CURRICULUM VITAE

David W. Dempster, B.Sc. (Hons), Ph.D., F.R.M.S.

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- https://www.pathology.columbia.edu/our-faculty?keywords=Dempster

1. Date of preparation: March 3, 2021

2. Name: David William Dempster
   Birth date: March 17, 1952
   Birthplace: Crawford, Scotland
   Citizenship: U.S.A.

3. Academic training:

University of Glasgow:	
B.Sc. (First Class Honors in Physiology)	1974
Ph.D. (Physiology)	1979
Thesis: Electron microscopical and biochemical studies on rachitic rat bone (Mentor: Dr. HY Elder)	

4. Traineeship

Research Assistant, University of Glasgow	1974 -1979

Postdoctoral Fellow, University of Zurich (Dr JA Fischer)	1980 -1981
Visiting Fellow, University of Lyon (Dr PJ Meunier)	1981

5. Professional organizations and societies:

Member, American Society for Bone & Mineral Research	1981-present
Member, Endocrine Society	1985-2005
Fellow, Royal Microscopical Society (FRMS)	2004-present
Member, International Society of Clinical Densitometry	2003-present

6. Academic Appointments

Professor of Clinical Pathology, Columbia University	1995-present
Associate Professor of Clinical Pathology, Columbia University	1989 - 1995
Assistant Professor of Clinical Pathology, Columbia University	1982 - 1989
Lecturer in Physiology, University of Glasgow	1979 - 1980

7. Hospital Appointments

Distinguished Research Scientist, Regional Bone Center Helen Hayes Hospital	2010 - 2021
Director, Regional Bone Center, Helen Hayes Hospital	1987 - 2010
Research Scientist VI, Regional Bone Center Helen Hayes Hospital	1990 - 2010
Research Scientist V, Regional Bone Center, Helen Hayes Hospital	1982 - 1990

8. Honors/Service

Member, International Advisory Board of Glucocorticois Induced Osteoporosis Skeletal Endocrinology Group (G.I.O.S.E.G)	2021
Elected "Fellow of the ASBMR"	2019
Editor-in-Chief, Osteoporosis ("Big Red"), Vth Edn.	2019
Dr. Aurelio Rapada Memorial Lecture, "From Classical	

Histomorphometry to the Present" October 21, Gran Canaria, Spain.	2016
Presenter, First joint webinar sponsored by the European Calcified Tissue Society (ECTS), the International Bone and Mineral Society (IBMS) and Nature.com. "Cortical Bone Modeling and Remodeling in the Adult Skeleton," Live broadcast" September 17th, 2015.	2015
Speaker and panelist, First International Conference on the Diagnosis, Management and Treatment of Hypoparathyroidism, Florence, Italy, May 8th, 2015.	2015
Speaker and Panelist, Fourth International Workshop on the Management of Asymptomatic Primary Hyperpara-thyroidism, Florence, Italy, September 19-21, 2013.	2013
Visiting Professor, King's College, Cambridge, April 15, 2013	2013
Chairperson, 2012 Update of ASBMR Report on Standardized Nomenclature, Symbols and Units for Bone Histomorphometry (See Publication # 144)	2012
Co-editor, *Osteoporosis* ("Big Red") IVth Edition, Elsevier	2013
The First SIGMA Distinguished Lecture, Vancouver, Canada, December 8, 2011."Bone Turnover: the Good, the Bad and the Ugly"	2011
Member, ASBMR Task Force on Atypical Subtrochanteric and Diaphyseal Fractures	2010 and 2012
The Louis V. Avioli Bone Lecture, Washington University, St Louis, May 14, 2010. "PTH: Feast or Famine; An Histomorphometrist's View"	2010
Member, ASBMR Task Force on Bisphosphonate-Associated Osteonecrosis of the Jaw (see Publication # 104)	2008
Member, Canadian Consensus Panel on Practice Guidelines for Bisphosphonate-Associated Osteonecrosis of the Jaw (see Publication #'s 109 and 119)	2008
Member, Expert Panel: Defining Fractures Attributable to Osteoporosis, University of Alabama	2008
Member, Advisory Group for NIAMS U01 "HR-pQCT as a biomarker of bone strength in osteoporosis trials.	2007 - 2010
Guest Editor, *Clinical Reviews in Bone and Mineral Metabolism,* Humana Press.	2006

Member, Scientific Advisory Council of the National Osteoporosis Foundation	2005 - present
Elected Member, Association of Osteobiology	2003 - present
1986 paper "A simple method for correlative light and scanning electron microscopy of human iliac crest bone biopsies" selected as one of the 21 most influential papers to be published in the first 10 years of the JBMR.	2003
Images from this article appeared in the first U.S. Surgeon General's Report on Bone Health and Osteoporosis	2004
New York State Department of Health Award of Excellence	2000
Member, National Osteoporosis Foundation's Continuing Medical Education Committee	2000-2003
Member, Education Committee of the American Society for Bone & Mineral Research	2001-2002
Founding Member, Board of Directors, International Society of Musculoskeletal and Neuronal Interactions	2000-2002
Honorary Member, International Chinese Hard Tissue Society	1999-present
President, International Society of Bone Morphometry http://www.bonemorphometry.com/index.html	1996-1999
Member, Scientific Advisory Board of the National Osteoporosis Foundation.	1991-1997
Member, Public Affairs and Development Committee, American Society for Bone & Mineral Research	1988 – 1989

9. Grant support

1. National Institutes of Health, "Bone Structure and Strength in Different Racial Groups" (AR 35647), 1986-1989, direct costs: $106,436 (Dr. Dempster was the Principal Investigator).

2. National Institutes of Health, "Osteoclasts, glucocorticoids and apoptosis" (RO1 AR41331), 1994-1998, direct costs: $364,293 (Dr. Dempster is the Principal Investigator).

3. National Institutes of Health, "Skeletal homeostasis in blacks and whites" (AR41386), 1991-1995, direct costs: $992,062 (Dr. Dempster was a Co-investigator).

4. Sandoz Pharmaceutical Corporation, "Prevention of bone loss as a result of estrogen deficiency in a rat model by intervention with calcitonin, alendronate and estrogen", 1995-1997, direct costs: $111,145 (Dr. Dempster was the Principal Investigator).

5. Amgen, Inc. "The effects of osteoprotegerin on rat and human osteoclasts", 1997-1998, direct costs: $55,283 (Dr. Dempster was the Principal Investigator)

6. National Institutes of Health, "Bone structure in primary hyperparathyroidism" (AM32333), 1997-2002, direct costs: $288,966 (Dr. Dempster was the Principal Investigator on this Sub-contract from Columbia University).

7. Amgen, Inc. Bone resorption assay service contract, 1999-2000, $116,640.

8. Amgen, Inc. "Unrestricted gift to support research work in Dr. David Dempster's laboratory", 1998, $50,000.

9. National Institutes of Health, "The mode of action and regulation of the osteoclast" (AR 39191), 1987-1997, 1998-2004 direct costs: $372,832 (Dr. Dempster was the Principal Investigator on this project which is one of four projects in a Specialized Center of Research (SCOR) grant on osteoporosis)

10. National Institutes of Health, "Bone histomorphometry core facility" (AR39191), 1987-1997, 1998-2004, direct costs: $395,844 (Dr. Dempster was the Principal Investigator on this Core

11. National Instututes of Health (1 P01 AR 049363-01A1), Title: Paget's Histomorphometry Core 2004-2008. Role on Project: Dr. Dempster serves as PI on the subcontract for bone histomorphometry. Grant Number: **RO1 AR 49896-01**

12. Title: Idiopathic Osteoporosis in Premenopausal Women
Principal Investigator: Elizabeth Shane, M.D.
Dates of Funding: 12/04-11/09
Funding Agency: NIH/NIAMS
Goal of Project: To study the pathogenesis and histological features of osteoporosis in premenopausal women.
Role on Project: Dr. Dempster served as PI on the subcontract for bone histomorphometry.

