

# CURRICULUM VITAE

## Prof. Fredrik Karpe, PhD, FRCP

**Address:** Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM)  
Nuffield Department of Clinical Medicine, University of Oxford  
Churchill Hospital, Oxford OX3 7LJ  
Telephone: +44-1865-857222 Fax: +44-1865-857217  
e-mail: [fredrik.karpe@ocdem.ox.ac.uk](mailto:fredrik.karpe@ocdem.ox.ac.uk)

**Nationality:** Swedish  
**Civil status:** Married, one son  
**Date of birth:** June 24, 1962

### EDUCATION:

1988 Graduated from the Karolinska Institute Medical School, Stockholm, Sweden (corresponds to MBBS)  
1991 Fully licensed physician (The National Swedish Board of Health and Welfare)  
1998 Certificate in secondary specialist training (CCST) in General Internal Medicine (The National Swedish Board of Health and Welfare). Included in the specialist register of GMC (No. 4246592)

### ACADEMIC QUALIFICATIONS:

1992 Ph.D. (Karolinska Institute, Stockholm, Sweden)

### PRESENT POSITION:

2010- Professor of Metabolic Medicine, University of Oxford (joint University and NHS position, managing a 20-people strong research group in OCDEM)  
1999- Honorary Consultant Physician, OCDEM, Churchill Hospital, Oxford Radcliffe Hospitals NHS Trust, Oxford (clinical lead for lipids in Oxford)  
2003- Lecturer, Pembroke College, Oxford (1<sup>st</sup> and 2<sup>nd</sup> year tutorials and graduate entry tuition)

### PREVIOUS POSITIONS:

1988 Clinical research fellow, Dept Medicine, Karolinska Institute, Stockholm, Sweden  
1989-1994 House Officer, SHO and Registrar in Medicine at the Danderyd Hospital and the Karolinska Hospital, Stockholm, Sweden  
1995-1998 Senior Registrar at the Department of Cardiovascular and Emergency Medicine, Karolinska Hospital, Stockholm, Sweden  
1996-1998 Vice Director of the Biomedicine Curriculum at the Karolinska Institute, Stockholm, Sweden.  
1999-2002 Senior Clinical Research Fellow, OCDEM, University of Oxford  
2002-2009 Wellcome Trust Senior Clinical Research Fellow, OCDEM, University of Oxford  
2002-2010 Reader in Metabolic Medicine

### MEMBERSHIPS:

2003 Fellow of the Royal College of Physicians (FRCP), Fellow of the Royal Society of Medicine

### AWARDS:

1998 Morgagni Prize (the Young Investigator Award), Padua, Italy, a silver medal and \$8,000.  
2009 The 1<sup>st</sup> William B Isley lecturer, Mayo Clinic, Rochester, Minnesota, US  
2009 Adjunct Professor, CMC, Vellore, India

### CURRENT BOARDS AND COMMITTEES:

Immediate past-president of the Royal Society of Medicine Section on Lipids in Clinical Medicine (London)  
Associate Editor of Diabetologia  
Associate Editor of Clinical Science  
Member of the editorial boards of the following journals: 1/Nutrition, Metabolism and Cardiovascular Disease and 2/International Journal of Obesity 3/BBA Molecular and Cellular Biology of Lipids  
Member of international scientific advisory boards for the following units/initiatives: INSERM 866 Dijon, France and EU FP7 TOBI ([www.tobi-project.eu](http://www.tobi-project.eu))  
Chairman of EFSD/NovoNordisk funding panel (EASD)  
Member of the EASD Executive Committee  
Member of the King Faisal International Prize 2013 Selection committee (Riyadh, Saudi)  
Reviewer of funding organizations (within brackets the number of grants evaluated over the past 5-year period): The Wellcome Trust (5), MRC (4), BHF (6), Diabetes UK (11), Irish Health Research Board (4), Diabetes Fonds (Netherlands) (2), EFSD (30), INSERM (3), Finnish Academy (11).

