

Thomas Ragnar Wood

Curriculum vitae

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Date of birth: 06/09/1984

Birth place: Evanston, Illinois, USA

Citizenship: UK/US/Icelandic

Current Position(s)

- 12/18- **Research Assistant Professor, Department of Pediatrics, University of Washington**
- 07/19- Acting Director, Neonatal Neuroscience Laboratory, University of Washington, WA
- 04/19- Research Director, Cocos Health, London, UK
- 06/18- Research Scientist (by courtesy), Institute for Human and Machine Cognition, Pensacola, FL

Education

- 2016 PhD, University of Oslo, Norway
Thesis title: *On the Physiology of Experimental Hypoxic-Ischaemic Encephalopathy*
- 2011 BM BCh (Graduate Entry), Oxford University (Medical Degree)
- 2007 BA Hons in Natural Sciences (Biochemistry), Cambridge University
Class awarded: I(I) (Double First)
- 2003 A2 levels, Cotham School, Bristol. Mathematics (A), Physics (A), Chemistry (A) and Biology (A).
- 2002 AS levels, Cotham School, Bristol. Music Technology (A).
- 2001 GCSEs, Cotham School, Bristol. Mathematics (A*), double award Science (2xA*), Geography (A*), History (A*), double award English (2xA), French (A*), German (A*) and Music (A).

Previous Experience

- 12/15–03/19 Chief Scientific Officer, Nourish Balance Thrive, CA
- 04/17-10/18 Senior Fellow (postdoc), Division of Neonatology, University of Washington
- 10/16-03/17 Visiting Scientist, Division of Neonatology, University of Washington
- 08/13-09/13 Locum Senior House Officer (General Medicine), St. Thomas' Hospital, London, UK
- 08/12 -08/13 Academic FY2 Doctor at St. Thomas' Hospital, London, UK
Rotations: Accident & Emergency, General Medicine, Toxicology
- 08/11-08/12 Academic FY1 Doctor at St. Thomas' Hospital, London, UK
Rotations: Vascular surgery, Orthopaedic surgery, Elderly Care, General Medicine
- 10/09-11/09 Interview tutor – Oxbridge Applications.

- 07/07-09/07 Research assistant, Department of Clinical Sciences, University of Bristol.
- 07/06-09/06 Wellcome Biomedical Research student, Department of Clinical Sciences, University of Bristol.
- 04/04-09/04 Laboratory assistant, Earth Sciences Department, University of Bristol
- 01/04-04/04 Laboratory technician, deCODE genetics, Iceland.
- 06/03-01/04 Editorial assistant, Earth and Planetary Science Letters, and laboratory assistant at the University of Bristol Earth Sciences Department

Awards, Scholarships and Qualifications

- 2013 Advanced Life Support certification (UK resuscitation council)
- 2012 Basic Orthopaedics and Trauma skills (BOATS)
- 2012 MRCS – Part A
- 2011 Oxford University Iowa Scholarship. University of Iowa Sports Medicine.
- 06/10 Merit in Paediatrics, Oxford University Medical School
- 07/06-09/06 Wellcome Trust Biomedical Vacation Scholar. Department of Child Health, University of Bristol
- 2005-2007 John Bowyer Buckley scholar in Biological Natural Sciences, Girton College, Cambridge.
- 2006 Edith Neal Prize in Biological Natural Sciences. Girton College, Cambridge
- 2005, 2007 Ellen Delf-Smith Prize in Biological Natural Sciences. Girton College, Cambridge

Teaching Responsibilities

- 2017, 2019 Guest Lecturer, CHEME 534 Physiology and Nanomedicine, University of Washington, Seattle, WA. Lecture title: Homeostasis, the endocrine system, and thermoregulation.
- 09/13-08/16 PhD contract with 25% teaching commitment, University of Oslo
 Instructor for first and second year medical students
 Courses taught: Exercise physiology (practical, 50% responsibility), blood pressure measurement (practical, 50% responsibility). Group teaching (problem-based learning) in physiology, biochemistry, and immunology
- 08/11-08/13 “Med Ed” tutor for King’s College London GKT medical students
 Ward and classroom-based teaching of clinical skills

