NEXT MEETING
21st Workshop on Vitamin D – Barcelona, Spain
May 16 – 19, 2018
# Table of Contents

Time Table ..................................................................................................................... ii
Official Sponsors and Exhibitors ................................................................................... iii - v
Organizers ........................................................................................................................ vi
2017 Awards ..................................................................................................................... vii
General Information ...................................................................................................... viii
Scientific Program ........................................................................................................... 1 - 5

## ABSTRACTS

### Tuesday

Plenary Poster Session ................................................................................................. 6 - 20

### Wednesday

Session I .......................................................................................................................... 21
Session II ....................................................................................................................... 21 - 22
Session III ..................................................................................................................... 23 - 24
Session IV ..................................................................................................................... 25
Session V ....................................................................................................................... 25 - 26
Session VI ..................................................................................................................... 27 - 28
Poster Session I ........................................................................................................... 41 - 28

### Thursday

Session VII ..................................................................................................................... 29 - 30
Session VIII .................................................................................................................. 31 - 33

### Friday

Session X ......................................................................................................................... 34
Session XI ..................................................................................................................... 35 - 36
Session XII ................................................................................................................... 36
Session XIII ................................................................................................................ 37 - 38
Session XIV ............................................................................................................... 39 - 40
Poster Session II ........................................................................................................... 71 - 99

Index of Abstract Authors .............................................................................................. 100 - 105

JSBMB Manuscript Information and Instructions for Submission ......................... 106

Hotel Map ...................................................................................................................... 107

Participant List ............................................................................................................. 108 - 114
20th Workshop on Vitamin D

Time Table

Tuesday, March 28, 2017

1:00 - 8:00PM Registration ........................................ Executive Ballroom Pre-Function Area
5:00 - 8:00PM Welcome Reception and Plenary Poster Session .................................. Signature 1

Wednesday, March 29, 2017

8:00 - 6:00PM Registration ........................................ Executive Ballroom Pre-Function Area
8:00 - 5:20PM General Session .................................................. Executive Ballroom I
Session I: Opening Keynote
Session II: Vitamin D, Immunity and the Microbiome
Session III: Vitamin D and Suppression of Malignancy
Session IV: Structure/Function and Vitamin D Analogues
Session V: Vitamin D, UV Light and Skin Biology
Session VI: Vitamin D Metabolism

10:20 - 10:40AM Coffee Break .................................. Executive Ballroom Pre-Function Area
12:00 - 2:00PM Lunch and Poster Session I Viewing .................................. Executive Ballroom H
3:50 - 4:10PM Coffee Break .................................. Executive Ballroom Pre-Function Area
7:30 - 10:30PM Networking Dinner Event at SeaWorld
Buses will begin loading at 7:00 pm from Signature 1 bus depot.
You must have a dinner ticket to board.

Thursday, March 30, 2017

7:00 - 12:30PM Registration ........................................ Executive Ballroom Pre-Function Area
8:00 - 12:20PM General Session .................................................. Executive Ballroom I
Session VII: Transcriptional Regulation by VDR
Session VIII: Vitamin D and Healthy Aging

9:20 - 9:35AM Coffee Break .................................. Executive Ballroom Pre-Function Area
Afternoon Free

Friday, March 31, 2017

7:00 - 5:00PM Registration ........................................ Executive Ballroom Pre-Function Area
8:00 - 4:45PM General Session .................................................. Executive Ballroom I
Session IX: Joint Plenary Lecture
Session X: The Debate
Session XI: Vitamin D and Breast Cancer
Session XII: Vitamin D Biology in Non-traditional Models
Session XIII: Clinical Trials
Session XIV: Vitamin D, Inflammation and Diabetes

9:40 - 10:00AM Coffee Break .................................. Executive Ballroom Pre-Function Area
12:05 - 2:00PM Lunch and Poster Session II Viewing .................................. Executive Ballroom H
PLATINUM SPONSORS

