CURRICULUM VITAE

Jameela Banu, M.Sc., Ph.D.

Personal Data

Address	Department of Health and Biomedical Sciences College of Health Affairs and Department of Biology, College of Science University of Texas Rio Grande Valley 1201 W University Dr, Edinburg TX 78539-2999
Phone	(956) 665-3222
Fax	(956) 665-5253
Email	**Jameela.banu**@utrgv.edu

Self-Description

I got my Ph.D. in Special Zoology, with specialization in biochemical parasitology, from The University of Madras, India. After my Ph.D., I moved to Japan and did postdoctoral training in molecular biology of *Mycobacterium leprae* at National Institute of Leprosy Research, Tokyo. I then, undertook a postdoctoral research position at UT Health Science Center, San Antonio where I did research in different areas like molecular and physiological basis of preeclampsia (hypertension in pregnancy); oxygen toxicity in lung, intracellular calcium signaling during oocyte maturation and bone metabolism in relation to menopause and aging. Currently, my research focuses mainly on identifying nutritional supplements and alternative medicines that can treat or prevent bone loss using animal models. In addition, I am also interested in studying bone metabolism related changes in diabetes and cancer as well. My goal is to find alternative medicines that will have less or no side-effects and will serve as good bone forming and/or anti bone resorbing agents. I moved to UTPA in 2012 to take up a teaching position. I teach Anatomy and Physiology, Advanced Nutrition and Research Methods in Dietetics and Introduction to Clinical Nutrition.

Education

Year	Degree	Discipline	Institution/Location
1991	Ph.D.	Special Zoology Biochemical Parasitology	University of Madras, Chennai, India
1984	M.Sc.	Special Zoology	University of Madras, Chennai, India
1982	B.Sc.	Zoology (Major) Botany and Chemistry (Minor)	University of Madras, Chennai, India

Certifications

2015	Basic Herbal Nutrition Certification	WEFNA, TX, USA
2017	Integrative Nutrition Health Coach	Institute for Integrative Nutrition, NY, USA

Academic appointments

Year	Position	Institution
12/2014 – Present	Module Co-Director (Digestive Health and Nutrition) & Discipline Coordinator (Nutrition)	UT Rio Grande Valley, School of Medicine, Edinburg, TX
09/2015 – Present	Assistant Professor	UT Rio Grande Valley, Edinburg, TX

09/2012-08/2015	Assistant Professor	UT Pan American, Edinburg, TX
09/2012-Present	Adjunct Professor	UT Health Science Center at San Antonio, Department of Medicine, San Antonio, TX
10/2008-08/2012	Assistant Professor Research	UT Health Science Center at San Antonio, Medical Research Division, ERAHC, Edinburg, TX
01/2005-09/2008	Assistant Professor Research	UT Health Science Center at San Antonio, Department of Medicine, San Antonio, TX
09/2000-12/2004	Assistant Professor Research	UT Health Science Center at San Antonio, Department of Physiology, San Antonio, TX

Non-academic appointments

Year	Position	Institution
10/1997-10/2001	Postdoctoral Fellow	UT Health Science Center at San Antonio, San Antonio, TX, USA
03/1994-10/1996	Postdoctoral Fellow	UT Health Science Center at San Antonio, San Antonio, TX, USA
09/1992-12/1992	Visiting Lecturer	Nevada University, International Division, Tokyo, Japan
02/1991-01/1993	Postdoctoral Trainee	National Institute for Leprosy Research, Tokyo, Japan
04/1989-02/1991	Senior Research Fellow, CSIR	University of Madras, Chennai, India
10/1985-04/1989	Senior Research Fellow, ICAR	University of Madras, Chennai, India
12/1984-10/1985	University Research Fellow	University of Madras, Chennai, India

Honors and awards

Year	Description
05/2015	Faculty Excellence Award for Research, COHSHS, UTPA
03/2014	Session Facilitator, MORE Health Conferences, COHSHS, UTPA
09/2009	Session Moderator, Aging and Other Disorders of Bone and Mineral Metabolism I, ASBMR
01/1991	Young Scientist Research Project, Department of Science and Technology, Government of India
01/1988	Senior Research Fellowship, Council of Scientific and Industrial Research, India
01/1985	Senior Research Fellowship, Indian Council of Agricultural Research, India
01/1985	University Research Fellow, University of Madras, India

Professional development

Workshop(s)/training(s)

Date	Description
03/2016	Quality Matters Rubric Independent applying the QM Rubric, COLTT, Brownsville, TX
01/2016 – Present	Blueprinting online course, COLTT, UTRGV, Edinburg, TX
08/2015	Training on CIRCLE curriculum for Module Co- Directors, San Antonio, TX
06/2015 – 06/2015	International Association of Medical Science Educators, San Diego, CA
10/2014 – 12/2015	Teaching Online Certification Training, UTPA, Edinburg, TX
01/2014 – 04/2014	ADVANCE Leadership Institute – course for the development of leadership qualities, UTPA, Edinburg, TX
04/03/2014	Faculty Development Series – Using Clickers in classroom, UTPA, Edinburg, TX
01/31/2014	Second Year Faculty Support Program – Promotion and Tenure, UTPA, Edinburg, TX
10/2013	ADVANCE Women's Faculty Network – Mentoring Talk, UTPA, Edinburg, TX

10/2013	Faculty training –FARS and Course Evaluations, UTPA, Edinburg, TX
09/13/2013	Second year Faculty Support Program – Mentoring, UTPA, Edinburg, TX
10/7/2013	Equal Opportunity Search committee Training, UTPA, Edinburg, TX
01/2013	Blackboard Learn: Essential skills, UTPA, Edinburg, TX
11/2014	Developing Successful Mentor Relationships, UTPA, Edinburg, TX
09/2012 - 04/2013	First Year Faculty Support Program – Monthly meetings/trainings, UTPA, Edinburg, TX
10/2012	Teaching Effectiveness workshop, UTPA, Edinburg, TX
03/21/2009	Comparative Endocrinology of Calcium Regulation workshop, Sydney, Australia
06/05/2007 – 06/28/2007	Practical Optical Microscopy, UT Health Science center at San Antonio, TX
04/21/2006	VA VISN 17 Research Conference on Aging and Age-related Disease, San Antonio, TX
09/09/2013-12/09/2013	University Teaching Excellence Course, UTEC, UTHSCSA, San Antonio, TX