### GRADUATE AND POSTDOCTORAL SUPERVISION

#### Graduate supervision for D. Phil. at the University of Oxford:

Jean-Luc Ardlouze, MD, DPhil viva Dec-03 on a thesis entitled "Regulation of adipose tissue blood flow in humans"  
Richard Heath, BSc, DPhil viva Feb-04, on a thesis entitled "Characteristics of triacylglycerol-rich lipoproteins in the postprandial state" (MRC studentship)

Garry D Tan, MBBS, DPhil viva Dec-05, on a thesis entitled "Adipose tissue function in humans; in vivo studies of PPAR $\gamma$  action and regional adiposity" (MRC clinical training fellow)

Alex Bickerton, MBBS, DPhil viva Sept-08, on a thesis entitled "Adipose tissue fatty acid metabolism in the metabolic syndrome" (Clinical research fellow within a grant from the Food Standards Agency)

Siobhan McQuaid, MBBS, DPhil viva May-2009 entitled "Fatty acid metabolism in lower and upper body subcutaneous adipose tissue", funded as a clinical training fellow within the Wellcome Trust Consortium of Integrative Physiology of common metabolic disease.

Sara Suliman, MBBS, DPhil viva May 2012, tentative title "Investigations of genetic and physiological factors resulting in severe insulin resistance and aberrant adipose tissue deposition". Funded by a DUK clinical training fellowship.

Konstantinos Manolopoulos, MD, DPhil viva Oct-2011, project on in vivo lipolytic regulation in abdominal and gluteal adipose tissue.

Catrina Hilton, MD, MRC clinical training fellow, Term of admission MT2012, project on regional adipose tissue function and developmental genes

Ari Manuel, MBBS, BRC clinical training fellow, Term of admission HT 2012, project on obesity in sleep apnoea

Liliane Chamas BSc, Rhodes Scholar, Term of admission TT2009, project on nicotinic acid receptor gene regulation in human adipose tissue.

#### **Postdoctoral training at the University of Oxford:**

Dr Matt Neville, DPhil, postdoctoral fellow within the Wellcome Trust Consortium of Integrative Physiology of common metabolic disease, now NIHR bioresource coordinator (2003-)

Dr Ulf Riserus, PhD, postdoctoral fellow from the University of Uppsala, Sweden (2003-2005), funded by the Throne-Holst Foundation (Sweden).

Dr Toralph Ruge, PhD, postdoctoral fellow from the University of Umeå, Sweden (2004-2005), funded by the Throne-Holst Foundation (Sweden).

Dr Junichi Funada, MD, postdoctoral fellow from the University of Ehime, Japan (2004-2005), partly funded by an unrestricted grant from Otsuka Pharmaceuticals, Japan.

Dr Kiki Marinou, MD, postdoctoral fellow from the University of Athens, Greece (2005-2006, Marie Curie Fellowship 2012-2014).

Dr Patricia Perez-Matute, postdoctoral fellow from University of Pamplona, Spain (2006-2007)

Dr Meftun Khandker, postdoctoral fellow (2006-2009)

Dr Goshi Nakamura, postdoctoral fellow (2010-12)

Dr Katherine Pinnick, postdoctoral fellow (2008-)

Dr Jenny Collins, postdoctoral fellow (2010-)

Dr Camilla Pramfalk, postdoctoral fellow (funded by Throne-Holst foundation 2012-)

Dr Hiroaki Nagai, postdoctoral fellow (funded by Takeda Pharmaceutical, 2012-)

#### **Graduate supervision at the Karolinska Institute, Stockholm Sweden:**

Johan Björkegren, MD, PhD graduated June-98 on a thesis entitled "Triglyceride-rich lipoproteins, postprandial metabolism and composition in relation to atherosclerosis" (Karolinska Institute, Stockholm, Sweden)

Camilla Skoglund-Andersson, MD, PhD, graduated April-03, on a thesis entitled "Low density lipoprotein heterogeneity - implications for cardiovascular disease and genetic influence" (Karolinska Institute, Stockholm, Sweden)