HEARTLAND ASSAYS - Ames, Iowa
http://www.heartlandassays.com/

PFIZER
http://www.pfizer.com/
GOLD SPONSORS
DIASORIN INC.
OPKO HEALTH INC

SILVER SPONSORS
BIO-TECH PHARMACAL INC
DIASOURCE IMMUNOASSAYS SA
CERBIOS
TEIJEN
GRASSROOTS HEALTH
ABSTRACT - The Vitamin D Workshop Inc. was established in 1974 as a mechanism for organization of academic meetings devoted to the science of vitamin D. Vitamin D exerts biological actions via the vitamin D receptor which is expressed throughout the body. Basic cell and molecular research, epidemiological studies and clinical trials have linked vitamin D to a host of chronic diseases including osteoporosis, cancer, heart disease and obesity. The surge of publications on vitamin D and chronic disease has drawn attention to an individual's vitamin D status and the possibility that vitamin D supplementation may have preventive actions against chronic diseases. Worldwide, government agencies are re-evaluating recommended dietary allowances for vitamin D, and many are considering fortification and regulatory issues. Physicians and other health professionals have received mixed messages concerning when to measure vitamin D status, what the "optimal" serum vitamin D level is and how to institute supplementation regimens for deficient patients. Collectively these factors warrant an annual meeting of vitamin D scientists to disseminate current findings, discuss the emerging basic and applied research, and bring areas of controversy to light. The Vitamin D Workshop is the only recurring scientific meeting specifically focused on vitamin D. Through keynote lectures, invited speakers, promoted oral communications and poster presentations, the Workshop's broad scope combines state of the art basic research on vitamin D biology for basic scientists with clinical and observational reports geared towards applied scientists, policy makers and health professionals.

Funding for this conference was made possible, in part, by R13 AG48689-01 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.

EXHIBITORS

PLEASE VISIT THE BOOTHS IN THE REGISTRATION AREA

BIO-TECH PHARMACAL INC
DIASOURCE IMMUNOASSAYS SA
GRASSROOTS HEALTH
Organizers

Workshop Executive Committee

John White, Canada (CEO and Meeting Co-chair)  
Peter Ebeling, Australia (Meeting Co-chair) 
Marie Demay, USA (Past Chair)  
JoEllen Welsh, USA (CFO)  
Dan Bikle, USA  
Geert Carmeliet, Belgium  
Reinhold Erben, Austria  
James Fleet, USA  
Christopher Gallagher, USA  
Martin Hewison, UK (Future Chair)  
Wesley Pike, USA  
Roger Bouillon, Belgium (ex-officio)  
Anthony Norman, USA (ex-officio)

Program Advisory Committee

Klaus Badenhoop, Germany  
Moray Campbell, USA  
Margherita Cantorna, USA  
Carsten Carlberg, Finland  
Kevin Cashman, Ireland  
Sylvia Christakos, USA  
David Feldman, USA  
Brian Feldman, USA  
Helen Henry, USA  
Bruce Hollis, USA  
Glenville Jones, Canada  
Rolf Jorde, Norway  
Eniko Kallay, Austria  
Atsushi Kittaka, Japan  
Richard Kremer, Canada  
Christel Lamberg-Allardt, Finland  
Yan Chun Li, USA  
Paul Lips, the Netherlands  
Miguel Maestro, Spain  
Adrian Martineau, United Kingdom  
Chantal Mathieu, Belgium  
Toshio Matsumoto, Japan  
Howard Morris, Australia  
Antonio Mourino, Spain  
John Pettifor, South Africa  
Inez Schoenmakers, United Kingdom  
George Studzinski, USA  
Rene St-Arnaud, Canada  
Hans van Leeuwen, The Netherlands  
Natasja van Schoor, the Netherlands  
Susan Whiting, Canada

Meetings Plus

Roxanne Hall  
Natalie Bishop  
Thomas Carrell  
Jean Hood  
Carol Montgomery


2017 Awards

YOUNG INVESTIGATOR AWARD

Erica W. Mandell, University of Colorado School of Medicine, USA
FETAL VITAMIN D DEFICIENCY IMPAIRS LUNG STRUCTURE AND INCREASES SUSCEPTIBILITY TO HYPOXIA INJURY IN THE DEVELOPING RAT

