BIOGRAPHICAL SKETCH

Personal details

- Title(s), initial(s), first name, surname: Dr. Patrick Schrauwen

Education/training

1998	PhD, Human Biology, Maastricht University
1997	Visiting scientist, PhD, NIH/NIDDK, Phoenix, Arizona, USA
1994	Msc, exercise physiology, Maastricht University

Positions and Employment

2024 – present	Senior Scientist and deputy head Research Group Energy Metabolism, Institute for Clinical Diabetology, German Diabetes Center, Düsseldorf, Germany
2024 – present	Project leader of the international 'TIMED' consortium
2021– 2025	Member of the Management Board of the European Association for the Study of Diabetes (EASD)
2021– 2025	Chair of the EASD Academy
2024– present	Visiting Senior Scientist Leiden University Medical Center (LUMC)
2010 – 2024	Professor 'Metabolic Aspects of Type 2 Diabetes Mellitus', Maastricht University
2005 – 2010	Associate Professor, Department of Human Biology, Maastricht University
2002 – 2007	Academy fellow of the Royal Acadamy of Arts and Sciences (KNAW)
1998 – 2001	Post-doctoral fellow, Department of Human Biology, Maastricht University
1997 – 1998	Visiting Scientist, Clinical Diabetes and Nutrition Section, National Institutes of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Phoenix, U.S.A.

Editorial and Scientific Board Member

2026 – present	Associate editor and board member "Diabetologia"
2021 – present	Expert panel member *European Research Council*, section Advanced ERC grants
2023 – present	Member of the EASD rising star award committee
2018 – present	Reviewer for European Foundation for Study of Diabetes (EFSD)
2018 – present	Member of the EASD Minkowski Prize Committee

Honors and awards

2018	Bio Art and Design Award (NWO)
2016	51st MINKOWSKI Award of the European Association for the Study of Diabetes (EASD), Munich, Germany.
2013	Corona-Gallina research award for fundamental research by Dutch Diabetic Foundation (DFN)
2008	Rising Star Award 2008 from the European Association for the Study of Diabetes (EASD)
2006	Winner of the 'Silver Medal' 2006 from the Nutrition Society (UK)
2001	Young Investigators Award 2001 for Clinical Science from the European Association for the Study of Obesity
1997	NWO - travel scholarship for 7 months visit to the National Institutes of Health, Phoenix, USA

Five most important publications, out of >340 (average impact factor >9.0; h-index 83 (WoS), 106 (google scholar).

- Harmsen, J-F., Habets, I., Biancolin, A., Lesniewska, A., Philips, N.E., Metz, L., Sanchez-Avila, J., Kotte, M., Timmermans, M., Hasim, D., de Kam, S., Schaart, G., Jörgensen, J.A., Gemmink, A., Moonen-Kornips, E., Doligkeit, D., van de Weijer, T., Buitinga, M., Haans, F., De Lorenzo, R., Pallubinsky, H., Gordijn, M.C.M., Collet, T-H., Kramer, A., Schrauwen, P*., Dibner, C*., Hoeks, J*. Natural daylight during office hours improves glucose control and whole-body substrate metabolism. Cell Metabolism, 38 (1), 65-81, 2026. **IF: 30.9** *shared last author
- Parker, V.E., Robertson, D., Tapia, E.E., Havekes, B., Phielix, E., de ligt, M., Roumans, K., Mevenkamp, J., Sjoberg, F., Schrauwen-Hinderling, V.B., Johansson, E., Chang, Y-T., Esterline, R., Smith, K., Wilkinson, D.J., Hansen, L., Johansson, L., Ambery, P., Jermutus, L., Schrauwen, P. Cotadutide dual GLP-1 and glucagon receptor agonist promotes glycogenolysis and drives beneficial effects on liver health in patients with T2DM and overweight or obesity. Nature Metabolism, 5 (12), 2086-2093, 2023. **IF: 20.8**
- Hanssen MJW, Hoeks J, Brans B, van der Lans AAJJ, Schaart G, van den Driessche JJ, Jörgensen JA, van Boekschoten MV, Hesselink MKC, Havekes B, Kersten S, Mottaghy FM, van Marken Lichtenbelt WD, Schrauwen P. Short-term cold acclimation improves insulin sensitivity in patients with type 2 diabetes mellitus. Nature Medicine, 21, 863-865, 2015. **IF: 50.0**
- Broeders, E.P.M., Nascimento, E.B.M., Havekes, B., Brans, B., Roumans, K.H.M., Tailleux, A., Schaart, G., Kouach, M., Charton, J., Deprez, B., Bouvy, N.D., Mottagy, F., Staels, B., van Marken Lichtenbelt, W.D., Schrauwen, P. The bile acid chenodeoxycholic acid increases human brown adipose tissue activity. Cell Metabolism, 22, 418-426, 2015. **IF: 30.9**

- Marken Lichtenbelt WD van, Vanhommerig JW, Smulder NM, Drossaerts JMAFL, Kemerink GJJ, Schrauwen P, Teule GJJ. Cold-activated brown adipose tissue in healthy adults. New England J Medicine, 360, 1500-1508, 2009. **IF:78.5**

