

**NucSys Newsletter,
Issue No. 8. – That's all folks!
November 2009**

The time seems to have flown by, from the first planning meetings in 2004 to ESR recruitment and now submitting PhD thesis in 2009. A lot has happened in between!

Our first formal network meeting was in Leuven in January 2006, and it was the first time we had all met up, face to face (many contacts had been by email only to that point). It was a cold January in Leuven, but the city was a fine backdrop for the meeting and the excitement and optimism were tangible. This may, or may not, have been enhanced by some of the fine liquid products of that city.

Reflecting this mood of optimism I gave a talk on our history (even in January 2006 we had history!) and made some bold predictions about what impact we could have. I think it's fair to say we hit those expectations and achieved in ways we never anticipated. Our major achievement is the training of 18 PhD students. None were lost along the way and they form the major legacy of the network.

Through the seven subsequent network meetings, all different but all equally as exciting, we clearly progressed. I always felt everyone, from PIs, to ESRs to associated group members, is extremely supportive of the network. Furthermore NucSys acted as a very significant catalyst through these physical and virtual contacts. For example in generating successful grant applications and

published papers, but also for the informal spread of knowledge, insight, and experience.

The list of papers published is already substantial and will continue to grow as the ESRs publish their findings through 2010 and 2011. Importantly, amongst those are several multi-ESR papers in high impact journals that demonstrate the importance of modelling biological events. Other outcomes include a book on nuclear receptors edited by NucSys investigators and including several chapters from NucSys colleagues. Another key product of this network is the generation of significant biological resources including several knockout mice, stably manipulated cell lines and micro-array data sets. These resources will be utilized in many projects for several years to come.

I'm actually writing this in Boston, attending an organisational meeting for a scheme called the FIPSE Atlantis program. This scheme is joint-funded and run by the Dept of Education in the US and the European Commission and this summer we were lucky enough to get funded a new international Masters Program entitled CanSys. I've been listening to talks about the need for interdisciplinary training, student mobility and how students that experience this training will be critical levers to deliver the knowledge based economies. These are fine words and lofty goals.

Ultimately this is an end-user driven activity. By that I mean it's the academics that run networks like NucSys (and its successor!) and CanSys who translate these policy goals. But it's the students that receive the training that make these policy statements actually happen.

I know the last four years have had a profound influence on how I view nuclear receptor biology. The network has really demonstrated the power of interdisciplinary training for PhD students and the key importance of mobility. So that's what I'll focus on in this final newsletter; the development and achievements of the NucSys students.

MJC October 2009



ESR1: Tatjana Degenhardt (4/06 to 3/09)
(Prof. Carlberg, University of Kuopio,
Finland).

Meeting poster presentations

2nd FEBS Advanced Lecture Course on
Systems Biology from Molecules to Life,
Gosau, Austria, March 2007

Keystone Symposium: Nuclear receptors
and metabolism, Steamboat Springs,
USA, April 2007

Nutrigenomics Masterclass, Wageningen,
The Netherlands, Nov. 2007

Systems Biology: Global regulation of
gene regulation. Cold Spring Harbor
March 2008

Meeting oral presentations

Recomb Satellite Conference on
Regulatory Genomics-Systems
Biology-DREAM3 Cambridge, MA, USA
2008

Papers published

1. Degenhardt T., Matilainen M., Herzig
KH., Dunlop TW. and **Carlberg C.** The
insulin-like growth factor binding protein 1
gene is a primary target of
peroxisome proliferator-activated
receptors (2006) J Biol Chem 281:
39607-39619

2. Degenhardt T., Saramäki A., Malinen
M., Rieck M., Väisänen S., Huotari A.,
Herzig KH., Müller R. and **Carlberg C.**
Three members of the pyruvate
dehydrogenase kinase gene family are
direct targets of the peroxisome
proliferators-activated receptor b/d (2007)
J Mol Biol 372: 341-355

3. Heinäniemi M., Uski JO., **Degenhardt
T.** and **Carlberg C.** Meta-analysis of
primary target genes of peroxisome
proliferator-activated receptors (2007)
Genome Biol. 8: R147

4. Malinen M., Saramäki A., Ropponen A.,
Degenhardt T., Väisänen S. and
Carlberg C. Distinct HDACs regulate the
transcriptional response of human
cyclin-dependent kinase inhibitor genes to
Trichostatin A and 1
alpha,25-dihydroxyvitamin D3 (2008)
Nucleic Acids Res.36:121-32

5. Mager U., **Degenhardt T.**, Pulkkinen L.,
Kolehmainen M., Lindström J., **Carlberg
C.**, Tuomilehto J. and Uusitupa M.
Variations in the ghrelin receptor gene
associate with measures of obesity and
glucose and insulin metabolism in
subjects of the Finnish diabetes
prevention study (2008)
PLoS ONE 3: e2941

6. Degenhardt T., Väisänen S.,
Rakhshandehroo M., **Kersten S.** and
Carlberg C. Peroxisome proliferator-
activated receptor controls multiple steps
in hepatic heme biosynthesis (2009)
J Mol Biol 388:225-38

7. Degenhardt, T., **Rybakova, K. N.**,
Tomaszewska, A., Mone, M. J.,
Westerhoff, H.V., **Bruggeman, F. J.** &
Carlberg, C. Population-level transcription
cycles derive from stochastic timing of
single-cell transcription (2009)
Cell 138, 489-501.

Placements

Long-term visit. Wageningen

Short-term visit. Amsterdam,

Courses taken

University of Kuopio

Molecular Medicine I: Biology of Cancer,
Univ. of Kuopio

Molecular Medicine II: Aging/CNS
disorders/Human genetic variations, Univ.
of Kuopio

Molecular Medicine III:
Diabetes/Obesity/Atherosclerosis, Univ. of
Kuopio

Philosophy of Science, Univ. of Kuopio

Mechanisms of gene expression, Univ. of
Kuopio

C-category course for researches using animals in their experiments, Univ. of Kuopio

Network

Mouse ESC course, Max Planck Institute, Berlin

SNP course – Erasmus Medical Center Rotterdam, Rotterdam

Project management: tissue facts, Medical University Vienna

3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria

PhD Status

Awarded February 2009

Current. PostDoc at the Department of Biological Engineering, MIT, Cambridge, USA TD



ESR2: Aleksandra Tomaszewska (12/06 to 11/09)

(Prof. Carlberg, University of Kuopio, Finland).