Teaching

Courses

Date	Description		Institution	Credit hours
Spring 2017	Integrative Nutrition	NUTR 6300	UTRGV	4.50
	Research Methods in Diet	DIET 4257 01	UTRGV	2.00
	Anatomy and Physiology	BIOL 2404 02	UTRGV	4.00
Fall 2016	Pathophysiology	CLSC6300	UTRGV	1.00
	Anatomy and Physiology	BIOL 2404 02	UTRGV	4.00
Spring 2016	Research Methods in Diet	DIET 4257 01	UTRGV	2.00
	Anatomy and Physiology	BIOL 2404 02	UTRGV	4.00
	Introduction to Clinical Nutrition	DIET 2351 02	UTRGV	3.00
	Biology Problems	BIOL 4201	UTRGV	2.00
Fall 2015	Advanced Nutrition	DIET 3353 01	UTRGV	3.00
	Anatomy and Physiology	BIOL 2404 02	UTRGV	4.00
Spring 2015	Research Methods in Diet	DIET 4257 01	UTPA	2.00
	Junior Seminar in Dietetics	DIET 3257 01R	UTPA	2.00
	Food Preparation - labs	DIET 2352 B	UTPA	1.00
	Biology Problems	BIOL 4201	UTPA	2.00
	Anatomy and Physiology	BIOL 2404 02	UTPA	4.00
Fall 2014	Introduction to Clinical Nutrition	DIET 2351 02	UTPA	3.00
	Advanced Nutrition	DIET 3353 01	UTPA	3.00
	Anatomy and Physiology	BIOL 2404 02	UTPA	4.00
Spring 2014	Research Methods in Diet	DIET 4257 01	UTPA	2.00
	Anatomy and Physiology	BIOL 2404 02	UTPA	4.00
Fall 2013	Advanced Nutrition	DIET 3353 01	UTPA	3.00
	Biological Writing	BIOL 3302 02	UTPA	3.00
Spring 2013	Research Methods in Diet	DIET 4257 01	UTPA	2.00
	General Biology	BIOL 1402 03	UTPA	3.00
	General Biology – Labs	BIOL 1401 B	UTPA	1.00
	Anatomy and Physiology –Labs	BIOL2403N	UTPA	1.00
Fall 2012	Advanced Nutrition	DIET 3353 01	UTPA	3.00
	General Biology	BIOL 1402 06	UTPA	3.00
07/1992 – 10/1992	Biology		University of Nevada International Branch in Tokyo	

Mentoring

High school/Junior High School Student

Date	Description	Institution	# of students

12/2016 – 08/2017	Undergraduate HHMI Mentor	UTRGV	1
11/2016 – 08/2017	Engaged Scholar Mentor	UTRGV	1
05/2016 – 08/2017	Undergraduate HHMI mentor	UTRGV	1
05/2016 – 08/2016	High school Mentor Program	COS, UTRGV	2
06/2015 – 08/2015	HHMI mentor	UTPA	2
06/2009 – 07/2009	Mentor - Summer Ed Program	ERAHC, UTHSCSA	2
06/2006 – 08/2006	Supervisor – Summer Ed Program	UTHSCSA	2

The projects of these two students won awards in the Alamo regional Academy of Science and Engineering Science Fair

Undergraduate student(s)

Date	Student	Position	Institution
04/2010-06/2012	Juan Guerra	Volunteer/Res Assistant	UTHSCSA
06/2011-08/2011	Denizly Cantu	Summer student	UTHSCSA
11/2012 – 08/2014	Jorge Navarro	Volunteer/URI/Res Assistant	UTPA
01/2013 -06/2013	Joanna Espinosa	Volunteer/summer student	UTPA
01/2013 - Present	Crissy Elizondo	Volunteer/URI	UTPA
09/2013 – 08/2014	Jovan Garcia	Volunteer	UTPA
09/2013 – 09/2015	Robert E Salazar	Volunteer	UTPA
06/2014 – 04/2015	Julian Gonzalez	HHMI Mentee	UTPA
05/2015 – 2015	Rogelio Gonzalez	Volunteer	UTPA
01/2016 – Present	Tomas Hernandez	HHMI Mentee	UTRGV
01/2016 – Present	Maximo Rey	Volunteer	UTRGV
05/2016 – 07/2016	Clarissa Salazar	Volunteer	UTRGV
04/2016 – Present	Diego Sanchez	Volunteer	UTRGV

Graduate student(s)

Date	Student	Position	Institution
12/2012 – 04/2013	Danaji Gonzalez	Graduate Assistant	UTPA
01/2013 - 08/2013	Stephanie Gonzalez	Graduate Assistant	UTPA
05/2013 - 05/2014	Elisa Gutierrez	Graduate Assistant	UTPA
06/2014 - 12/2014	Gina Ramirez	Graduate Assistant	UTPA
01/2015 – 05/2016	Vaijayanthi Rajendran	Graduate Assistant	UTPA/UTRGV
09/2015 – 12/2016	Robert E Salazar	Volunteer	UTPA/UTRGV
05/2013 - present	Criselda Castillo	Graduate Student	UTPA
09/2016 – 12/2016	Swathi Jaleja	Graduate Student	UTRGV

Post doctoral fellow(s)

Date	Fellow	Position	Institution
11/2008 – 07/2009	Dr. Manonmani Ganapathy	Post-Doctoral Fellow	E-RAHC, UTHSCSA

Research

I have several years of research experience in studying bone metabolism related to postmenopausal and age related bone loss. I have been using mice and rats for these studies, so I have plenty of experience in conducting *in vivo* research. In addition, I also can formulate nutritional supplements to treat bone loss and I am currently evaluating the efficacy of certain nutritional supplements and alternative medicines for bone disorders like osteoporosis, osteopenia due to diabetes and bone metastasis. Bone static and dynamic histomorphometry, and densitometry to evaluate the mineral density, mineral content and microarchitecture are

the analytical parameters used in my experiments. I also conduct *in vitro* research on preosteoblastic cells to study the molecular mechanism of action of the nutritional supplements and alternative medicines that I test.

Technical Skills

Bone Histomorphometry - A method of identifying the effects of the therapeutic agent on bone is by studying the bone forming rate and mineralization rate. This will give information about the bone anabolic properties and/or anti-resorptive properties of the agent. Using histomorphometry, we can also detect the nature of cells that are lining the bone. Depending on the kind of cells that are lining the bone, we can determine the action of the agent.