13. Grant Number: **DK 32333-20**
Title: Primary Hyperparathyroidism
Principal Investigator: John P. Bilezikian, M.D.
Dates of Funding: 2008-2013
Funding Agency: NIH-NIDDK
Goal of Project: To study the changes in bone structure and remodeling in primary hyperparathyroidism.
Role on Project: Dr. Dempster served as PI on the subcontract for bone histomorphometry.

14. Grant Number: **1 R01 AI06520001**
Title: Characterization of bone in hypoparathyroidism: Effects of PTH
PI: John Bilezikian, MD
Dates of Funding: 7/05-6/15
Funding Agency: NIH/NIAMS
Goal of Project: To study the histological features of hypoparathyroidism and the response to PTH administration.
Role on Project: Dr. Dempster served as PI on the subcontract for bone histomorphometry. Grant Number: **R01 AR051454**

15. Title: A mechanistic study of skeletal actions of 1-34hPTH
PI: Robert Lindsay, MD, PhD
Dates of Funding: 12/01/05-11/30/10
Funding Agency: NIH/NIAMS
Goal of Project: To determine the cellular and histologic effects of PTH in combination with acute and chronic administration of bisphosphonates and to determine if cyclic PTH administration is as effective as daily PTH on bone density and bone structure.
Role on Project: Dr. Dempster served as Co-investigator.

16. Grant Number: **U01 AR055968**
Title: Ultra-high Resolution pQCT as a Biomarker of Bone Strength in Osteoporosis
PI: Elizabeth Shane, MD
Dates of Funding: 04/01/07-03/31/10
Funding Agency: NIH/NIAMS
Goal of Project: The goal of this project is to investigate the utility of ultra-high resolution peripheral QCT as a marker of bone strength in women with osteoporosis and those with mild to moderate chronic kidney disease.
Role on Project: Dr. Dempster served on the Advisory Committee

17. Grant Number: **RO1 AR053537-02**
Title: Mutant p62 and the Role of the Bone Microenvironment in Paget's Disease
PI: Jolene Windle, PhD
Dates of Funding: 10/01/06 - 09/30/10
Funding Agency: NIH/NIAMSD
Goal of Project: To generate a genetically accurate mouse model of Paget's disease and to use this model to gain a better understanding of the pathogenesis of this disease.
Role on Project: Dr. Dempster served as PI of the Histomorphometry Core.

18. Grant Number **AR059204-01**
Title: Early Effects of PTH on the proximal femur
Dates of funding: 04/22/10-4/21/15
PI: Felicia Cosman, MD
Funding agency: NIH-NIAMS

Goal of project: Teriparatide (Forteo) is a potent osteoporosis medication that helps prevent fractures. However, we know little about its effect on the hip. The purpose of this study is to determine what changes Teriparatide has on hip structure and how teriparatide might help reduce hip fracture risk. We will evaluate hip bone samples from patients that we will be treating with either teriparatide (Forteo) or a placebo (an inactive substance) before their surgical hip replacement. Role: Co-investigator

19. Grant number: N/A

Title: Analysis of Bone Biopsies in Patients Treated with Teriparatide or Zoledronic Acid
Dates of funding: 5/11/2010 – date
PI: David Dempster
Funding agency: Eli Lilly and Co.
Goal of Project: To compare the effects of 6 months' treatment with teriparatide and zoledronic acid on human iliac crest remodeling activity.

20. Grant Number: **1R01 AR056651-01A2**
Title: A mechanistic study of skeletal actions of 1-34h PTH
Dates of funding:
Funding agency: NIH-NIAMS
PI: Robert Lindsay, MD

Goal of project: This project seeks to extend and expand on our NIH study to obtain long term data on TPTD effects on bone mass, structure and strength when TPTD is given daily or cyclically (3 monthly cycles for 4 years - equivalent to 2yrs of daily treatment. We will also address the question of whether multiple cycles of TPTD treatment can produce repeated stimulation of bone formation and perhaps less stimulation of resorption than is seen with daily treatment. Role: Co-investigator responsible for biochemical marker measurement and bone histomorphometry

21. Grant Number: **1 R01 DK084986-01A1**
Title: Vitamin D Deficiency in Primary Hyperparathyroidism
Dates of funding: July 1, 2010-June 30, 2015
Funding agency: NIH-NIDDK
PI: Shonni Silverberg, MD
Goal of project: This project seeks to determine the skeletal effects of vitamin D deficiency in patients with mild primary hyperparathyroidism and how these effects are modified by vitamin D treatment.
Role: Co-investigator responsible for bone histomorphometry.

22. Grant number: N/A
Title: A Comparison of the Mechanism of Action of Teriparatide and Denosumab in Postmenopausal Women with Osteoporosis Using Quadruple Fluorochrome Labeled Bone Histomorphometry: The AVA Study
Analysis of Bone Biopsies in Patients Treated with Teriparatide or Zoledronic Acid
Dates of funding: 5/11/2010 – date
PI: David Dempster
Funding agency: Eli Lilly and Co.
Goal of Project: To compare the effects of treatment with teriparatide and denosumab on human iliac crest modelling and remodeling activity.

10. <u>Departmental and University Committees</u>

Research Committee, Helen Hayes Hospital	1986-1996
Laboratory Committee, Helen Hayes Hospital	1989-1996
Chairman, Institutional Animal Care and Use Committee, Helen Hayes Hospital	1995-1997
Chairman, Hospital Quality Management Committee Helen Hayes Hospital	1998-2010
New York State Department of Health Research	

Agenda Task Force (Laboratory Based Research Subcommittee)	1997
Chairman, Radiation Safety Committee, HHH	1997-1999
Radiation Safety Officer, Helen Hayes Hospital	1999-2011

11. Teaching experience and responsibilities

Undergraduate (CPMC)

Pathology/Abnormal Human Biology: annual lecture on "Bone cell biology", 1982-2016

Systemic Pathology Seminar on Metabolic Bone Disease, September-November, 1984.

Fourth Year Elective Course (Advanced Pathophysiology - Metabolic Bone Disease), 1991

Postgraduate

PhD student: Carolina Kulak, MD. Project: "Bone Structure and Remodeling in Postmenopausal Women with COPD" 2010 http://www.sempr.org.br/Noticias/1566/medica-do-sempr-faz-pesquisa-em-histomorfometria-ossea-em-nova-york

Post-doctoral fellows: The following postdoctoral and visiting fellows were trained in Dr. Dempster's laboratory over the indicated periods. The resulting publications are given in parentheses.

Timothy R Arnett, PhD	1984-86 (See Publication Nos. 17,19)
Richard J Murrills, PhD	1986-91 (See Publication Nos. 20,24,27,31,34,40,49)
Robert WE Mellish, PhD	1988-90 (See Publication Nos. 32,35,41,64,66)
Majeedul Chowdhury, PhD	1988-91 (See Publication Nos. 33,38)
Veronique Breuil, MD	1997-1998 (See Publication Nos. 70,72)
Hua Zhou, MD	1999-date (See Publication Nos. 76,77,80,82,84,89,90, 91,97,101,102,103,105,107, 110, 111,112,113,114)
Shi Shu Lu, MD	2005-date (See Publication Nos. 79,80,82,85,92,93,99)

Orthopedic residents: Dr. Dempster directed and taught a course on Metabolic Bone Diseases for CPMC Orthopedic Residents during their rotation at the Helen Hayes Hospital. The course, which consisted of two didactic sessions and one practical session, was given approximately six times each year from 1984-1993.