Research Funding

Bill and Melinda Gates Foundation OPP1182584 (Juil, PI) 11/09/2017 – 04/30/2019
 Title: Uridine neuroprotection in neonatal hypoxic-ischemic brain injury
 Project Goal: To study the pharmacology and neuroprotective effects of uridine in novel ferret models of encephalopathy of prematurity, and term-equivalent neonatal hypoxic-ischemic encephalopathy (HIE).

Role : Key personnel

Peer-reviewed Publications

Mietzsch U, Radhakrishnan R, Boyle FA, Juul S, Wood TR. Temperature profile during therapeutic hypothermia as a physiologic biomarker of outcome in neonates with moderate to severe hypoxic-ischemic encephalopathy (HIE). [*Submitted*]

Wood T, Nance EA. Disease-directed engineering for physiology-driven treatment interventions. [*Submitted*]

Wood T, Kelly C, Roberts M, Walsh B. Elucidating potential signatures of human longevity by interrogating machine learning models of biological age. [*Submitted*]

Wood T, Moralejo D, Corry K, Fisher C, Snyder JM, Acuna V, Holden-Hunt A, Virk S, White O, Parikh P, Juul SE. A Ferret Model of Inflammation-Sensitized Late Preterm Hypoxic-Ischemic Brain Injury. *JoVE* [*In Press*]

Wood T. Exogenous ketone bodies as promising neuroprotective agents for developmental brain injury. *Developmental Neuroscience*. 2019;May 14:1-12.

Wood T, Moralejo D, Corry K, Snyder J, Traudt C, Curtis C, Nance E, Parikh P, Juul S. A Ferret Model of Encephalopathy of Prematurity. *Developmental Neuroscience*. 2019;May 10:1-15.

Falck M, Osredkar D, Maes E, Flatebø T, Wood TR, Walløe L, Sabir H, Thoresen M. Hypothermia Is Neuroprotective after Severe Hypoxic-Ischaemic Brain Injury in Neonatal Rats Pre-Exposed to PAM3CSK4. *Developmental Neuroscience*. 2018;40(3):189-197.

Wood T*, Snyder J*, Corry K, Moralejo D, Parikh P, Juul SE. Ontogeny of white matter, toll-like receptor expression, and motor skills in the neonatal ferret. *International Journal of Developmental Neuroscience*. 2018 May 20. 2018 May 20. pii: S0736-5748(18)30092-3. *Contributed equally.

Joseph A, Wood T, Chen E, Corry K, Snyder J, Juul S, Parikh P, Nance E. Curcumin-Loaded Polymeric Nanoparticles for Neuroprotection in Neonatal Rats with Hypoxic-Ischemic Encephalopathy. *Nano Research* 2018. [*In Press*]

Cucuzzella MT, Tondt J, Dockter NE, Saslow L, Wood TR. A low-carbohydrate survey: Evidence for sustainable metabolic syndrome reversal. *Journal of Insulin Resistance*. 2017;2(1).

Falck M, Osredkar D, Wood TR, Maes E, Flatebø T, Sabir H, Thoresen M. Neonatal Systemic Inflammation Induces Inflammatory Reactions and Brain Apoptosis in a Pathogen-Specific Manner. *Neonatology*. 2018;113(3):212-220.

Falck M, Osredkar D, Maes E, Flatebø T, Wood TR, Sabir H, Thoresen M. Hypothermic Neuronal Rescue from Infection-Sensitized Hypoxic-Ischaemic Brain Injury Is Pathogen Dependent. *Developmental Neuroscience*. 2017;39(1-4):238-247.

Curtis C, Zhang M, Liao R, Wood T, Nance E. Systems-level thinking for nanoparticle-mediated therapeutic delivery to neurological diseases. *WIREs Nanomedicine and Nanobiotechnology*. 2017 Mar;9(2).