Bone densitometry - DXA scans are primarily used to evaluate areal bone mineral density and can be used to measure total body composition including fat content. pQCT densitometry is a powerful technique that is highly sensitive and reliable for studying bone parameters. pQCT differentiates cortical from cancellous bone and can measure and quantify them separately and together at bone sites that contain both types of bone. In addition, pQCT measures true bone density (gm/cm3) rather than areal density (gm/cm2) as is measured by other x-ray absorptiometric techniques such as DXA. MicroCT densitometry is a technique that is used to study static histomorphometry of trabecular bone. Results from microCT analysis, after reconstruction of the trabecular bone will give the microarchitecture of the bone as well as the bending and torsion strength of the bone. It is a non-destructive 3D imaging technique at the micron level. High resolution is critical for studying internal structures and defects like the trabecular bone parameters without cutting the bone.

Surgery to induce bone loss - Survival surgery on small rodents: Depletion of estrogen increases bone turnover, however, there is increased bone resorption leading to net loss of bone. Animal models are very useful tools to study the mechanism as well as any therapeutic agents for diseases. For studying bone loss, ovariectomy in rodents, especially rats and mice, have served as excellent models. Ovarietomized rats are FDA approved animal models for studying therapeutic agents to prevent and/or treat osteoporosis. I have had 99% survival rate and 100% success in inducing bone loss in rats and mice after ovariectomy.

Various molecular biology techniques - Have experience in isolation of nucleic acids (both DNA and RNA), cloning, sequencing, PCR, expression of proteins, detection of proteins and phosphorylated proteins of prokaryotes and eukaryotes.

Publications *(* peer reviewed articles;* ‡ **corresponding author)**

Book Chapters

1. Reyna, S and Banu, J‡. Anti-obesity activity of natural compounds. In: Anti-obesity Drug Discovery and Development. Bentham e Books; 2014
2. Banu J‡. and Fernandes, G. Animal models of menopausal metabolism. In: Handbook of Nutrition and Diet in Menopause. Springer Verlag; 2013.
3. Banu J‡. The ovariectomized mice and rats In: Osteoporosis Research: Animal Models. Springer Verlag; 2012

Journal Articles (= peer reviewed, ‡ = Corresponding Author)*

1. *Banu J# and Fernandes G. Effects of fish oil and exercise on postmenopausal bone loss. Journal of Osteoporosis and Physical Activity. 2017. 5:1 DOI: 10.4172/2329-9509.1000188.
2. *Salazar RE and Banu J‡. An insight into the role of vitamins other than vitamin D on bone. Austin Journal of Nutrition and Metabolism, 2015. 2:1024. *Invited review article.*
3. *Banu, J‡. Diabetes and Physical Activity. Journal of Endocrinology and Diabetes, 2016. 3:1-12. *Invited peer reviewed article.*
4. *Banu J‡. Causes, consequences and treatment of osteoporosis in men. Drug Design and Development 2013; 7:849-860 - *Review article*. PMID 24009413.
5. *Banu J‡, Varela E, Guerra JM, Halade G, Williams PJ, Hanaoka K, Fernandes G. Dietary coral calcium and zeolite protect bone in a mouse model for postmenopausal bone loss. Nutrition Research 2012; 32(12):965-975. PMID 23244542.

6. *Fernandes G and Banu J‡. Medicinal properties of plants from the genus *Cissus:* A review*.* Journal of Medicinal Plants Research 2012; 6:3080-3086 – *Review article.*
7. *Banu J‡, Varela E, Fernandes G. Alternative therapies for the prevention and treatment of osteoporosis: complementary medicines and fatty acids Nutrition Reviews 2012;70(1):22-40 – *Review article.*pmid 22221214.
8. *Banu J‡, Varela E, Bahadur AN, Soomro R, Kazi N, Fernandes G. *Inhibition of Bone Loss by Cissus quadrangularis* in Mice: A Preliminary Report. J Osteoporos. 2012; 2012:101206. PMID 22779034.
9. *Banu J‡, Bhattacharya A, Rahman MM, Kang JX, Fernandes G. Endogenously Produced n-3 Fatty Acids Protects Against Ovariectomy Induced Bone Loss in Fat-1 Transgenic Mice. J Bone and Min Metabol 2010;28(6):617-626. PMID 20393761.
10. *Ghosh R, Graham H, Rivas P, Tan XJ, Crosby K, Bhaskaran S, Schoolfield J, Banu J, Fernandes G, Yeh I-T, Kumar AP‡. *Phellodendron amurense* bark extract prevents progression of prostate tumors in transgenic adenocarcinoma of mouse prostate potential for prostate cancer. Anticancer Res 2010; 30:857-866. PMID 20393007.
11. *Rahman MM, Bhattacharya A, Banu J, Kang JX, Fernandes G‡. Endogenous n-3 fatty acids protect ovariectomy induced bone loss by attenuating osteoclastogenesis. J Cell Mol Med 2009; 13(18B):1833-1844. PMID 20141608.
12. *Banu J, Bhattacharya A, Rahman M, Fernandes G‡. Beneficial effects of conjugated linoleic acid and exercise on bone of middle-aged female mice J Bone Min Metabol 2008;26(5):436-445. PMID 18758901.
13. *Fernandes G‡, Bhattacharya A, Rahman M, Zaman K, Banu J. Effects of n-3 fatty acids on autoimmunity and osteoporosis. Front Biosci 2008;13:4015-4020. PMID 18508495.
14. *Rahman MM, Bhattacharya A, Banu J, Fernandes G‡. Conjugated linoleic acid protects against age-associated bone loss in C57BL/6 female mice J Nutr Biochem 2007;18(7):467-474. PMID 16997541.
15. Bhattacharya A, Banu J*, Rahman M, Causey J, Fernandes G‡. Biological effects of conjugated linoleic acids in health and disease J Nutr Biochem 2006; 17(12):789-810 – *Review article*. PMID 16650752.
16. *Bhattacharya A, Chandrasekar B, Rahman MM, Banu J, Kang JX, Fernandes G‡. Inhibition of inflammatory response in transgenic fat-1 mice on a calorie-restricted diet. Biochem Biophys Res Commun 2006;349(3):925-930. PMID 16962071
17. *Wang L, Kalu DN, Banu J, Thomas JB, Gabriel N, Athanasiou K‡. Effects of ageing on the biomechanical properties of rat articular cartilage Proc Inst Mech Eng [H] 2006;220(4):573-578. PMID 16808073.
18. *Banu J, Bhattacharya A, Rahman M, O'Shea M, Fernandes G‡. Effects of conjugated linoleic acid and exercise on bone mass in young male Balb/C mice. Lipids Health Dis 2006;5:7-7. PMID 16556311.
19. *Bhattacharya A, Rahman MM, Banu J, Lawrence RA, McGuff HS, Garrett IR, Fischbach M, Fernandes G‡. Inhibition of osteoporosis in autoimmune disease prone MRL/Mpj-Fas(1pr) mice by N-3 fatty acids. J Am Coll Nutr 2005;24(3):200-209. PMID 15930486.
20. *Banu J‡, Kalu DN. Site-specific effects of cerivastatin on bone in male Sprague-Dawley rats. Bone 2004;34(3):432-442. PMID 15003791
21. *Banu J‡, Wang L, Kalu DN. Effects of increased muscle mass on bone in male mice overexpressing IGF-I in skeletal muscles. Calcif Tissue Int 2003;73(2):196-201. PMID 14565602.
22. *Wang L, McMahan CA, Banu J, Okafor MC, Kalu DN‡. Rodent model for investigating the effects of estrogen on bone and muscle relationship during growth. Calcif Tissue Int 2003;72(2):151-155. PMID 12469248
23. *Banu J‡, Kalu DN. Effects of cerivastatin and parathyroid hormone on the lumbar vertebra of aging male Sprague-Dawley rats. Bone 2002;31(1):173-179. PMID 12110431.
24. *Banu J, Wang L, Kalu DN‡. Age-related changes in bone mineral content and density in intact male F344 rats. Bone 2002;30(1):125-130. PMID 11792574
25. *Wang L, Banu J, McMahan CA, Kalu DN‡. Male rodent model of age-related bone loss in men. Bone 2001;29(2):141-148. PMID 11502475
26. *Banu J, Orhii PB, Wang L, Kalu DN‡. Separate and combined effects of growth hormone and parathyroid hormone on cortical bone osteopenia in ovariectomized aged rats. Aging: Clin Exp Res (Milano) 2001;13(4):282-292.
27. *Banu J, Orhii PB, Okafor MC, Wang L, Kalu DN‡. Analysis of the effects of growth hormone, exercise and food restriction on cancellous bone in different bone sites in middle-aged female rats. Mech Ageing Dev 2001;122(8):849-864. PMID 11337013.