TRAINEE TRAVEL AWARDS

Brittany Bunch, Roswell Park Cancer Institute, USA (Mentor: Candace Johnson, PhD)
VITAMIN D3 CAN INCREASE AND PROLONG THE RESPONSE TO CISPLATIN THERAPY IN BLADDER CANCER THROUGH VDR AND TAP73 SIGNALING CROSSTALK

Brian Chapron, University of Washington, USA (Mentor: Kenneth Thummel, PhD)
CHARACTERIZATION OF THE ROLE OF MEGALIN IN THE REGULATION OF VITAMIN D HOMEOSTASIS

Chloe Cheng, The University of Western Australia, Australia (Mentor: Robert Tuckey, PhD)
CHARACTERIZATION OF CYP2R1, A VITAMIN D 25-HYROXYLASE, IN A MEMBRANE ENVIRONMENT

Brian DeFelice, University of California, Davis, USA (Mentor: Oliver Fiehn, PhD)
A SINGLE LC-MS/MS METHOD FOR SEPERATION AND QUANTIFICAITON OF MAJOR VITAMIN D PATHWAY METABOLITES INCLUDING 1α,25(OH)2D, 3-EPI-25OHD3, AND 25OHD3

Vassil Dimitrov, McGill University, Canada (Mentor: John White, PhD)
VITAMIN D ATTENUATES T CELL-MEDIATED INFLAMMATORY RESPONSES BY DIRECTLY STIMULATING EXPRESSION OF PD-L1 IN EPITHELIAL AND MYELOID CELLS

Lasse Hansen, Harvard School of Dental Medicine, USA (Mentor: Martin Blomberg Jensen, MD, PhD)
OVARIAN 1,25-DIHYDROXYVITAMIN D AND SELECTION OF HIGH QUALITY SPERMATOZOA FOR FERTILIZATION

Dean Larner, University of Birmingham, UK (Mentor: Martin Hewison, PhD)
GENDER-SPECIFIC FETAL-PLACENTAL INFLAMMATORY RESPONSES ASSOCIATED WITH VITAMIN D-DEFICIENCY AND IMMUNE CHALLENGE IN PREGNANT MICE

Anette Larsen, Tromsø Endocrine Research Group, UiT, Norway (Mentor: Rolf Jorde, PhD)
THE EFFECT OF HIGH-DOSE VITAMIN D ON BONE MINERAL DENSITY IN SUBJECTS WITH PREDIABETES

Danyang Li, The University of Birmingham, UK (Mentor: Martin Hewison, PhD)
IMMUNOMODULATION BY VITAMIN D IS ASSOCIATED WITH REGULATION OF DENDRITIC CELL MICRORNAS

Christopher Yanucil, University of Miami Miller School of Medicine, USA (Mentor: Christian Faul, PhD)
CALCITRIOL ATTENUATES FGF23-INDUCED CARDIAC HYPERTROPHY

Yang Zhang, Oregon State University, USA (Mentor: Adrian Gombart, PhD)
LOCAL SUSTAINED DELIVERY OF 1α,25(OH)2D3 BY NANOFIBER WOUND DRESSINGS INDUCES HUMAN CATHLECIDIN ANTIMICROBIAL PEPTIDE EXPRESSION BOTH IN VITRO AND IN VIVO

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

Welcome Reception and Plenary Poster Session, Tuesday, March 28, 2017

Please join us for a Welcome Reception Tuesday evening from 5:00 – 8:00 pm in Signature 1. All delegates and their registered accompanying guests are cordially invited.

Poster Sessions

There will be three poster sessions during the Workshop. Plenary posters will be highlighted during the Welcome Reception on Tuesday evening and will remain up for the duration of the Workshop. Two additional poster sessions will be held during the afternoon lunch periods on Wednesday and Friday.

Plenary Session posters may be put up on Tuesday between 3:00 – 5:00 pm and removed on Friday between 2:30 – 3:30 pm.

Wednesday posters may be put up on Wednesday morning before 12 noon and removed before 12 noon on Thursday.

Friday posters may be put up on Thursday after 12 noon and removed on Friday between 2:30 – 3:30 pm.

Posters that are not taken down at the appropriate time will be removed by staff members and held at the Vitamin D Workshop Hospitality desk until the end of the meeting at which time unclaimed posters will be discarded.