Helena Ledmyr, MSc, PhD, graduated Dec-04, on a thesis entitled "Molecular regulation of the microsomal triglyceride transfer protein, MTP – functional genetic studies in relation to cardiovascular disease" (Karolinska Institute, Stockholm, Sweden)

#### **RECENT INVITATIONS AS PLENARY SPEAKER**

2005 74<sup>th</sup> EAS satellite on Remnant Lipoproteins, Prague, Czech Republic

2005 Annual meeting of the Biochemical Society, Glasgow

2005 28<sup>th</sup> European Lipoprotein Club, Tutzing, Germany

2005 Adipose Tissue Discussion Group, Warwick

2005 HEART UK annual meeting, Cardiff

2005 Fat and Diabetes, Florence, Italy

2005 3<sup>rd</sup> CART Symposium, Tromsø, Norway

2006 2<sup>nd</sup> Obesity Forum, Copenhagen, Denmark

2006 Biochemical Society, London (Diet and Cardiovascular Health)

2007 5<sup>th</sup> Winter Symposium, Vellore, India

2007 15<sup>th</sup> International Congress on Obesity, Budapest, Hungary

2007 76<sup>th</sup> EAS congress, Helsinki, Finland

2007 'Dissecting the Role of Genes and Environment in Complex Diseases', Hyderabad, India

2008 44<sup>th</sup> EASD congress, Rome

2009 17<sup>th</sup> European Congress on Obesity, Amsterdam

2009 International Symposium on Genetic and Epigenetic basis of Complex Disease, Hyderabad, India

2010 International Symposium Chylomicrons in Disease, Rotterdam

2010 70<sup>th</sup> American Diabetes Association Scientific Sessions, Orlando

2010 11<sup>th</sup> International Congress on Obesity (ICO), Stockholm

2010 40<sup>th</sup> Annual Conference on Endocrine Soc of India, Vellore, India

2011 CIM Conference, Copenhagen  
 2011 38<sup>th</sup> UK Adipose Tissue Discussion Group, Cambridge  
 2011 Obesity Today, Madrid  
 2012 16<sup>th</sup> ISA, Sydney  
 2012 ECO Satellite, Paris  
 2012 Spanish Atherosclerosis Soc annual meeting, Barcelona  
 2012 Nobel symposium, Stockholm

#### **EXAMINATIONS OF PHD/DPHIL**

<b>University</b>	<b>Year</b>	<b>Candidate</b>
University of Helsinki, Finland	1999	Raija Malmstrom
Flinders University, Adelaide, Australia	2000	Simone Burghardt
University of Helsinki, Finland	2001	Kati Ylitalo
Trinity College, Dublin, Ireland	2001	Catherine Phillips
Concordia University, Montreal, Canada	2001	Thea Scantlebury
University of Oxford (internal)	2002	Robert Sidell
University of Western Australia	2002	Michael Swarbrick
Danish University of Pharm. Sci., Cph, Denmark	2003	Katarina Jelic
University of Gothenburg, Sweden	2004	Caroline Ameen
University College, London	2004	Daniel Clarke
University of Exeter and Plymouth	2005	Jane Kirsten Ward
University of Oxford (internal)	2005	Minal Desai
University of Oxford (internal)	2005	Michaela Scheuermann
University of Maastricht, Netherlands	2006	Gijs Goossens
University of Nottingham	2007	Nandini Seevaratnam
University of Gothenburg, Sweden	2007	Louise Olofsson
Karolinska Institute, Stockholm, Sweden	2007	Maria Kaaman
University of Surrey	2008	Fei-Fei Sun
University of Glasgow	2008	Iqbal Al-Shayji
University of Nottingham	2008	Tantip Boonsong
University of Oxford (internal)	2009	Marie Schroeder
University of Oxford (internal)	2010	Patrick Heck
University of London, Royal Veterinary College	2010	Valerie Graham
University of Copenhagen	2010	Emil Wolsk
University of Edinburgh	2011	David MacFarlane
University of Aarhus	2011	Lars P Sørensen
University of Copenhagen	2011	Lillan Tobin
Karolinska Institute, Stockholm, Sweden	2012	Sameer S Kulkarni
University of Copenhagen	2012	Maria Pedersen
Karolinska Institute, Stockholm, Sweden	2012	Jonas Persson