28. *Wang L, Orhii PB, Banu J, Kalu DN‡. Effects of separate and combined therapy with growth hormone and parathyroid hormone on lumbar vertebral bone in aged ovariectomized osteopenic rats. Bone 2001;28(2):202-207. PMID 11182379
29. *Wang L, Orhii PB, Banu J, Kalu DN‡. Bone anabolic effects of separate and combined therapy with growth hormone and parathyroid hormone on femoral neck in aged ovariectomized osteopenic rats. Mech Ageing Dev 2001;122(1):89-104. PMID 11163626
30. *Kalu DN‡, Banu J, Wang L. How cancellous and cortical bones adapt to loading and growth hormone. J Musculoskelet Neuronal Interact 2000;1(1):19-23. PMID 15758520.
31. *Mosekilde L, Tornvig L, Thomsen JS, Orhii PB, Banu J, Kalu DN‡. Parathyroid hormone and growth hormone have additive or synergetic effect when used as intervention treatment in ovariectomized rats with established osteopenia. Bone 2000;26(6):643-651. PMID 10831937.
32. *Shah DM‡, Banu J, Chrigwin JM, Tekmal RR. Reproductive tissue renin gene expression in preeclampsia. Hypertension and Pregnancy 2000;19(3):341-351. PMID 11118408
33. *Yang F‡, Coalson JJ, Bobb HH, Carter JD, Banu J, Ghio AJ. Resistance of hypotransferrinemic mice to hyperoxia-induced lung injury Am J Physiol 1999;277(6 Pt):1214-1223. PMID 10600893
34. *Banu MJ, Orhii PB, Mejia W, McCarter RJ, Mosekilde L, Thomsen JS, Kalu DN‡. Analysis of the effects of growth hormone, voluntary exercise, and food restriction on diaphyseal bone in female F344 rats. Bone 1999;25(4):469-480. PMID 10511115
35. *Dhandayuthapani S‡, Banu MJ, Kashiwabara Y. Cloning and sequence determination of the gene coding for elongation factor Tu in *Mycobacterium leprae* J Biochem 1994;115:94-99. PMID 8089081
36. *Banu MJ‡, Nellaiappan K, Dhandayuthapani S. Mitochondrial malate dehydrogenase and malic enzyme of a filarial worm *Setaria digitata*: Some properties and effects of drugs and herbal extracts Jap J Med Biol Sci 1992;45:137-150. PMID 1291764
37. *Nellaiappan K‡, Ramakrishnan R, Banu MJ. Evidence for the presence of quinone methide isomerase in the metacercarial cyst of *Microphallus* sp. (Trematoda: Microphallidae). Parasitology 1991 Oct;103 P:299-303. PMID 1745555.
38. *Nellaiappan K‡, Banu MJ. Demonstration of monophenoloxidase activity of tyrosinase after electrophoresis. Biotech Histochem 1991;66(3):125-130. PMID 1716163
39. *Banu MJ‡, Nellaiappan K. Properties of succinate dehydrogenase and fumarate reductase in the adult filarial worm *Setaria digitata* Zool Jb Physiol 1991;96:241-254.
40. *Nellaiappan K‡, Banu MJ, Ramakrishnan R. Tyrosinase activity in *Microphallus* sp. Parasitology 1991;103:299-303.
41. *Banu MJ, Dhandayuthapani S, Nellaiappan K‡. Intermediary carbohydrate metabolism in the adult filarial worm *Setaria digitata* Int J Parasitol 1991;21:795-799. PMID 1774115
42. *Dhandayuthapani S‡, Banu MJ. Mitochondrial structure and enzymes associated with electron transport system of *Penetrocephalus ganapatii* (Cestoda: Pseudophyllidae) Cytobios 1990;64:197-202.
43. *Banu MJ‡, Kalyani R, Nellaiappan K. Some properties of β-D-galactosidase from the adult filarial nematode *Setaria digitata* Vet Parasitol 1990;36:27-36.
44. *Kalpana P, Banu MJ‡, Nellaiappan K. Some properties of succinate dehydrogenase and fumarate reductase of a sheep cestode, *Moniezia benedeni* Zool Jb Physiol 1989; 93:409-41.
45. *Banu J‡, Nellaiappan K, Dhandayuthapani S. Lactate dehydrogenase from adult *Setaria digitata* Vet Parasitol 1989;32:311-323. PMID 2781717.
46. *Dhandayuthapani S‡, Nellaiappan K, Banu J, Vinayakam A. Changes in biochemical components in relation to maturity of proglottids in the pseudophyllid cestode *Penetrocephalus ganapatii* Rao 1990. National Academy of Science Letters 1989;12:133-135.
47. Kalyani R, Nellaiappan K, Banu J. Precursor of tanning from the basal uterus of *Achatina fulica*. Proceedings of the Fifth Indian Symposium of Invertebrate Reproduction. 1987; pp104-113.