Breaks and Social Events

Lunches: Wednesday and Friday lunches are included in the registration fee. The lunches will be available each day in the Executive Ballroom H and the pre-function area.

Coffee Breaks: All registered delegates are invited to stretch and enjoy a hot or cold beverage in the pre-function area during the breaks.

Networking Banquet: Wednesday, March 29th: A private networking social event with buffet dinner will be held at SeaWorld Orlando Park where you will be able to explore the Wild Arctic area with your friends and colleagues. Shuttle buses will depart from the Signature 1 bus depot are and will begin loading at 7:00 pm. You must have your dinner ticket to board the shuttle. Buses will depart SeaWorld for the return transfer at 10:30 pm.
Tuesday, March 28

1:00 - 8:00PM  Registration
5:00 - 8:00PM  Welcome Reception and Plenary Posters

Wednesday, March 29

8:00 - 8:15AM  **Opening Remarks**
                J. White, Workshop Chair and P. Ebeling, Workshop Co-chair

**Session I:**  **OPENING KEYNOTE**
Moderator: P. Ebeling

8:15 - 8:55AM  J. Fleet  **THE YEAR IN VITAMIN D: BASIC/TRANSLATIONAL**
8:55 - 9:00AM  **Discussion**

**Session II:**  **VITAMIN D, IMMUNITY AND THE MICROBIOME**
Moderators: M. Hewison and C. Bernal-Mizrachi

9:00 - 9:20AM  C. Maurice  **CHARACTERIZING THE ACTIVE HUMAN GUT MICROBIOTA**
9:20 - 9:25AM  **Discussion**

9:25 - 9:45AM  J. Baines  **GENOME-WIDE ASSOCIATION ANALYSIS IDENTIFIES VARIATION IN**
9:45 - 9:50AM  **Discussion**  **VITAMIN D RECEPTOR INFLUENCING THE GUT MICROBIOTA**

9:50 - 10:00AM  V. Dimitrov  **VITAMIN D ATTENUATES T CELL-MEDIATED INFLAMMATORY**
10:00 - 10:05AM  **Discussion**  **RESPONSES BY DIRECTLY STIMULATING EXPRESSION OF PD-L1 IN**
10:05 - 10:20AM  **Discussion**  **EPITHELIAL AND MYELOID CELLS**
10:20 - 10:40AM  **Coffee Break**

**Session III:**  **VITAMIN D AND SUPPRESSION OF MALIGNANCY**
Moderators: J. Fleet and M. Verstuyf

10:40 - 11:00AM  J. Moscat  **VDR REGULATION OF STELLATE CELL FIBROSIS AND LIVER CANCER**
11:00 - 11:05AM  **Discussion**  **VIA P62**

11:05 - 11:25AM  P. Herschberger  **EXPLOITING 1,25-DIHYDROXYVITAMIN D3 TO OVERCOME RESISTANCE**
11:25 - 11:30AM  **Discussion**  **TO EPIDERMAL GROWTH FACTOR RECEPTOR (EGFR) TYROSINE KINASE**
11:30 - 11:40AM  **Discussion**  **INHIBITORS (TKIs) IN EGFR MUTANT LUNG CANCER**
11:40 - 11:45AM  B.L. Bunch  **VITAMIN D3 CAN INCREASE AND PROLONG THE RESPONSE TO**
11:45 - 11:50AM  **Discussion**  **CISPLATIN THERAPY IN BLADDER CANCER THROUGH VDR AND TAP73**
11:50 - 11:55AM  **Discussion**  **SIGNLAING CROSSTALK**

12:00 - 2:00PM LUNCH AND POSTER SESSION I VIEWING

Session IV: STRUCTURE/FUNCTION AND VITAMIN D ANALOGUES
Moderator: R. Horst

2:00 - 2:05PM R. Horst TRIBUTE TO SATYA REDDY

2:05 - 2:25PM J. Gleason BIFUNCTIONAL VITAMIN D ANALOGUES

2:25 - 2:30PM Discussion

Session V: VITAMIN D, UV LIGHT AND SKIN BIOLOGY
Moderators: D. Bikle and M. Kimlin

