Scientific Program

18th Workshop on Vitamin D

April 21 – 24, 2015
Delft, NL
**Main Molecular Image:** Not surprisingly, the molecular model describes the three dimensional shape of the steroid hormone, $1\alpha,25$-dihydroxy vitamin D$_3$ that binds selectively and tightly to its cognate protein receptor, the vitamin D receptor (VDR). Thanks are due to Bill Okamura who is a Professor of Organic Chemistry in the Chemistry Department at the University of California. He spent significant time evaluating and validating the 3D image of all the bonds of the of $1\alpha,25(OH)_2D_3$ on the front of the cover. The two-dimensional structure (lower right) is $1\alpha,25(OH)_2D_3$. The fine lines connect each atom in the two-dimensional view with the same atom in the 3D model.

**Histogram:** The histogram reports the number of papers published and listed in the National Library of Medicine that included the term 'vitamin D' in either the Title or the Abstract from 1950 - 2013. In the past 53 years 37,596 papers were published. In the past three years close to 12,000 new papers were published on vitamin D (3662 in 2012, 3826 in 2013 and 4355 in 2014).

**Image of Man:** The image is known as the Vitruvian Man.

The Vitruvian Man is a world-renowned drawing created by Leonardo da Vinci in about 1487. It is accompanied by notes based on the work of the famed architect, Vitruvius. The drawing, which is in pen and ink on paper, depicts a male figure in two superimposed positions with his arms and legs apart and simultaneously inscribed in a circle and square. The drawing and text are sometimes called the Canon of Proportions. It is stored in the Gallerie dell’Accademia in Venice, Italy.

The drawing is based on the correlations of ideal human proportions with geometry described by the ancient Roman architect Vitruvius in Book III of his treatise *De Architectura*. Vitruvius described the human figure as being the principal source of proportion among the classical orders of architecture. Leonardo’s drawing is traditionally named in honor of the architect. (Abstracted from Wikipedia)

The front cover was designed by Sohail Wasif, in Computing and Communications at the University of California, Riverside.
Table of Contents

Official Sponsors .................................................................................................................. i

Organizers ............................................................................................................................... ii

In Memorium - Dr. Ricardo Boland ......................................................................................... iii

Young Investigator and Trainee Travel Awards ...................................................................... iv

General Information ............................................................................................................... v

Scientific Program .................................................................................................................. 6 - 11

ABSTRACTS

Wednesday
  Session I ................................................................................................................................. 12 - 14
  Session II ............................................................................................................................ 15 - 16
  Session III ........................................................................................................................... 17 - 18
  Session IV ........................................................................................................................... 19 - 20
  Session V ............................................................................................................................. 21 - 22
  Poster Session I: ............................................................................................................... 23 - 51

Thursday
  Session VI ............................................................................................................................. 52
  Session VII ........................................................................................................................... 53 - 54
  Session VIII ........................................................................................................................ 55 - 56
  Session IX ............................................................................................................................ 57 - 59
  Poster Session II: ............................................................................................................... 60 - 91

Friday
  Session X ............................................................................................................................... 92
  Session XI ............................................................................................................................. 93 - 94
  Session XII .......................................................................................................................... 95 - 96
  Session XIII ........................................................................................................................ 97 - 99
  Session XIV ........................................................................................................................ 100
  Poster Session III: ............................................................................................................. 101 - 129

Index of Abstract Authors ..................................................................................................... 130 - 138

JSBMB Manuscript Information and Instructions for Submission ....................................... 139

Delft Map ............................................................................................................................... 140

World Health Organization Session VI and VII ................................................................. 141 - 144
Official Sponsors

Major funding for the Vitamin D Workshops is provided by the National Institute on Aging

The generous support of the World Health Organization for Sessions VI and VII is acknowledged

Platinum Sponsor
Pfizer

Gold Sponsors
Chugai Pharmaceutical Co. Ltd. (Japan)
Heartland Assays (USA)
Biotech Pharmacal Inc. (USA)
Teijin Pharma Ltd (Japan)

Silver Sponsors
DSM
Merck (USA)
Galephar
DIAsource ImmunoAssays (Belgium)
Cerbios
Roche Diagnostics International