Meeting Poster presentations

Diet and cancer; susceptibility, prevention and therapy, Nottingham, June 2007

3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria, March 2009

Mechanisms of Eukaryotic transcription, Cold Spring Harbor Laboratory, USA, August 2009

Nuclear Receptors: from molecular mechanisms to molecular medicine, Dubrovnik, Croatia, September 2009

Meetings attended

First Annual Symposium of Luxembourg Bioinformatics Network, Luxembourg, October 2008

First Benelux Nuclear Receptor Meeting – Utrecht, The Netherlands, November 2008

3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria, March 2009

Papers published

Degenhardt T, Rybakova KN, Tomaszewska A , Moné MJ, Westerhoff HV, Bruggeman FJ, Carlberg C.

Population-level transcription cycles derive from stochastic timing of single-cell transcription. Cell. 2009 Aug 7;138(3):489-501.

Papers in preparation

Rybakova KN, Tomaszewska A , Moné MJ, Westerhoff HV, Bruggeman FJ, Carlberg C. RNA species dynamics,

combining experiments and systems biology modeling (2010)

Courses taken

University of Kuopio

Molecular Medicine I: Biology of Cancer, Univ. of Kuopio

Molecular Medicine II: Aging/CNS disorders/Human genetic variations, Univ. of Kuopio

Molecular Medicine III:

Diabetes/Obesity/Atherosclerosis, Univ. of Kuopio

Philosophy of Science, Univ. of Kuopio

Mechanisms of gene expression, Univ. of Kuopio

C-category course for researches using animals in their experiments, Univ. of Kuopio

Network

Mouse ESC course, Max Planck Institute, Berlin

SNP course – Erasmus Medical Center Rotterdam, Rotterdam

Project management: tissue facts, Medical University Vienna

3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria

Placements

University of Luxembourg

PhD Status

Funding from FNR (Fonds National de la Recherche Luxembourg) until September 2011

PhD to submitted summer 2011 at latest



ESR3: Sebastiano Battaglia, (3/06 to 2/09)

Team 2, Drs Campbell & Bunce,
University of Birmingham, UK

Meeting poster presentations

International Conference of System
Biology; Sweden, Goteborg, Aug 2008.

Keystone Meeting: Nuclear Receptor
Steroids; Canada, Whistler March 2008;

Diet and Cancer meeting; England,
Nottingham, June 2007

Chromatin meeting; England, Nottingham,
May 2007; poster

EBS-SysBio2007 - 2nd FEBS Advanced
Lecture Course on Systems Biology: From
Molecules to Life, March, 2007, Gosau,
Austria.

Meeting oral presentations

International Conference on Differentiation
Therapy and Innovative Therapeutics in
Oncology; France, Paris November 2006;

Papers published

Abedin SA, Thorne J, **Battaglia S**,
Maguire O, Hornung LB, Doherty AP, Mills
IG, **Campbell MJ** (2009). Elevated
NCOR1 disrupts a network of dietary-
sensing nuclear receptors in bladder
cancer cells. *Carcinogenesis*
Mar;30(3):449-56.

Papers submitted

1. Battaglia S, Thorne J, Hornung L B,
Doig CL, Liu S, Sucheston LE, Bianchi A,
Khanim F, Gommersall LM, Coulter HSC,
Rhaka S, Giddings, I. Cooper C, McCabe,
CJ, **Bunce CM**, & **Campbell MJ** (2009).
Elevated NCOR1 disrupts PPAR signaling
in prostate cancer and forms a targetable
epigenetic lesion. (Submitted to
Carcinogenesis)

2. Battaglia S, Maguire O & **Campbell
MJ** (2009). Transcription factor co-
repressors in cancer biology; roles and
targeting (Submitted to *Int. J Cancer*)

Papers in preparation

Thorne JL, Maguire O, Doig CL **Battaglia
S**, Matilainen M, O'Neill LP Turner BM,
McCabe CJ **Carlberg, C.** & **Campbell MJ**
(2009). VDR-induced p21^(waf1/cip1) cycling is
determined by response element-specific
regulation of histone modifications, cell
cycle status, and miR-106b co-
expression.

Book chapters

Battaglia S & **Pedro V** (2010). Preface, in
'*Nuclear Receptors; Current concepts and
future challenges*'. Eds **Bunce CM** &
Campbell MJ. In 'Proteins and cell
regulation' Series. Pub: Kluwer Academic
Publishers. Dordrecht/Boston/London (*In
Press*)

Prizes awarded

Poster prize Diet and Cancer meeting,
Nottingham, UK June 2007

Courses taken

University of Birmingham

Getting published

GeneSpring Workshops, Intermediate
Level Microarray analysis,.

Advanced speaking and lecturing skills for
international staff

How to make the most of your research
with business

Multiplex fluorescent bead-based assay
Stem Cells: the basics, the hype and the
reality

What should I expect to achieve my PhD?

In situ hybridization: from theory to
practice

Immunohistochemistry: from theory to
practice

Monitoring microcirculation using intravital
microscopy

Network

Mechanism of gene expression, University of Kuopio, Kuopio, Finland;

Mouse embryonic stem cell culture training course", Max Planck Institute for Molecular Genetics, Berlin, Germany;

3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria

Project management: tissue facts, Medical University Vienna

Placements

Long term - Max Planck Institute for Molecular Genetics, Dept of Developmental Genetics, Berlin (Germany) - Dr. Heiner Schrewe

Short term - University of Luxembourg, Luxembourg (Lux) - Prof. Carsten Calberg, Dr. Frank Bruggeman

PhD Status

Submitted, *Viva* exam November 2009

Current post

Research Fellow, Roswell Park Cancer Inst, USA



ESR4: Pedro Velica, (9/06 to 8/09)

*Team 2, Drs Campbell & Bunce,
University of Birmingham, UK*

Meeting posters presentations

EBS-SysBio2007 - 2nd FEBS Advanced
Lecture Course on Systems Biology: From
Molecules to Life, March 10-16, 2007,
Gosau, Austria.

BACR Diet & Cancer Conference, 18-19
June 2007, Nottingham, UK

Biosciences Graduate Research
Symposium, April 2008, Birmingham, UK

Meeting oral presentations

European Muscle Congress, September
2008, Oxford, UK

Biosciences Graduate Research
Symposium, April 2009, Birmingham, UK

Meetings attended

Developmental Biology Meeting, Marburg,
Germany (Gesellschaft für
Entwicklungsbiologie), (March 2007).