Endocrine Fellows

Dr. Dempster serves as a faculty member for the Endocrine Fellows Foundation Preceptorship, an annual course in Metabolic Bone Disease sponsored by the Endocrine Fellows Foundation. http://www.endocrinefellows.org/

CME Teaching

Dr. Dempster served as Program Chair for a CME course entitled "The Bone Course: Recent Advances in the Management and Treatment of Bone Diseases", which was sponsored by the University of Massachusetts Medical School. The course included lectures on postmenopausal osteoporosis and osteoporosis in men, glucocorticoid-induced and other forms of osteoporosis, renal osteodystrophy, cancer and bone, and Paget's disease. The courses were given in

Fort Lauderdale, FL	October 20, 2007
Chicago, IL	November 27, 2008
Tampa, FL	October 11, 2008

Dr. Dempster directed a CME course entitled "Osteoporosis: Turning Up the Volume on a Silent Disease." The course, which was sponsored by the University of Massachusetts Medical School, was given in the following cities:

Denver, CO	June 10, 2006
Cleveland, OH	August 26, 2006
Pittsburgh, PA	September 30, 2006
Charleston, SC	October 7, 2006

Dr. Dempster directed a CME course entitled "Osteoporosis: Where do we stand five years into the new millennium? " The course, which was sponsored by the University of Massachusetts Medical School, was given in the following cities:

Philadelphia, PA	August 20, 2005
Kansas City, MO	October 1, 2005
St. Louis, MO	October 15, 2005
Dallas, TX	October 29, 2005
Chicago, IL	November 19, 2005

Dr. Dempster organized and chaired the VIIIth Congress of the International Society of Bone Morphometry, Scottsdale, Arizona, October 6-10, 1999. Scientists from 23 countries attended this meeting.

Dr. Dempster co-organized and lectured in a series of national conferences, sponsored by the National Osteoporosis Foundation on the "Clinical Management of the Patient with Osteoporosis". The conferences, which were each attended by several hundred physicians and other health care professionals, were held in the following venues:

San Francisco, CA	May, 1992
Chicago, IL	September, 1992 and October, 1993
San Antonio, TX	November, 1992
Fort Myers, FL	February 1993
Seattle, WA	June, 1993
Scottsdale, AZ	November, 1993

Dr. Dempster organized and co-chaired an NOF-sponsored conference on "Bone Mass Measurement in Osteoporosis and Other Bone Diseases", which was held in Los Angeles, November 9-11, 1995.

High School

Lindsay MacLeod, a summer student in Dr. Dempster's laboratory, was selected as a finalist at the 2005 Intel International Science and Engineering Fair (Intel ISEF), the world's largest pre-college science competition for a project entitled "The Effects of Ipriflavone on Human Osteoclastic Bone Resorption and Cell Morphology In Vitro." Lindsay

competed with over 14,000 students from 40 countries. Her project was awarded second prize from the Endocrine Society.

12. Other professional activities:

Associate Editor, *OSTEOPOROSIS INTERNATIONAL*	1990-present
Associate Editor, *ARCHIVES IN OSTEOPOROSIS*	2006-present
Editorial Board Member, *JOURNAL OF BONE AND MINERAL RESEARCH*	2009-2015
Editorial Board Member, *FRONTIERS IN ENDOCRINOLOGY –BONE RESEARCH*	2012-2015
Editorial Board Member, *ENDOCRINOLOGY*	1986-1990
Editorial Board Member, *JOURNAL OF BONE AND MINERAL RESEARCH*	1990-1995
Editorial Board Member, *BONE*	1993-present
Editorial Board Member, *JOURNAL OF CLINICAL DENSITOMETRY*	2002-present

Member, Scientific Organizing Committee, XIth Congress of the International Society for Bone Morphometry, Zell am See, Austria, May 30, 2009.

New York State Licensed Clinical Laboratory Technologist (License # 006924) 2007-date

Member, Review Committee, ASBMR Harold Frost Young Investigator Awards, 2004.

Member, Advisory Committee for NIAMS UO1 AR055968 "Ultra-high Resolution pQCT as a Biomarker of Bone Strength in Osteoporosis Trials." November 2007-date.

Ad Hoc Reviewer, NIH Skeletal Biology Structure and Regeneration Study Section (SBSR), February 2004

Ad Hoc Reviewer, Orthopedic and Musculoskeletal Study Section,
N.I.A.M.S., June 1994

Ad Hoc Reviewer for Medical Research Council of Canada, Medical Research Council (U.K.), Veteran's Administration, National Osteoporosis Foundation.

NIH Site Visitor, Yale University School of Medicine, April, 1989.

Member, Scientific Program Committee for annual meeting of the American Society for Bone and Mineral Research, 1988, 1991, 1992, 1994, 1996, 1998, 1999, 2000, 2002 , 2005

Member, International Scientific Committee and Invited Speaker, Perth International Bone Meeting: *"Bone Fragility in the Year 2000",* Fremantle, Western Australia, February 10-13, 1995

Member, Scientific Committee and Invited Speaker, First International Congress on Glucocorticoid-induced Osteoporosis, Gardone Riviera, Lake Garda, Italy, April 8-10, 1999.

Chairman, VIIIth Congress of the International Society of Bone Morphometry, Scottsdale, Arizona, October 6-10, 1999.

Member, Scientific Advisory Committee, IXth Congress of the International Society of Bone Morphometry, Edinburgh, Scotland, April, 2002.

Co-chair, ASBMR Mini-symposium: New Osteoclast Targets at the 24th Annual Meeting of the ASBMR, San Antonio, TX, September 20, 2002.

Co-chair, State of the Art Lectures on Glucocorticoid Action, 25th Annual Meeting of The American Society of Bone and Mineral Research, September 20th, 2003, Minneapolis, MN.

Co-chair, Session II, Fourth European Congress on Clinical and Economic Aspects of Osteoporosis and Osteoarthritis, Nice, France, November 15, 2003.

Co-chair, Scientific Organizing Committee, Xth International Congress of the International Society of Bone Morphometry, Philadelphia, PA, September 19-22, 2006.

Member, ASBMR Task Force on Bisphosphonate-Associated Osteonecrosis of the Jaw 2007

Co-Chair, ASBMR Debate "Excessive Suppression of Bone Remodeling by Antiresorptive Agents – Fact or Fiction? Arguing fact: Ego Seeman; Arguing fiction Socrates Papapoulos, September 16, 2007, Honolulu, Hawaii

Co-chair, ASBMR symposium "Scanning the Horizons of Bone Imaging", #1st Annual Meeting of ASBMR, Denver, CO, September 11, 2009

13. Publications:

Original, Peer-reviewed Papers:

* Denotes senior author

1.* **Dempster, D.W.**, Elder, H.Y., and Smith, D.A. Scanning electron microscopy of rachitic rat bone In: *Scanning Electron Microscopy* Vol. II (Ed. O. Johari), SEM, Inc., AMF O'Hare, IL, 513-520, 1979.

2.* **Dempster, D.W**., Elder, H.Y., Nicholson, W.A.P., Smith, D.A. and Moss, V.A. Changes in bone mineral in experimentally induced rickets in the rat: Electron microprobe and chemical studies. *Calcified Tissue International* 30:135-146, 1980.