Contributors
Fujirebio Europe
Elsevier
Friesland Campina

1Funding for this conference was made possible, in part, by conference grant R13 AG48689 from the National Institute on Aging. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention by trade names, commercial practices, or organizations imply endorsement by the U.S. Government.
Organizers

Workshop Executive Committee (WEC)

Paul Lips, The Netherlands (Chair)  Christopher Gallagher, USA
JoEllen Welsh, USA (Past Chair)  Martin Hewison, UK
Daniel Bikle, USA (Secretary)  Chantal Mathieu, Belgium
Roger Bouillon, Belgium  Anthony Norman, USA
Sylvia Christakos, USA  Wesley Pike, USA
Marie Demay, USA  John White, Canada
Peter Ebeling, Australia

Program Advisory Committee (PAC)

Heike Bischoff-Ferrari, Switzerland  Christel Lamberg-Allardt, Finland
Moray Campbell, USA  Yan Chun Li, USA
Margherita Cantorna, USA  Paul MacDonald, USA
Carsten Carlberg, Finland  Miguel Maestro, Spain
Geert Carmeliet, Belgium  Toshio Matsumoto, Japan
Kevin Cashman, Ireland  John McGrath, Australia
Reinhold Erben, Austria  Howard Morris, Australia
David Feldman, USA  Antonio Mourino, Spain
Jim Fleet, USA  John Pettifor, South Africa
Helen Henry, USA  Joerg Reichrath, Germany
Candace Johnson, USA  George Studzinski, USA
Michael Kimlin, Australia  Hans van Leeuwen, The Netherlands
Atsushi Kittaka, Japan  Susan Whiting, Canada
Richard Kremer, Canada

Local Committee

Paul Lips (Chair)  Ab-Initio
Roger Bouillon  Inge van Marion
Renate de Jongh  Lucienne Dado
Natasja van Schoor

Meetings Plus

Roxanne Hall
In Memorium - Dr. Ricardo Boland

The Vitamin D Workshop is saddened to announce the death of Argentinean scientist Dr. Ricardo Boland. Dr. Boland was a valued member of the Program Advisory Committee of the Vitamin D Workshop and was actively involved in reviewing manuscripts for the 17th Workshop Proceedings at the time of his death. He was also a member of ASBMR, the Endocrine Society, the Argentinean Society of Biochemistry, and the Argentinean Society of Bone and Mineral Research, so he was well known by many of us in the Vitamin D field. Dr. Boland trained in Germany and the US, and together with his colleague and wife of 40 years, Dr. Ana Russo de Boland, mentored an extensive cadre of Argentinean scientists at the Universidad Nacional del Sur (UNS), Bahia Blanca, Argentina.

Ricardo was a principal investigator of the Argentina Research Council and played a crucial role in establishing the Department of Biochemistry and Biology at UNS, which he directed in the 1980s, and the recently established Institute of Biological and Biomedical Sciences of the South.

A number of sabbatical stays ranging from 3 to 9 months by Dr. Boland from Bahia Blanca, occurred in the laboratory of professor, Anthony Norman in the Department of Biochemistry at the University of California in Riverside, CA. Ricardo’s visits occurred in 1985, 1990, 1994 and 2000. On all but two visits by Ricardo, he brought his wife Dr. Ana Russo Boland who also worked in the laboratory. On two of the sabbaticals Ricardo and Anna brought their two children who attended school in Riverside. It was a lovely family to introduce to the city of Riverside.

Ricardo attended early Vitamin D Workshops. His first participation was at the 5th Workshop in February 1982 which was held in Williamsburg, Virginia. The title of his submitted paper was “The Effects of Cholecalciferol on Proteins and Lipids of Muscle Membranes”. Since that first meeting, Ricardo attended every Workshop up to the 17th Workshop (his last) which was held in Chicago. In addition to his more recent work on vitamin D and muscle, one of the surprising discoveries for the vitamin D research field made by Ricardo, was that some plants have inherited the capability of producing some 1,25-(OH)2D3. One example is Solanum Glaucophyllum.