Presentations and Conferences

Oral Presentations/ Guest Lecture

1. 19/11/2016 Anti bone metastatic properties of fish oil and thymoquinone. Presented at the World Congress of Food and Nutrition Kaohsuing, Taiwan
2. 18-20/11/2016 Animal models of menopausal metabolism. Presented at the World Congress of Food and Nutrition Kaohsuing, Taiwan
3. 01/2016 Nutritional supplements and alternative therapies to prevent bone disorders. Presented at the Harlingen Medical Center, Harlingen, TX.
4. 09/2015 Supplements for endurance exercise. Presented at the Recreation Center, UTRGV, Edinburg, TX.
5. 07/2014 Supplementation and nutrition for endurance athletes – A Review. Presented in the HHMI High School Summer Program, UTPA. Edinburg, TX.
6. 04/2014 Alternative medicine and nutritional supplements to protect bone. Invited Speaker, Translational Research Seminars, University of Brownsville and University of Texas Health Science Center at Houston, School of Public Health, Brownsville, TX.
7. 04/2014 Medical Nutrition Therapy for Rheumatoid Diseases. Guest Lecture, Coordinated Program in Dietetic, UTPA, Edinburg, TX.
8. 03/2014 Medical Nutrition Therapy for Cancer Prevention, Treatment and Recovery. Guest Lecture, Coordinated Program in Dietetics, UTPA, Edinburg, TX.
9. 03/2014 Medical Nutrition Therapy for Cardiovascular Disease. Guest Lecture, Coordinated Program in Dietetic, UTPA, Edinburg, TX.
10. 02/2014 Nutrition in Weight Management. Guest Lecture, Coordinated Program in Dietetic, UTPA, Edinburg, TX.
11. 09/2013 Histology – Epithelium and Bone, Guest lecture Department of Biology, UTPA, Edinburg, TX.
12. 03/2013 Obesity and Fatty acids, MORE Health Conference, COHSHS, UTPA, Edinburg, TX.
13. 11/2012 14th Annual South Padre Cell Signaling, Cancer Prevention and Therapy Conference. Nov 9-10, 2012 (Attendee).
14. 09/2012 Bone morphology in Health and Disease, Guest lecture, Department of Biology, UTPA, Edinburg, TX
15. 04/2011 Bone Metabolism and Alternative Therapies for Osteoporosis, Invited Speaker, Department of Biology, UTPA, Edinburg, TX.
16. 05/2010 Bone metastasis. UTPA-CTRC Collaboration Retreat May 2010, Port Aransas, TX
17. 05/2009 Bone disease – Prevention and treatment. UTPA-CTRC Collaboration Retreat May 2009, Kerrville, TX
18. 09/2009 Nutritional Supplements and Alternative Therapies for Osteoporosis, Invited Speaker, X-Radia Group Meeting/ ASBMR, X-Radia Group, Denver, CO.
19. 09/2009 Endogenously Produced n-3 Fatty Acid and *Cissus quadrangularis* Attenuates Ovariectomy Induced Bone Loss in Mice, Invited Speaker, pQCT User's Group Meeting, Montreal, Canada.
20. 02/2007 Bone loss and Aging, UTPA, Invited Speaker, Department of Biology, University of Texas Pan American, Edinburg, TX.
21. 01/2007 Benefits of Conjugated Linoleic Acid on Bone Mass in Mice, Second National Meeting of ASIOA, Association Scientists of Indian Origin of America, Denton, TX (Oral Presentation)
22. 01/2007 Role of Dietary Fatty Aids on Aging bones and Lean Body Mass, 2nd Biannual National Meeting of ASIOA, American Scientist of Indian Origin of North America, Denton, TX (Co-Presenter).
23. 09/2006 Effects of Conjugated Linoleic Acid on Bone Mass of C57Bl/6 Mice, Invited Speaker, pQCT Users' Group, Osteometrix Inc, Philadelphia, PA.
24. 03/2003 Bone loss and aging. Invited Speaker, Department of Biology, University of Brownsville, Brownsville, TX.

Abstracts

1. 11/2016 Animal models of menopause – World Congress of Food and Nutrition, Kaohsuing, Taiwan. (Presenter)
2. 04 2016 Inhibition of bone metastasis by fish oil, thymoquinone, and xanthone. American Society of Nutrition in the Annual Meeting of Experimental Biology – FASEB 2016, San Diego (Co-Presenter)
3. 03-04/2015 *Nigella sativa* influences GLUT4 through the AMPK pathway. Annual Meeting of Experimental Biology – FASEB 2015, Boston (Co-Presenter)
4. 05/2015 Anticancer properties of fish oils, thymoquinone, and xanthones on bone metastases. MORE Health Conference, Research Day, College of Health Sciences and Human Services, UTPA (Co-Presenter). Grand Prize winner.
5. 04/2014 *Cissus quadrangularis* has anti-oxidant and anti-inflammatory properties – in vitro and in vivo studies. American Society of Nutrition in the Annual Meeting of Experimental Biology – FASEB 2014, San Diego (Co-Presenter).
6. 10/2013 Prevention and Restoration of Bone Loss by n-3 Fatty Acids in an Ovariectomized Mouse Model. 34th Annual Meeting of the American Society for Bone and Mineral Research, Baltimore, MD (Presenter).
7. 11/2013 Effects of *Cissus quadrangularis* on Apoptotic Pathway and Proinflammatory cytokines in MC3T3 cells. Undergraduate Research Initiative, UTPA, Edinburg, TX (Co-Presenter)
8. 04/2013 Anti-oxidative Properties of Cissus quadrangularis – a mechanistic Study to Prevent and/or treat Osteoporosis. 25th April 2013. College of Health Sciences and Human Services, UTPA, Research Day (Co-Presenter). Grand Prize winner.
9. 09/2011 Effects of Dietary Coral Calcium and Zeolite on Ovariectomy Induced Bone Loss. 33rd Annual Meeting of the American Society for Bone and Mineral Research, San Diego, CA (Presenter)
10. 05/2011 Effects of *Cissus quadrangularis* on Ovariectomy Induced Bone Loss. Biannual Meeting of the International Bone and Mineral Society, Athens, Greece (Presenter)
11. 10/2010 Effects of Fish Oil and Exercise on Postmenopausal Bone Loss, 32nd Annual Meeting of the American Society for Bone and mineral Research, Toronto, Canada (Presenter)
12. 09/2009 Effects of n-3 Fatty Acids on Postmenopausal Bone Loss. 31st Annual Meeting of the American Society for Bone and Mineral Research, Denver, CO (Presenter)
13. 09/2009 Site specific effects of exercise on ovariectomy induced bone loss in middle aged Mice, 31st Annual Meeting of the American Society for Bone and Mineral Research, Denver, CO (Co-Presenter)
14. 09/2009 t10c12-CLA maintains higher bone mineral density during aging by modulating osteoclastogenesis and bone marrow adiposity, 31st Annual Meeting of the American Society for Bone and Mineral Research, Denver, CO (Co-Presenter)
15. 03/2009 Effects of nutritional supplementation on weight reduction and bone in mice, Second Joint Meeting: International Bone and Mineral Society and Australian and New Zealand Bone and Mineral Society, International Bone and Mineral Society, Sydney, Australia (Presenter)
16. 09/2008 *Cissus quadrangularis* attenuates ovariectomy induced bone loss in mice, 30th Annual Meeting of the American Society of Bone and Mineral Research, ASBMR, Montreal, CA (Presenter)
17. 04/ 2008 t10c12 CLA isomer prevents age associated bone loss by modulating osteoclastogenesis, Annual Meeting of Experimental Biology, FASEB, San Diego, CA (Co-Presenter).
18. 04/2008 Effect of endogenous n-3 PUFA on inflammation and oxidative stress, Annual Meeting of Experimental Biology, FASEB, San Diego, CA (Co-Presenter)
19. 04/2008 Chronic effect of CLA isomers on bone mineral density fat and lean mass in C57BL/6 female mice, Experimental Biology meeting, FASEB, San Diego, CA (Co-Presenter)