3. Nicholson, W.A.P. and **Dempster, D.W.** Aspects of microprobe analysis of mineralized tissues. In: *Scanning Electron Microscopy* Vol. II (Ed. O. Johari), SEM, Inc., AMF O'Hare, IL, 517-534, 1980.

4. Fischer, J.A., Blum, J., Born, W., Dambacher, M.A. and **Dempster, D.W.** Regulation of parathyroid hormone secretion *in vitro* and *in vivo*. *Calcified Tissue International* 34:313-316, 1982.

5. Biddlecombe, W.H., Mc Ewan Jenkinson, D., Mc Williams, S.A., Nicholson, W.A.P., Elder, H.Y. and **Dempster, D.W**. Preparation of cryosections with a modified Sorvall MT2B ultramicrotome and cryoattachment. *J. Microscopy* 126:63-75, 1982.

6. Boyce, B.F., Elder, H.Y., Fell, G.S., Nicholson, W.A.P., Smith, G.D., **Dempster, D.W.**, Gray, C.C. and Boyle, I.T. Quantitation and localization of aluminum in human cancellous bone in

renal osteodystrophy. *Scanning Electron Microscopy,* 1981/III/329-337 SEM, Inc., AMF O'Hare (Chicago) IL.

7.* **Dempster, D.W.**, Tobler, P.H., Olles, P., Born, W., and Fischer, J.A. Potassium stimulates parathyroid hormone release from perifused parathyroid cells. *Endocrinology* 111:191-195, 1982.

8.* **Dempster, D.W.**, Arlot, M.D., and Meunier, P.J. Mean wall thickness and formation periods of trabecular bone packets in corticosteroid induced osteoporosis. *Calcified Tissue International* 35:410-417, 1983.

9. Gopalakrishnakone, P., **Dempster, D.W.**, Hawgood, B.J., and Elder, H.Y. Cellular and mitochondrial changes induced in the structure of murine skeletal muscle by crotoxin, a neurotoxic phospholipase A2 complex. *Toxicon* **22**:85-98, 1984.

10. Olles, P., Tschopp, F., **Dempster, D.W.**, Tobler, P.H., Muff, R and Fischer, J.A. Potassium stimulates parathyroid hormone release in the absence of extracellular calcium. *Mol. Cell Endocrinol* 32:1-12, 1983).

11. Wahner, H., Dunn, W.L., Mazess, R.B., Towsley, M., Lindsay, R., Markhard, L. and **Dempster, D.W.** Accuracy of dual photon (153 GD) absorptiometry. *Radiology* 156:203-206, 1985.

12. Sloviter, R.S. and **Dempster, D.W.** "Epileptic" brain damage is replicated qualitatively in the rat hippocampus by central injection of glutamate, or aspartate but not by GABA or acetylcholine. *Brain Research Bulletin* 15:39-60, 1985.

13. Siris, E.S., Clemens, T.L., **Dempster, D.W.**, Shane, E., Segre, G., Lindsay, R., and Bilezikian, J.P. Tumor-induced osteomalacia: Kinetics of calcium, phosphorus and vitamin D metabolism and characteristics of bone histomorphometry. *Am. J. Med.* 82:307-312, 1986.

14. Sloviter, R.S, von Knebel Doeberitz, Walsh, T.J., and **Dempster, D.W.** On the role of seizure activity in the hippocampal damage produced by trimethyltin. *Brain Research* 367:169-182, 1986.

15. Zhou, X.Y., **Dempster, D.W.**, Marion, S.L. Pike, J.W., Haussler, M.R. and Clemens, T.L. Bone vitamin D-dependent calcium binding protein is localized in chondrocytes of growth plate cartilage. *Calcified Tissue International* 38:244-286, 1986.

16.* **Dempster, D.W.**, Shane, E.S., Horbert, W. and Lindsay, R. A simple method for correlative light and scanning electron microscopy of human iliac crest bone biopsies: qualitative observations in normal and osteoporotic subjects. *J. Bone and Mineral Res.* 1:15-21, 1986.

17.* Arnett, T.R., and **Dempster, D.W.** Effect of pH on bone resorption by disaggregated rat osteoclasts *in vitro. Endocrinology* 119:119-124, 1986.

18. Silverberg, S.J., Shane, E., Clemens, T.L., **Dempster, D.W.**, Segre, G., Lindsay, R., and Bilezikian, J.P. The effect of oral phosphate administration on major indices of skeletal metabolism in normal subjects. *J. Bone and Mineral Res.* 1:383-388, 1986.

19.* Arnett, T.R. and **Dempster, D.W.** A comparative study of disaggregated chick and rat osteoclasts *in vitro:* Effects of calcitonin and prostaglandins. *Endocrinology* 120:602-608, 1987.

20.* **Dempster, D.W.**, Murrills, R.J., Horbert, W.R., and Arnett, T.R. Biological activity of chicken calcitonin: effects on neonatal rat and embryonic chick osteoclasts. *J. Bone and Mineral Res.* **2**:443-448, 1987.

21. Kanders, B., **Dempster, D.W.**, Lindsay, R. Interaction of calcium, nutrition, and physical activity on bone mass in young women. *J. Bone and Mineral Res.* **3**:145-149, 1988.

22. Clemens, T.L., Garrett, K.P., Zhou, X.Y., Pike, J.W., Haussler, M.R., **Dempster, D.W.** Immunocytochemical localization of the 1,25-dihydroxyvitamin D_3 receptor in target cells. *Endocrinology* **122**:1224-1230, 1988.

23.* Parisien, M.V., McMahon, D., Pushparaj, N., **Dempster, D.W.** Trabecular architecture in iliac crest bone biopsies: intra-individual variability in structural parameters and changes with age. *Bone* **9**:289-295, 1988.

24.* Murrills, R.J., Shane, E., Lindsay, R., **Dempster, D.W.** Bone resorption by isolated human osteoclasts *in vitro:* effects of calcitonin. *J. Bone and Mineral Res.* **4**:259-268, 1989.

25.* **Dempster, D.W.** Bone histomorphometry in glucocorticoid-induced osteoporosis. *J. Bone and Mineral Res.* **4**:137-141, 1989.

26. Silverberg, S.J., Shane, E., De La Cruz, L., **Dempster, D.W.**, Feldman, F., Seldin, D., Jacobs, T.P., Siris, E.S., Cafferty, M., Parisien, M.V., Lindsay, R., Clemens, T., Bilezikian, J.P. Skeletal disease in primary hyperparathyroidism. *J. Bone and Mineral Res.* **4**:283-291, 1989

27.* Murrills, R.J. and **Dempster, D.W.** The effects of stimulators of intracellular cyclic AMP on rat and chick osteoclasts *in vitro:* validation of a simplified light microscope assay of bone resorption. *Bone* **11**:333-344, 1990.

28.* Parisien M, Silverberg SJ, Shane E, De La Cruz L, Lindsay R, Bilezikian J, **Dempster DW** The histomorphometry of bone in primary hyperparathyroidism: Preservation of cancellous bone structure. *J Clin Endocrinol Metab* **70**:930-938, 1990.

29. Warren, M.P., Shane, E., Lee, M.J., Lindsay, R., **Dempster, D.W.**, Warren, L.F., Hamilton, W.G. Femoral head collapse associated with anorexia nervosa in a 20 year-old ballet dancer. *Clin Orthop Rel Res* **251**:171-176, 1990.

30.* Arnett T.R., **Dempster D.W.** Protons and osteoclasts. *J Bone and Mineral Res* 5:1099-1103, 1990.