Wood T, Kelly C. Insulin, glucose and beta-hydroxybutyrate responses to a medium-chain triglyceride-based sports supplement: A pilot study. *Journal of Insulin Resistance*. 2017 2;1

Falck M, Osredkar D, Maes E, Flatebø T, Wood TR, Sabir H, Thoresen M. Hypothermic Neuronal Rescue from Infection-Sensitised Hypoxic-Ischaemic Brain Injury Is Pathogen Dependent. *Developmental Neuroscience*. 2017;39(1-4):238-247.

Curtis C, Zhang M, Liao R, Wood T, Nance E. Systems-level thinking for nanoparticle-mediated therapeutic delivery to neurological diseases. *WIREs Nanomedicine & Nanobiotechnology*. 2016 Aug 25. doi: 10.1002/wnan.1422.

Wood T, Hobbs C, Falck M, Brun AC, Løberg EM, Thoresen M. Rectal temperature in the first five hours after hypoxia-ischaemia critically affects neuropathological outcomes in neonatal rats. *Pediatric Research*. 2017 Mar 13.

Sabir H, Osredkar D, Maes E, Wood T, Thoresen M. Xenon combined with therapeutic hypothermia is not neuroprotective after severe hypoxia-ischemia in neonatal rats. *PLoS One*. 2016 Jun 2;11(6):e0156759.

Sabir H, Wood T, Gill H, Dingley J, Liu X, Thoresen M. Xenon depresses aEEG background voltage activity whilst maintaining cardiovascular stability in sedated healthy newborn pigs. *Journal of Neurological Sciences*. 2016 Apr 15;363:140-4.

Wood T, Smit E, Maes E, Osredkar D, Falck M, Elstad M, Thoresen M. Monitoring of cerebral blood flow during hypoxia-ischaemia and resuscitation in the neonatal rat using laser speckle imaging. *Physiological Reports*. 2016 Apr;4(7). pii: e12749.

Wood T, Osredkar D, Puchades M, Maes E, Falck M, Flatebø T, Walløe L, Sabir H, Thorsen M. Treatment temperature and insult severity influence the neuroprotective effects of therapeutic hypothermia. *Scientific Reports*. 2016 Mar 21;6:23430.

Smit E, Liu X, Jary S, Gill H, Wood T, Thoresen M. The effect of resuscitation in 100% oxygen on brain injury in a newborn rat model of severe hypoxic-ischaemic encephalopathy. *Resuscitation*. 2015 Nov;96:214-9.

Wood T, Thoresen M. Physiological Responses to Hypothermia. *Seminars in Fetal and Neonatal Medicine*. 2015 Apr;20(2):87-96.

Osredkar D, Sabir H, Falck M, Wood T, Maes E, Flatebø T, Puchades M, Thoresen M. Hypothermia does not reverse cellular responses caused by lipopolysaccharide in neonatal hypoxic-ischemic brain injury. *Developmental Neuroscience*. 2015;37(4-5):390-.7

Thoresen M, Hobbs CE, Wood T, Chakkarapani E, Dingley J. Cooling combined with immediate or delayed xenon inhalation provides equivalent long-term neuroprotection after neonatal hypoxia-ischemia. *J Cereb Blood Flow Metab.* 2009 Apr;29(4):707-14.

Kuhnle GG, Joosen AM, Wood TR, Runswick SA, Griffin JL, Bingham SA. Detection and quantification of sucrose as dietary biomarker using gas chromatography and liquid chromatography with mass spectrometry. *Rapid Commun Mass Spectrom.* 2008;22(3):279-82.