20. 09/2007 Conjugated Linoleic Acid (CLA) protects against musculoskeletal loss during aging, II International Congress on Conjugated Linoleic Acids (CLA) from experimental models to human application, Villasimius, Italy (Co-Presenter)
21. 09/2007 Fat-1 gene prevents ovariectomy induced bone loss by modulating NF-κB activation, 29th Annual Meeting of the American Society of Bone and Mineral Research, Honolulu, HI (Co-Presenter)
22. 09/2007 Endogenously produced n-3 fatty acids (Fat-1 transgene) protects bone after ovariectomy in mice, 29th Annual Meeting of the American Society of Bone and Mineral Research, Honolulu, HI (Presenter) Plenary Poster.
23. 04/2007 Endogenous n-3 fatty acids are beneficial to bone during food restriction in transgenic mice, 10th Annual Medicine Research Day, University of Texas Health Science Center at San Antonio, San Antonio, TX (Presenter)
24. 09/2006 Effects of conjugated linoleic acid and exercise on bone health of middle aged female mice, 28th Annual meeting of the American Society of Bone and Mineral Research, Philadelphia, PA (Presenter)
25. 09/2005 Reduced bone loss by docosahexaenoic acid (DHA) than eicosapentaenoic acid (EPA) in ovariectomized mice, 27th Annual Meeting of the American Society of Bone and Mineral Research, Nashville, TN (Co-Presenter)
26. 09/2002 Effects of cerivastatin and parathyroid hormone on bone in male Sprague Dawley rats, 24th Annual Meeting of the American Society of Bone and Mineral Research, San Antonio, TX (Presenter)
27. 09/2002 Effects of IGF-I overexpression in muscle on cortical and cancellous bones of female mice, 24th Annual Meeting of the American Society of Bone and Mineral Research, San Antonio, TX (Presenter)
28. 10/2001 Rodent model of age-related osteoarthritis in humans, Biomedical Engineering Society Annual Meeting, Biomedical Engineering Society, Durham, NC (Co-Presenter)
29. 09/201 Bone loss in aged intact female Sprague Dawley rats, 23rd Annual Meeting of the American Society of Bone and Mineral Research, Phoenix, AZ (Presenter)
30. 09/2001 Age-related changes in cortical and cancellous bone in male mice overexpressing IGF-I in muscles, 23rd Annual Meeting of the American Society of Bone and Mineral Research, Phoenix, AZ (Presenter)
31. 09/2001 Mechanisms of sequential occurrence of two types of bone loss in the lumbar vertebra of male Sprague Dawley rats during aging, 23rd Annual Meeting of the American Society of Bone and Mineral Research, Phoenix, AZ (Co-Presenter)
32. 09/2001 Rodent animal model for investigating the effects of estrogen on the skeletal response to voluntary muscle forces during growth, 23rd Annual Meeting of the American Society of Bone and Mineral Research, Phoenix, AZ (Co-Presenter)
33. 09/2001 Analysis of musculoskeletal changes during growth and aging in male Sprague Dawley rats, 22nd Annual Meeting of the American Society of Bone and Mineral Research, Toronto, CA (Co-Presenter)
34. 09/2001 Rodent model of musculoskeletal changes during growth, maturation and aging, 22nd Annual Meeting of the American Society of Bone and Mineral Research, Toronto, CA (Co-Presenter)
35. 09/2000 Male rodent model of aging bone loss in men, 22nd Annual Meeting of the American Society of Bone and Mineral Research, Toronto, CA (Co-Presenter)
36. 09/2000 Age-related bone loss in male F344 rats, 22nd Annual Meeting of the American Society of Bone and Mineral Research, Toronto, CA (Presenter)
37. 09/2000 Effects of increased muscle mass on cortical bone in mice, 22nd Annual Meeting of the American Society of Bone and Mineral Research, Toronto, CA (Presenter)
38. 09/1999 PTH and GH have synergetic effect when used as intervention treatment in ovariectomized rats with established osteopenia, 21st Annual meeting of the American Society of Bone and Mineral Research, St. Louis, MO (Co-Presenter)