We will miss Ricardo’s constantly inquisitive mind, and his contributions to the intellectual life of the Workshop.
Young Investigator and Trainee Travel Awards

**Young Investigator**

Karl P. Schlingmann
University Children’s Hospital, Wilhelm’s University Muenster, Germany

**Trainees**

Mohamed Abu el Maaty
Ruprecht-Karls-Universität Heidelberg, Germany

Gabriela Bomfim Ferreira
KU LEUVEN, Belgium

Wendy Dankers
Erasmus MC University Medical Center, The Netherlands

Martin Kaufmann
Queen’s University, Canada

Gilles Laverny
IGBMC, University of Strasbourg, France

Seong Min Lee
University of Wisconsin-Madison, USA

Giovanni Lugli
University of Illinois at Chicago, USA

Donald Matthews
University at Albany Cancer Research Center, USA

Janna Nissen
Technical University of Denmark, Denmark

Lige Song
Massachusetts General Hospital, Boston, USA and Tongji University School of Medicine, Shanghai, Japan

Hillary St. John
University of Wisconsin-Madison, USA

Awards for junior scientists were made possible by funds from Heartland Assays, LLC (Ames, Iowa) and a conference grant from the National Institutes of Health.
General Information

Welcoming Reception, Tuesday, April 21, 2015

Please join us for a Welcoming Reception Tuesday evening from 5:00 – 7:00 pm at the Theatre de Veste. All delegates and their registered accompanying guests are cordially invited.

Poster Sessions, Wednesday – Friday, April 22 – 24, 2015

There will be three poster sessions during the Workshop. The poster sessions will be held at the Theatre de Veste each afternoon during the lunch period. Please follow the signage to access the poster area adjacent to the main auditorium.

Mount: The morning of your assigned session.
Dismount: Any time after the afternoon coffee break. All posters must be removed by the end of the meeting close for your assigned day.

Breaks and Social Events

Lunches: On Wednesday, Thursday and Friday, lunches are included in the registration fee. The lunches will be available each day in the Moodz Restaurant and lobby area.

Coffee Breaks: All registered Delegates are invited to stretch and enjoy a cup of coffee in the lobby area during the twice-daily coffee breaks.

Networking Social Event: Thursday, April 23rd: A networking social event with buffet dinner will be held at the Museum Het Prinsenhof from 7:00 – 11:00 pm. Additional registration and fee is required. A cash bar will be available. Please inquire at the Registration desk upon check-in if you wish to attend.
Scientific Program

18th Workshop on Vitamin D

April 21 – 24, 2015

Delft, NL
Scientific Program – Tuesday and Wednesday
18th WORKSHOP ON VITAMIN D

TUESDAY, April 21, 2015

17:00 - 19:00 Welcome Reception at the Theatre de Veste

WEDNESDAY, APRIL 22, 2015

8:30 - 8:45 Welcome and Opening Remarks
Paul Lips, Program Chair

Session I: MOLECULAR GENETICS AND VITAMIN D ACTION
Session Chair: Carsten Carlberg, Co-Chair: J. Wesley Pike

8:45 - 8:50 Chair’s Introduction

8:50 - 9:15 A. Uitterlinden
THE SEARCH FOR BONE AND JOINT GENES AND WHAT TO DO WITH THEM?
9:15 - 9:20 Discussion

9:20 - 9:45 R. Bouillon
THE VITAMIN D BINDING PROTEIN, DBP: AN UPDATE ON A MULTIFUNCTIONAL PROTEIN
9:45 - 9:50 Discussion

9:50 - 10:00 R. Scragg
CONSISTENT ETHNIC SPECIFIC DIFFERENCES IN DIABETES RISK AND VITAMIN D STATUS IN THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEYS
10:00 - 10:05 Discussion

10:05 - 10:15 S. Seuter
SHORT- AND LONG-TERM EPIGENOMIC AND TRANSCRIPTOMIC RESPONSE OF A HUMAN MONOCYTIC CELL MODEL TO 1,25-DIHYDROXYVITAMIN D3
10:15 - 10:20 Discussion