31.* Murrills RJ, Stein LS, Fey CP, **Dempster DW** The effects of PTH and PTHrP on osteoclast resorption of bone slices in vitro: an analysis of pit size and the resorption focus. *Endocrinology* **127**:2648-2653, 1990.

32.* Mellish RWE, Ferguson-Pell MW, Cochran GVB, Lindsay R, **Dempster DW**. A new manual method for assessing two dimensional cancellous bone structure: comparison between iliac crest and lumbar vertebra. *J Bone and Mineral Res* **6**:689-696, 1991.

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15. *Remote-Live Presentations and Other Electronic Media*

Presenter, Role of RANK Ligand Pathway in Osteoclast-Mediated Bone Loss, PV Updates, www.pvupdate.com/RSF

Faculty member, **OsteoporosisTx.com** a web site designed to provide educational resources for clinicians who manage patients who have, or at risk for osteoporosis. The goal is to offer users easily accessible, up-to-date clinical information and to create a community of health care professionals that share clinical insights. This educational initiative is co-sponsored by Curatio CME Institute and the National Osteoporosis Foundation. http://www.osteoporosistx.com, 2009

Chairman and Moderator, "Aspects of Bone Quality: Emerging Trends and Therapeutic Implications'. Live, nationwide CME teleconference series jointly sponsored by the University of Wisconsin Medical School and Enable Center for Continuing Education, August-December, 2003.

Moderator, "Exploring Bone Formation, Breakthroughs in Therapy Options for Osteoporosis", CME Audioconference Series, jointly sponsored by the Annenberg Center for Health Sciences at Eisenhower and MediTech Media, Ltd., May-August, 2003.

Moderator, A Contemporary Approach to Osteoporosis for the Primary Care Clinician (Live Web CME Conference, September 4, 2003) http://www.medscape.com/viewprogram/2607, available through September 3, 2004.

Rapid fracture protection in the treatment of osteoporosis. (CME program) http://www.medscape.com/viewprogram/2412

"Bone Remodeling". A series of computerized animations with voice-over depicting the changes that occur during postmenopausal bone loss and the events that occur within the bone remodeling cycle under normal conditions and under the influence of several antiresorptive agents and an anabolic agent. The animations were made in collaboration with Eli Lilly & Co. and Blue Diesel, Inc. They are available on CD Rom for educational purposes.

Program Developer and Moderator, "Building a Strong Foundation: Understanding Bone" A series of live, interactive, internet-based presentations on bone quality, Sponsored by Merck Pharmaceuticals, Inc. September 2003-August, 2004

"Bone Quality", an interview on CD Rom, sponsored by Eli Lilly and Co, 2003.

"Bone Through the Looking Glass: One Man's View", an electronic exhibit of images of bone, Virginia Society of Rheumatologists 17th Annual Meeting, Williamsburgh, VA, September 13th, 2003.

"New Concepts in Bone Quality" A summary of the work presented at the 25th Annual Meeting of the ASBMR, Minneapolis, MN, September 19-23, 2003. Medscape (CME program) http://www.medscape.com/viewarticle/463098

"The State of the Art in the Management of Osteoporosis," Sponsored by The Office of Women's Health of the U.S. Department of Health and Human Services and Columbia University, New York (CME program). *Interdisciplinary Medicine* Vol 5, # 7, 2004; *Clinician* Vol 22, #3, 2004.

Faculty member, Discussions in Osteoporosis Issues 1-3 (2003-2004), Supported by an educational grant from the Alliance for Better Bone Health, Adelphi Inc, New York, NY

"Improving Bone Quality: New Insights Into Osteoporosis Management" Clinical Medicine Today, Accreditation Council for Continuing Medical Education (ACCME). July 2004 – August 2005, http://www.clinicalmedicinetoday.com/program/32/default.asp

"Therapeutic Advances in Preserving Key Elements of Bone Strength". Clinical Medicine Today, Accreditation Council for Continuing Medical Education (ACCME). September , 2005 - August 2006, http://gehealthcare.ninesystems.com/production/ondemand/foh/cmt/2498/links.htm

"Determinants of Bone Strength and Impact of Antiresorptive Therapy," Sponsored by The Office of Women's Health of the U.S. Department of Health and Human Services and the University of Cincinnati (CME program). Clinical Couriier 24, No.3 ,June 2006

"Cortical Bone Modeling and Remodeling in the Adult Skeleton" A joint webinar sponsored by the European Calcified Tissue Society (ECTS), the International Bone and Mineral Society (IBMS) and Nature.com, Live broadcast: September 17th, 2015.

"Improving Bone Strength and Reducing Fracture Risk in Osteoporosis" An *Endocrine Today* CME program: http://www.healio.com/endocrinology/education-lab/2016/09_september/improving-bone-strength-and-reducing-fracture-risk-in-osteoporosis/cme-information

16. Selected Oral Presentations at Professional Meetings

"Effect of corticosteroid therapy on the mean wall thickness of trabecular bone packets", Fourth Annual Meeting of the American Society for Bone and Mineral Research, San Francisco, June 15, 1982.

"Relationships between iliac crest bone biopsy and other skeletal sites", Fallis International Symposium on Clinical Disorders of Bone and Mineral Metabolism, Detroit, May 10, 1988.

"Bone histomorphometry in glucocorticoid-induced osteoporosis", Tenth Annual Meeting of the American Society for Bone and Mineral Research, New Orleans, June 4, 1988.

"Quantitative analysis of trabecular bone in ovariectomized rats after intermittent administration of low dose human parathyroid hormone fragment (1-34) and 17 -estradiol", Third International Symposium on Osteoporosis, Copenhagen, Denmark, October, 1990

"Cellular mechanisms of age- and menopause-related bone loss", Osteodensitometrie et Risque Fracturaire Osteoporotique, Monaco, France, June 6, 1990.

"On the mechanism of cancellous bone loss in the ovariectomized rat", XIth International Conference on Calcium Regulating Hormones, Florence, Italy, April, 29, 1992.

"Quantitative assessment of cancellous bone structure in humans and rats", Sixth International Congress on Bone Morphometry, Lexington, Kentucky,October 5, 1992.

"Parathyroid hormone in the treatment of osteoporosis", Fourth International Symposium on Osteoporosis and Consensus Development Conference, Hong Kong, March 29, 1993.

"Quantitative assessment of cancellous bone structure", Architecture et Resistance Mecanique Osseuse, Montpelier, France, May 25, 1993

"Parathyroid hormone in the treatment of osteoporosis", Fifteenth Annual Meeting of the American Society for Bone and Mineral Research, Tampa, September 18, 1993.

"Action of glucocorticoids on bone", Third International Symposium on Osteoporosis: Research Advances and Clinical Applications, Washington D.C., March 3, 1994.

"Histomorphometric assessment of bone structure", Perth International Bone Meeting: *Bone Fragility in the Year 2000*, February 10-13, 1995

"Bone histomorphometry in postmenopausal women with primary hyperparathyroidism", Eighteenth Annual Meeting of the American Society for Bone and Mineral Research, Seattle, WA, September 8, 1996.

"Effects of endogenous and exogenous parathyroid hormone on the human skeleton", Seventh International Congress on Bone Morphometry, Sardinia, October 6-10, 1996.

"Effects of fluticasone propionate on plasma cortisol and osteocalcin levels", The American College of Allergy, Asthma & Immunology 1996 Annual Meeting, Boston, November 11, 1996.

"Recent advances in the biology of calcitonin", Fourth International Symposium on Osteoporosis: Research Advances and Clinical Applications, Washington, D.C., June 6, 1997.