Other Publications

Wood T. Lost metabolic machinery during ketosis? Depends where you're looking. *Strength & Conditioning Journal.* 2017 39(5);94-95. [Letter to the editor]

Wood T. If the Metabolic Winter Is Coming, When Will It Be Summer? *Metabolic Syndrome and Related Disorders.* 2017 Feb;15(1):3. [Letter to the Editor]

Wood T, Hansen R, Sigurðsson A, Jóhannsson G. The cardiovascular risk reduction benefits of a low carbohydrate diet outweigh the potential increase in LDL cholesterol. *British Journal of Nutrition.* 2016 Mar 28;115(6):1126-8. [Letter to the editor]

Wood T, Sverdrup U, Ragnarsdottir KV, Sverdrup HU. Investigating the root causes of multiple sclerosis using systems analysis and dynamics, developing an integrated treatment strategy. *Proceedings of the 30th International Conference of the System Dynamics Society* St. Gallen, Switzerland -- July 22-26, 2012

Articles in Preparation

Potter GDM, Wood T. The Future of Shift Work: Circadian Biology Meets Personalized Medicine and Behavioral Economics. [Review article]

Feldman D, Huggins S, Wood T. The Lipid Energy Model – Dynamic Changes in LDL-C During Ketosis Suggest Co-ordinated ApoB Particle Regulation for Substrate Delivery. [Hypothesis paper]

Turknett J, Wood T. Game Level Interventions for Cognitive Protection. [Review article]

Abstracts and Conference Presentations

Wood T, Moralejo D, Corry K, Snyder J, Parikh P, Juul SE. A Ferret Model of Severe Late-Preterm Brain Injury (poster). Annual Pediatric Academic Societies Conference, Baltimore, April 27-30, 2019.

Moralejo D, Wood T, Corry K, Snyder J, Juul S. Characterization of Motor and Reflex Development in a Novel Ferret Model of Encephalopathy of Prematurity (poster). 69th AALAS National Meeting. October 27-November 1 2018.

Wood T, Moralejo D, Corry K, Snyder J, Juul S. Characterization of Motor Development in a Novel Ferret Model of Encephalopathy of Prematurity (oral presentation). 11th Hershey Conference on Developmental Brain Injury. June 4-6, 2018.

Joseph A, Wood T, Chen E, Corry K, McKenna M, Liao R, Juul S, Snyder J, Parikh P, Nance E. Curcumin-loaded brain-penetrating nanoparticles for the treatment of neonatal HIE (poster). 11th Hershey Conference on Developmental Brain Injury. June 4-6, 2018.

Wood T, Moralejo D, Corry K, Snyder J, Juul S. Characterization of Motor Development in a Novel Ferret Model of Encephalopathy of Prematurity (poster). Annual Pediatric Academic Societies Conference, Toronto, May 5-8, 2018.

Joseph A, Wood T, Chen E, Corry K, McKenna M, Liao R, Juul S, Snyder J, Parikh P, Nance E. Curcumin-loaded brain-penetrating nanoparticles for the treatment of neonatal HIE (poster symposium). Annual Pediatric Academic Societies Conference, Toronto, May 6-8, 2018.

Wood T, Moralejo D, Corry K, Snyder J, Juul S. Characterization of Motor Development in a Novel Ferret Model of Encephalopathy of Prematurity (oral presentation). 39th Western Conference on Perinatal Research. January 10-12, 2018.

Wood T, Moralejo D, Corry K, Gebert JT, Snyder JM, Traudt CM, Juul SE. Motor and Reflex Development in a Novel Ferret Model of Encephalopathy of Prematurity (poster). Annual Pediatric Academic Societies Conference, San Francisco, May 6-9, 2017.

Falck M, Osredkar D, Maes E, Flatebø T, Wood TR, Sabir H, Thoresen M. Hypothermic Neuronal Rescue from Infection-Sensitized Hypoxic-Ischaemic Brain Injury Is Pathogen Dependent (oral presentation). Annual Pediatric Academic Societies Conference, San Francisco, May 6-9, 2017.

Wood T, Smit E, Maes E, OSredkar D, Falck M, Elstad M, Thoresen M. Cerebral Blood Flow Monitoring During Hypoxia-Ischaemia And Resuscitation In The Neonatal Rat Using Laser Speckle Imaging (poster). Hershey Conference on Developmental Brain Injury. June 8-11, 2016.