10:20 - 10:30 S.M. Lee
A SERIES OF HIGHLY DISPERSED INTRONIC AND DISTAL ENHANCERS CONTROLS BASAL, TISSUE-SPECIFIC AND INDUCIBLE EXPRESSION OF THE VITAMIN D RECEPTOR GENE BOTH IN VITRO AND IN MICE IN VIVO
10:30 - 10:35 Discussion

10:35 - 11:00 COFFEE BREAK

Session II: VITAMIN D METABOLISM AND CALCIUM ABSORPTION
Session Chair: Dan Bikle, Co-Chair: John White

11:00 - 11:05 Chair’s Introduction

11:05 - 11:30 V. Tangpricha VITAMIN D THERAPY IN CYSTIC FIBROSIS
11:30 - 11:35 Discussion

11:35 - 11:45 Y. Ono ACTIVE VITAMIN D₃ ANALOG, ELDECALCITOL: PROTEIN INTERACTION AND MODE OF ACTION
11:45 - 11:50 Discussion

11:50 - 12:00 M. Kaufmann SIMULTANEOUS ASSAY OF MULTIPLE VITAMIN D METABOLITES BY LC-MS/MS FOR THE SCREENING OF PATIENTS WITH HYPERCALCEMIA & CYP24A1 MUTATIONS. A COHORT STUDY
12:00 - 12:05 Discussion

12:05 - 13:30 LUNCH AND POSTER SESSION I VIEWING
Session III: RENAL PHYSIOLOGY AND DISEASE
Session Chair: Michael Kimlin, Co-Chair: Renate de Jongh

13:30 - 13:35 Chair’s Introduction

13:35 - 14:00 R. Erben VITAMIN D, FGF23 AND CALCIUM CHANNELS
14:00 - 14:05 Discussion

14:05 - 14:30 M. Vervloet FIBROBLAST GROWTH FACTOR 23 (FGF23) AND VITAMIN D IN CHRONIC RENAL FAILURE
14:30 - 14:35 Discussion

14:35 - 14:45 K. Schlingmann NEPHROLITHIASIS CAUSED BY MUTATIONS IN CYP24A1
14:45 - 14:50 Discussion

14:50 - 15:00 S. Strugnell MODIFIED-RELEASE CALCIFEDIOL (MRC) CAPSULES INCREASE 25D AND 1,25D AND LOWER iPTH INDEPENDENT OF eGFR IN CHRONIC KIDNEY DISEASE PATIENTS WITHOUT IMPACTING SERUM CALCIUM AND PHOSPHORUS
15:00 - 15:05 Discussion

15:05 - 15:30 COFFEE BREAK

Session IV: VITAMIN D AND CANCER
Session Chair: JoEllen Welsh, Co-Chair: George Studzinski

15:30 - 15:35 Chair’s Introduction

15:35 - 16:00 M. van Driel VITAMIN D IN BONE METASTATIC CANCER MODELS: POSSIBLE THERAPEUTIC AGENT
16:00 - 16:05 Discussion

16:05 - 16:15 E. Kallay IMPACT OF CYP24A1 OVEREXPRESSION ON GROWTH OF COLORECTAL TUMOURS
16:15 - 16:20 Discussion

16:20 - 16:30 M. Tenniswood MODULATION OF ENERGY METABOLISM BY VITAMIN D IN PROSTATE CANCER
16:30 - 16:35 Discussion

16:35 - 16:45 G. Lugli SUPPRESSION OF microRNAs MAY BE A DRIVER OF PROSTATE CARCINOGENESIS WHICH IS REVERSIBLE BY 1,25-DIHYDROXYVITAMIN D
16:45 - 16:50 Discussion

Session V: MEASUREMENT OF VITAMIN D METABOLITES
Session Chair: Helen Henry, Co-Chair: Miguel Maestro

16:50 - 16:55 Chair’s Introduction

16:55 - 17:20 G. Jones VITAMIN D METABOLIC PROFILING USING LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY (LC-MS/MS)
17:20 - 17:25 Discussion

17:25 - 17:50 C. Sempos STANDARDIZING VITAMIN D ASSAYS: IMPORTANCE TO RESEARCH
17:50 - 17:55 Discussion

