Prof. dr. R.J.A. Wanders

Position
Professor

Main activities
Research, Patient care

Specialisation
Biochemistry, Enzymology.

Focus of research
Peroxisomes in health and disease.

Physiological role of peroxisomes in human health and disease with special emphasis on the enzymology and transport properties of peroxisomes.

Key publications

- Houten SM, Violante S, Ventura FV, Wanders RJA, **The Biochemistry and Physiology of Mitochondrial Fatty Acid β-Oxidation and Its Genetic Disorders.** ANNU REV PHYSIOL 2016;78:23-44 [PubMed]
- Vaz FM, Paulusma CC, Huidekoper H, de Ru M, Lim C, Koster J, Ho-Mok K, Bootsma AH, Groen AK, Schaap FG, Oude Elferink RPJ, Waterham HR, Wanders RJA, **Sodium taurocholate cotransporting polypeptide (SLC10A1) deficiency: conjugated hypercholanemia without a clear clinical phenotype.** HEPATOLOGY 2015;61 (1):260-267 [PubMed]
- Bennett MJ, Rinaldo P, Wilcken B, Pass KA, Watson MS, Wanders RJA, **Newborn screening for metabolic disorders: how are we doing, and where are we going?.** CLIN CHEM 2012;58 (2):324-331 [PubMed]
- Wanders RJA, Komen J, Ferdinandusse S, **Phytanic acid metabolism in health and disease.** BBA-MOL CELL BIOL L 2011;1811 (9):498-507 [PubMed]
- van Roermund CWT, Visser WF, Ijlst L, Waterham HR, Wanders RJA, **Differential substrate specificities of human ABCD1 and ABCD2 in peroxisomal fatty acid β-oxidation.** BBA-MOL CELL BIOL L 2011;1811 (3):148-152 [PubMed]

All Publications
Curriculum Vitae

Ronald (R.J.A.) Wanders has studied Chemistry at the University of Amsterdam with a subspecialization in Biochemistry and subsequently did his PhD at the E.C. Slater Institute for Biochemical Research, University of Amsterdam (1977-1982) under the leadership of Prof. Dr. J.M. Tager. In 1983 Wanders joined the Laboratory Genetic Metabolic Diseases at the Academic Medical Center (AMC) of the University of Amsterdam (UvA) as postdoc with the objective to: (1.) perform research on Zellweger syndrome and other peroxisomal disorders, and (2.) set up an Enzymology Laboratory, capable of doing selective enzyme assays in patients suspected to suffer from certain inborn errors of metabolism (IEMs) including peroxisomal diseases, fatty acid oxidation disorders, amino oxidation defects, among others. He is full professor in Clinical Enzymology of IEMs since 1996, and is Head of the Laboratory Genetic Metabolic Diseases since 2003. Wanders has been promotor of 34 completed PhD thesis works, and copromotor of ... PhD thesis works and has published more than 936 papers in peer-reviewed journals. Wanders is member of several Editorial Boards of scientific journals (Human Mutation (2006-2011), Biochimica Biophysica Acta, Molecular Basis of Diseases, Journal of Inherited Metabolic Disease, Molecular Genetics and Metabolism, Journal of Biological Chemistry, World Journal of Biological Chemistry), member of different medical Advisory Boards (Prinses Beatrix Fonds (PBF), European Leukodystrophy Association (ELA), Barth Syndrome Foundation (BSF), and member of different national and international Selection Committees, including NWO-VICI (2007-2011). Wanders has received several awards including the IFCC 2011 SDistinguished Award for Laboratory Medicine and Patient Care.

Training
'71-76: M.SC Master of Sciences Chemistry with specialization in Biochemistry, University of Amsterdam.

'77-'82: PhD-student at the Department of Biochemistry, E.C. Slater Institute for Biomedical Research. Title Thesis: 'Quantitative studies on the control of flux'. (PhD Professor/Promotor: Prof. J.M. Tager).

'83-'88: Post-doc. fellow at the Laboratory of Genetic Metabolic Diseases, Departments of Pediatrics and Clinical Chemistry, Academic Medical Center, University of Amsterdam.