"Glucocorticoids, osteoclasts, and apoptosis", Bone and The Hematopoietic and Immune Systems: A Scientific Workshop, National Institutes of Health, Bethesda, MD, August 5, 1997.

"Effects of Glucocorticoids on Bone Resorption", First International Congress on Glucocorticoid-induced Osteoporosis, Gardone Riviera, Lake Garda, Italy, April 8-10, 1999.

"Bone Quality and Fractures", Influence of Bone Density and Turnover on Osteoporotic Fractures, American College of Nutrition Symposium, New Orleans, Louisiana, April 21, 1999

"Two- and three-dimensional structural analysis of paired biopsies from osteoporotic patients before and after treatment with parathyroid hormone" Twenty-second Annual Meeting of the American Society for Bone and Mineral Research, Toronto, September 25th, 2000.

"What does antifracture efficacy really mean - is a therapy proven to be effective at one site likely to be effective at other sites? Theoretical concepts" New Insights and Ongoing Controversies in the management of Osteoporosis, Professional Postgraduate Services, Toronto, September 24th, 2000.

"Regulation of osteoclast recruitment, activity and life span" NIH Inter-Institute Endocrine Grand Rounds, National Institutes of Health, Bethesda, MD, December 15th, 2000

"Basis for the Anabolic Action of PTH", Plenary Presentation, 23rd Annual Meeting of the American Society for Bone and Mineral Research, Phoenix, Arizona, October 15th, 2001.

"PTH treatment directly stimulates bone formation in cancellous and cortical bone in humans", 23rd Annual Meeting of the American Society for Bone and Mineral Research, Phoenix, Arizona, October 16th, 2001.

"A new era: focus on bone quality" New Beginnings in the Treatment of Osteoporosis, The Institute for Continuing Healthcare Education, Phoenix, Arizona, October 14th, 2001.

"Impact of anabolic and antiresorptives on bone quality", Boning Up on Osteoporosis, 4th Annual CME Update, NYU Postgraduate Medical School, New York, October 24th, 2001.

"Mechanism of anabolic action of PTH on Bone", Inaugural Meeting of the Minnesota Bone Club, Bloomington, MN, November 3, 2001.

"Mechanism of anabolic action of PTH in the treatment of osteoporosis", Endocrine Scholar Lecture, University of Connecticut Health Center, February 5th, 2002.

"Three-dimensional assessment of trabecular architecture in mild primary hyperparathyroidism" 24th Annual Meeting of the American Society for Bone and Mineral Research, San Antonio, TX, September 23, 2002.

"Bone Quality: Its Impact on Fractures", Medical Grand Rounds, Massachusetts General Hospital, (Ether Dome), November 19th, 2002.

"Innovative Effects of Bone Formation Agents on Bone Quality", 30th European Symposium on Calcified Tissues, May 9, 2003, Rome.

"Bone Quality: Understanding What Matters", 30th European Symposium on Calcified Tissues, May 8, 2003, Rome.

"The Qualities of Bone", The State of the Art in the Management of Osteoporosis, Sponsored by The Office of Women's Health of the U.S. Department of Health and Human Services, Washington, DC, July 29, 2003.

"Bone Histomorphometry", NIH Bone Quality Meeting sponsored by NIAMS, Bethesda, MD, August 18, 2003.

"How Do Agents that Prevent Fractures Really Work", Virginia Society of Rheumatologists 17th Annual Meeting, Williamsburgh, VA, September 13th, 2003.

"Treatments of Osteoporosis: How Do They Reduce The Risk of Fracture", Fourth European Congress on Clinical and Economic Aspects of Osteoporosis and Osteoarthritis, Nice, France, November 15, 2003

"Osteoporosis: Causes, Consequences, Prevention, and Treatment. Chosun Taekwondo Academy, Warwick, NY, May 8, 2004.

"Bone Histomorphometry" The Cleveland Clinic Bone Summit 2004, Cleveland, OH, May 13, 2004

"Actions of PTH at the Tissue Level", Advances in Skeletal Anabolic Agents and the Treatment of Osteoporosis, Co-sponsored by the National Institutes of Health and the American Society for Bone and Mineral Research, May 25, 2004, Bethesda, MD.

"Effects of Antiresorptive and Anabolic Agents on Bone Quality", Grand Rounds, Center for Osteoporosis and Metabolic Bone Diseases, Cleveland Clinic, Cleveland, OH, June 9, 2004.

"Influence of microarchitecture on bone quality", Festschrift for A.M. Parfitt, Seattle, WA, September 29, 2004

"A.M. Parfitt – A Tribute" Festschrift for A.M. Parfitt, Seattle, WA, September 29, 2004

"Mechanisms of PTH Anabolism", Meet the Professor Session, 26th Annual meeting of the American Society for Bone and Mineral Research, Seattle, WA, October 1, 2004.

"Evaluating Microarchitecture as a Factor in Bone Quality", Changes on the Horizon: the Future of Osteoporosis, Diagnosis, Prevention, and Management, a CME program jointly sponsored by the Center for Accredited Healthcare and Education and the International medical Press, Seattle, WA, October 1, 2004.

"Aspects of Bone Strength: What Can We Measure in 2005?" Annual Meeting of The International Society for Clinical Densitometry, New Orleans, LA, February 17, 2005.

"Analysis of Recent Histomorphometric Data on Antifracture Agents", Novel Insights Into Current Diagnostic and Treatment Approaches for the Management of Osteoporosis, a CME program jointly sponsored by the Postgraduate Institute for Medicine and SciMed, New Orleans, LA, February 17, 2005.

"Improving Bone Quality" American College of Rheumatology Innovative Therapies in Autoimmune Diseases, Washington, DC, March 4, 2005.

"What Does Bone Quality Really Mean"? The Third Annual Dr. Charles Porter lecture, 21st Annual Rheumatology on The Beach Conference, Sandestin, FL, March 18, 2005.
www.rheumatologyonthebeach.com

"Effects of Osteoporosis Therapies on Bone Microarchitecture," Bone Quality: What Is It and can We Measure It? - A Scientific Meeting sponsored by the National Institutes of Health and the American Society for Bone and Mineral Research, Bethesda, MD, May 2, 2005.

"How Anabolic Agents Might Work To Reduce Fracture Risk," Building Bone: The Use of Anabolic Agents in the Treatment of Osteoporosis, A CME Symposium sponsored by the Endocrine Society Continuing Medical Education Services, San Diego, June 5, 2005.

"Cellular Mechanisms Underlying Bone Loss," The Biology of Bone Loss: Advancing the Clinical Management of Osteoporosis, Postgraduate Institute for medicine, Nashville, TN, September, 23, 2005.

"Bone Quality: Is It Important or a Passing Fad?" Endocrine Grand Rounds, Yale University, New Haven, CT, January 13, 2006.

"Current Research in Osteoporosis" OB/GYN Grand Rounds, Eastern Virginia Medical School, Norfolk, VA, May 26, 2006.

"Bone Quality" , Annual meeting of the Florida Rheumatology Association, Orlando, Florida, June 23, 2006

"Anabolic Therapy," Doylestown Bone Club, Dolylestown, PA, October 5, 2006

"Bone Quality: Do We Need to Know More than BMD?" , University of Pittsburg Medical Center, Endocrinology DivisionGrand Rounds, October 13, 2006

"Bone Quality", Hot Topics in Rheumatology and Infectious Diseases, A CME Program sponsored by the Pittsburgh Mercy Health System and Duquesne University, Nemacolin Woodlands Conference Center, Farmington, PA, October 14, 2006.