17:55 - 18:05 A. Valcour A NOVEL, FULLY-AUTOMATED CHEMILUMINESCENT ASSAY FOR THE DETECTION OF 1,25-DIHYDROXYVITAMIN D IN BIOLOGICAL SAMPLES
18:05 - 18:10 Discussion

18:10 - 18:20 A. Heijboer DETERMINATION OF REFERENCE VALUES FOR SERUM TOTAL 1,25-DIHYDROXYVITAMIN D3 USING A 2D ID-UPLC-MS/MS METHOD
18:20 - 18:25 Discussion
### Scientific Program – Thursday

**18th WORKSHOP ON VITAMIN D**

<table>
<thead>
<tr>
<th>Sessions VI and VII</th>
<th>Sponsored by World Health Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 - 8:45</td>
<td>Introduction to WHO Sessions</td>
</tr>
<tr>
<td></td>
<td>J. P. Peña-Rosas</td>
</tr>
</tbody>
</table>

**Session VI:**  
**PREVALENCE, DIAGNOSIS AND PREVENTION OF RICKETS**  
Session Chair: Howard Morris, Co-Chair: Inez Schoenmakers

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 - 8:50</td>
<td>Chair’s Introduction</td>
</tr>
<tr>
<td>8:50 - 9:15</td>
<td>J. Pettifor SCREENING OF COMMUNITIES FOR VITAMIN D DEFICIENCY</td>
</tr>
<tr>
<td>9:15 - 9:20</td>
<td>Discussion RICKETS</td>
</tr>
<tr>
<td>9:20 - 9:45</td>
<td>N. Shaw PREVENTION AND TREATMENT OF RICKETS AND</td>
</tr>
<tr>
<td>9:45 - 9:50</td>
<td>Discussion RECOMMENDATIONS ON VITAMIN D</td>
</tr>
<tr>
<td>9:50 - 10:20</td>
<td>COFFEE BREAK</td>
</tr>
</tbody>
</table>

**Session VII:**  
**VITAMIN D DEFICIENCY DURING PREGNANCY**  
Session Chair: Bruce Hollis, Co-Chair: John McGrath

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:20 - 10:25</td>
<td>Chair’s Introduction</td>
</tr>
<tr>
<td>10:25 - 10:50</td>
<td>C. Palacios VITAMIN D SUPPLEMENTATION IN PREGNANCY</td>
</tr>
<tr>
<td>10:50 - 10:55</td>
<td>Discussion</td>
</tr>
<tr>
<td>10:55 - 11:20</td>
<td>M. Tabesh MATERNAL VITAMIN D STATUS AND RISK OF PRE-ECLAMPSIA: A</td>
</tr>
<tr>
<td>11:20 - 11:25</td>
<td>Discussion SYSTEMIC REVIEW AND META-ANALYSIS</td>
</tr>
<tr>
<td>11:25 - 11:50</td>
<td>C. Cooper MATERNAL VITAMIN D STATUS AND PRE- AND POSTNATAL BONE</td>
</tr>
<tr>
<td>11:50 - 11:55</td>
<td>Discussion DEVELOPMENT IN THE CHILD</td>
</tr>
<tr>
<td>11:55 - 12:55</td>
<td>WHO Round Table Discussion</td>
</tr>
<tr>
<td></td>
<td>Session Chairs: Roger Bouillon and Inez Schoenmakers</td>
</tr>
</tbody>
</table>

TRANSLATING RESEARCH INTO EVIDENCE-INFORMED POLICY OPTIONS TO ADDRESS VITAMIN D NUTRITION

Introductions: J.P. Peña-Rosas, C. Lamberg-Allardt, J. Pettifor

Additional Panel Members: F. Glorieux and N. Shaw

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:55 - 14:30</td>
<td>LUNCH AND POSTER SESSION II VIEWING</td>
</tr>
</tbody>
</table>

**Session VIII:**  
**VITAMIN D NUTRITION AND SUPPLEMENTATION**  
Session Chair: Christel Lamberg-Allardt, Co-Chair: Susan Whiting