#### **RESEARCH FUNDING (relevant for the past 5 years)**

2002-2007, Wellcome Trust Senior Clinical Research Fellowship, £1,400,000  
 2007-2009, Wellcome Trust Senior Clinical Research Fellowship, £528,000  
 2004-2005, GSK, investigator-led Phase 2a study, £260,000  
 2004-2008, Diabetes UK, studentship, £78,000  
 2005-2008, Diabetes UK, clinical training fellowship (Dr Sara Suliman), £120,000  
 2007-2012, NIHR, Oxford BRC, Oxford Biobank collection, £280,000  
 2007-2012, MRC-Centre for Translational Research in Obesity and Related Metabolic Disorders  
 £1.8M, Lead applicant SE O'Rahilly Cambridge, £350k to Oxford (F Karpe)  
 2008-2009, Unilever, £74,000  
 2008-2012, EU FP7 LipidomicNet WP23, £163,000  
 2009-2012, BHF £254,000 (together with Dr BA Fielding)  
 2009-2012, BHF £212,000 (together with Prof Keith Channon)  
 2009-2011, EFSD, £202,000  
 2010-2012, Oxford NIHR BRC, Extension of the Oxford Biobank £212,000  
 2011-2014, HeartResearch UK £150,000  
 2011-2014, MRC Clinical Training Fellowship (Catriona Hilton), £300,000  
 2010-2012, Takeda Pharmaceuticals, £103,000  
 2012-2015, MRC £642,000 (together with Prof MI McCarthy)  
 2012-2017, NIHR Bioresource Oxford, £1,042,000

#### **CONSULTING APPOINTMENTS**

Torrent Pharmaceuticals 2003-2008 (Diabetes/Obesity, contract with 4 working days per year)

Oxford Biosensors 2003-2008, Medical Advisory Board  
MSD, UK Atherosclerosis Advisory Board  
GSK, Novartis, Sanofi, MSD, external consultant on ad hoc basis (1-3 sessions for each company over the past 3 years).

### **LIST OF PUBLICATIONS**

In total 165 original publications, 247 items posted on ISI Web of Science with a total of >9,500 citations leading to an h-index of 51)

