018 Mar 5;373(1741). doi: 10.1098/rstb.2016.0441.

2016

Farin HF, Jordens I, Mosa MH, Basak O, Korving J, Tauriello DV, **de Punder K**, Angers S, Peters PJ, Maurice MM, Clevers H. Visualization of a short-range Wnt gradient in the intestinal stem-cell niche. *Nature*. 2016 Feb 18;530(7590):340-3. doi: 10.1038/nature16937.

2015

Pruimboom L, **de Punder K**. The opioid effects of gluten exorphins: asymptomatic celiac disease. *J Health Popul Nutr*. 2015 Nov 24;33:24. doi: 10.1186/s41043-015-0032-y.

de Punder K, Pruimboom L. Stress induces endotoxemia and low-grade inflammation by increasing barrier permeability. *Front Immunol*. 2015;6:223. doi: 10.3389/fimmu.2015.00223.

2014

Jong WS, Daleke-Schermerhorn MH, Vikström D, Ten Hagen-Jongman CM, **de Punder K**, van der Wel NN, van de Sandt CE, Rimmelzwaan GF, Follmann F, Agger EM, Andersen P, de Gier JW, Luirink J. An autotransporter display platform for the development of multivalent recombinant bacterial vector vaccines. *Microb Cell Fact*. 2014 Nov 25;13:162. doi: 10.1186/s12934-014-0162-8.

Daleke-Schermerhorn MH, Felix T, Soprova Z, Ten Hagen-Jongman CM, Vikström D, Majlessi L, Beskers J, Follmann F, **de Punder K**, van der Wel NN, Baumgarten T, Pham TV, Piersma SR, Jiménez CR, van Ulsen P, de Gier JW, Leclerc C, Jong WS, Luirink J. Decoration of outer membrane vesicles with multiple antigens by using an autotransporter approach. *Appl Environ Microbiol*. 2014 Sep;80(18):5854-65. doi: 10.1128/AEM.01941-14.

2013

van der Woude AD, Mahendran KR, Ummels R, Piersma SR, Pham TV, Jiménez CR, **de Punder K**, van der Wel NN, Winterhalter M, Luirink J, Bitter W, Houben EN. Differential detergent extraction of mycobacterium marinum cell envelope proteins identifies an extensively modified threonine-rich outer membrane protein with channel activity. *J Bacteriol*. 2013 May;195(9):2050-9. doi: 10.1128/JB.02236-12.

de Punder K, Pruimboom L. The dietary intake of wheat and other cereal grains and their role in inflammation. *Nutrients*. 2013 Mar 12;5(3):771-87. doi: 10.3390/nu5030771.

2012

Houben D, Demangel C, van Ingen J, Perez J, Baldeón L, Abdallah AM, Caleechurn L, Bottai D, van Zon M, **de Punder K**, van der Laan T, Kant A, Bossers-de Vries R, Willemsen P, Bitter W, van Soolingen D, Brosch R, van der Wel N, Peters PJ. ESX-1-mediated translocation to the cytosol controls virulence of mycobacteria. *Cell Microbiol*. 2012 Aug;14(8):1287-98. doi: 10.1111/j.1462-5822.2012.01799.x.

Jong WS, Soprova Z, **de Punder K**, ten Hagen-Jongman CM, Wagner S, Wickström D, de Gier JW, Andersen P, van der Wel NN, Luirink J. A structurally informed autotransporter platform for efficient heterologous protein secretion and display. *Microb Cell Fact*. 2012 Jun 18;11:85. doi: 10.1186/1475-2859-11-85.

Weerdenburg EM, Abdallah AM, Mitra S, **de Punder K**, van der Wel NN, Bird S, Appelmelk BJ, Bitter W, van der Sar AM. ESX-5-deficient Mycobacterium marinum is hypervirulent in adult zebrafish. *Cell Microbiol*. 2012 May;14(5):728-39. doi: 10.1111/j.1462-5822.2012.01755.x.

2011

Abdallah AM, Bestebroer J, Savage ND, **de Punder K**, van Zon M, Wilson L, Korbee CJ, van der Sar AM, Ottenhoff TH, van der Wel NN, Bitter W, Peters PJ. Mycobacterial secretion systems ESX-1 and ESX-5 play distinct roles in host cell death and inflammasome activation. *J Immunol*. 2011 Nov 1;187(9):4744-53. doi: 10.4049/jimmunol.1101457.