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:30 - 14:35</td>
<td>Chair’s Introduction</td>
</tr>
<tr>
<td>14:35 - 15:00</td>
<td>M. Kiely MODELLING OF VITAMIN D INTAKE AND EFFECTS OF FOOD</td>
</tr>
<tr>
<td>15:00 - 15:05</td>
<td>Discussion FORTIFICATION</td>
</tr>
<tr>
<td>15:05 - 15:15</td>
<td>S. Whiting MATERNAL VITAMIN D SUPPLEMENTATION AT 50 mcg PER DAY</td>
</tr>
</tbody>
</table>
Session IX: VITAMIN D AND IMMUNOLOGY
Session Chair: Margherita Cantorna, Co-Chair: Martin Hewison

16:00 - 16:05 Chair's Introduction

16:05 - 16:30 C. Mathieu VITAMIN D AND TYPE 1 DIABETES
16:30 - 16:35 Discussion

16:35 - 17:00 A. Martineau VITAMIN D AND INFECTIOUS DISEASES
17:00 - 17:05 Discussion

17:05 - 17:15 G.B. Ferreira 1α,25-DIHYDROXYVITAMIN D₃ INDUCES TOLERANCE IN HUMAN DENDRITIC CELLS BY ACTIVATION OF INTRACELLULAR METABOLIC PATHWAYS
17:15 - 17:20 Discussion

17:20 - 17:30 W. Dankers 1,25(OH)₂D₃ SUPPRESSES THE PRO-INFLAMMATORY TH17-RASF FEEDBACK LOOP VIA IL-4-DEPENDENT AND -INDEPENDENT MECHANISMS
17:30 - 17:35 Discussion

17:35 - 17:45 D. Bikle VITAMIN D AND CALCIUM REGULATION OF WOUND HEALING
17:45 - 17:50 Discussion

17:50 - 18:00 L. Song THE VITAMIN D RECEPTOR REGULATES TISSUE RESIDENT MACROPHAGE PROLIFERATION DURING CUTANEOUS WOUND HEALING
18:00 - 18:05 Discussion

18:05 - 18:30 RECOGNITION OF WORKSHOP AWARD RECIPIENTS

19:00 - 23:00 NETWORKING EVENT “PRINSENHOF” INCLUDING BUFFET DINNER
### Session X: SELECTED ORAL PRESENTATIONS AND LATE BREAKING NEWS
Session Chair: JoEllen Welsh, Co-Chair: Heike Bischoff-Ferrari

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 - 9:10</td>
<td>E. de Koning</td>
<td>SERUM 25-HYDROXYVITAMIN D, PARATHYROID HORMONE AND THE RISK OF OVERALL AND DISEASE-SPECIFIC MORTALITY: RESULTS FROM THE LONGITUDINAL AGING STUDY AMSTERDAM</td>
</tr>
<tr>
<td>9:10 - 9:15</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>9:15 - 9:25</td>
<td>D. Eyles</td>
<td>1,25α(OH)2D3 PREVENTS AUTISM-RELATED PHENOTYPES IN A MATERNAL IMMUNE ACTIVATION ANIMAL MODEL</td>
</tr>
<tr>
<td>9:25 - 9:30</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>9:30 - 9:40</td>
<td>S. Borg</td>
<td>MATERNAL VITAMIN D DEFICIENCY ALTERS BONE SIZE AND LATER SKELETAL RESPONSIVENESS TO MECHANICAL LOADING IN A MODEL SYSTEM (Abstract: Page 74)</td>
</tr>
<tr>
<td>9:45 - 9:55</td>
<td>A. Vaes</td>
<td>RELATIVE IMPORTANCE OF SUMMER SUN EXPOSURE, VITAMIN D INTAKE AND GENES TO VITAMIN D STATUS IN DUTCH OLDER ADULTS (Abstract: Page 114)</td>
</tr>
<tr>
<td>9:55 - 10:00</td>
<td>Discussion</td>
<td></td>
</tr>
</tbody>
</table>

### Session XI: VITAMIN D AND ITS RECEPTOR: MOLECULAR MECHANISMS
Session Chair: Hans van Leeuwen, Co-Chair: Anthony Norman