#### **Selection of 15 top publications:**

1. Pal A, Barber TM, Van de Bunt M, Rudge SA, Zhang Q, Lachlan KL, Cooper NS, Linden H, Levy JC, Wakelam MJ, Walker L, **Karpe F**, Gloyd AL. PTEN mutations as a cause of constitutive insulin sensitivity and obesity. *N Engl J Med*. 2012 Sep 13;367(11):1002-11.
2. Gill PJ, Harnden A, **Karpe F**. Familial hypercholesterolaemia. *BMJ*. 2012;344:e3228.
3. Watts GF, **Karpe F**. Triglycerides and atherogenic dyslipidaemia: extending treatment beyond statins in the high-risk cardiovascular patient. *Heart*. 2011 Mar;97(5):350-6.
4. **Karpe F**, Dickmann JR, Frayn KN. Fatty acids, obesity, and insulin resistance: time for a reevaluation. *Diabetes*. 2011 Oct;60(10):2441-9.
5. Formenti F, Constantin-Teodosiu D, Emmanuel Y, Cheeseman J, Dorrington KL, Edwards LM, Humphreys SM, Lappin TR, McMullin MF, McNamara CJ, Mills W, Murphy JA, O'Connor DF, Percy MJ, Ratcliffe PJ, Smith TG, Treacy M, Frayn KN, Greenhaff PL, **Karpe F**, Clarke K, Robbins PA. Regulation of human metabolism by hypoxia-inducible factor. *Proc Natl Acad Sci U S A*. 2010 Jul 13;107(28):12722-7.
6. Riserus U, Sprecher D, Johnson T, Olson E, Hirschberg S, Liu A, Fang Z, Hegde P, Richards D, Sarov-Blat L, Strum JC, Basu S, Cheeseman J, Fielding BA, Humphreys SM, Danoff T, Moore NR, Murgatroyd P, O'Rahilly S, Sutton P, Willson T, Hassall D, Frayn KN, **Karpe F**. Activation of peroxisome proliferator-activated receptor (PPAR) $\delta$  promotes reversal of multiple metabolic abnormalities, reduces oxidative stress, and increases fatty acid oxidation in moderately obese men. *Diabetes*. 2008 Feb;57(2):332-9.
7. Frayling TM, Timpson NJ, Weedon MN, Zeggini E, Freathy RM, Lindgren CM, Perry JR, Elliott KS, Lango H, Rayner NW, Shields B, Harries LW, Barrett JC, Ellard S, Groves CJ, Knight B, Patch AM, Ness AR, Ebrahim S, Lawlor DA, Ring SM, Ben-Shlomo Y, Jarvelin MR, Sovio U, Bennett AJ, Melzer D, Ferrucci L, Loos RJ, Barroso I, Wareham NJ, **Karpe F**, Owen KR, Cardon LR, Walker M, Hitman GA, Palmer CN, Doney AS, Morris AD, Smith GD, Hattersley AT, McCarthy MI. A common variant in the FTO gene is associated with body mass index and predisposes to childhood and adult obesity. *Science*. 2007 May 11;316(5826):889-94.
8. Riserus U, Tan GD, Fielding BA, Neville MJ, Currie J, Savage DB, Chatterjee VK, Frayn KN, O'Rahilly S, **Karpe F**. Rosiglitazone increases indexes of stearoyl-CoA desaturase activity in humans: link to insulin sensitization and the role of dominant-negative mutation in peroxisome proliferator-activated receptor-gamma. *Diabetes*. 2005 May;54(5):1379-84.
9. **Karpe F**, Fielding BA, Coppack SW, Lawrence VJ, Macdonald IA, Frayn KN. Oscillations of fatty acid and glycerol release from human subcutaneous adipose tissue in vivo. *Diabetes*. 2005 May;54(5):1297-303.
10. **Karpe F**, Frayn KN. The nicotinic acid receptor--a new mechanism for an old drug. *Lancet*. 2004 Jun 5;363(9424):1892-4.
11. Ardilouze JL, Fielding BA, Currie JM, Frayn KN, **Karpe F**. Nitric oxide and beta-adrenergic stimulation are major regulators of preprandial and postprandial subcutaneous adipose tissue blood flow in humans. *Circulation*. 2004 Jan 6;109(1):47-52.
12. Tan GD, Debard C, Tiraby C, Humphreys SM, Frayn KN, Langin D, Vidal H, **Karpe F**. A "futile cycle" induced by thiazolidinediones in human adipose tissue? *Nat Med*. 2003 Jul;9(7):811-2
13. **Karpe F**, Fielding BA, Ilic V, Macdonald IA, Summers LK, Frayn KN. Impaired postprandial adipose tissue blood flow response is related to aspects of insulin sensitivity. *Diabetes*. 2002 Aug;51(8):2467-73.
14. **Karpe F**, Steiner G, Uffelman K, Olivecrona T, Hamsten A. Postprandial lipoproteins and progression of coronary atherosclerosis. *Atherosclerosis*. 1994 Mar;106(1):83-97.
15. **Karpe F**, Steiner G, Olivecrona T, Carlson LA, Hamsten A. Metabolism of triglyceride-rich lipoproteins during alimentary lipemia. *J Clin Invest*. 1993 Mar;91(3):748-58.