Daleke MH, Cascioferro A, **de Punder K**, Ummels R, Abdallah AM, van der Wel N, Peters PJ, Luirink J, Manganelli R, Bitter W. Conserved Pro-Glu (PE) and Pro-Pro-Glu (PPE) protein domains target LipY lipases of pathogenic mycobacteria to the cell surface via the ESX-5 pathway. *J Biol Chem*. 2011 May 27;286(21):19024-34. doi: 10.1074/jbc.M110.204966.

2010

Sani M, Houben EN, Geurtsen J, Pierson J, **de Punder K**, van Zon M, Wever B, Piersma SR, Jiménez CR, Daffé M, Appelmelk BJ, Bitter W, van der Wel N, Peters PJ. Direct visualization by cryo-EM of the mycobacterial capsular layer: a labile structure containing ESX-1-secreted proteins. *PLoS Pathog*. 2010 Mar 5;6(3):e1000794. doi: 10.1371/journal.ppat.1000794.

2008

de Witte MA, Jorritsma A, Swart E, Straathof KC, **de Punder K**, Haanen JB, Rooney CM, Schumacher TN. An inducible caspase 9 safety switch can halt cell therapy-induced autoimmune disease. *J Immunol*. 2008 May 1;180(9):6365-73. doi: 10.4049/jimmunol.180.9.6365.

Boekhoorn K, Sarabdjitsingh A, Kommerie H, **de Punder K**, Schouten T, Lucassen PJ, Vreugdenhil E. Doublecortin (DCX) and doublecortin-like (DCL) are differentially expressed in the early but not late stages of murine neocortical development. *J Comp Neurol*. 2008 Apr 1;507(4):1639-52. doi: 10.1002/cne.21646.

Book Chapters

Entringer S, **de Punder K**, Verner G, Wadhwa PD. Fetal programming of telomere biology: Role of maternal nutrition, obstetric risk factors and suboptimal birth outcomes in diet, nutrition, and fetal programming. Nutrition and Health, pp.569-593. 2017, *Springer International Publishing AG*.

Published Abstracts

de Punder K, Karabatsiakis A, Martens DS, Heim C, Entringer S. Early life stress and perceived chronic stress are associated with increased immune cell mitochondrial DNA copy number in healthy individuals. Bioblast 2022: BEC Inaugural Conference. In: https://doi.org/10.26124/bec:2022-0001

de Punder K, Overfeld J, Karaboycheva G, Winter SM, Buss C, Binder EB, Entringer S, Heim C. C-reactive protein levels in children aged 3–5 years with verified exposure to maltreatment: Sex differences and association with depression. *Brain Behav Immun.* 2019, 81:35

de Punder K, Heim C, Pathik D. Wadhwa, Entringer S. Maximal telomerase activity capacity (mTAC) mediates the effect of the cortisol stress response on leukocyte telomere length. *Brain Behav Immun.* 2019, 81:22

Karaboycheva G, **de Punder K**, Overfeld J, Dörr P, Dittrich K, Murray E, Binder EB, Entringer S, Heim C. Intestinal dysbiosis in maltreated children is associated with concentrations of salivary cortisol, C-reactive protein and with depressive symptoms. *Brain Behav Immun.* 2019, 81:54

Dammering F, McEwan L, Provençal N, **de Punder K**, Overfeld J, Martins J, Czamara D, Rex-Haffner M, Hoffmann F, Kobor MS, Buss C, Winter SM, Entringer S, Binder EB, Heim C. Psychiatric symptom severity mediates the effect of adversity on epigenetic aging in children aged 3–5 years. *Psychoneuroendocrinology*. 2019, 107S: 1-82

de Punder K, Overfeld J, Karaboycheva G, Winter SM, Buss C, Binder EB, Entringer S, Heim C. Elevated C-reactive protein levels in children aged 3–5 years with verified exposure to maltreatment: Sex differences and association with depressive symptoms. *Psychoneuroendocrinology*. 2019, 100S:1-64

de Punder K, Heim C, Entringer S. Association between chronotype and body mass index: The role of C-reactive protein and the cortisol sresponse to stress. *Psychoneuroendocrinology*. 2019, 100S:1-64