Leukaemia Research Forum for
Translational Research "Normal and
leukaemic haematopoietic stem cells",
London UK (March 2008)

Papers published

Velica P and **Bunce C M** (2008),
"Prostaglandins in muscle regeneration." *J
Muscle Res Cell Motil.* 29(6-8):163-7

Papers submitted

Velica P, **Khanim F L** and **Bunce C M**
(2009), "Prostaglandin D2 inhibits C2C12
myogenesis" *Mol Cell Endocrinol.*

Velica P, **Davies N J**, **Rocha P P**,
Schrewe H S, **Ride J P** and **Bunce C M**
(2009), "Lack of functional and expression
homology between human and mouse
aldo-keto reductase 1C enzymes:
implications for modeling human cancers."
Mol Cancer.

Prizes awarded

Young investigator prize award for oral
presentation at the European Muscle
Conference 2008 (Oxford, UK).

Courses taken

University of Birmingham

Getting published

GeneSpring Workshops, Intermediate
Level Microarray analysis,.

Advanced speaking and lecturing skills for
international staff

How to make the most of your research
with business

Multiplex fluorescent bead-based assay
Stem Cells: the basics, the hype and the
reality

What should I expect to achieve my PhD?

In situ hybridization: from theory to
practice

Immunohistochemistry: from theory to
practice

Monitoring microcirculation using intravital
microscopy

Network

Mouse embryonic stem cell culture
training course", Max Planck Institute for
Molecular Genetics, Berlin, Germany;

Project management: tissue facts, Medical
University Vienna

Placements

Long term - Max Planck Institute for
Molecular Genetics, Dept of
Developmental Genetics, Berlin
(Germany) - Dr. Heiner Schrewe

PhD status

Submission December 2009



ESR5: Claudia Bruedigam (3/06 to 2/09)
(Team 3, Prof. Van Leeuwen, Erasmus University Medical Centre, Rotterdam The Netherlands)

Meeting posters presentations

Internal Medicine Science Days 2007; 11-12/01/2007; Goes, The Netherlands

34th European Symposium on Calcified Tissues; 5-9/05/2007; Copenhagen, Denmark

Internal Medicine Science Days 2008; 10-11/01/2008; Antwerp, Belgium

35th European Symposium on Calcified Tissues; 24-28/05/2008; Barcelona, The Netherlands

36th European Symposium on Calcified Tissues; 23-27/05/2009; Vienna, Austria

Meeting oral presentations

NVCB 2006; 9-10/11/2006; Zeist, The Netherlands

NVCB 2007; 15-16/11/2007; Zeist, The Netherlands

NVCB 2008; 13-14/11/2008; Zeist, The Netherlands

Meetings attended

XV Annual Congress of the European Society of Gene and Cell Therapy; 27-30/10/2007 Rotterdam, The Netherlands

EMBO meeting; 29/08-01/09/2009; Amsterdam, The Netherlands

Papers published

1. **Bruedigam C.**, Koedam M, Chiba H, Eijken M, **van Leeuwen JP** (2008) Evidence for multiple peroxisome proliferator-activated receptor gamma transcripts in bone: fine-tuning by hormonal regulation and mRNA stability *FEBS letters* May;582(11):1618-24.

Papers submitted

Bruedigam C., Eijken M., Chiba H., van **Leeuwen J.P.T.M** (2009). An alternative concept of stem cell lineage skewing that explains the detrimental effects of thiazolidinediones on bone.

Papers in preparation

1. **Bruedigam C.**, Eijken M., Chiba H., van **Leeuwen J.P.T.M** (2009). The role of PPAR-gamma and its ligands in apoptosis-mediated pathological mineralization.

2. **Bruedigam C.**, Eijken M., Chiba H., van **Leeuwen J.P.T.M** (2009). Activated PPAR-gamma stimulates osteoclastogenesis directly and indirectly via crosstalk with osteoblasts.

Courses taken

University Medical Centre, Rotterdam

Biomedical Research Techniques; 18-22/09/2006; Rotterdam, The Netherlands

Neuro-Immuno-Endocrinology; 2-6/10/2006; Rotterdam, The Netherlands

Biomedical English Writing and Communication; March - July 2007; Rotterdam, The Netherlands

SNPs and Human Diseases; 5-9/11/2007; Rotterdam, The Netherlands

Basic data analysis on gene expression arrays; 13/11/2008; Rotterdam, The Netherlands

Network

Mouse embryonic stem cell culture training course", Max Planck Institute for Molecular Genetics, Berlin, Germany; 3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria

Project management: tissue facts, Medical
University Vienna

Mechanisms of Gene Expression;
University of Kuopio Kuopio, Finland

Project management; FFG, Austrian
funding institution; 13/01/2009; Vienna,
Austria

TissueFacs; TissueGnostics GmbH,
Vienna; 14/01/2009; Vienna,
Austria

PhD Status

Submission November 2009



ESR 6: Viola Woeckel (1/07 – 12/09)
(*Team 3, Prof. Van Leeuwen, Erasmus University Medical Centre, Rotterdam The Netherlands*)

Meetings Poster presentation

Molecular Medicine Day 2007, Molecular Medicine Postgraduate School, Feb 2007, Rotterdam/Netherlands

Wetenschapsdagen 2008, Internal Medicine; Erasmus MC, Jan 2008, Antwerpen/Belgium

Wetenschapsdagen 2009, Internal Medicine; Erasmus MC, Jan 2009, Antwerpen/Belgium

Molecular Medicine Day 2009, Molecular Medicine Postgraduate School, Feb 2009, Rotterdam/Netherlands

36th European Symposium on Calcified Tissues, ECTS, May 2009, Vienna/Austria

14th Vitamin D workshop, Oct 2009, Bruges/Belgium

Meeting Oral presentations

NVCB meeting 2007, NVCB, Nov 2007, Zeist/Netherlands

NVCB meeting 2009, NVCB, Nov 2009, Zeist/Netherlands

Meetings Attended

35th European Symposium on Calcified Tissues, ECTS, May 2008, Barcelona/Spain

Osteoimmunology, Aegean Conferences, Jun 2008, Rhodes/Greece

NVCB meeting 2008, NVCB, Nov 2008, Zeist/Netherlands

ASBMR 31st Annual Meeting, ASBMR, Sep 2009, Denver/USA

International Symposium on Stem Cells, Development and Regulation, Bsik Consortium, Oct 2009, Amsterdam/Netherlands

Papers in preparation

Woeckel et al. - Evidence that $1\alpha,25-(OH)_2D_3$ acts in the early phase of osteoblast differentiation to stimulate mineralization via enhanced matrix vesicle production.

