

PROGRAM BOOK  
2018  
VITAMIN D WORKSHOP



*[www.vitaminDworkshop.org](http://www.vitaminDworkshop.org)*

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# Timetable

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## Wednesday, May 16, 2018

1:00 - 8:00PM	Registration / Hospitality Desk.....	Foyer B
5:00 - 8:00PM	Welcome Reception and Plenary Poster Session.....	Room 212 and Foyer B

## Thursday, May 17, 2018

8:00 - 6:00PM	Registration .....	Foyer B
8:00 - 5:50PM	General Session .....	Room 211
	Session I: Basic Research Keynote	
	Session II: Vitamin D and Bone Disease	
	Session III: Bioinformatics	
	Session IV: Vitamin D and Cancer	
	Session V: Vitamin D, Immunology and Respiratory Disease	
10:35 - 11:00AM	Coffee Break .....	Foyer B
12:20 - 2:20PM	Lunch and Poster Session I Viewing .....	Room 212 and Foyer B

Afternoon refreshments are available in Foyer B from 3:30 – 5:00PM.  
Please help yourself as needed.

## Friday, May 18, 2018

7:00 - 12:30PM	Registration / Hospitality Desk.....	Foyer B
8:00 - 5:30PM	General Session .....	Room 211
	Session VI: Vitamin D and Nutrition	
	Session VII: Non-calcemic Target Tissues for Vitamin D	
	Session VIII: New Functions for Vitamin D	
	Session IX: Vitamin D Chemistry and Analogs	
9:50 - 10:20AM	Coffee Break .....	Foyer B
11:45 - 2:00PM	Lunch and Poster Session II Viewing .....	Room 212 and Foyer B
3:50 - 4:05PM	Coffee Break .....	Foyer B
5:00 - 5:30PM	2018 Awards Ceremony .....	Room 211
7:00 - 10:00PM	Networking Dinner Event (must have dinner ticket) .....	Ballroom

## Saturday, May 19, 2018

7:00 - 12:20PM	Registration / Hospitality Desk.....	Foyer B
8:00 - 12:20PM	General Session .....	Room 211
	Session X: Clinical Research Keynote	
	Session XI: Vitamin D and Reproduction	
	Session XII: Optimizing Vitamin D	
10:20 - 10:45AM	Coffee Break .....	Foyer B

## General Information

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### **Welcome Reception and Plenary Poster Session, Wednesday, May 16, 2018**

Please join us for a Welcome Reception Wednesday evening from 5:00 – 8:00 pm in Room 212 and Foyer B. 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 Wednesday evening and will remain up for the duration of the Workshop. Two additional poster sessions will be held during the afternoon lunch periods on Thursday and Friday.

Plenary Session posters may be put up on Wednesday between 3:00 – 5:00 pm and removed on Saturday between 10:45 am and Noon.

Thursday posters may be put up on Thursday morning before 10:00 am and removed that evening. Posters not removed will be discarded.

Friday posters may be put up on Friday morning before 10:00 am removed on Saturday between 10:45 am and noon. Posters not removed will be discarded.

### **Breaks and Social Events**

*Lunches:* Thursday and Friday lunches are included in the registration fee. The lunches will be available each day in Foyer B.

*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 Dinner Event:* Friday, May 18<sup>th</sup>. A networking social event with buffet dinner will be held in the beautiful ballroom adjacent to our meeting area on the second floor of the CCIB. An open balcony offers a splendid view of the sea. This is a ticketed event and may be sold out by the date of the event. Please check with the Registration / Hospitality staff if you wish to purchase a ticket.

# Organizers

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## Workshop Executive Committee

Martin Hewison, UK (CEO and Chair)  
Dan Bikle, USA  
Geert Carmeliet, Belgium  
Marie Demay, USA  
Peter Ebeling, Australia  
Reinhold Erben, Austria

James Fleet, USA  
Christopher Gallagher, USA  
JoEllen Welsh, USA (CFO)  
John White, Canada (Past Chair)  
Roger Bouillon, Belgium (ex-officio)  
Anthony Norman, USA (ex-officio)

## Program Advisory Committee

Paul Anderson, Australia  
Klaus Badenhoop, Germany  
Carlos Bernal-Mizrachi, USA  
Moray Campbell, USA  
Margherita Cantorna, USA  
Carsten Carlberg, Finland  
Kevin Cashman, Ireland  
Sylvia Christakos, USA  
David Feldman, USA  
Bruce Hollis, USA  
Glenville Jones, Canada  
Rolf Jorde, Norway  
Eniko Kallay, Austria  
Mairead Kiely, Ireland  
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  
Malachi McKenna, Ireland  
Antonio Mourino, Spain  
John Pettifor, South Africa  
Wesley Pike, USA  
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  
Carol Montgomery