Dammering F, McEwan L, Provençal N, **de Punder K**, Overfeld J, Martins J, Czamara D, Rex-Haffner M, Hoffmann F, Kobor MS, Buss C, Winter SM, Entringer S, Binder EB, Heim C. Bidirectional effect of early adversity on epigenetic ageing in children: Mediation by C-reactive protein and moderation by FKBP5 gene and cortisol status. *Psychoneuroendocrinology*. 2018, 100S:1-64

de Punder K, Heim C, Przesdzing I, Wadhwa PD, Entringer S. Characterization of *in vitro* leukocyte maximal telomerase activity capacity (mTAC) as a stress-related measure for human studies. *Psychoneuroendocrinology*. 2017*,* 83S:1-89

de Punder K, Overfeld J, Dörr Pr, Dittrich K, Winter SM, Kubiak N, Karaboycheva G, Heim C. Maltreatment is associated with elevated C-reactive protein levels in 3 to 5 year-old children. *Brain Behav Immun.* 2017, 66:e17-e18

de Punder K, Heim C, Wadhwa PD, Entringer S. Characterization of *in vitro* leukocyte maximal telomerase activity capacity (mTAC) in humans: Association with chronic stress exposure and stress-reactivity. *Brain Behav Immun.* 2017, 66:e17

van Zon M, **de Punder K**, van der Sar A, Brosch R, Pando RH, Grootemaat A, Tigchelaar-Gutter W, van der Wel N. Subcellular localization of *M. tuberculosis in vivo* and effect of the adaptive immunity. *Ultrastruct Pathol.* 2017, 41(1):133

de Punder K, Overfeld J, Dörr P, Dittrich K, Winter SM, Kubiak N, Karaboycheva G, Heim C. Exposure to child maltreatment is associated with elevated stress and immune mediators in children aged 3–5 years. *Psychoneuroendocrinology*. 2016, 71S:1–78

de Punder K, Heim C, Wadhwa PD, Entringer S. *In vitro* stimulated leukocyte telomerase activity is associated with chronic stress exposure. *Psychoneuroendocrinology*. 2016*,* 71S:1–78

Overfeld J, Nadig-Haynes K, **De Punder K**, Dörr P, Dittrich K, Winter SM, Haynes J, Buss C, Heim C (2016). Hippocampal volume in children aged 3–5 years with verified maltreatment exposure. *Psychoneuroendocrinology*. 2016, 71S:1–78

de Punder K, Heim C, Entringer S. Plasma levels of lipopolysaccharide-binding protein in response to psychosocial stress induction: Association with sympathetic nervous system response. *Brain Behav Immun.* 2016, 57:e25

de Punder K, Heim C, Entringer S. Validation of a measure of in-vitro stimulated telomerase expression as a stress-related biomarker for human studies. *Psychoneuroendocrinology*. 2015, 61:1–78

Conference Oral Presentations

The steroid hormone dehydroepiandrosterone (DHEA) counteracts the consequences of psychological trauma on immunocellular aging. Kongress der Deutsche Gesellschaft für Psychiatrie und Psychotherapie, Psychosomatik und Nervenheilkunde (DGPPN), Berlin, Germany, November 2022.

The steroid hormone dehydroepiandrosterone (DHEA) counteracts the consequences of psychological trauma on immunocellular ageing and mitochondrial bioenergetics. German Endocrine Brain Immune Network (GEBIN) Meeting, Virtual, March 2022

Stress and immunosenescence: the role of telomerase. Annual Conference of the International Society of Psychoneuroendocrinology (ISPNE), Milan, Italy, September 2019.

Stress and cellular aging-related processes. Jahrestagung Psychologie und Gehirn (PuG), Dresden, Germany, June 2019.

C-reactive protein levels in children aged 3-5 years with verified exposure to maltreatment: Sex differences and association with depression. German Endocrine Brain Immune Network (GEBIN) Meeting/Annual Conference of the Psychoneuroimmunology Research Society (PNIRS), Berlin, Germany, June 2019.

Maximal telomerase activity capacity (mTAC) mediates the effect of the cortisol stress response on leukocyte telomere length. German Endocrine Brain Immune Network (GEBIN) Meeting/Annual Conference of the Psychoneuroimmunology Research Society (PNIRS), Berlin, Germany, June 2019.

Erhöhte C-reactive Protein Spiegel in 3-5 jährigen Kindern mit frühkindlicher Misshandlung: Geschlechterunterschiede und Zusammenhang mit depressiven Symptomen. Kongress der Deutsche Gesellschaft für Psychiatrie und Psychotherapie, Psychosomatik und Nervenheilkunde (DGPPN), Berlin, Germany, November 2018.

Characterization of *in vitro* leukocyte maximal telomerase activity capacity (mTAC) as a stress-related measure for human studies. Annual Conference of the International Society of Psychoneuroendocrinology (ISPNE), Zurich, Switzerland, September 2017.