Courses

University Medical Centre, Rotterdam

Endocrinology Lectures, Internal Medicine, Rotterdam/Netherlands

Internal Medicine Departmental Seminar, Internal Medicine, Rotterdam/Netherlands

Bone and Calcium Research Literature Discussion, Internal Medicine, Rotterdam/Netherlands

Network

Mouse embryonic stem cell culture training course, Heiner Schrewe, May 2007, Berlin/Germany

Molecular Medicine or Mechanisms of gene expression, Carsten Carlberg, Sep 2007, Kuopio/Finland

System biology - from molecules to life, Hans Westerhoff – FEBS, March 2009, Alpbach/Austria

Workshop: Browsing Genes and Genomes, MolMed, Jun 2007, Rotterdam/Netherlands

Biomedical Research Techniques, MolMed, Sep 2007, Rotterdam/Netherlands

Annual Course of Molecular Medicine, MolMed, Jun 2008, Rotterdam/Netherlands

Biomedical English Writing and Communication, MolMed, Jul 2008, Rotterdam/Netherlands

Presentation Skills, Peter Evans, Jul 2008, Birmingham/UK

Project Management training, Pentalog, Jan 2008, Vienna/Austria

Successful Proposal Writing, FFG, Jan
2008, Vienna/Austria

Neuro-Immuno-Endocrinology, MolMed,
Sep 2008, Rotterdam/Netherlands

PhD training course on bone metabolism,
ECTS, Sep 2008, Rome/Italy

Bone and Calcium Research Work
Discussion, Internal Medicine,
Rotterdam/Netherlands

PhD status

Submission autumn 2010



ESR7: Ellen Wiedemann, (10/06 to 9/09)

Team 4, Profs Goldfarb & Gibson and Dr. Plant, University of Surrey, UK

Meeting poster presentations

Keystone Nuclear Receptors: Orphan Brothers (Z1) March 2008 and at BTS annual meeting April 2008

DMDG annual open meeting September 2009

Meeting oral presentations

DMDG annual meeting September 2009

Meetings attended

BTS annual meeting April 2007 and April 2008,

Courses taken

Network

Mouse embryonic stem cell culture training course", Max Planck Institute for Molecular Genetics, Berlin, Germany;

3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria

Project management: tissue facts, Medical University Vienna

Placements

Kuopio, Finland (March 2009 - May 2009)

PhD status

Estimated date of submission June 2010



Team 5, ESR8: Katja Rybakova, (9/06 to 8/09)

Prof. Westerhoff and Drs. Bruggeman & Bakker, Vrije Universiteit Amsterdam, The Netherlands

Meeting poster presentations

System Biology: redefining BioThermoKinetics (BTK), 14-17 September, 2006, Trakai, Lithuania
ESF-EMBO symposium, October 2006, St Feliu de Guixols, Spain

FEBS course on Systems Biology, March 2007, Gosau, Austria

ESF conference, April 2008, St Feliu de Guixols, Spain

ICSB, August 2008, Gothenburg, Sweden

Mechanisms of eukaryotic transcription
CSH conference, August 2009, USA

Meeting oral presentations

EISyS conference, February 2008, Enschede, the Netherlands

FEBS course on Systems Biology, March 2009, Alpbach, Austria

Papers published

1. **Westerhoff HV**, Kolodkin A, Conradie R, Wilkinson SJ, **Bruggeman FJ**, Krab K, van Schuppen JH, Hardin H, **Bakker BM**, Moné MJ, **Rybakova KN**, Eijken M, van **Leeuwen HJ**, Snoep JL. Systems Biology towards Life *in silico*: mathematics of the control of living cells, J Math Biol. 2009 Jan;58(1-2):7-34

2. **Degenhardt T**, **Rybakova KN**, **Tomaszewska A**, Moné MJ, **Westerhoff HV**, **Bruggeman FJ**, **Carlberg C**. Population-level transcription cycles derive from stochastic timing of single-cell transcription. Cell. 2009 Aug 7; 138(3):489-501.

Papers in preparation

1. **Rybakova KN**, Conradie R., Moné MJ, **van Leeuwen HJ**, **Westerhoff HV**, **Bruggeman FJ**. A framework for phase behavior by biological systems

2. Schwabe A, **Rybakova KN**, **Bruggeman FJ**. Transcription burst properties and mRNA noise in eukaryotic systems

Courses taken

Network

Mechanism of gene expression, University of Kuopio, Kuopio, Finland;

3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria

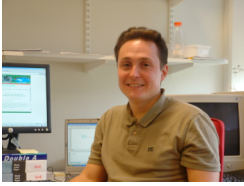
Placements

Hans van Leeuwen, Erasmus Medical Center, Rotterdam, Netherlands

Carsten Carlberg, University of Luxembourg, Luxembourg

PhD Status

Submission April 2010



ESR9: Alexey Kolodkin. (9/06 to 8/09)
Prof. Westerhoff and Drs. Bruggeman & Bakker, Vrije Universiteit Amsterdam, The Netherlands

Meeting poster presentations

System Biology: redefining BioThermoKinetics (BTK), 14-17 September, **2006**, Trakai, Lithuania
BioSysBio-07: Systems Biology. Bioinformatics. Synthetic Biology. 11th-17th of January, **2007**, Manchester,
EISyS conference, February 24th -26th, **2008**, Enschede, the Netherlands
ESF conference, April **2008**, St Feliu de Guixols, Spain
Marie Curie conference, July **2008**, Barcelona, Spain
ISGSB, August **2008**, Helsingør, Denmark
ICSB, August **2008**, Gothenburg, Sweden
FEBS course, March 2009, Alpbach, Austria

Meeting oral presentations

BloSim, September **2008**, Budapest, Hungary

Papers published

1. **Westerhoff HV**, Kolodkin A, Conradie R, Wilkinson SJ, **Bruggeman FJ**, Krab K, van Schuppen JH, Hardin H, **Bakker BM**, Moné MJ, **Rybakova KN**, Eijken M, van **Leeuwen HJ**, Snoep JL. Systems Biology towards Life *in silico*: mathematics of the control of living cells, J Math Biol. 2009 Jan;58(1-2):7-34