"PTH: Feast or Famine. A Histomorphometrist's Perspective," Endocrine Grand Rounds, Indiana University School of Medicine, Indianapolis, IN, October 23, 2006.

"Mechanism of Action of PTH: Basic and Clinical Studies," Indiana University Bone and Mineral Club, Indianapolis, IN, October 23, 2006.

"Osteoclasts, Osteoblasts and Osteocytes," Thirteenth Annual Meeting of the International Society of Clinical Densitometry, Tampa, FL, March 16, 2007.

"Oversuppression of Bone Turnover: More Than Just A Theoretical Concem?" , Combined Rheumatology Grand Rounds, Massachusetts General Hospital, Harvard Medical School (Ether Dome), Boston, MA, May 1, 2007.

"Understanding the Mechanisms of the Anabolic Action of PTH", Advances in the Molecular Pharmacology and Therapeutics of Bone Disease, University of Oxford Workshop, St Catherine's College, Oxford, July 10, 2007.

"Unusual osteoclast morphology in teriparatide-treated patients who have been pretreated with alendronate. Oral Presentation, 29th Annual ASBMR Meeting, September 17, 2007, Honolulu, Hawaii.

"Bone strength and the role of the RANK/RANKL/OPG pathway in normal bone homeostasis," Current Standards and Novel Understandings in the Management of Bone Loss: The RANK/RANKL/OPG Pathway and its Clinical Implications, A CME Symposium sponsored by Education/Outcomes/Science, September 16, 2007, Honolulu, Hawaii

"Clinical Perspectives: Present and Past," ASBMR Non-invasive Assessment of Bone Microarchitecture Working Group, September 17, 2007, Honolulu, Hawaii.

"Bone Histomorphometry", Analysis of Skeletal Tissues: State of the Art 2007, December 14, 2007, Yale University, New Haven, CT

"PTH: Feast or Famine", Department of Pediatrics Grand Rounds, Charles P. Darby Children's Research Institute, Medical University of South Carolina, Charleston, SC, November 14, 2008

"Bone Loss Across the Menopausal Transition", Third New York Skeletal Biology and Medicine Conference, Mount Sinai School of Medicine, New York, NY, April 29, 2009.
http://www.mssm.edu/cme/courses/skelbio/

"PTH: Feast or Famine; An Histomorphometrist's View. XIth Congress of the International Society for Bone Morphometry, Zell am See, Austria, May 30, 2009.
http://www.bonemorphometry.org/meeting.html

"To impute or not to impute? That is the question", 31st Annual Meeting of the American Society for Bone and Mineral Research, Denver, Colorado, September 14, 2009

"Hyper- and Hypo-parathyroidism: Altered turnover in both, yet no fractures. Why?" Fourth International Meeting on Bone Quality Parameters and Bone Strength, Myconos, Greece, September 25th, 2009.

"Bone microarchitecture and effects of bisphosphonates therapy", GIO 2009, 6th International Congress on Glucocortiocoid-Induced osteoporosis, Siena, Italy, October 9, 1009.

"Bone turnover and bone strength" ASBMR Bone Strength Working Group, 31st Annual ASBMR meeting, Denver, CO, September 13, 2009.

"PTH: Feast or Famine; An Histomorphometrist's View," The Louis V. Avioli Bone Lecture, Washington University, St Louis, St Louis, May 14, 2010.

"Are Subtrochanteric Fractures Causally Related to Bisphosphonate Use?" New York Metropolitan Bone Club, New York, NY, May 19, 2010.

"Bone Structure in Health and Disease", Special Session for Health Professionals, 32nd Annual Meeting of the American Society for Bone and Mineral Research, Toronto, ON, Canada, October 15, 2010.

"Osteoporosis Update", Mid-Atlantic Chapter of the American Association of Clinical Endocrinologists Annual Meeting, Bethesda, MD, October 2, 2010.

"Bone Biology Basics" 17th Annual Meeting of the International Society for Clinical Densitometry, Miami, FL, April 8th, 2011.

"Bone Turnover: the Good, the Bad and the Ugly". The First SIGMA Distinguished Lecture, Vancouver, Canada, December 8, 2011.
http://www.sigmamenopause.com/professionals/sigmalectures/

"PTH: Feast or Famine", Rheumatology Grand Rounds, Brigham and Women's Hospital, Boston, MA, March 20, 2012.

"Skeletal Manifestations of Hypoparathyroidism" Fifth Meeting of Skeletal Endocrinology, Brescia, Italy, September 21st, 2012.

"Differential effects of teriparatide and zoledronic acid on the outer and inner surfaces of cortical bone in postmenopausal women with osteoporosis: Results from the SHOTZ trial. Annual meeting of the ASBMR 2012, Minneapolis, MN, October 15, 2012.

"Histomorphometry in Bone Disorders: Animal Models and Clinical Studies", XIIth Congress of the International Society of Bone Morphometry, October 18, 2012, Minneapolis, Minnesota.

"Differences Between Modes of Action of Current Treatments for Osteoporosis", Kings College, Cambridge, UK, April 15th, 2013.

"Differences Between Modes of Action of Current Treatments for Osteoporosis", The Royal Society of Medicine, Chandos House, London, UK, April 16th, 2013.

"SHOTZ Study: Histomorphometry with Antiresorptive and Anabolic Therapy", EUROPEAN CONGRESS ON OSTEOPOROSIS AND OSTEOARTHRITIS (ECCEO), Rome, Italy, April 19, 2013.

"Bone Remodeling – Can You Get Too Much or Too Little of a Good Thing? Rheumatology Rounds, St. Joseph's Healthcare, Hamilton, Ontario, Canada, May 29, 2013.

"Bone Remodeling – Can You Get Too Much or Too Little of a Good Thing?" McGill Bone Rounds, McGill University Hospital Center, Montreal, Canada, June 3, 2013.

"Bone Remodeling – Can You Get Too Much or Too Little of a Good Thing?" CHUL Research Center, Quebec City, Quebec, Canada, June 4, 2013

"Bone Remodeling – Can You Get Too Much or Too Little of a Good Thing?" The University of Montreal Hospital Research Centre (CRCHUM), June 4, 2013.

"The Bone Biopsy in Primary Hyperparathyroidism" Fourth International Workshop on the Management of Asymptomatic Primary Hyperparathyroidism, Florence, Italy, September 20, 2013.

"A longitudinal study of skeletal histomorphometry in subjects on teriparatide (TPTD) or zoledronic acid (ZOL), the SHOTZ study. Distinguished oral presentation, Annual Meeting of the ASBMR, 2013, Baltimore, MD, October 5, 2013

"Continuous modeling-based bone formation: a novel mechanism that could explain the sustained increases in hip bone mineral density (BMD) with denosumab treatment. Late-breaking oral presentation, Annual Meeting of the ASBMR, 2013, Baltimore, MD, October 7, 2013.

"Bone remodeling: An Inverted U-curve", 10th Annual Osteoporosis Outreach Symposium, St. Michael's Hospital, Toronto, ON, Canada, March 28, 2014.

"Bone Modeling: Another Mechanism to Increase Bone Mass in the Treatment of Osteoporosis," Advances in Mineral Metabolism (AIMM)/ASBMR John Haddad Young Investigators Meeting, Snowmass, CO, April 10, 2014.

"Regulation of Bone Homeostasis: Signaling Pathways and Novel Targets," Congress of Clinical Rheumatology, Sandestin, FL, May 4, 2014.

"Bone Turnover and its Relationship to Bone Strength," Annual Congress of the Association Des Medecins Biochimistes du Quebec & the Canadian Association of Medical Biochemists, Montreal, October 23rd, 2014.

