

NAME: NABANITA S DATTA email: ndatta@med.wayne.edu

EDUCATION AND TRAINING: University of Calcutta, India MS, Ph.D (Biochemistry/Molecular Biology)
University of Michigan, USA Post-Doctoral

FACULTY APPOINTMENTS:

2007- Assistant Professor (tenure track), Dept. Internal Medicine, Div. Endocrinology,
Wayne State University School of Medicine

2003- 2007 Assistant Research Scientist, Department of Periodontics and Oral Medicine,
University of Michigan

1991- 2003 Assistant Research Scientist, Department of Pediatrics, University of Michigan

1990-1991 Assistant Research Scientist, Department of Internal Medicine, University of
Michigan

HONORS AND AWARDS:

1981 National Merit Predoctoral Scholarship, Lady Tata Memorial Trust, India

1982 National Senior Predoctoral Merit Fellowship, Indian Council of Medical Research

MEMBERSHIPS AND OFFICES IN PROFESSIONAL SOCIETIES:

1990- Member, American Society for Biochemistry and Molecular Biology

1993- Member, American Society of Hematology

2003- Member, American Society of Bone and Mineral Research

SERVICES:

1. Reviewer of major national and international journals (J. Endocrinology, European Journal of Pharmacology, Proteomics, Am. J. Pathology, FEBS letters)
2. Reviewer of American Society of Bone and Mineral Research (ASBMR) bridge funding awards
3. Reviewer of SALS research grants
4. Examiner LS&A Undergraduate studies, University of Michigan

INVITED SEMINARS/PRESENTATIONS:

1. Invited presentation "Bone and Parathyroid Hormone: Osteoblast Signaling Network", Bone and Joint Center, Henry Ford Hospital, Detroit, Michigan, November 30, 2007
2. Invited seminar in "Women's Health Retreat", University of Michigan, November 1, 2007
3. Invited seminar in Endocrinology Research Conference, Wayne State University School of Medicine, July 9, 2007.
4. Invited seminar in "BIRCWH" seminar series: "Osteoporosis, Bone and Parathyroid Hormone: University of Michigan, April 3, 2007.

INVITED SEMINARS/PRESENTATIONS (continued):

5. Seminar in 3rd Annual Research Symposium, Musculoskeletal Research Core Center, University of Michigan, Winter, 2005.
6. Lecture in U of M Bone center seminar series: "PTHrP Control of the Cell Cycle Machinery in Osteoblasts", Summer, 2004.
7. Lectures in winter short course. Indian Institute of Chemical Biology, University of Calcutta, India. Dec. 2003.
8. Invited lectures as part of a workshop on "Cell Cycle, Therapeutics and Cancer", University of Calcutta, India. Dec. 2001.

GRANT SUPPORT:

<u>R03 DE016865</u>	NIH/NIDCR	09/07/05 – 06/30/08	\$152,011
<i>Cell cycle mechanisms of PTH/PTHrP action in osteoblasts</i>			
Role: PI			
<u>5R01 DK062286-04</u>	NIH/NIDDK	01/15/04-12/31/08	\$ 1,751,203
<i>PTH1R regulation in bone biology using a mouse model</i>			
Role: Co-Investigator			
<u>R01 DE14073</u>	NIH/NIDCR	06/01/03-05/31/07	\$1,157,368
<i>Tooth Eruption: Role of the Dental Follicle & PTH Receptor</i>			
Role: Co-Investigator			
<u>P30 AR46024</u>	NIH/UM	2003-2006	\$40,000
<i>Role of p53 on the PTH action in bone</i>			
Role: Project Director			
<u>RO1 HL051459</u>	NIH	1994-1998	\$1,216,313
<i>Regulation of megakaryocyte endomitosis</i>			
Role: Co-Investigator			
<u>UM Cancer Research Committee</u>		1993- 1994	\$7,500
<i>Role of cdk2 kinase in endomitotic human erythroleukemia (HEL) cells</i>			
Role: PI			
<u>UM Memorial Phoenix Project</u>		1993- 1994	\$6,000
<i>Regulation of endomitotic DNA synthesis in human erythroleukemia cells</i>			
Role: PI			