Becerril Aragon G. A., Starikov L. S., **Kolodkin A.**, Gorot I. V., Velykyi M. M. (2007). "Adaptogenic effect of the vitamin D₃ containing supplement "Videchol" on the activity of glucose-6-phosphate dehydrogenase in irradiated rats erythron", The Ukrainian Biochemical Journal, volume 79 (3), pp: 70-78

Papers in preparation

Kolodkin AN, Moné MJ **Bruggeman FJ**, **Bakker B**, **Campbell MJ**, van **Leeuwen JPT**, **Carlberg C** and **Westerhoff HV** (2010) Design principles of endocrine nuclear receptor signaling: How complex networking may improve signal transduction

Book chapters

Lenas P, Saravia V, Toca-Herrera J, Paternain JL, Ikononou L, Mayer J, Probst I, Crawford J, Vassilicos JC, Moreno A, Dravaliari M, **Kolodkin AN**, Novellino A, Guzmán-Aránguez A and Pintor J
Functional Biomimetics In Tissue Engineering: Engineering Emergent Tissue Functions In Vitro Through Complexity And Networks Science, Biomimetics in Biophysics: Model systems, experimental techniques and computation. Editor: J.-L. Toca-Herrera, Senior consultant: Edwin Donath (Dept. Medical Biophysics, Leipzig University). Publisher: Research Signpost, Kerala, India.

Courses taken

Mechanism of gene expression, University of Kuopio, Kuopio, Finland;
3rd FEBS Advanced Lecture Course on Systems Biology: From molecules to Function, Alpbach, Austria

Placements

University of Surrey, UK

PhD Status

Submission June 2010



ESR 10: Anastasia Georgiadi. (08/06 to 07/09)

Team 6, Dr. Kersten and Prof. Müller, Wageningen University, The Netherlands.

Meeting Posters presentations

NuGO introduction week Aug 2006

FEBS Sys-Bio March April 2007

Society for Heart and Vascular Metabolism 2007

Wageningen Nutritional Sciences Forum 2009 Too Much - Too Little 4 - 6 March 2009

Arteriosclerosis, Thrombosis and Vascular Biology Annual Conference 2009.

Meeting Oral presentations

Lipoprotein Club meeting 2008

Nutrigenomics Masterclass 2008

7th Dutch Endo-Neuro-Psycho Meeting 2008

NWO days 2007, 2008, 2009.

49th ICBL Maastricht 2008

Meetings attended

First Benelux Meeting on Nuclear Receptors (BNLR 2008)

Obesitas meeting 2008

List of Courses:

Wageningen University

Molecular Genetics and Genomics (MSc Course Sep-Dec 2006)

Bioinformatics (MSc Course Jan-March 2007)

Masterclass in Nutrigenomics 2008, 2009

International Course on Laboratory Animal Science July 2007

Advanced Statistics Course: Design of Animal Experiments (VLAG/WIAS course)

Feb 2008

Presentation Skills Course Feb 2008

Course in Epigenesis and Epigenetics- Physiological Consequences of perinatal programming (VIAS/WIAS course) Nov 2008

Career Orientation June 2009

Papers submitted

Georgiadi A, Lichtenstein L, Degenhardt T, Boekschoten M, van Bilsen M, Desvergne B, Müller M, Kersten S. (2009) Induction of cardiac Angptl4 by dietary fatty acids is mediated by PPAR β/δ and protects against oxidative stress. *Circulation Research* (under revision)

Papers in preparation

Georgiadi A, Desvergne B, Müller M, Kersten S. (2010) Comparative analysis of the PPAR α and PPAR β dependent transcriptome in murine heart.

Placements

Amsterdam Vrije University

PhD status

Submission October 2010



ESR 11: Marcin Buler (1/07 to 12/09)

Team 7, Dr. Hakkola and Prof. Pelkonen, University of Oulu, Finland

Meeting Posters presentations

Joint EASL-AASLD Monothematic Conference: Nuclear Receptors and Liver Disease, February 27-March 1, 2009, Vienna

Epigenetic Mechanisms in Disease and Development, May 5-6, Helsinki Biomedical Graduate School, Biomedicum Helsinki

FEBS Advanced Lecture Course on "Systems Biology – From Molecules to Life", Gosau 10-16/03/2007

Meetings attended

Scandinavian Physiological Society Annual Meeting 2008, Oulu, Finland, August 15-17, 2008

Biocenter Day, University of Oulu, Oulu, April 3rd, 2008 2009

Joint EASL-AASLD Monothematic Conference: Nuclear Receptors and Liver Disease, February 27-March 1, 2009, Vienna

Mouse as a Model Organism-From Animal to Cells, NorIMM Project, Oulu, June 5-6, 2009

Courses

University of Oulu

Bioinformatics, University of Oulu, Oulu, March 13-27, 2008

Legislation in Biosciences and Biomedicine, University of Oulu, May 22nd, 2008

System Biology, University of Oulu, February, 2008

Microarrays, Sequencing and Expression Studies, University of Oulu, Oulu, March 8th 2009

Network

Gene regulation analysis and ChIP-on-chip Workshops, Espoo 14-15/02/2007

FEBS Advanced Lecture Course on "Systems Biology – From Molecules to Life", Gosau 10-16/03/2007

Mechanism of Gene Expression, University of Kuopio, Kuopio 2007

Mouse Embryonic Stem Cell Culture Training Course, Max-Planck Institute for Molecular Genetics, Berlin, June 23 – 28, 2008,

Advanced Immunology, University of Kuopio, Kuopio 2008

Molecular Medicine - Nutrigenomics , University of Kuopio January 1.-15.2.2008

Project Management, Tissue Facs, January 12-13, Medical University of Vienna, Vienna, 2009

Papers in preparation

Buler M, Pelkonen O, Hakkola, J.
Glucagon as an Immunomodulator in Liver Coactivation of PXR mediated gene regulation by PGC-1 α is modulated by the deacetylase SIRT1

Placements

Wageningen University

University of Kuopio

Vrije Universiteit Amsterdam

PhD Status

Submission summer 2010



ESR 12: Carsten Kriebitzsch (09/06 to 08/09)

Team 8, Prof. Mieke Verstuyf, Prof. Roger Bouillon, Katholieke Universiteit Leuven, Belgium

Meeting posters presentations

FEBS advanced lecture course on Systems Biology: From Molecules to Life Gosau, Austria

Marie Curie Conference Barcelona, Spain
14th Workshop on Vitamin D, 2009, Brugge, Belgium

Meeting oral presentations

Vitamin D Analogs in Cancer Prevention and Therapy" Krefeld, Germany 2008

8th Annual Meeting of the Dutch Society for Calcium and Bone Metabolism Zeist, The Netherlands 2008

Meetings attended

Epiphany Symposium on Epigenetics and Pharmacogenomics, ICC Ghent, Belgium 26.10.2007

ASBMR 30th Annual Meeting, Montréal, Québec, Canada. September 12-16, 2008

Papers published

Kriebitzsch C, Verlinden L, Eelen G, Tan BK, Van Camp M, **Bouillon R**, **Verstuyf A**. The impact of 1,25(OH)₂D₃ and its structural analogs on gene expression in cancer cells -- a microarray approach. Anticancer Res. 2009 Sep;29(9):3471-83.