## University of Birmingham

Amadeo Muñoz Garcia  
Ankana Ganguly  
Carl Jenkinson  
Dean Larner  
Danni Li

## **PLATINUM SPONSORS**

**HEARTLAND ASSAYS - Ames, Iowa**

<http://www.heartlandassays.com/>



**PFIZER**

<http://www.pfizer.com/>



## **GOLD SPONSORS**



The Bioscientifica Trust exists to distribute funds to assist and support early-career scientists and clinicians in biomedicine and the life sciences by helping to facilitate networking, cooperative research, and other interactions through the provision of small grants. The application process aims to be quick and simple and is open to investigators from across the globe. Applications are competitively assessed and awarded over three funding rounds throughout each year.

The Bioscientifica Trust was initiated by [Bioscientifica Limited](#), a provider of publishing, event organization, and association management services to the global scholarly community, with the support of several of its clients. The Trust receives funds from Bioscientifica but is a wholly independent entity with separate governance. The Bioscientifica Trust is a charity registered in the UK with charity number 1175434.

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## **SILVER SPONSOR**



# MAJOR FUNDING FOR THE VITAMIN D WORKSHOP IS PROVIDED BY THE NATIONAL INSTITUTE ON AGING



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.*

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## **EXHIBITORS**

**PLEASE VISIT THE BOOTHS IN THE REGISTRATION AREA**

**Heartland Assays**

**DIASource**

**Internis**

**FAES FARMA**

**OPKO Health**



# Scientific Program – Wednesday and Thursday

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## Wednesday, May 16

1:00 - 8:00PM Registration / Hospitality Desk Opens  
5:00 - 8:00PM Welcome Reception and Plenary Poster Session

## Thursday, May 17

8:00 - 8:15AM **OPENING REMARKS**  
M. Hewison, Workshop Chair

**Session I:** **BASIC RESEARCH KEYNOTE**  
Moderator: C. Carlberg

8:15 - 8:55AM M. Demay A YEAR IN VITAMIN D: BASIC/TRANSLATIONAL  
8:55 - 9:00AM *Discussion*

**Session II:** **VITAMIN D AND BONE DISEASE**  
Moderators: R. Bouillon and N. Shaw

9:00 - 9:20AM W. Höglér PREVENTION OF NUTRITIONAL RICKETS  
9:20 - 9:25AM *Discussion*

9:25 - 9:45AM P. Anderson VITAMIN D METABOLISM AND ACTIVITY IN BONE  
9:45 - 9:50AM *Discussion*

9:50 - 10:00AM J. Roizen VITAMIN D DEFICIENCY DUE TO A RECURRENT GAIN OF FUNCTION  
10:00 - 10:05AM *Discussion* MUTATION IN CYP3A4 CAUSES A NOVEL FORM OF VITAMIN D  
DEPENDENT RICKETS

10:05 - 10:15AM L. Verlinden VITAMIN D RECEPTOR SIGNALING IN OSTEOCYTES CONTRIBUTES TO  
10:15 - 10:20AM *Discussion* MATERNAL BONE LOSS DURING LACTATION

10:20 - 10:30AM A. Molin MOLECULAR STUDY OF A COHORT OF 185 PATIENTS WITH SUSPECTED  
10:30 - 10:35AM *Discussion* 25-HYDROXYVITAMIN D 24-HYDROXYLASE DEFICIENCY

10:35 - 11:00AM Coffee Break

**Session III:** **BIOINFORMATICS**  
Moderators: J. White and M. Tenniswood

11:00 - 11:20AM A. Uitterlinden GENETICS OF VITAMIN D LEVEL AND ACTION  
11:20 - 11:25PM *Discussion*

11:25 - 11:45AM S. Coort PATHWAY ANALYSIS FOR VITAMIN D  
11:45 - 11:50AM *Discussion*

11:50 - 12:00PM C. Carlberg MACHINE LEARNING APPROACHES TO INFER VITAMIN D SIGNALING:  
12:00 - 12:05PM *Discussion* CRITICAL IMPACT OF TIME-DEPENDENT VDR BINDING