Brief summary of research over the last five years

Dr. Schrauwen focuses on human translational research in the field of type 2 diabetes mellitus, with a special emphasis on insulin resistance, lipotoxicity, mitochondrial dysfunction, and human energy metabolism. Dr. Schrauwen was one of the first to show that mitochondrial function is compromised in patients with overt type 2 diabetes and in subjects with pre-diabetes (Diabetologia 2007). Dr. Schrauwen was also the first to show that the polyphenolic compound resveratrol is able to increase mitochondrial function and improve metabolic health in obese humans (Cell Metabolism 2011) but not in type 2 diabetes patients (Diabetes Care 2016). In more recent years, Dr. Schrauwen has been pioneering in the field of circadian rhythmicity in human energy metabolism and diabetes and was the first to demonstrate that mitochondrial function (Mol Metab 2016), lipid content (Mol Metab 2020) and muscle metabolites (Cell Reports, 2023) displays 24h rhythmicity in healthy humans with blunted rhythmicity in -diabetes volunteers. Also, he showed that circadian misalignment leads to muscle insulin resistance in humans (PNAS 2018), and recently demonstrated that natural light exposure affects human energy metabolism (Cell Metabolism, 2026). Dr. Schrauwen has also led human clinical trials investigating the effect of diabetes drugs on human energy metabolism (Op den Kamp, Diabetes Care 2021, Veelen, Metabolism 2023, Parker, Nature Metabolism 2024).
Dr Schrauwen was also one of the first to show that BAT can be detected in most humans upon acute cold exposure (NEJM 2009). Furthermore, he showed that the bile-acid CDCA activates BAT and elevates energy expenditure in humans (Cell Metabolism 2015), whereas creatine is unable to affect BAT in humans (Nature Metab 2021). In 2015, Dr. Schrauwen demonstrated that 10 days of cold acclimation had very marked effects on skeletal muscle insulin sensitivity in type 2 diabetes patients in a BAT-independent manner (Nature Medicine 2015), and next demonstrated that this involves cold-exposure activated GLUT4 translocation in skeletal muscle via a yet unknown molecular pathway (Nature Commun 2021). Most recent, he demonstrated that the beta-adrenergic pathway may be involved (Nature Commun 2023).

Dr. Schrauwen was awarded an NWO postdoctoral fellowship in 1999 and a prestigious KNAW Academy-fellowship (Royal Dutch Academy of Arts and Sciences) in 2001 and 2004. In 2008 he received the NWO VICI grant, the most prestigious research grant for young scientists in the Netherlands. For his research, he was awarded with the young investigator award of the European Association for the Study of Obesity (EASO) in 2001, the 'Silver Medal' award of the British Nutrition Society in 2006, the 'Rising Star Award' of the European Association for the Study of Diabetes (EASD) in 2008 and the Corona Gallina Award for excellence in diabetes research in 2013. In September 2016, Schrauwen was awarded the MINKOWSKI Award of the EASD, the most prestigious European award in diabetes research. From 2010 to 2024, Dr. Schrauwen has been a Professor of Metabolic Aspects of Type 2 Diabetes and from 2021 to 2025 he was a board member of the European Association for the study of Diabetes. In 2021 he established and became chair of the EASD academy, an initiative to support, train and mentor early career researchers in the field of diabetes. In 2024, Schrauwen joined the DDZ in Dusseldorf.

Main scientific contributions to the field /breakthroughs

- One of the first to show that mitochondrial function, as measured by in-vivo MR spectroscopy, is compromised not only in patients with overt type 2 diabetes but also in subjects with pre-diabetes (Diabetologia 2007)
- First to show the metabolic effects of natural versus artificial day light in humans (Cell Metabolism, 2025)
- First to show that the polyphenolic compound resveratrol is able to increase mitochondrial function and improve metabolic health in obese humans (Cell Metabolism 2011).
- Demonstration that mitochondrial function in muscle displays 24h rhythmicity in humans (Mol Metab, 2016) and that this rhythmicity is blunted in prediabetes volunteers (Mol Metab, 2020)
- First demonstration that circadian misalignment leads to muscle insulin resistance in humans (PNAS, 2018)
- Discovery of brown adipose tissue in humans (NEJM, 2009)
- First to show that cold acclimation markedly improves insulin sensitivity in humans, via a so-far unknown molecular pathway (Nature Medicine 2015)

Earning power

I have been coordinator of several large collaborative research grants, and have received over 50 research grants, four of which are NWO-TOP grants, one KNAW fellowship and one VICI. My total earning power is approximately 30 mE, of which ~ 7.5 mE from NWO/ERC, ~ 7.8 mE from competitive health foundation grants (DFN, NHS, EFSD) and the remainder is mainly industry, both food industry (Unilever, FrieslandCampina, Danone) and pharma industry (AstraZeneca, Genfit, Pfizer, MedImmune) Currently I lead a large Dutch-Canadian consortium (~ 5 mE) on "restoring 24h substrate rhythmicity to improve glycemic control by the timing of lifestyle factors" (TIMED) financed by a.o. ZonMW and CIHR. Previously, I have been coordinator and project leader of many larger consortia, including Energise (supported by the dutch heart foundation, ~ 5 mE) and Mitohealth (supported by TI Food an Nutrition, ~ 2 mE). I have also lead phase 2/2b pharmacological studies investigating effects on human energy and substrate metabolism. Average earning power over the last 10 years has been ~ 2.0 mE/year