Papers in preparation

Kriebitzsch et al. 1,25(OH)₂D₃, a regulator of Cystathionine beta synthase (Cbs)

Courses

Katholieke Universiteit Leuven

Course "Systems of Genetic Analysis" Biomedical Science: Graduate Course Academic Year 2006-2007

KUL Leuven, "Academic Writing" Academic Year 2007-2008 Leuven, Belgium

Language course "Academisch Nederlands" → CNaVT certificate (Profiel Academische Taalvaardigheid (PAT)) 2006-2009

Network

Mouse Embryonic Stem Cell Culture Training Course; 23-28.06.2008 Berlin, Germany

In Vivo imaging "From Molecule to Organism"; 27-31.10.2008 Rotterdam, The Netherlands

Mechanisms of Gene Expression; Kuopio, Finland September 2007

Course "Microbiology" Academic Year 2006-2007 Leuven, Belgium

Project Management course 12-13.01.2009 Vienna, Austria

Placements

Visit 2008 in Rotterdam - group Prof. Hans van Leeuwen

Visit 2006 in Ann Arbor, Michigan – group Prof. Ruma Banerjee

Visit 2009 in Greifswald, Germany – group Prof. Michael Hecker

PhD status

Submission December 2010



ESR13: Oita Radu Cristian, (1/07 to 12/09)

Team 9, Drs. Mazzatti & Mayes, Unilever R&D, United Kingdom

Meeting posters presentations

GRC Biology of Ageing, Les Diablerets, Switzerland

Keystone Symposia in Nuclear receptor: Orphan brothers, Whistler, Canada

GRC Oxidative stress and disease, Lucca, Italy

Papers published

1. Mazzatti DJ, Smith MA, Oita RC, Lim FL, White AJ, Reid MB., Muscle unloading-induced metabolic remodeling is associated with acute alterations in PPARdelta and UCP-3 expression, *Physiol Genomics*. 2008 Jul 15;34(2):149-61. Epub 2008 Apr 29.

2. Oita RC, Mazzatti DJ, Lim FL, Powell JR, Merry BJ., Whole-genome microarray analysis identifies up-regulation of Nr4a nuclear receptors in muscle and liver from diet-restricted rats, *Mech Ageing Dev*. 2009 Apr;130(4):240-7.

Papers submitted

Oita RC Ferdinando D Wilson S, **Bunce CM & Mazzatti DJ** (2009) Visfatin induces oxidative stress in differentiated C2C12 myotubes in an Akt- and MAPK-independent, NFkB-dependent manner, *Pflugers Archiv-European Journal of Physiology*

Book chapters

Mazzatti DJ, Karnik K, Oita RC, and Powell JR., Insulin resistance, chronic inflammation and the link with immunosenescence. Handbook on Immunosenescence: basic understandings and clinical implications. Fulop, T.; Franceschi, C.; Hirokawa, K.; Pawelec, G. (Eds.) Springer 2009.

Courses

Unilever

Microarray advanced data analysis training course for Genespring GX 7.3.1 (Agilent), Colworth, Unilever UK

Unilever Corporate Research Mitochondrial Dysfunction SPARK workshop, Slaley Hall, Newcastle, UK

Network

System Biology modeling course. Free University, Amsterdam in Erasmus/ University Medical Center, Rotterdam, Netherlands

Protein 3D Structure Databases and Services, EBI, Hinxton, UK

CRESCENDO Workshop on genome-scale approaches in nuclear receptor function, Munich, Germany

Stem cells technology and application training course, Max Planck Institute for Molecular Genetics Berlin Germany

MiMAGE/Link-Age summer school in ageing research, Les Diablerets, Switzerland

TissueFacs, Vienna Medical University, Austria

PhD status

Submission October 2010



ESR 14: Fabio Pires, (10/06 to 09/09)

Team 10, Prof. Muñoz and Dr. González-Sancho, Instituto de Investigaciones Biomédicas, Spain

Meeting posters presentations

8th International Conference of Anticancer Research. Kos, Greece, 2008.

Meeting oral presentations

UEGF Teaching Activity on Basic Science, Cambridge, UK, 2009.

Meetings attended

Chromatin and Cancer Meeting, Cambridge, UK, 2009.

Transcription and Cancer Meeting, Cambridge, UK, 2009.

BioMed Conference on Inflammation and Chronic Disease. Barcelona, Spain, 2007.

Papers published

Larriba MJ, Martín-Villar E, García JM, **Pereira F**, Peña C, de Herreros AG, Bonilla F, **Muñoz A**. Snail2 cooperates with Snail1 in the repression of vitamin D receptor in colon cancer. *Carcinogenesis* 2009; 30(8): 1459-1468.

Pendás-Franco N, Aguilera O, **Pereira F**, **González-Sancho J**, **Muñoz A**. "Vitamin D and Wnt/ β -catenin pathway in colon cancer: role and regulation of *DICKKOPF* Genes". *Anticancer Research* 28: 2613-2624, 2008.

Courses taken

In Vivo Imaging: from Molecule to Organism". Postgraduate School Molecular Medicine. Rotterdam, The Netherlands, 2008.

Mouse Embryonic Stem Cell Culture Training". Max Planck Institute for Molecular Genetics. Berlin, Germany, 2008.

Introducción al estudio de SNPs aplicado a la epidemiología genética". Centro Nacional de Investigaciones Oncológicas. Madrid, Spain, 2008.

Biotechnology Ethics". University of Vilnius. Vilnius, Lithuania, 2007.

Lab visits

Short-term visit

Annemieke Verstuyf. Department of Experimental Medicine and Endocrinology. Katholieke Universiteit Leuven. Belgium.