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 - 10:05</td>
<td></td>
<td>Chair’s Introduction</td>
</tr>
<tr>
<td>10:05 - 10:30</td>
<td>M. Meyer</td>
<td>DYNAMIC VDR CONTROL OF GENE EXPRESSION DURING DIFFERENTIATION AND SELECTIVE REGULATION OF MMP13 TRANSCRIPTION</td>
</tr>
<tr>
<td>10:30 - 10:35</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>10:35 - 10:45</td>
<td>D. Matthews</td>
<td>ADIPOSE-SPECIFIC VDR DELETION ALTERS BODY FAT AND ENHANCES MAMMARY EPITHELIAL DENSITY</td>
</tr>
<tr>
<td>10:45 - 10:50</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>10:50 - 11:00</td>
<td>D. Glenn</td>
<td>AMPLIFICATION OF LIPOTOXIC CARDIOMYOPATHY IN VDR KNOCKOUT MOUSE</td>
</tr>
<tr>
<td>11:00 - 11:05</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>11:05 - 11:30</td>
<td></td>
<td>COFFEE BREAK</td>
</tr>
</tbody>
</table>

### Session XII: VITAMIN D, MUSCLE AND CARDIOVASCULAR SYSTEM
Session Chair: Peter Ebeling, Co-Chair: Natasja van Schoor

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 - 11:35</td>
<td></td>
<td>Chair’s Introduction</td>
</tr>
<tr>
<td>11:35 - 12:00</td>
<td>R. Brandes</td>
<td>VITAMIN D PROMOTES VASCULAR REGENERATION</td>
</tr>
<tr>
<td>12:00 - 12:05</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>12:05 - 12:30</td>
<td>H. Bischoff-Ferrari</td>
<td>EFFECT OF HIGH-DOSE VITAMIN D ON FALL PREVENTION</td>
</tr>
<tr>
<td>12:30 - 12:35</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>12:35 - 12:45</td>
<td>D. Agrawal</td>
<td>VITAMIN D STATUS DETERMINES INTIMAL HYPERPLASIA AND RESTENOSIS FOLLOWING CORONARY INTERVENTION</td>
</tr>
<tr>
<td>12:45 - 12:50</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>12:50 - 13:00</td>
<td>C. Bernal-Mizrachi</td>
<td>ABSENCE OF MACROPHAGE VITAMIN D RECEPTOR ACCELERATES MONOCYTE CHOLESTEROL TRANSPORT INTO THE ATHEROSCLEROTIC PLAQUE IN MICE</td>
</tr>
<tr>
<td>13:00 - 13:05</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>13:05 - 14:30</td>
<td></td>
<td>LUNCH AND POSTER SESSION III VIEWING</td>
</tr>
</tbody>
</table>
Session XIII: VITAMIN D AND BONE
Session Chair: Marie Demay, Co-Chair: Geert Carmeliet

14:30 - 14:35 Chair’s Introduction

14:35 - 15:00 P. Anderson LOCAL SYNTHESIS OF 1\alpha,25(OH)2D3 IN VIVO IS REQUIRED TO
15:00 - 15:05 Discussion PROMOTE BONE FORMATION AND IS SUBSTRATE DEPENDENT

15:05 - 15:15 G. Laverny UNLIGANCED VITAMIN D RECEPTOR IMPAIRS MORE
15:15 - 15:20 Discussion MINERAL AND BONE HOMEOSTASIS THAN FULL RECEPTOR
DEFICIENCY

15:30 - 15:35 Discussion 1,25(OH)2D3 AND PTH IN OSTEOCYTE DIFFERENTIATION

15:35 - 15:45 J. Ryan VITAMIN D-MEDIATED BONE RESORPTION IS REGULATED BY
15:45 - 15:50 Discussion MATURE OSTEOBLASTS, BUT NOT OSTEOCYTES, DURING GROWTH

15:50 - 16:00 H. Morris 1,25-DIHYDROXYVITAMIN D ANALOGUES WITH AN AROMATIC
16:00 - 16:05 Discussion RING SUBSTITUTED IN THE 20,22-POSITION ELICIT DIFFERENTIAL
ACTIVITIES IN MC3T3 AND MLO-A5 OSTEOBLAST-LIKE CELL LINES

Paul Lips CLOSING REMARKS

16:05 - 16:30 COFFEE BREAK