2:30 - 2:50PM P. Elias DILUTION OF EPIDERMAL PIGMENTATION DURING HUMAN EVOLUTION

2:50 - 3:00PM Discussion

2:55 - 3:15PM D. Fisher SKIN β-ENDORPHIN MEDIATES ADDICTION OF UV LIGHT

3:15 - 3:30PM Discussion

3:20 - 3:40PM R.S. Mason 1,25(OH)_{2}D_{3} FACILITATES DNA REPAIR IN SKIN BY INCREASING ENERGY AVAILABILITY IN UV-IRRADIATED KERATINOCYTES

3:40 - 3:50PM Discussion

3:45 - 4:05PM Y. Zhang LOCAL SUSTAINED DELIVERY OF 1α,25(OH)_{2}D_{3} BY NANOFIBER WOUND DRESSINGS INDUCES HUMAN CATHELICIDIN ANTIMICROBIAL PEPTIDE EXPRESSION BOTH IN VITRO and IN VIVO

3:50 - 4:10PM Coffee Break

Session VI: VITAMIN D METABOLISM
Moderators: G. Jones and D. Goltzman

4:10 - 4:30PM M. Levine SEQUENCE VARIABILITY IN THE CYP2R1 GENE ENCODING VITAMIN D 25-HYDROXYLASE INFLUENCES VITAMIN D HOMEOSTASIS IN HUMANS

4:30 - 4:40PM Discussion

4:35 - 4:55PM B.D. Chapron CHARACTERIZATION OF THE ROLE OF MEGALIN IN THE REGULATION OF VITAMIN D HOMEOSTASIS

4:55 - 5:00PM Discussion

4:50 - 5:10PM K.P. Schlingmann MUTATIONS IN GENES REGULATING VITAMIN D METABOLISM IN IDIOPATHIC INFANTILE HYPERCALCEMIA AND NPHROCALCINOSIS/NPHROLITHIASIS

5:10 - 5:30PM Discussion

5:05 - 5:20PM R. St-Arnaud OPOSSUMOUSE (A326G), HYPERCALCIMOUSE (R396W), AND ANABOLIMOUSE (V391L): INSIGHTS INTO IN VIVO METABOLISM OF VITAMIN D USING KNOCK-IN MOUSE MODELS OF CYP24A1 VARIANTS

7:00PM Buses load for networking dinner event at SeaWorld from Signature 1 bus depot
### Scientific Program - Thursday

**Thursday, March 30**

#### Session VII: TRANSCRIPTIONAL REGULATION BY VDR

Moderators: M. Campbell and L. Tavera-Mendoza

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 8:20AM</td>
<td>M. Meyer</td>
<td>IDENTIFICATION OF THE GENOMIC AND HOMEOSTATIC CIRCUITRY</td>
</tr>
<tr>
<td>8:20 - 8:25AM</td>
<td>Discussion</td>
<td>CONTROLLING CYP27B1 EXPRESSION IN VIVO</td>
</tr>
<tr>
<td>8:25 - 8:45AM</td>
<td>J.W. Pike</td>
<td>DIFFERENTIAL ENHANCER-MEDIATED REGULATION OF CYP24A1</td>
</tr>
<tr>
<td>8:45 - 8:50AM</td>
<td>Discussion</td>
<td>IN THE KIDNEY AND IN NONRENAL TARGET CELLS IN VIVO</td>
</tr>
<tr>
<td>8:50 - 9:00AM</td>
<td>C. Carlberg</td>
<td>EPIGENOMIC PU.1-VDR CROSSTALK MODULATES VITAMIN D SIGNALING</td>
</tr>
<tr>
<td>9:00 - 9:05AM</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>9:05 - 9:15AM</td>
<td>S.M. Lee</td>
<td>STUDIES ON THE FUNCTION OF THE PHOSPHORYLATED HUMAN VITAMIN D RECEPTOR IN VIVO</td>
</tr>
<tr>
<td>9:15 - 9:20AM</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>9:20 - 9:35AM</td>
<td>Coffee Break</td>
<td></td>
</tr>
</tbody>
</table>