Long-term visit

November – December 2008

Moray Campbell. Institute of Biomedical Research. Division of Medical Sciences. University of Birmingham. UK.

PhD status

Submission June 2010.



ESR 15: Pedro Rocha, (01/07 to 12/09)

Team 11, Dr. Heinrich Schrewe, Max-Planck Institute for Molecular Genetics, Germany.

Meeting posters presentations

Gosau Systems Biology Meeting- A mouse model for study of the Mediator complex as a coactivator for Nuclear Receptors

Regulatory mechanisms in Eukaryotic Transcription, Keystone Meeting - Mouse models to study Mediator functions in transcriptional activation

55 Benzon Symposium Transcription, Chromatin and Disease -same title as previous

Mouse & Genomics: Development & Disease, Cold Spring Harbor Laboratory same title

Mechanisms of Eukaryotic Transcription Cold Spring Harbor Laboratory –

Meeting oral presentations

6th International Neural Tube Defects Conference

Meetings attended

17th and 18th Meeting of the German Society for Developmental Biology

20th International Congress of Genetics

Papers submitted

Velica P, Davies N J, **Rocha P P**, **Schrewe H S**, Ride J P and **Bunce C M** (2009), "Lack of functional and expression homology between human and mouse aldo-keto reductase 1C enzymes: implications for modelling human cancers." Mol Cancer.

Papers in preparation

Rocha P, **Schrewe H S** Med12 is required for Wnt/b-catenin signaling and is

essential for axis elongation and neural tube closure in mice

Rocha P, **Schrewe H S** Med12 a new mouse model for Exencephaly, Spina Bifida and Craniorachischisis

Prizes awarded

Marcy Speer Award Presentation at the 6th International Neural Tube Defects Conference

Courses taken

Bioinformatics module of the PhD program at the Max Planck Institute for Molecular Genetics

Network

FEBS Advanced Lecture Course on "Systems Biology – From Molecules to Life", Gosau 10-16/03/2007

Mouse ES cell course at the Max Planck Institute for Molecular Genetics

Gene Regulation at Kuopio University Course on Laboratory animals, animal experiments and alternatives

PhD Status

Submission October 2010



ESR 16: Carole Brosseau – France (11/06 to 10/09)

Team 12, Dr. Kay Colston, St. George's Hospital Medical School, UK

Meeting posters presentations

St George's Research day. London UK. Dec 2007.

AICR conference: Food, nutrition, physical activity and cancer. Washington DC USA. Nov 2008.

ICR conference. London UK. June 2009.

Fourteenth Workshop on Vitamin D. Bruges Belgium. Oct 2009.

Meeting oral presentations

Cellular and Molecular Medicine PhD Presentation Day. London, UK 2009.

Meetings attended

The British Association for Cancer Research Conference: Diet and Cancer, Susceptibility, Prevention and Therapy. Nottingham UK, June 2007.

Breast Cancer Research Conference, London UK, 2008.

Papers in preparation

Brosseau *et al.* Involvement of stress activated protein kinases (JNK and p38) in 1,25 dihydroxyvitamin D₃ induced breast cell death.

Brosseau *et al.* Role of IGFBP-3 in 1,25 dihydroxyvitamin D₃ induced breast cancer cell apoptosis.

Brosseau *et al.* Involvement of VDR pathway in breast cancer cell resistance to 1,25 dihydroxyvitamin D₃ treatment.

Prizes awarded

Effects of 1, 25-dihydroxyvitamin D₃ treatment on VDR target gene expression in breast cancer. Brosseau C, Campbell MJ, Colston KW. St George's Research day. London UK. Dec 2007.

Courses taken

Core training of St George's University of London. (300 hours)

Embryonic stem cells, Berlin. (from the 7th to the 12th of May 2007).

Modelling courses (5 days).

Labs placements

Short term: Chris Bunce lab, Birmingham. From the 12th to the 17th of October 2009.

Long term: Moray Campbell lab, Birmingham. From the 1st of March to the 30th of June 2007.

PhD status

Submission March 2010.



ESR 17: Thomas Nittke, (09/06 to 08/09)

Team 13, Prof. Cross and Drs Kallay & Thalhammer, Medical University of Vienna, Austria

Meeting posters presented

2nd FEBS Advanced Lecture Course on Systems Biology: From Molecules to Life 2007, Gosau, Austria

4th PhD Symposium, 2008, Vienna, Austria

AACR 100th Annual Meeting 2009 in Denver, CO

5th PhD Symposium, 2009, Vienna, Austria

14th Workshop on Vitamin D, 2009, Brugge, Belgium

Meeting oral presentations

Annual Meeting of the Austrian Society for Endocrinology and Metabolism /ÖGES, 2008, St. Wolfgang, Austria

8th International Conference of Anticancer Research, 17-22 October 2008, Kos, Greece

18th IFCC-EFCC European Congress of Clinical Chemistry and Laboratory Medicine, 2009, Innsbruck, Austria

Additional meetings attended

Center Symposium of the Departments of Pathophysiology, Physiology, Immunology, Medical Chemistry, Tropical Medicine, 2007, Vienna, Austria

VFWF-University lectures 2007, Vienna, Austria

Papers published

Nittke T, Selig S, Kallay E, Cross HS Nutritional calcium modulates colonic expression of vitamin D receptor and

pregnane X receptor target genes. *Mol Nutr Food Res.* 2008 Jun;52 Suppl 1:S45-51.

Nittke T, Kallay E, Manhardt T, Cross HS. Parallel elevation of colonic 1,25-dihydroxyvitamin D₃ levels and apoptosis in female mice on a calcium-deficient diet. *Anticancer Res.* 2009 Sep;29(9):3727-32.

Cross HS, Nittke T, Peterlik M. Modulation of vitamin D synthesis and catabolism in colorectal mucosa: a new target for cancer prevention. *Anticancer Res.* 2009 Sep;29(9):3705-12. Review.