Wood T, Skranes J, Falck M, Løhaugen G, Stiris T, Løberg E, Fugelseth D, Thoresen M. Core Temperature After Neonatal Hypoxia-Ischaemia Predicts Long-term Cerebral Injury (poster). Hershey Conference on Developmental Brain Injury. June 8-11, 2016.

Falck M, Maes E, Flatebø T, Wood T, Sabir H, Osredkar D, Thoresen M. Moving Towards a More Clinically Relevant Animal Model of Infection-sensitized HIE (oral presentation). Hershey Conference on Developmental Brain Injury. June 8-11, 2016.

Wood T, Skranes J, Falck M, Løhaugen G, Stiris T, Løberg E, Fugelseth D, Thoresen M. Core Temperature After Neonatal Hypoxia-Ischaemia Predicts Long-term Cerebral Injury (poster symposium). Annual Pediatric Academic Societies Conference, Baltimore, April 30-May 3, 2016.

Falck M, Maes E, Flatebø T, Wood T, Sabir H, Osredkar D, Thoresen M. Gram-positive Septicemia Sensitises The Neonatal Brain To Hypoxic-ischemic Injury, Without Inhibiting The Neuroprotective Effect Of Hypothermia (oral presentation). Annual Pediatric Academic Societies Conference, Baltimore, April 30-May 3, 2016.

Smit E, Wood T, Liu X, Thoresen M. The Effect Of Resuscitation In 100% Oxygen On Cerebral Blood Flow And Neuropathology In A Newborn Rat Model Of Hypoxia-ischaemia (poster). Annual Pediatric Academic Societies Conference, Baltimore, April 30-May 3, 2016.

Wood T, Osredkar D, Flatebø T, Falck M, Maes E, Thoresen M. Temperature Dependence Of Hypothermic Neuroprotection In A Rat Model Of Neonatal Hypoxic Ischaemic Encephalopathy (oral presentation). *Annual Pediatric Academic Societies Conference*, San Diego, April 25-28, 2015.

Wood T, Osredkar D, Sabir H, Falck M, Maes E, Thoresen M. Cooler Isn't Cool – Deep Hypothermia Does Not Provide Neuroprotection In A Rat Model Of Severe Neonatal Hypoxic-Ischaemic Encephalopathy (poster). 2014, 9th Hershey Conference on Developmental Brain Injury.

Wood T, Osredkar D, Sabir H, Falck M, Maes E, Thoresen M. Cooler Isn't Better – Hypothermia at Three Different Temperatures Does Not Provide Neuroprotection In A Rat Model Of Severe Neonatal Hypoxic-Ischaemic Encephalopathy (oral presentation). *Annual Pediatric Academic Societies Conference*, Vancouver, May 2-6, 2014.

Sverdrup HU*, Wood TR*, Ragnarsdottir KV. Using systems analysis to investigate the root causes of multiple sclerosis; developing an integrated treatment strategy (oral presentation). 3rd Annual meeting of the *International Society for Neurovascular Disease*, Feb 23-25, 2013. *Joint first authors.

Wood T, Hobbs C, Tucker A, Aquilina K, Thoresen M. Phenobarbital protects motor function two weeks after hypoxia-ischaemia in the neonatal rat (poster). *Neonatal Society Widdowson Meeting*, 12th-13th December, 2006.

Acknowledged contributions to other publications

Stubbs BJ, Cox PJ, Kirk T, Evans RD, Clarke K. Gastrointestinal Effects of Exogenous Ketone Drinks are Infrequent, Mild and Vary According to Ketone Compound and Dose. *Int J Sport Nutr Exerc Metab*. 2019 Apr 29:1-23.

Thoresen M. Who should we cool after perinatal asphyxia? *Seminars in Fetal and Neonatal Medicine*. 2015 Apr;20(2):66-71.