#### Session VIII: VITAMIN D AND HEALTHY AGING

Moderators: J. Welsh and M. Thambisetty

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:35 - 9:45AM</td>
<td>M. Thambisetty</td>
<td>INTRODUCTION</td>
</tr>
<tr>
<td>9:45 - 10:05AM</td>
<td>F. Feron</td>
<td>TRANSCRIPTOMIC ANALYSIS OF VITAMIN D EFFECTS IN ANIMAL MODELS OF ALZHEIMERS DISEASE</td>
</tr>
<tr>
<td>10:05 - 10:10AM</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>10:10 - 10:30AM</td>
<td>S. Gonzalo</td>
<td>VDR SIGNALING PRESERVES GENOME STABILITY DURING AGING</td>
</tr>
<tr>
<td>10:30 - 10:35AM</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>10:35 - 10:55AM</td>
<td>S. Sisley</td>
<td>VITAMIN D RECEPTOR IN THE PARAVENTRICULAR NUCLEUS OF THE HYPOTHALAMUS IS NECESSARY FOR NORMAL GLUCOSE TOLERANCE</td>
</tr>
<tr>
<td>10:55 - 11:00AM</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>11:00 - 11:20AM</td>
<td>B. Richards</td>
<td>ESTIMATING 25-HYDROXY-VITAMIN D EFFECTS ON COMMON DISEASE IN HUMANS: RESULTS FROM MENDELIAN RANDOMIZATION STUDIES</td>
</tr>
<tr>
<td>11:20 - 11:25AM</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>11:25 - 11:45AM</td>
<td>N. van Schoor</td>
<td>VITAMIN D STATUS IN RELATION TO PHYSICAL FUNCTIONING, FALLS AND FRACTURES: THE LONGITUDINAL AGING STUDY AMSTERDAM</td>
</tr>
<tr>
<td>11:45 - 11:50AM</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>11:50 - 12:20PM</td>
<td></td>
<td><strong>2017 Awards Ceremony</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Afternoon Free</strong></td>
</tr>
</tbody>
</table>
Scientific Program - Friday

Friday, March 31

Session IX: JOINT PLENARY: Vitamin D Workshop and the International Aldosterone Conference
Moderators: J. White and G.P. Rossi

8:00 - 8:45AM  V. Corces  A HIGH-ALTITUDE TALK ON “THE 3D GENOME” AND HIGHER ORDER STRUCTURES IN THE NUCLEUS: MECHANISMS OF LONG-RANGE TRANSCRIPTIONAL REGULATION
8:45 - 8:50AM  Discussion

Session X: THE DEBATE: RCT ARE THE ONLY APPROPRIATE WAY TO DEMONSTRATE THE ROLE OF VITAMIN D IN HEALTH. (PARTICIPANTS WILL ARGUE A FIRM YES OR NO POSITION)
Moderator: R. Bouillon

8:50 - 8:53AM  R. Bouillon  CLARIFY DEBATE BACKGROUND
8:53 - 9:08AM  R. Scragg  CONTRA
9:08 - 9:10AM  Reply
9:10 - 9:25AM  R. Jorde  PRO
9:25 - 9:27AM  Reply
9:27 - 9:40AM  Open Discussion
9:40 - 10:00AM  Coffee Break

Session XI: VITAMIN D AND BREAST CANCER
Moderators: D. Feldman and E. Kallay

10:00 - 10:20AM  J. Welsh  VITAMIN D AND BREAST CANCER – PAST AND PRESENT
10:20 - 10:25AM  Discussion
10:25 - 10:45AM  B. Feldman  TUMOR AUTONOMOUS EFFECTS OF VITAMIN D DEFICIENCY PROMOTE BREAST CANCER METASTASIS
10:45 - 10:50AM  Discussion
10:50 - 11:10AM  L. Tavera-Mendoza  VDR AND AUTOPHAGY IN BREAST CANCER CELLS AND NORMAL MAMMARY GLAND
11:10 - 11:15AM  Discussion

Session XII: VITAMIN D BIOLOGY IN NON-TRADITIONAL MODELS
Moderators: M. Demay and S. Christakos