Papers submitted

Henrik C. Horváth, Lakatos P, Kósa JP, Bácsi K, Borika K, Bises G, **Nittke T**, Hershberger PA, Speer G, **Kállay E**, The candidate oncogene CYP24A1: a potential biomarker for colorectal tumorigenesis. *Journal of Histochemistry and Cytochemistry*

H.C. Horváth, Z. Khabir, **T. Nittke**, S. Gruber, **E. Kallay**. CYP24A1 splice variants – implications for the antitumorigenic actions of 1,25-(OH)₂D₃ in colorectal cancer. *Journal of Steroid Biochemistry and Molecular Biology*

Papers in preparation

Nittke T., Thalhammer T., Kállay E. Metabolism of PGE₂ in colorectal cancer. Wallmann J., **Nittke T.**, Wegmann M., Kiefer F., Epstein M., Esterbauer H., Jensen-Jarolim E. The pathophysiology of Phlp 5 – specific acute allergic asthma in mice.

Book chapters

Chemoprevention of cancer and DNA damage by dietary factors, Chapter 24.2 Vitamin D, **Cross H** and **Nittke T; S.** Knasmüller(ed), Wiley, 2009,

Prizes awarded

Travel grant for oral presentation: Vitamin D receptor- and pregnane X receptor-dependent gene expression in colonocytes - impact of nutritional calcium in tumorigenesis Annual Meeting of the Austrian Society for Endocrinology and

Metabolism /ÖGES, 2008, St. Wolfgang, Austria

Courses taken

University of Vienna

Journal Club/ Transgenic Mouse Models

Journal Club/ Immunology

Methods in Molecular Biology and Biochemistry

Medical Biostatistics I

Medical Biostatistics II

Thesis Seminar/ Transgenic Mouse Models

Thesis Seminar/Applied Experimental Pharmacology

Tumour Pathology

Molecular Signal Transduction

Cellular Signal Transduction in disease

Journal Club/ Molecular Tumour Pathology

Journal Club/ Signal transduction during tumor progression

Thesis Seminar/ Signal transduction during tumor progression

Thesis Seminar/Applied Experimental Pharmacology II

Project management

Tissue Faxes / Immunohistochemistry

DNA microarray- technology and application in medicine

Project Management and intellectual property rights

Ethics and Good Scientific Practice

Problem-based learning course for teaching activity

Network

Mouse Embryonic Stem Cell Culture Training Course (Berlin)

2nd FEBS Advanced Lecture Course on Systems Biology: From Molecules to Life

Mechanism of gene regulation (Kuopio)

12th Grant Writing Workshop, AACR 100th Annual Meeting 2009 (Denver, US)

Lab placements

University of Birmingham, School of Biosciences Dr Chris Bunce (long term)

PhD status

Submission March 2010



ESR 18: Gilles Laverny, (10/06 to 09/09)

Team 14, Dr. Luciano Adorini, BioXell S.p.A., Italy

Meeting posters presented

5th Italian society of immunology, clinical immunology and allergology (Trieste, Italy) 2007

6th Italian society of immunology, clinical immunology and allergology (Roma, Italy) 2008

2nd European congress of Immunology (Berlin, Germany) 2009

6th European Mucosal group Immunology (Milan, Italy) 2008

Meeting oral presentations

2nd European congress of Immunology (Berlin, Germany) 2009

Papers published

Penna G, Amuchastegui S, **Laverny G**, **Adorini L**. (2007) Vitamin D receptor agonists in the treatment of autoimmune diseases: selective targeting of myeloid but not plasmacytoid dendritic cells. *J Bone Miner Res.* 2007 Dec;22 Suppl 2:V69-73.

Adorini L, Amuchastegui S, Corsiero E, **Laverny G**, Le Meur T, Penna G (2007) Vitamin D receptor agonists as anti-inflammatory agent. *Expert Rev Clin Immunol* vol. 3(4)

Penna G, Fibbi B, Amuchastegui S, Corsiero E, **Laverny G**, Silvestrini E, Chavalmane A, Morelli A, Sarchielli E, Vannelli GB, Gacci M, Colli E, Maggi M, **Adorini L**. (2008) The vitamin D receptor agonist elocalcitol inhibits IL-8-dependent benign prostatic hyperplasia stromal cell proliferation and inflammatory response

by targeting the RhoA/Rho kinase and NF- κ B pathways. *Prostate*, 69(5):480-93

Penna G, Fibbi B, Amuchastegui S, Cossetti C, Aquilano F, **Laverny G**, Gacci M, Crescioli C, Maggi M, **Adorini L** (2009) Human Benign Prostatic Hyperplasia Stromal Cells as Inducers and Targets of Chronic Immuno-mediated Inflammation. *Journal of Immunology* 182(7):4056-64

Laverny G, Penna G, Uskokovic M, Marczak S, Maehr H, Jankowski P, Ceailles C, Vouros P, Smith B, Robinson M, Reddy G. S, **Adorini L** (2009) Synthesis and anti-inflammatory properties of 1 α ,25-dihydroxy-16-ene-20-cyclopropyl-24-oxo-vitamin D3, a Hypocalcemic Stable Metabolite of 1 α ,25-dihydroxy-16-ene-20-cyclopropyl-vitamin D3. *J. Med. Chem.* 52(8):2204-13

Papers submitted

Laverny G, Penna G, Vetrano S, Correale C, Danese S, **Adorini L** (2009) Identification of a potent and safe Vitamin D Receptor agonist for the treatment of inflammatory bowel disease. *Submitted Journal of cellular and molecular medicine*

Papers in preparation

Laverny G, Penna G, Vetrano S, Correale C, Danese S, **Adorini L** (2009) Toll like receptor4-dependent selective defect in IL-10 production by blood leukocytes from inflammatory bowel disease patients

Courses taken

Italian language (2006-2008) Milan, Italy
Biostatistic II (2008), Univ. Kuopio, Finland
Biostatistic III (2009) Univ. Kuopio, Finland
Project management and tissue facts (2009) Univ. Vienna, Austria
Mechanisms of gene regulation (2006), Univ. Kuopio, Finland
Advanced Immunology (2008) Kuopio, Finland
Advanced literature pharmacology (2009) Univ. Kuopio, Finland

Molecular Medicine I (2008), Univ. Kuopio, Finland

Molecular Medicine II (2008), Univ. Kuopio, Finland

Molecular Medicine III (2009), Univ. Kuopio, Finland

Mouse embryonic stem cells (2008), Max Planck institute, Berlin, Germany

OIC in vivo imaging (2007) Erasmus medical center, Rotterdam, Netherlands

Placements

Laboratories Carsten Carlberg, Luxembourg

PhD status

Defense scheduled for December 10th 2009

Current post

Post-Doc Fellowship in the laboratory of Pr. Pons F, UMR7199, Faculty of Pharmacy, Strasbourg France (starting 11/2009)