GRANT SUPPORT (pending):

R01DE018245-01A1	NIH/NIDCR		\$1,511,526
<i>PTH and PTHrP action on osteoblast cell cycle signaling network</i>			
Role: PI			

TEACHING ACTIVITIES:

University of Michigan

- 1989 Lectures in “Introductory Short Courses in Proteins”, Division of Rheumatology, Department of Internal Medicine, Medical school.
- 1992- Examiner, LS&A Undergraduate Studies.
- 1998 Grand Rounds. Department of Pediatrics, Medical school.
- 2003 Participated in Fall course “Mineralized Tissues”, course number 606 Department of Periodontics/Prevention and Geriatrics, School of dentistry.
- 2005 Lecture in Fall course “Mineralized Tissues”, course number 606, Department of Periodontics and Oral Medicine, School of dentistry.
- 2006 Lecture in Fall course “Mineralized Tissues”, course number 606, Department of Periodontics and Oral Medicine, School of dentistry.

University of Calcutta

- 1998 Lectures in winter short course on “Cell cycle technology”
- 2003 Lectures in winter short course on “Cell cycle regulation and apoptosis

FACULTY MENTORING RESPONSIBILITIES:

Involved in training and mentoring pre-doctoral students, post-doctoral research fellows, undergraduate research assistants, research laboratory technical associates, undergraduate research opportunity program (UROP) students and junior faculties in both basic and clinical sciences.

Student research advisement in past few years

Type of Student	Year	Name	Responsibilities
Research Associate (WSU)	2007-	Alemu Fite	Faculty mentor and supervisor
Undergraduate student (WSU)	2007-	Tareq Abou-Samra	Faculty mentor and supervisor
MD Fellow (WSU)	2007-	Panchali Khanna	Faculty mentor and supervisor
Undergrad Research Assistants (UM)	2003-2006	Chen Chen Joanna Hooten Adam Jaros	Faculty mentor and supervisor
Research Laboratory Technical Associate (UM)	2006-2007	Rola Kolailat	Faculty mentor and supervisor
UROP Students (UM)	2004-2007	Phong Van Nguyen Erika Brumlett	Faculty research sponsor and mentor
Ph.D Student on Rotation (UM)	2003-2004	Yong-Hee Chun	Teaching, mentoring laboratory bench-science and theoretical aspects
Graduate Student (UM)	2004-2005	Abraham Schneider	Helping fine tuning experimental procedures and protocols
OHS Students on Rotation (UM)	2005-2006	Yuhe Lu Chad Novince Julie Marchesan	Teaching, mentoring laboratory bench-science and theoretical aspects
Post doctorals (UM)	2005-2007	Jinhui Liao, Junro Yamashita	Helping fine tuning experimental procedures and protocols

PUBLICATIONS:

Peer Reviewed

1. Berry JE, Pettway GJ, Jin T, **Datta NS**, McCauley LK: JunB as a mediator of PTHrP actions: New gene targets ephrin B1 and VCAM-1. **Molecular Endocrinology**, conditional acceptance, 2008.
2. Yamashita J, **Datta, N.S.**, Chun YH, Yang D, Carey A, Kreider J, Goldstein S, McCauley LK: Role of Bcl2 in osteoclastogenesis and PTH anabolic actions in bone. **J.Bone and Mineral Research**, accepted, 2008
3. **Datta, N.S.**, Pettway, G.J, Chen, C, Koh, A.J, McCauley, LK: Cyclin D1 as a target for the proliferative effects of PTH and PTHrP in early osteoblastic cells. **J. Bone and Mineral Research**, 22: 951-964, 2007.
4. Liao, J, Schneider, A, **Datta, N.S.**, McCauley, L.K: Extracellular calcium as a candidate mediator of prostate cancer skeletal metastasis. **Cancer Res**. 66: 9065-9073, 2006.
5. Berry, JE, Ealba, E, Pettway, G, **Datta, NS**, McCabe, L, Swanson, E, Somerman, M, McCauley, L.K: JunB as a downstream mediator of PTHrP actions in cementoblasts. **J.Bone and Mineral Research**, 21: 246-257, 2006.
6. Zhang, ZC, Mitra, RS, Henson, B, **Datta, NS**, McCauley, LK, Kumar, P, Lee, JSJ, Carey, TE and D'Silva, NJ: Rap1GAP inhibits tumor growth in oropharyngeal squamous cell carcinoma. **American J Pathol**. 168: 585-596, 2006.
7. **Datta, N.S.**, Chen, C., Berry, J.E., and McCauley, L.K. PTHrP signaling targets cyclin D1 and induces osteoblastic cell growth arrest. **J. Bone and Mineral Research**, 20: 1051-1064, 2005.
8. Koh, A.J, Demiralp, B, Neiva, K, Ealba, E, Nohutcu, EM, **Datta, N.S.**, Taichman, R, McCauley, LK: Cells of the osteoclast lineage as mediators of the anabolic actions of parathyroid hormone in bone. **Endocrinology**. 146:4584-4596, 2005.
9. Chen, C., Koh, A.J., **Datta, N.S.**, Zhang, J., Keller, E.T., GuoZhi, X., Franceschi, R.T., D'Silva, N.J., and McCauley, L.K. Impact of the mitogenactivated protein kinase (MAPK) pathway on parathyroid hormone related protein actions in osteoblasts. **J. Biol. Chem**. 279: 29121-29129, 2004.
10. Hotary, K., Allen, E., **Datta, N.S.**, Long, M.W., and Weiss, S.J. Membrane type -1 matrix metalloproteinase usurps tumor growth control imposed by the three-dimensional extracellular matrix. **Cell**. 114: 33-45, 2003.
11. **Datta, N. S.** and Long M.W. Modulation of MDM2/p53 and cyclin activating kinase during the megakaryocyte differentiation of human erythroleukemia cells. **Experimental Hematology**, 30: 158-165, 2002.
12. Yin, X. Grove, L., **Datta, N. S.**, Katula, K., Long, M. W., and Prochownik, E. V. : Inverse regulation of cyclin B1 by c-myc and p53 induction of tetraploidy by cyclin B1 overexpression. **Cancer Research**, 61: 6487-6493, 2001.
13. Yin, X., Grove, L., **Datta, N.S.**, Long, M.W. and Prochownik, E.V.: C-myc over expression and p53 loss cooperate to promote genomic instability. **Oncogene**. 18: 1177-1184, 1999.
14. **Datta, N. S.**, J.L. Williams and M.W. Long. Differential modulation of G1/S phase associated CDK2/cyclin complexes occur during acquisition of a polyploid DNA content. **Cell Growth and Differentiation**. 9: 639-650, 1998.