39. 09/1999 Effects of combined therapy with growth hormone and parathyroid hormone on the third lumbar vertebra of aged osteopenic rats, 21st Annual meeting of the American Society of Bone and Mineral Research, St. Louis, MO (Co-Presenter)
40. 09/1999 Effects of combined therapy with growth hormone and parathyroid hormone on the femoral neck of aged osteopenic rats, 21st Annual meeting of the American Society of Bone and Mineral Research, St. Louis, MO (Co-Presenter)
41. 09/1999 Effects of combined therapy with growth hormone and parathyroid hormone on tibial cortical bone in osteopenic rats, 21st Annual meeting of the American Society of Bone and Mineral Research, St. Louis, MO (Presenter)
42. 09/1999 Analysis of the effects of growth hormone, exercise and food restriction on cancellous bone in aged female rats, 21st Annual meeting of the American Society of Bone and Mineral Research, St. Louis, MO (Co-Presenter)
43. 02/1999 Analysis of the effects of growth hormone, exercise and food restriction on bone in middle aged rats, Pan-American Congress, San Antonio, TX (Presenter)
44. 08/1996 Decidual secretion of prorenin and processing to mature renin may occur through constitutive pathway, International Society for the Hypertension in Pregnancy, International Society for the Hypertension in Pregnancy, Seattle, WA (Co-Presenter)
45. 03/1996 Two different types of renin secreting decidual cells process prorenin to renin, International Society for the Hypertension in pregnancy, International Society for the Hypertension in pregnancy, Seattle, WA (Co-Presenter)
46. 03/1995 Decidualized stromal cells process prorenin to its mature form, active renin, Society of Gynecological Investigation, Society of Gynecological Investigation, Chicago, IL (Co-Presenter)
47. 03/1995 Decidual renin gene expression is increased in preeclampsia, Society for Gynecological Investigation, Society for Gynecological Investigation, Chicago, IL (Co-Presenter)
48. 08-09/1993 Overexpression and seroreactivity of 15 kDa antigen of *Mycobacterium leprae*, 14th International Leprosy Conference, Orlando, FL (Presenter)
49. 08-09/1993 Cloning and sequencing of the gene coding for the elongation factor Tu of *Mycobacterium leprae*. 14th International Leprosy Congress, Orlando, FL (Co-Presenter)

Travel Awards:
Faculty Affairs Junior Faculty Travel Award, April 2013
Faculty Affairs Junior Faculty Travel Award, April 2016
Faculty Affairs Junior Faculty Travel Award, Nov 2016

Research Grants

Internal

Funding Agency: COS Research Enhancement Seed grant Program
Title: Bone protective properties of *Sylvia hispanica* in postmenopausal rat model
Role: Principal Investigator
Period: 04/2017 – 08/2018
Total Cost: $25,000.00 Funded

Funding Agency: HHMI Mentor, UTRGV
Title: Antioxidative properties of *Cissus quadrangularisRole: Faculty Mentor*
Period: 03/2016-/08/2017
Total Cost: $1,000.00 Funded

Funding Agency: Engaged Scholar Mentor, UTRGV

Title: Effects of *Cissus quadrangularis* on gene expression related to bone metabolism
Role: Faculty Mentor
Period: 11/2016-/08/2017
Total Cost: $2,000.00 Funded

Funding Agency: HHMI Mentor, UTRGV
Title: Effects on bone biochemical markers in breast cancer induced mice fed fish oil, thymoquinone and xanthone.
Role: Faculty Mentor
Period: 01/2017-/08/2017
Total Cost: $1,000.00 Funded

Funding Agency: Faculty Research Council Award, UTPA
Title: Combined effects of parathyroid hormone and *Cissus quadrangularis* on postmenopausal bone loss
Period: 01/2015-/08/2015
Role: Principal Investigator
Total Cost: $5,000.00 Funded

Funding Agency: Undergraduate Research Initiative, UTPA
Title: Effects of nutritional supplements on bone loss and bone metastasis - continuation
Period:02/2015-/08/2015
Role: Faculty Mentor
Total Cost: $2,000.00 Funded

Funding Agency: Undergraduate Research Initiative, UTPA
Title: Effects of nutritional supplements on bone loss and bone metastasis
Period:11/2012-/05/2013
Role: Faculty Mentor
Total Cost: $2,000.00 Funded

Funding Agency: STEM ADVANCE Graduate Assistant Support Program, UTPA
Title: Anti-diabetic properties of alternative medicines – *Nigella* and *Cissus*
Period:12/2012 – 05/2013
Role: Faculty Mentor
Total Cost: $ 5,000.00 Funded

Funding Agency: Undergraduate Research Initiative, UTPA
Title: Anti-cancer properties of fish oil, thymoquinone and xanthone
Period:11/2013-05/2014
Role: Faculty Mentor
Total Cost: $2,000.00 Funded

Foundations
Funding Agency: ACRCF
Title: Inhibition of bone metastasis with multi compound therapy
Role: Principal Investigator
Period: December, 2013
Total Costs: $50,000.00 – Not funded

Funding Agency: Kleberg Foundation

Title: Benefits of combination therapy with parathyroid hormone, alendronate and Cissus quadrangularis for the treatment of osteoporosis.
Role: Principal Investigator
Period; October, 2013
Total Costs: $387,720.00 – Not funded

Funding Agency: Herbal Society of America
Title: Boneminearlaization of chia seed extract
Role: Principal Investigator
Period: January, 2015
Total Costs: $5,000.00 – Not funded

Funding Agency: Kleberg Foundation
Title: Attenuation of breast cancer cells from bone metastasis by fish oil and thymoquinone.
Role: Principal Investigator
Period; April, 2016
Total Costs: $435,900.00 – Not funded

Federal
Funding Agency: USDA NIFA
Title: Undergraduate Mentoring in Nutritional Sciences in the Rio Grande Valley (UMNS-RGV)
Role: Principal Investigator
Period: 08/2017 – 07/31/2021
Total Costs: $250,000.00 – Under Review

Funding Agency: USDA NIFA (subaward)
Title: Experiential learning and Peer tutoring for nutrition and dietetic Students
Role: Co Principal Investigator
Period: 09/2017 – 08/2021
Total Costs: $1,000,000.00 – Under Review

Funding Agency: NIH SC 3
Title: Combined effects of Parathyroid Hormone and *Cissus quadrangularis* on postmenopausal bone loss
Role: Principal Investigator
Period: 10/2017 – 09/2021
Total Costs: $403,933.00 – Under Review

Funding Agency: DoD
Title: Combined therapy of thymoquinone and *Cissus quadrangularis*, in conjunction with fish oil, on breast cancer and bone metastasis
Role: Principal Investigator
Period: 09/2017 – 08/2020
Total Costs: $466,849.00 – Under Review

Funding Agency: NIH
Title: Synergistic effects of *Nigella sativa* and *Cissus quadrangularis* on type 2 diabetes and bone
Role: Principal Investigator
Period: 09/2016 – 08/2018
Total Costs: $275,000.00 – Not funded

Funding Agency: NIH SC 2 Revised

Title: Anti-cancer properties of n-3 fatty acids, thymyquinone and xanthones
Role: Principal Investigator
Period: 04/2016 – 03/2019
Total Costs: $368,999.00 – Not funded

Travel Award:
Funding Agency: FASEB MARC
Travel award for one student to attend the Experimental Biology Meeting at Boston in April 2015