"Bone histomorphometry and bone markers in diabetes," First International Meeting on Diabetes and Bone, November 8th, Rome, Italy.

"Bone Modeling in the Adult Skeleton: Time to Revisit a 50-year-old Concept, Visiting Professor, Amgen Inc., Thousand Oaks, CA, December 9th, 2014.

"Bone Histomorphometry in hypoparathyroidism", Multidisciplinary Parathyroid Conference, Baylor College of Medicine, Houston, TX, April2, 2015.

"Bone remodeling: an inverted U curve?" Rolanette and Berdon Lawrence Bone Disease Program of Texas Seminar Series, The University of Texas MD Anderson Cancer Center and Baylor College of Medicine, Houston, TX, April 2, 2015.

"Modeling and Remodeling of the Human Skeleton," Premium ABRASSO/ASBMR Doencas osteometabolicas avaliacao da osteoporose e tratamento, Curitiba, Brazil, April 17th, 2015.

"Contrasting Mechanism of Action of Anabolic and Antiresorptive Drugs for the Treatment of Osteoporosis," 6th BRADOO Congresso Brasileiro de Densitometria Osteoporose e Osteometabolismo, Curitiba, Brazil, April 18th, 2015.

"Tetracycline Labeling and Dynamic Parameters," Curso: Histomorfometria Ossea, 6th BRADOO Congresso Brasileiro de Densitometria Osteoporose e Osteometabolismo, Curitiba, Brazil, April 20th, 2015.

"Histomorphometry of Other Metabolic Bone Diseases," Curso: Histomorfometria Ossea, 6th BRADOO Congresso Brasileiro de Densitometria Osteoporose e Osteometabolismo, Curitiba, Brazil, April 20th, 2015.

Meet the Professor: "Bone Histology and Histomorphometry," Fourth Joint Meeting of the European Calcified Tissues Society (ECTS) and the International Bone and Mineral Society (IBMS), Rotterdam, The Netherlands, April 26th, 2015.

"Modeling and Remodeling of the Cortical Bone," Fourth Joint Meeting of the European Calcified Tissues Society (ECTS) and the International Bone and Mineral Society (IBMS), Rotterdam, The Netherlands, April 267h, 2015.

"Bone Histomorphometry in Hypoparathyroidism," First International Conference on the Diagnosis, Management and Treatment of Hypoparathyroidism, Florence, Italy, May 8th, 2015.

"Bone Modeling and Remodeling in the Human and Primate Femur," Orthopedic Grand Rounds, Hospital for Special Surgery, New York, NY, June 8th, 2015.

"Effects of Denosumab on Bone Matrix Mineralization: Results from the Phase 3 FREEDOM Trial," Oral Presentation, American Society for Bone and Mineral Research Annual Meeting 2015, Seattle, WA, October 10th, 2015.

"Bone Modeling in the Adult Skeleton: Implications for Osteoporosis Treatment," Washington Bone Club, Georgetown University, Washington, DC, November 18, 2015.

"Teriparatide Effects on Bone Tissue: Recent Results from the SHOTZ and AVA Active Comparator Trials (Satellite Symposium) WCO-IOF-ESCEO World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases, Malaga, Spain, April 15, 2016.

"Effects of up to Years of Denosumab Treatment on Bone Matrix Mineralization: Results from the FREEDOM Extension. Late-breaking Oral presentation, Annual ASBMR meeting, Atlanta, GA, September 19, 2016.

"Longitudinal Changes in Modeling- and Remodeling-based Bone Formation with an Anabolic vs. an Antiresorptive Agent in the AVA Osteoporosis Study. Plenary Oral presentation, Annual ASBMR meeting, Atlanta, GA, September 19, 2016.

"Effects of 10 Years of Denosumab Treatment on Bone Histology and Histomorphometry in the FREEDOM Extension Study". Oral presentation, Annual ASBMR meeting, Atlanta, GA, September 16, 2016.

"Effects of Osteoporosis Drugs on Human Bone Tissue," XXI Congress of the Spanish Society for Research in Bone and Mineral Metabolism (SEIOMM), October 20, 2016 Gran Canaria, Spain.

"From Classical Histomorphometry to the Present" Dr. Aurelio Rapada Memorial Lecture, October 21, 2016, Gran Canaria, Spain.

"Modeling-based Bone Formation: An Old Idea Revisited with Implications for the Treatment of Osteoporosis" Endocrine Scholar Lecture Series, University of Connecticut School of Medicine, Division of Endocrinology and Metabolism, January 31, 2017.

"Effect of 10 Years of Denosumab Treatment on Bone Histology and Histomorphometry in the FREEDOM Extension Study," World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases, March 25th, 2017, Florence, Italy.

"Modeling-based Bone Formation: An Old Idea Revisited with Implications for the Treatment of Osteoporosis" Grand Rounds, Division of Endocrinology, Diabetes, and Metabolism, Tufts Medical Center, Boston, MA, May 1st, 2018.

"Modeling-based Bone Formation: An Old Idea Revisited with Implications for the Treatment of Osteoporosis", Rheumatology Grand Rounds, Cleveland Clinic, Cleveland, OH, January 9th, 2019.

"Modeling-based Bone Formation: An Old Idea Revisited with Implications for the Treatment of Osteoporosis", NOF Interdisciplinary Symposium on Osteoporosis, La Jolla, CA, May 17th, 2019.

"The Effects of Osteoporosis Treatments on Modeling- and Remodeling-based Bone Formation", Web Symposium on Bone Morphometry on the Occasion of the 20th Anniversary of the Niigata Bone Science Institute, June 6th, 2019.

"Histomorphometric Aspects of Osteoporosis Treatment", Niigata University Medical and Dental Hospital, Niigata, Japan, July 24th, 2019

"Histomorphometric Aspects of Osteoporosis Treatment", Ito International Research Center, University of Tokyo, Tokyo, Japan, July 25th, 2019.

"Histomorphometric Aspects of Osteoporosis Treatment", The 9th International Symposium on Musculoskeletal System and Pain, Tokyo, Japan, July 26th, 2019.

"Mechanism of Action of Osteo-anabolic Agents" NOF FLS Bone Health TeleECHO Clinic, April 9th, 2020. https://vimeo.com/405990284

"Bone Biology: Where is the Evidence Taking Us? Asia Pacific Bone Academy (Amgen), July 16th, 2020. https://amgenbonehealth.vistream.tv/teaser3

"Effects of Abaloparatide on Modeling- and Remodeling-Based Formation" Oral Presentation, Annual ASBMR Meeting (Virtual), September 12th, 2020.

"Effects of Teriparatide on Modeling-based and Remodeling-based Bone Formation in the Human Femoral Neck" Oral Presentation, Annual ASBMR Meeting (Virtual), September 12th, 2020.

"Modeling-based Bone Formation: An Old Idea Revisited with Implications for the Treatment of Osteoporosis" Grand Rounds (Virtual), Hospital for Special Surgery, New York, October 13th, 2020

"What bone biopsies teach us about bone strengthening medications" Osteoporosis Rounds (Virtual), NYU Langone Health, New York, October 14, 2020.

"Mechanisms of Action of Bone Strengthening Drugs (Virtual), Grand Rounds, Department of Obstetrics and Gynecology, Sinai Hospital (LIFEBRIDGE HEALTH), Baltimore, MD, December 3, 2020

"Denosumab what's new? Persistence of modeling-based bone formation" 9th Skeletal Endocrinology Meeting (Virtual), February 19th-20th, 2021