11:15 - 11:35AM  Y. Nys  EGGSHELL FORMATION IN BIRDS: A CHALLENGE TO CALCIUM HOMEOSTASIS
11:35 - 11:40AM  Discussion
11:40 - 12:00PM  K. Dumas  STUDYING VITAMIN D IN WORMS: BENEFICIAL EFFECTS ON PROTEIN HOMEOSTASIS AND LONGEVITY
12:00 - 12:05PM  Discussion
12:05 - 2:00PM  LUNCH AND POSTER SESSION II VIEWING
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00</td>
<td>I: CLINICAL TRIALS</td>
<td>C. Gallagher</td>
<td>THE YEAR IN VITAMIN D: CLINICAL TRIALS</td>
</tr>
<tr>
<td>2:20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:25</td>
<td></td>
<td>K. Sanders</td>
<td>TOO MUCH OF A GOOD THING? FALLS AND FRACTURES FOLLOWING</td>
</tr>
<tr>
<td>2:45</td>
<td></td>
<td>J. Lappe</td>
<td>A RANDOMIZED CLINICAL TRIAL TO DETERMINE THE EFFECTS OF</td>
</tr>
<tr>
<td>3:00</td>
<td></td>
<td>C. Gallagher</td>
<td>VITAMIN D₃ AND CALCIUM SUPPLEMENTATION ON CANCER INCIDENCE</td>
</tr>
<tr>
<td>3:05</td>
<td></td>
<td>C. Damsgaard</td>
<td>ESTIMATION OF THE DIETARY REQUIREMENT FOR VITAMIN D IN WHITE</td>
</tr>
<tr>
<td>3:15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:20</td>
<td>II: VITAMIN D, INFLAMMATION AND DIABETES</td>
<td>A. Riek</td>
<td>VITAMIN D₃ REPLACEMENT DECREASES A UNIQUE</td>
</tr>
<tr>
<td>3:30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:35</td>
<td></td>
<td>C. Bernal-Mizrachi</td>
<td>MATERNAL VITAMIN D DEFICIENCY INDUCES LOW</td>
</tr>
<tr>
<td>3:45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:50</td>
<td></td>
<td>M. Hewison</td>
<td>ANTI-INFLAMMATORY EFFECTS OF VITAMIN D ARE</td>
</tr>
<tr>
<td>4:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:05</td>
<td></td>
<td>E. Mandell</td>
<td>FETAL VITAMIN D DEFICIENCY IMPAIRS LUNG STRUCTURE AND</td>
</tr>
<tr>
<td>4:15</td>
<td></td>
<td></td>
<td>INCREASES SUSCEPTIBILITY TO HYPEROXIA INJURY IN THE DEVELOPING RAT</td>
</tr>
<tr>
<td>4:20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Session XIV: VITAMIN D, INFLAMMATION AND DIABETES**

Moderators: C. Mathieu and K. Badenhoop

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:20</td>
<td></td>
<td>A. Riek</td>
<td>CIRCULATING MONOCYTE CHOLESTEROL POOL AND PROMOTES THE</td>
</tr>
<tr>
<td>3:30</td>
<td></td>
<td></td>
<td>CLASSICAL MONOCYTE PHENOTYPE IN PATIENTS WITH TYPE 2 DIABETES</td>
</tr>
<tr>
<td>3:35</td>
<td></td>
<td>C. Bernal-Mizrachi</td>
<td>MATERNAL VITAMIN D DEFICIENCY INDUCES LOW</td>
</tr>
<tr>
<td>3:45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:50</td>
<td></td>
<td>M. Hewison</td>
<td>ANTI-INFLAMMATORY EFFECTS OF VITAMIN D ARE</td>
</tr>
<tr>
<td>4:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:05</td>
<td></td>
<td>E. Mandell</td>
<td>FETAL VITAMIN D DEFICIENCY IMPAIRS LUNG STRUCTURE AND</td>
</tr>
<tr>
<td>4:15</td>
<td></td>
<td></td>
<td>INCREASES SUSCEPTIBILITY TO HYPEROXIA INJURY IN THE DEVELOPING RAT</td>
</tr>
<tr>
<td>4:20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Closing Remarks and Announcements