15. Williams, J.L., Pipia, G., **Datta, N. S.** and Long, M.W.: Thrombopoietin requires additional megakaryocyte active cytokines for optimal ex vivo expansion of megakaryocyte precursor cells. **Blood**. 91:4118-4126, 1998.
16. **Datta, N.S.**, Williams, J.L., Caldwell, J., Curry, A., Ashcraft, E.K. and Long, M.W.: Novel alterations in cdc2/cyclin B kinase complex formation occur during the acquisition of a polyploid DNA content. **Mol. Biol. Cell** 7:209-223, 1996.
17. ***Datta, N.S.**, *Sphychala, J., Takabayashi, K., Datta, M., Fox, I.H., Gribbin, T. and Mitchell, B.S.: Cloning of human adenosine kinase cDNA: Sequence similarity to microbial ribokinases and fructokinases. **Proc. Natl. Acad. Sci., USA** 93:1232-1237, 1996.
*equal contribution.
18. Chottiner, E.G., Shewach, D.S., **Datta, N.S.**, Ashcraft, E., Gribbin, D., Ginsburg, D., Fox, I.H., and Mitchell, B.S.: Cloning and expression of human deoxycytidine kinase cDNA. **Proc. Natl. Acad. Sci. USA** 88:1531-1535, 1991.
19. **Datta, N.S.**, Shewach, D.S., Hurley, M.S., Mitchell, B.S., and Fox, I.H.: Properties of highly purified human T-lymphoblast (MOLT-4) deoxycytidine kinase. **Adv. Exp. Med. Biol.** 253B:87-92, 1990.
20. **Datta, N.S.**, Shewach, D.S., Hurley, M.S., Mitchell, B.S., and Fox, I.H.: Human T-lymphoblast deoxycytidine kinase: purification and properties. **Biochemistry** 28:114-123, 1989.
21. **Datta, N.S.**, Shewach, D.S., Mitchell, B.S., and Fox, I.H.: Kinetic properties and inhibition of human T-lymphoblast deoxycytidine kinase. **J. Biol. Chem.** 264:9359-9364, 1989.
22. Webber, K.O., **Datta, N.S.**, and Hajra, A.K.: Properties of the enzymes catalyzing the biosynthesis of Lysophosphatidate and its ether analog in cultured fibroblasts from Zellweger syndrome patients and normal controls. **Arch. Biochem. Biophys.** 254:611-620, 1987.
23. Kelley, R.I., **Datta, N.S.**, Dobyns, W.B., Hajra, A.K., Moser, A.B., Noctzel, M.J., Zaekai, E.H., and Moser, H.W.: Neonatal adrenoleukodystrophy: New cases, biochemical studies and differentiation from Zellweger and related peroxisomal polydystrophy syndrome. **Am. J. Med. Genet.** 23:869-901, 1986.
24. Hajra, A.K., **Datta, N.S.**, Jackson, G.L., Moser, A.B., Moser, H.W., Larsen, J.W., and Powers, J.: Prenatal diagnosis of Zellweger cerebrohepatorenal syndrome. **N. Engl. J. Med.** 312:445-446, 1985.
25. **Datta, N.S.**, Wilson, G.N., and Hajra, A.K.: Deficiency of enzymes catalyzing the biosynthesis of glycerol-ether lipids in Zellweger syndrome: A new category of metabolic disease involving the absence of peroxisomes. **N. Engl. J. Med.** 311:1080-1083, 1984.
26. **Datta, N.S.**, and Hajra, A.K.: Does microsomal glycerophosphate acyltransferase also catalyze the acylation of dihydroxyacetone phosphate? **FEBS Lett.** 176:264-268, 1984.
27. (**Datta**) **Sengupta, N.**, Datta, S.C., and Sengupta, D.: Altered kinetics of membrane ATPase in mental illness. **Biochem. Med. (Biochem. Med. Metab. Biol.)** 26:277-285, 1981.
28. (**Datta**) **Sengupta, N.**, Datta, S.C., and Sengupta, D.: Platelet and erythrocyte membrane lipid and phospholipid patterns in different types of mental patients. **Biochem. Med. (Biochem. Med. Metab. Biol.)** 25:267-275, 1981.
29. (**Datta**) **Sengupta, N.**, Datta, S.C., and Sengupta, D.: Monoamine oxidase: Studies with normal and psychiatric population in a tropical environment. **Enzyme** 26:191-200, 1981.
30. (**Datta**) **Sengupta, N.**, Datta, S.C., Sengupta, D., and Bal, S.: Platelet and erythrocyte-membrane adenosine triphosphatase activity in depressive and manic-depressive illness. **Psychiatry Res.** 3:337-344, 1980.

Invited Review/Chapters in Books:

1. Schipani E, Ferrari S, **Datta NS**, McCauley LK, Vignery A, Bellido T, Strewler G, Turner CH, Jiang Y, Seeman E: Meeting report from the 28th Annual Meeting of American Society for Bone and Mineral Research. ***BoneKey-Osteovision*** 3: 14-50, 2006.
2. Hajra, A.K., Ghosh, M., Webber, K., and **Datta, N.S.**: Peroxisomal enzymes of the glycerolipid metabolism. IN: Enzymes of Lipid Metabolism II (L. Freysz and S. Gatt, eds.) Plenum Press, New York, 116:199-207, 1986