Chakkarapani E, Davis J, Thoresen M. Therapeutic hypothermia delays the C-reactive protein response and suppresses white blood cell and platelet count in infants with neonatal encephalopathy. *Arch Dis Child Fetal Neonatal Ed*. 2014 Nov;99(6):F458-63.

Marsden K and Whitmore M. Fitter Food: A Second Helping. *Primal Blueprint Publishing*. [Scientific editor and contributor]

Editorial Positions

2019- Assistant Editor, International Journal of Disease Reversal and Prevention
2016- Editorial board member, Journal of Insulin Resistance

Peer-review

I have provided peer-review for publications submitted to the following journals: Journal of Cerebral Blood Flow and Metabolism, International Journal of Developmental Neuroscience, Pediatrics, Resuscitation, Stroke, Journal of Thermal Biology, PLoS One, Behavioural Brain Research, Pediatric Research, Journal of Pediatrics, EBioMedicine, Archives of Disease in Childhood – Fetal and Neonatal Edition, Neuroscience, Journal of Perinatal Medicine, Neonatology, Developmental Neuroscience, Journal of Insulin Resistance, Metabolic Syndrome and Related Disorders, and Scientific Reports.

Other Positions

2018- President, Physicians for Ancestral Health
2017- Scientific board member, Hints Performance
2016- Director, British Society of Lifestyle Medicine
2015- Board member and co-founder, Icelandic Health Symposium
2015-2018 Chief Scientific Officer, Physicians for Ancestral Health
2008-2011 Head Coach, Osler House Boat Club, Oxford
09/08-07/09 Men's Captain, Pembroke College Boat Club, Oxford
09/08-07/09 Vice President, William Sweet Society, Oxford
09/05-07/07 Treasurer, Girton College Gym Society
09/05-07/07 Men's Captain, Girton College Boat Club, Cambridge

Invited Talks (Health and Nutrition)

Wood T. Triumph of the environment: lies, damn lies, and genetics. *Ancestral Health Symposium*, 08/2019, San Diego, CA.

Wood T. The Athlete's Gut – Pitfalls of fueling for modern sports. *Ancestral Health Symposium*, 07/2018. Bozeman, MT.

Wood T. Sleep and exercise strategies for those who don't have time to sleep and exercise. *WChE Seminar Series*. 01/2018, Seattle, WA.

Wood T. The Athlete's Gut. *Physicians and Ancestral Health Winter Symposium*, 01/2018, San Diego, CA.

Wood T. Diet and Nutrition 101. *WChE Seminar Series*. 01/2018, Seattle, WA

Host, *Who Wants To Live Forever* conference. 09/2017, Reykjavik, Iceland.

Wood T. The way to man's heart is through the stomach. *Low Carb Breckenridge*. 02/2017, Breckenridge, CO.

Wood T. Modelling and Quantifying Metabolism to Optimise Health and Performance. *Biohacker Summit UK*. 21st May 2016, London, UK

Wood T. Preventing and reversing chronic disease – it's not (just) about the diet. *Icelandic Health Symposium*, 26th May 2016, Reykjavik, Iceland.

Wood T. Never say never: nutritional grey areas and the randomness of nutritional science. *Fitter Food Academy*. 21st November 2015, London, UK.

Wood T. Using systems analysis to approach autoimmune disease treatment. *Health Unplugged UK*, November 1st 2015, London, UK.

Wood T. Insulin resistance and modern disease – it's not just about the carbs. *Health Unplugged UK*, October 31st 2015, London, UK.

Wood T. The multiple roles of dairy in health, and chronic disease. *Heilsufrelsi* ("Health Freedom"). 28th February 2015, Reykjavik, Iceland. *Named headline speaker.

Wood T. Using Systems thinking to approach chronic disease treatment: Multiple Sclerosis as an example. *Physicians and Ancestral Health Winter Symposium*, January 2015, Scottsdale, AZ.

Wood T. Is it Paleo? Grains, legumes, and dietary dogma. *Health Unplugged UK*, October 2014, London, UK.

References

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