Frühkindliche Misshandlung ist assoziiert mit erhöhten Konzentrationen an Cortisol und C-reaktivem Protein im Alter von 3-5 Jahren. Kongress der Deutschen Gesellschaft für Kinder- und Jugendpsychiatrie, Psychosomatik und Psychotherapie (DGKJP), Ulm, Germany**,** March 2017.

In vitro stimulated leukocyte telomerase activity is associated with chronic stress exposure. Jahrestagung der Deutschen Gesellschaft für Medizinische Soziologie (DGMS) und der Deutschen Gesellschaft für Medizinische Psychologie (DGMP), Berlin, Germany, September 2016.

<u>Conference Poster Presentations</u>

de Punder K, Heim C, Entringer S. Association between chronotype and body mass index: The role of C-reactive protein and the cortisol response to stress. Annual Conference of the International Society of Psychoneuroendocrinology (ISPNE), Irvine, California, USA, September 2018.

de Punder K, Overfeld J, Karaboycheva G, Winter SM, Buss C, Binder EB, Heim C. Elevated C-reactive protein levels in children aged 3-5 years with verified exposure to maltreatment: Sex differences and association with depressive symptoms. Annual Conference of the International Society of Psychoneuroendocrinology (ISPNE), Irvine, California, USA, September 2018.

de Punder K, Overfeld J, Karaboycheva G, Winter SM, Buss C, Binder EB, Heim C (2018). Elevated C-reactive protein Levels in children aged 3-5 years with verified exposure to maltreatment: Association with depressive symptoms. Annual Meeting of the Society of Biological Psychiatry (SOBP), New York, USA, May 2018.

de Punder K, Entringer S, Heim C, Otte C, Wingenfeld K, Kuehl LK. Increased interleukin-6 levels in patients with major depression exposed to childhood adversity. Annual Meeting of the Society of Biological Psychiatry (SOBP), New York, USA, May 2018.

de Punder K, Overfeld J, Dörr P, Dittrich K, Winter SM, Kubiak N, Karaboycheva G, Heim C. Maltreatment is associated with elevated cortisol and C-reactive protein concentrations in 3 to 5 year-old children. World Congress of Psychiatry, Berlin, Germany, October 2017.

de Punder K, Overfeld J, Dörr P, Dittrich K, Winter SM, Kubiak N, Karaboycheva G, Heim C. Maltreatment is associated with elevated C-reactive protein levels in 3 to 5 year-old children. Annual Conference of the Psychoneuroimmunology Research Society (PNIRS), Galveston, Texas, USA, June 2017.

de Punder K, Heim C, Wadhwa PD, Entringer S. Characterization of *in vitro* leukocyte maximal telomerase activity capacity (mTAC) in humans: Association with chronic stress exposure and stress-reactivity. Annual conference of the Psychoneuroimmunology Research Society (PNIRS), Galveston, Texas, USA, June 2017.
de Punder K, Overfeld J, Dörr P, Dittrich K, Winter SM, Kubiak N, Karaboycheva G, Heim C. Exposure to child maltreatment is associated with elevated stress and immune mediators in children aged 3–5 years. Annual Conference of the International Society of Psychoneuroendocrinology (ISPNE), Miami, Florida, USA, September 2016,

de Punder K, Heim C, Wadhwa PD, Entringer S. *In vitro* stimulated leukocyte telomerase activity is associated with chronic stress exposure. Annual Conference of the International Society of Psychoneuroendocrinology (ISPNE), Miami, Florida, USA, September 2016.

de Punder K, Heim C, Entringer S. Plasma levels of lipopolysaccharide-binding protein in response to psychosocial stress induction: Association with sympathetic nervous system response. Annual Conference of the Psychoneuroimmunology Research Society (PNIRS), Brighton, UK, June 2016.

de Punder K, Heim C, Entringer S. Validation of a measure of in-vitro stimulated telomerase expression as a stress-related biomarker for human studies. Annual Conference of the International Society of Psychoneuroendocrinology (ISPNE), Edinburgh, Scotland, September 2015.

Manuscript Reviews

- *Psychoneuroendocrinology*
- *Psychosomatic Medicine*
- *Journal of the Royal Society Interface*
- *Restorative Neurology and Neuroscience*
- *PLOS ONE*
- *Stress*
- *Journal of Neural Transmission*
- *Neurobiology of Stress*
- *Behavioural Brain Research*