Published Abstracts and/or Oral Presentations:

1. **Datta, NS**, Kolailat, R, Pettway, G, Berry, J, and McCauley, LK: PThrP induces mitogen activated protein kinase -1 in differentiated bone marrow stromal cells, mouse osteoblast and cementoblast cell lines. ASBMR 29th annual meeting, Honolulu, Hawaii, September 2007.
2. **Datta, NS**, Kolailat, R, Pettway, G, Berry, J, and McCauley, LK: Induction of mitogen-activated protein kinase phosphatase-1 and down-regulation of p38 and ERK1/2 phosphorylation in PTHrP stimulated differentiated osteoblasts. ASBMB annual meeting, Washington D.C., April 28-May 3, 2007.
3. **Datta, NS**, Pettway, GJ, Chen, C, Koh, AJ, and McCauley, L. K.: PTHrP targets cyclin D1 and induces osteoblastic cell proliferation. ASBMR 28th annual meeting, Philadelphia, PA 2006.
4. Berry, JE, Pettway, GJ, **Datta, NS**, Yamashita, J, Jin, T, McCauley, LK: PTHrP Actions in Cementoblasts: Regulation of PTH-1 Receptor, Ephrin B1 and Vascular Cell Adhesion Molecule via JunB. ASBMR annual meeting, Philadelphia, PA, 2006.
5. Liao, J, Scheneider, A. **Datta, NS**, Pienta, K, McCauley, LK: Extracellular calcium as a mediator of prostate cancer skeletal metastasis. AACR, Washington D.C., 2006.
6. Liao, J, Scheneider, A. **Datta, NS**, Pienta, K, McCauley, L.K: Prostate cancer and skeletal metastasis: Impact of the bone microenvironment and extracellular calcium. The 33rd European Symposium on Calcified Tissues. Prague, Czech Republic, 2006.
7. Berry, J.E, **Datta, NS**, Pettway, G.J, McCauley, L.K.M.: PTHrP actions via JunB: New gene targets in cementoblasts. IADR, Brisbane, Australia, 2006.
8. **Datta, NS**, Chen, C, McCauley, LK: Transcriptional activation of cyclin D1 promoter by PTHrP contributes to cell cycle progression in proliferating osteoblasts. ASBMR, Nashville, TN, 2005.
9. Berry, J.E, Ealba, E.L **Datta, N.S**, Pettway, G.P, Swanson, E, Somerman, M.J, McCauley, LK: Jun B as a key mediator of PTHrP actions on cementoblasts. ASBMR, Nashville, TN, 2005.
10. Yamashita, J, Chun, YHP, **Datta, NS**, McCauley, LK: The evidence that *Bcl-2* is dispensable for the anabolic action of PTH in bone. ASBMR, Nashville, TN, 2005.
11. **Datta, N.S.**, Chen, C., Berry, J.E., and McCauley, L. K.: PTHrP control of the cell cycle machinery in differentiating osteoblasts. ASBMR, Seattle, WA, October 2004.
12. **Datta, N.S.**, Chen, C., and McCauley, L. K.: PTHrP down-regulates cyclin D1 activity in differentiating MC3T3 cells. Skeletal Anabolic Meeting, ASBMR, Bethesda, MD, May 2004.
13. Chen, C., Koh, A.J., **Datta, N.S.**, Zhang, J., Keller, E.T., GuoZhi, X., Franceschi, R.T., D'Silva, N.J., and McCauley, L.K. Impact of the mitogenactivated protein kinase (MAPK) pathway on parathyroid hormone related protein actions in osteoblasts, Gordon Research Conference on Bone and Teeth, Kimball Union Academy, Meridan, August, 2003.
14. **Datta, N.S.**, and Long, M.W.: TGF- [BETA]1- mediated signal transduction during osteoblast differentiation. Blood. 98 (11): 123b, 2001.