12:05 - 12:15PM M. Campbell VDR REGULATION OF MICRORNA AND TMPRSS2 FUSION NEGATIVE  
12:15 - 12:20PM *Discussion* PROSTATE CANCER IN AFRICAN AMERICAN MEN

12:20 - 2:20PM **LUNCH AND POSTER SESSION I VIEWING**

**Session IV:**

**VITAMIN D AND CANCER**

Moderators: G. Studzinski and J. Welsh

2:20 - 2:40PM A. Muñoz MECHANISMS OF ACTION OF VITAMIN D IN COLON CANCER  
2:40 - 2:45PM *Discussion*

2:45 - 2:55PM G. Laverny CONTROL OF PROSTATIC PRECANCEROUS LESIONS BY VITAMIN D  
2:55 - 3:00PM *Discussion* SIGNALING

3:00 - 3:10PM J. White THE TUMOR SUPPRESSOR FBW7 AND THE VITAMIN D RECEPTOR ARE  
3:10 - 3:15PM *Discussion* MUTUAL COFACTORS

3:15 - 3:25PM V.K. Vincent-Chong PRECLINICAL PREVENTION TRIAL OF CALCITRIOL: IMPACT OF STAGE OF  
3:25 - 3:30PM *Discussion* INTERVENTION AND DURATION OF TREATMENT ON ORAL  
CARCINOGENESIS

3:30 - 3:40PM L. Zgaga ANNUAL AMBIENT UVB AT A PLACE OF RESIDENCE AND RISK OF  
3:40 - 3:45PM *Discussion* BREAST, COLORECTAL, LUNG AND PROSTATE CANCER: A LARGE  
PROSPECTIVE COHORT STUDY

3:45 - 3:55PM J. Vanhevel INECALCITOL COMBINED WITH PALBOCICLIB BLOCKS CELLULAR  
3:55 - 4:00PM *Discussion* GROWTH IN TRIPLE-NEGATIVE BREAST CANCER

**Session V:**

**VITAMIN D, IMMUNOLOGY AND RESPIRATORY DISEASE**

Moderators: M. Cantorna and C. Bernal-Mizrachi

4:00 - 4:20PM A. Martineau VITAMIN D AND RESPIRATORY INFECTIONS  
4:20 - 4:25PM *Discussion*

4:25 - 4:45PM W. Janssens VITAMIN D AND COPD  
4:45 - 4:50PM *Discussion*

4:50 - 5:00PM C. Carlberg *IN VIVO* RESPONSE OF THE HUMAN EPIGENOME TO VITAMIN D:  
5:00 - 5:05PM *Discussion* LINK TO IMMUNITY

5:05 - 5:15PM R. Mellanby 1,25 DIHYDROXYVITAMIN D3 RESTRAINS T CELL PRIMING ABILITY OF  
5:15 - 5:20PM *Discussion* CD11C+ DENDRITIC CELLS BY UPREGULATING EXPRESSION OF CD31

5:20 - 5:30PM J. Serré AIRWAY INFECTION WITH NONTYPEABLE *HAEMOPHILUS INFLUENZAE* IS  
5:30 - 5:35PM *Discussion* MORE RAPIDLY ERADICATED IN VITAMIN D DEFICIENT MICE

5:35 - 5:45PM D. Jolliffe VITAMIN D SUPPLEMENTATION TO PREVENT COPD EXACERBATIONS:  
5:45 - 5:50PM *Discussion* SYSTEMATIC REVIEW AND META-ANALYSIS OF INDIVIDUAL  
PARTICIPANT DATA

## Scientific Program – Friday

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### Session VI:

#### VITAMIN D AND NUTRITION

Moderators: I. Schoenmakers and K. Cashman

8:00 - 8:20AM	M. Kiely	ODIN PROJECT AND FOOD FORTIFICATION
8:20 - 8:25AM	<i>Discussion</i>	
8:25 - 8:45AM	J. Linseisen	DIETARY VITAMIN D: AN EPIC PERSPECTIVE
8:45 - 8:50AM	<i>Discussion</i>	
8:50 - 9:00AM	N. Shaw	NUTRITIONAL RICKETS PRESENTING TO SECONDARY CARE IN CHILDREN
9:00 - 9:05AM	<i>Discussion</i>	– A UK AND IRELAND SURVEILLANCE STUDY
9:05 - 9:15AM	A. Martineau	HIGH-DOSE VITAMIN D <sub>3</sub> IN THE TREATMENT OF SEVERE ACUTE
9:15 - 9:20AM	<i>Discussion</i>	MALNUTRITION: A MULTI-CENTER DOUBLE-BLIND RANDOMIZED CONTROLLED TRIAL
9:20 - 9:30AM	J. Jakobsen	VITAMIN D VITAMERS AFFECT VITAMIN D STATUS DIFFERENTLY
9:30 - 9:35AM	<i>Discussion</i>	IN YOUNG HEALTHY MALES
9:35 - 9:45AM	H. Mazahery	A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL OF
9:45 - 9:50AM	<i>Discussion</i>	VITAMIN D AND N-3 LONG CHAIN POLYUNSATURATED FATTY ACIDS IN THE TREATMENT OF IRRITABILITY AND HYPERACTIVITY IN CHILDREN WITH AUTISM SPECTRUM DISORDER
9:50 - 10:20AM	Coffee Break	

### Session VII:

#### NON-CALCEMIC TARGET TISSUES FOR VITAMIN D

Moderators: G. Jones and M. Demay

10:20 - 10:40AM	D. Eyles	VITAMIN D AND THE DEVELOPING BRAIN:- 17 YEARS ON!
10:40 - 10:45AM	<i>Discussion</i>	
10:45 - 10:55AM	M. Tamayo	BENEFICIAL EFFECTS OF PARICALCITOL IN A SETTING OF CARDIAC
10:55 - 11:00AM	<i>Discussion</i>	DYSFUNCTION INDUCED BY TRANSVERSE AORTIC CONSTRICTION IN MICE
11:00 - 11:10AM	V. Nair-Shalliker	HIGH VITAMIN D LEVELS ARE ASSOCIATED WITH IMPROVED OVERALL
11:10 - 11:15AM	<i>Discussion</i>	SURVIVAL OF MEN WITH AGGRESSIVE PROSTATE CANCER: A PROSPECTIVE LONG-TERM FOLLOWUP OF AN AUSTRALIAN COHORT (PCOSun)
11:15 - 11:25AM	N. Carrillo-Lopez	DEFECTIVE VITAMIN D INDUCTION OF VASCULAR MICRO RNA-145
11:25 - 11:30AM	<i>Discussion</i>	CONTRIBUTES TO THE ONSET AND PROGRESSION OF VASCULAR CALCIFICATION IN EXPERIMENTAL KIDNEY DISEASE
11:30 - 11:40AM	J. Bass	VITAMIN D RECEPTOR MEDIATED REGULATION OF SKELETAL MUSCLE
11:40 - 11:45AM	<i>Discussion</i>	MASS
11:45 - 2:00PM	<b>LUNCH AND POSTER SESSION II VIEWING</b>	

**Session VIII:****NEW FUNCTIONS FOR VITAMIN D**

Moderators: G. Carmeliet and R. Mason

2:00 - 2:20PM	M. Uesugi	25-HYDROXYVITAMIN D AND LIPID METABOLISM
2:20 - 2:25PM	<i>Discussion</i>	
2:25 - 2:45PM	C. Mathieu	VITAMIN D, CELL METABOLISM AND IMMUNE FUNCTION
2:45 - 2:50PM	<i>Discussion</i>	
2:50 - 3:00PM	A. García	TOLEROGENIC EFFECTS OF 1,25-DIHYDROXYVITAMIN D ARE ASSOCIATED WITH ALTERED DENDRITIC CELL METABOLISM
3:00 - 3:05PM	<i>Discussion</i>	
3:05 - 3:15PM	S. Davies	VITAMIN D BINDING PROTEIN IMPROVES SURVIVAL AFTER BONE MARROW TRANSPLANTATION THROUGH ACTIN SCAVENGING AND MODIFICATION OF MACROPHAGE PHENOTYPE
3:15 - 3:20PM	<i>Discussion</i>	
3:20 - 3:30PM	K. Dube	REGULATION OF THE <i>UDP-GLUCURONOSYLTRANSFERASE 1A (UGT1A)</i> GENE EXPRESSION BY VITAMIN D RECEPTOR (VDR)
3:30 - 3:35PM	<i>Discussion</i>	
3:35 - 3:45PM	S. Huish	VITAMIN D SUPPLEMENTATION CORRECTS 1,25-DIHYDROXYVITAMIN D DEFICIENCY AND REDUCES ERYTHROPOIETIN REQUIREMENT IN HAEMODIALYSIS PATIENTS
3:45 - 3:50PM	<i>Discussion</i>	
3:50 - 4:05PM	Coffee Break	