'88-present: Staff member, Department of Pediatrics, Academic Medical Center, University of Amsterdam.

'88-'96: Associate Professor and Head of the section Enzymology of Inherited Metabolic Diseases, Laboratory Genetic Metabolic Diseases, Academic Medical Center, University of Amsterdam.

'96-present: Professor of Clinical Enzymology & Inherited Metabolic Diseases, Laboratory Genetic Metabolic Diseases, Academic Medical Center, University of Amsterdam.

'03-present: Head of the laboratory of Genetic Metabolic Diseases, Academic Medical Center, University of Amsterdam.

Research programmes

Biochemistry & Enzymology of Metabolic Disorders

Peroxisomes were long thought to play only a minimal role in human physiology until the early 1980s when studies in a rare lethal autosomal recessive disorder called Zellweger syndrome revealed that peroxisomes are in fact indispensible organelles playing a key role in human physiology. Indeed, peroxisomes are now known to catalyze multiple metabolic functions including: (1.) the beta-oxidation of certain fatty acids notably very long-chain fatty acids; (2.) the synthesis of etherphospholipids (plasmalogens); (3.) the alpha-oxidation of 3-methyl branched chain fatty acids including phytanic acid, and (4.) the detoxification of glyoxylate. Subsequent to the discovery of Zellweger syndrome as the prototype peroxisomal disorders many additional peroxisomal diseases have been identified. .....

Faculty
Prof. dr. R.J.A. Wanders
Dr. S. Ferdinandusse PhD
Dr. R.H. Houtkooper
Dr. S. Kemp
Dr. A.B.P. van Kuilenburg
Dr. W. Kulik PhD
Dr. C.W.T. van Roermund
Dr. F.M. Vaz PhD
Prof. dr. H.R. Waterham

Postdocs
Dr. M. van Weeghel MSc

PhD Students
I.A. Chatzispyrou
E.G. Daniels
Drs. C.E. van Engen MD
W. Gao
N.M. Held
A.R. Khan
J. Liu
M. Molenaars MSc

Others
H. te Brinke BSc
Ing. S. Denis
Ing. L. IJlst

Prof. dr. H.R. Waterham (Functional Genetics of Metabolic Diseases)

Dr. S. Ferdinandusse PhD ()

Other research related activities

- Membership of Scientific Advisory Board, Prinses Beatrix Fonds
- Membership of advisory board / Consultant, NWO: Netherlands Organisation
- Other, NWO: Netherlands Organisation
- Membership of editorial board / Editorship, MOLECULAR GENETICS AND METABOLISM
- Membership of editorial board / Editorship, HUMAN MUTATION
- Membership of editorial board / Editorship, BIOCHIMICA ET BIOPHYSICA ACTA-MOLECULAR BASIS OF DISEASE
- Membership of editorial board / Editorship, JOURNAL OF BIOLOGICAL CHEMISTRY
- Membership of editorial board / Editorship, JOURNAL OF INHERITED METABOLIC DISEASE

Current research funding

Leadiant Biosciences Limited

yong.xie@outlook.com

From: ronald.j.a. wanders <ronaldjawanders@hotmail.com>
Sent: Saturday, January 31, 2015 10:48 AM
To: Yong.xie@outlook.com

Dear Mrs. Yong,
As promised I have now taken the time to have a good look at your Email.
The acylcarnitine profile with elevated levels of the 18:0, 16:0 and 18:1 species with relatively normal levels of the 14:1 species is indeed very suggestive for CACT or CPT2-deficiency.
Our laboratory here in Amsterdam has extensive expertise in measuring the activity of CACT and CPT2 as well as other mitochondrial beta-oxidation enzymes and would be happy to help you with the identification of the enzymatic defect in your child.
We would need fibroblasts to do these studies.
Myself I am not a medical doctor but a laboratory scientist but if you wish I can transfer your Email,to one of my colleagues who has extensive experience with patients suffering from a mitochondrial fatty acid oxidation disorder.
The person involved is Dr.Gepke Visser who might be able also to provide you information on the clinical situation of your child.
Best regards.
Prof.dr. Ronald JA Wanders.

Verstuurd vanaf mijn iPad