Travel Award:
Funding Agency: FASEB MARC
Travel award for me and two students to attend the Experimental Biology Meeting at San Diego in April 2014

Travel Award:
Funding Agency: FASEB MARC
Travel award to the undergraduate student presenter to attend the Experimental Biology Meeting at San Diego in April 2014

Funding Agency: NIH SC 2
Title: Anticancer properties of n-3 fatty acids thymoquinone and xanthone
Role: Principal Investigator
Period: 06/2014 – 05/2017
Total Costs: $418,164.00 – Not funded

Funding Agency: NIH
Title: Prolongation of lifespan by n-3 fatty acids and calorie restriction.
Period: 03/2008 -02/2011
Role: Co-Investigator
Total costs: $1,905,327.00 - Funded

Funding Agency: NIH
Title: Therapeutic Value of Fish Oil Rx on SLE and Bone Loss in Mice
Period: 11/2007 - 10/2012
Role: Co-Investigator
Total costs: $1,900,207.00 - Funded

Funding Agency: NIH
Title: Benefits of conjugated linoleic acid on aging
Period: 07/2006 - 06/2008
Role: Co-Investigator
Total costs: $401,500.00 - Funded

Funding Agency: NIH
Title: Effect of n-3 Fatty Acids and Exercise on Osteoporosis
Period: 12/2004 - 11/2008
Role: Co-Investigator
Total costs: $1,314,000.00 - Funded

Professional Service

Dates	**Role**	**Description**

01/2008-12/2009	Board Member	International Society for Musculoskeletal Interactions

UTRGV

Fall 2015 – present	Member	Faculty Senate
Spring 2015 – Present	Member	Inter-Professional Education Sub Committee
Spring 2015 – Present	Member	Medical school Admissions Committee
Spring 2014 - Present	Member	Central Curriculum Authority Committee
Spring 2014	Member	Academic Committee for Biomedical Sciences

UTHSCSA

11/2009-08/2015	DARO	E-RAHC, Department Animal Research Officer
09/2009-08/2010	Supervisor	E-RAHC Lab Helper
09/2009 – 08/2011	Co-coordinator	E-RAHC Seminar Series
09/2009 – Present	Member	IACUC
09/2010 – Present	Member	IRB

UTPA

University

09/2013 – 8/2015	Member	Academic Policy Committee
01/2013 – 8/2015	Co-Chair	Biomedical Sciences - Interdisciplinary Thematic Society

College of Health Sciences and Human Services

03/2014 – 8/2015	Member	Standing Faculty Recruitment and Retention Committee
09/2013 – 8/2015	Co-chair	Research Committee
09/2012 – 8/2015	Member	Research Committee
08/2014	Volunteer	Bronc Round up
Spring 2014	Member	Pharmacy Faculty search committee
10/19/2013	Volunteer	BroncFest 2013
08/08/2013	Volunteer	Summer Bash
2012	Volunteer	Summer Bash
Fall 2012	Member	Pharmacy Faculty search committee
11/2012	Volunteer	BroncFest 2012

Department

Spring 2016	Chair	Faculty Search Committee (Clinical Assistant Professor)
Fall 2015	Member	Promotion and Tenure guidelines committee
05/2015	Member	Admissions committee, Coordinated Program in Dietetics
2015	Chair	Faculty Search Committee (Associate Professor/Professor), Coordinated Program in Dietetics
2015	Chair	Faculty Search Committee (Clinical Faculty), Coordinated Program in Dietetics
2014	Member	Faculty Search Committee, Coordinated Program in Dietetics
05/2014	Member	Admissions committee, Coordinated Program in Dietetics
Fall 2013	Member	Faculty search committee, Coordinated Program in Dietetics
09/2013 – Present	Member	Recruitment Committee, Coordinated Program in Dietetics
09/2012 – Present	Member	Safety committee, Department of Biology

<u>Service to the Profession</u>:

Dates	Type	Description	Role
2015 – Present	National	Global Nutrition Council	Reviewer
2015	National	Jones and Bartlett Learning – 'Introduction to Nutrition Research: Concepts & Applications' - Book	Reviewer
2009 - Present	National	J of American College of Nutrition	Reviewer

2007 – Present	National	Pharmacological Reviews	Reviewer
2005 – Present	National	J of Bone and Mineral Research	Reviewer
2017 – Present	International	Frontiers in Endocrinology	Reviewer
2014 – Present	International	Photochemistry and Photobiology	Reviewer
2012	International	University of Madras – PhD thesis	Examiner
2012	International	Vellore Institute of Technology, India, PhD thesis	Examiner
2012 – Present	International	European Journal of Medicinal Plants	Reviewer
2012 – Present	International	J of Medicinal Plants Research	Reviewer
2007 – Present	International	Calcified Tissue International	Reviewer
2003 – Present	International	Bone	Reviewer
2001 – Present	International	Aging-Clinical and Experimental Research	Reviewer
2001 – Present	International	J of Musculoskeletal & Neuronal Interactions	Reviewer

Grant Reviewer

Dates	**Agency**	**Description**	**Role**
08/2007	ASBMR	ASBMR Bridge funding research grants	Reviewer
12/2003	Canadian Institute of Health	Grants from CIH	Reviewer

Service to the Community

Dates	**Description**	**Role**
09/2016	Rio Grande Valley Diabetic Association	Presenter
09/2015	Recreation Center, UTRGV	Presenter
01/2015	Harlingen Medical Center	Presenter
2015-Present	Interprofessional team, John Pena Clinic	Member
05/2015	MORE Health Conference – Community day	Dietetics Faculty Representative
04/2014	MORE Health Conference – Community day	Dietetics Faculty Representative
03/2013	MORE Health Conference – community day	Dietetics Faculty Representative
08/2002 – Present	Alamo Regional Academy of Science and Engineering	Board Member
08/2002 – Present	Alamo Regional Academy of Science and Engineering	SRC Member
08/2005 – 08/2007	Alamo Regional Academy of Science and Engineering	President
08/2003 – 07/2005	Alamo Regional Academy of Science and Engineering	Vice-President

Professional Affiliation

Dates	**Organization**	**Role**
01/2008 – 12/2011	International Society for Musculoskeletal and Neuronal Interactions	Member
04/2014 - Present	American College of Nutrition	Member
12/2012 – Present	Academy of Nutrition and Dietetics	Member
12/2012 – Present	Nutrition and Dietetic Educators and Preceptors	Member
01/2008 - Present	International for Bone and Mineral Society	Member
01/2000 – Present	Association of Scientists of Indian Origin in North America	Member
10/1997 – Present	American Society for Bone and Mineral Research	Member