**Session IX:****VITAMIN D CHEMISTRY AND ANALOGS**

Moderator: M. Maestro

4:05 - 4:25PM	A. Arnold	CALCITROIC ACID AND ITS PHASE II METABOLITES
4:25 - 4:30PM	<i>Discussion</i>	
4:30 - 4:40PM	M. Kaufmann	CALCIOIC ACID: IN VIVO DETECTION & QUANTIFICATION OF THE TERMINAL C24-OXIDATION PRODUCT OF 25-HYDROXYVITAMIN D <sub>3</sub> AND RELATED INTERMEDIATES IN SERUM OF MICE TREATED WITH 24,25-DIHYDROXYVITAMIN D <sub>3</sub>
4:40 - 4:45PM	<i>Discussion</i>	
4:45 - 4:55PM	R. Tuckey	CATALYTIC PROPERTIES OF 25-HYDROXYVITAMIN D <sub>3</sub> 3-EPIMERASE IN RAT AND HUMAN LIVER MICROSOMES
4:55 - 5:00PM	<i>Discussion</i>	
5:00 - 5:30PM	<b>2018 AWARDS CEREMONY</b>	
7:00 - 10:00PM	<b>NETWORKING DINNER EVENT</b>	

## Scientific Program – Saturday

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### Session X:

#### CLINICAL RESEARCH KEYNOTE

Moderator: R. Jorde

8:00 - 8:40AM P. Ebeling A YEAR IN VITAMIN D: CLINICAL  
 8:40 - 8:45AM *Discussion*

### Session XI:

#### VITAMIN D AND REPRODUCTION

Moderators: M. Hewison and M. Kiely

8:45 - 9:05AM C. Wagner PREVENTING HEALTH DISPARITIES DURING PREGNANCY  
 9:05 - 9:10AM *Discussion* THROUGH VITAMIN D (VITD) SUPPLEMENTATION: RESULTS FROM  
 CLINICAL INTERVENTION TRIALS

9:10 - 9:30AM C. Hawrylowicz MATERNAL VITAMIN D AND NEONATAL IMMUNITY  
 9:30 - 9:35AM *Discussion*

9:35 - 9:45AM I. Schoenmakers THE FETAL AND MATERNAL RESPONSE TO VITAMIN D  
 9:45 - 9:50AM *Discussion* SUPPLEMENTATION

9:50 - 10:00AM A. Ganguly PRO-INVASIVE EFFECTS OF 1,25-DIHYDROXYVITAMIN D ON PLACENTAL  
 10:00 - 10:05AM *Discussion* TROPHOBLAST CELLS ARE ASSOCIATED WITH LACK OF CYP24A1

10:05 - 10:15AM R. Mellanby VITAMIN D STATUS IS UNDER VARIABLE NATURAL SELECTION PRESSURE  
 10:15 - 10:20AM *Discussion* IN WILD SHEEP

10:20 - 10:45AM Coffee Break

### Session XII:

#### OPTIMIZING VITAMIN D

Moderators: K. Badenhop and D. Bikle

10:45 - 11:05AM K. Cashman VITAMIN D INTAKE TO OPTIMIZE VITAMIN D STATUS  
 11:05 - 11:10AM *Discussion*

11:10 - 11:20AM M. Kaufmann DIFFERENTIAL DIAGNOSIS OF VITAMIN D-RELATED HYPERCALCEMIA  
 11:20 - 11:25AM *Discussion* USING PRECISION VITAMIN D METABOLITE PROFILING

11:25 - 11:35AM R. Rafiq ASSOCIATIONS OF DIFFERENT BODY FAT DEPOSITS WITH SERUM 25-  
 11:35 - 11:40AM *Discussion* HYDROXYVITAMIN D CONCENTRATIONS

11:40 - 11:50AM D. Enkhmaa RANDOMIZED TRIAL OF THREE DOSES OF VITAMIN D TO REDUCE  
 11:50 - 11:55AM *Discussion* DEFICIENCY IN PREGNANT MONGOLIAN WOMEN

11:55 - 12:05PM R. Mason A KEY ROLE FOR PHOSPHORUS NUTRITION IN MAINTAINING VITAMIN D  
 12:05 - 12:10PM *Discussion* STATUS

12:10 - 12:20PM **CLOSING REMARKS AND ANNOUNCEMENTS**