15. **Datta, N.S.**, and Long, M.W.: Modulation of the MDM2/p53 pathway during the acquisition of a polyploid nucleus in megakaryocytes: The cell cycle meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, May, 2000.
16. **Datta, N.S.**, and Long, M.W.: Modulation of the MDM2/p53 pathway during megakaryocyte differentiation. American Society of Hematology, New Orleans, Louisiana. Dec. 3-7, 1999.
17. **Datta, N.S.**, and Long, M.W.: Tumor suppressor protein p53 differentially modulates CDK- activating kinase (CAK) activity during the megakaryocyte cell cycle. American Society of Hematology, Miami, FL, Dec. 1998.
18. **Datta, N.S.**, and Long, M. W.: CDK- activating kinases differentially activate cyclin dependent kinase complexes during polyploidization. Cold Spring Harbor, N.Y., May 1998.
19. **Datta, N.S.**, and Long, M.W.: CDK- activating kinases differentially activate cyclin dependent kinase complexes during megakaryocyte endomitosis. American Society of Hematology, San Diego, CA, Dec. 5-9, 1997.
20. **Datta, N. S.**, and Long, M. W.: Regulation of CDK2 activity in polyploid megakaryocytes by the CDK-inhibitory proteins p21^{cip1} and p27^{kip1}. American Society of Hematology, Orlando, FL, Dec. 6-10, 1996.
21. **Datta, N.S.**, Williams, J.L., Caldwell, J., Curry, A. and Long, M.W.: Formation of novel cyclin B - cell division kinase (CDK) complexes during the acquisition of a polyploid nucleus. The Cell Cycle Meeting, Cold Spring Harbor, NY. May 15-19, 1996.
22. **Datta, N.S.**, Williams, J.L., Caldwell, J., Curry, A., and Long, M.W.: Formation of novel cyclin B/cell division kinase (CDK) complexes during megakaryocyte endomitosis. American Society of Hematology, Seattle, WA. Dec. 1-5, 1995.
23. **Datta, N.S.**, Williams, J.L. and Long, M.W.: Alterations in cyclin B and cdc2 protein kinase play a role in megakaryocytic endomitosis. American Society of Hematology, Nashville, TN. Dec. 2-6, 1994.
24. **Datta, N.S.**, Williams, J.L. and Long, M.W.: Alterations in cyclin dependent complex formation during endomitosis (polyploidy). The Cell Cycle Meeting, Cold Spring Harbor, NY. May 18-22, 1994.
25. **Datta, N.S.**, Williams, J.L. and Long, M.W.: The role of cyclin D₃ and cyclin E cell division kinase complexes in megakaryocyte endomitosis. American Society of Hematology. St. Louis, MO. Dec. 3-7, 1993.
26. **Datta, N.S.**, Williams, J.L., and Long, M.W.: Association of human cyclin D and cdk2 in polyploid human erythroleukemia (HEL) cells. American Society for Biochemistry and Molecular Biology, San Diego, CA, May 30-June 3, 1993.
27. Chang, C.L., **Datta, N.S.**, Williams, J.L., and Long, M.W.: Cell cycle regulation of polyploid DNA content in human erythroleukemia cells. Amer. Soc. Hematol. Anaheim, Ca. Dec 4-8, 1992.
28. **Datta, N.S.**, Shewach, D.S., Mitchell, B.S., and Fox, I.H.: Kinetic properties and inhibition of human T-lymphoblast deoxycytidine kinase. J. Cell. Biol. 107:839a, 1989.
29. Shewach, D.S., **Datta, N.S.**, Fox, I.H. and Mitchell, B.S.: Purification and characterization of human T lymphoblast Deoxycytidine kinase. Proceedings of the American Association of Cancer Research 29: 7, 1988.
30. **Datta, N.S.**, Shewach, D.S., Hurley, M.C., Mitchell, B.S., and Fox, I.H.: Purification and properties of human T-lymphoblast deoxycytidine kinase. VI International Symposium on Human Purine and Pyrimidine Metabolism. Tokyo, Japan, 1988.
31. **Datta, N.S.**, Shewach, D.S., Hurley, M.C., Mitchell, B.S., and Fox, I.H.: Purification and properties of human T-lymphoblast deoxycytidine kinase. Fed. Proc. 47:A1350, 1988.