

STUDENTS/ RESIDENTS/CLASS	SYSTEMS STUDIED OR SAMPLE PUBLICATION(S)
Lan Doan, Class of 2007; Wendy Callejas, U. of H.	Duke, P.J., W. Callejas, L. Doan, and M. Marsh. 2004. Phototaxis and aerotaxis in a calcifying alga. <i>Gravitational and Space Biology</i> 18:16. Duke, P. Jackie, W. Callejas, L. Doan, and Mary Marsh. 2005. Phototaxis and aerotaxis in a calcifying alga. <i>Gravitational and Space Biology</i> 18 (2): 113-114.
Amanda Tamm, Class of 2007	Participated in NSBRI's Summer Internship Program; worked with a mentor at Johnson Space Center.
Vicki Leonhart, Class of 2006	Leonhart, V.L., D. Montufar-Solis, and P.J.Duke, Culture encapsulations with alginate affect cytodifferentiation and 3D craniofacial development. <i>J. Den. Res.</i> 83 (SI): Abstract #0015, 2004. Leonhart V, Montufar-Solis D, and Duke PJ. 2003. Eye, cartilage, and vibrissae development in embryonic mouse heads cultured in a rotating bioreactor. <i>J Den Res</i> 82 (Special Issue A):1515.
Huy Nguyen, Class of 2006	Montufar-Solis, D., Nguyen, H.C., Nguyen H.D, Horn W.N., Cody C.D., and P.J. Duke. 2004. Using cartilage to repair bone: an alternative approach in tissue engineering. <i>Annals of Biomedical Engineering</i> 32:1-6.
Vimal Chheda, Class of 2006, UTHSC-SA Dental School	Chheda, V, Montufar-Solis, D., and Duke, P.J. 2001. Bioconvection and gravitaxis in the calcifying alga <i>Pleurochrysis carterae</i> . <i>Gravitational and Space Biology Bulletin</i> 15(1):8.
Stephen Benjamin, DDS, Endodontics, 2005	Worked with NASA to assess dental applications of an ultrasound device for the International Space Station.
Yousef Jefferson, D.D.S. Class of 2005	Jefferson Y, Montufar-Solis D, and Duke PJ. 2003. Cartilage formation in alginate-embedded mouse limb buds cultured in a rotating bioreactor. <i>J Den Res</i> 82 (Special Issue A):1239. Montufar-Solis D, Oakley CR, Jefferson Y, and Duke PJ. 2003. Differentiation of cartilaginous anlagen in entire embryonic mouse limbs cultured in a rotating bioreactor. <i>Adv Space Res</i> 62(8): 1467-1472.
Scott Benoit, D.D.S., Class of 2005	Benoit AS, Montufar-Solis D, Hecht JT, Duke PJ. Differentiation of HME chondrocytes in a three-dimensional culture system. <i>J. Den. Res.</i> 81(SI): Abstract #1730, 2002
Neal Horn, DDS Class of 2004	Horn N, Montufar-Solis D, Duke PJ. Endochondral ossification of murine chondrocytes in a rotating bioreactor. <i>J. Den. Res.</i> 81(SI): Abstract #1731, 2002 Leonhart V, Montufar-Solis D, Horn N, Iverson J, and Duke PJ. 2003. The rotating bioreactor supports three-dimensional <i>in vivo</i> -like development of eyes, cartilages, and vibrissae in alginate encapsulated embryonic mouse heads. <i>Birth Defects Res Clin Mol Teratol</i> 67(5):329.

Ryan Oakley, DDS, Class of 2004	Oakley CR, Duke PJ, Montufar-Solis D. Effects of different culturing methods on mouse limb buds. <i>J. Dent. Res.</i> 81(SI): Abstract #1408, 2002
Amanda Hoover, DDS Class of 2003	A.G. Hoover, D. Montufar-Solis, and P.J. Duke. 2001. Effects of shear on chondrocyte differentiation: comparison between a fluid flow system and a rotating bioreactor. <i>J. Dental Research</i> 80: 133.
Hamilton Calder, DDS, Class of 2002	Calder, J.H., Montufar-Solis, D., Duke, P.J. and Neitzel, G.P. 1999. Laminar flow in the bioreactor shears cells from membrane surface. <i>Gravitational and Space Biology Bulletin.</i> 13(1):28. Calder, J.H., Montufar-Solis, D. and Duke, P.J. 2000. Healing of a skull defect implanted with flat cartilaginous disks. <i>J. Dent. Res.</i> (IADR Abstracts):473.
Jeff Iverson, DDS MS, Orthodontics, 2002	Duke PJ, Iverson J, Brey E, and Montufar-Solis D. 2003. Development of alginate encapsulated embryonic mouse heads cultured in a rotating bioreactor. <i>J Den Res</i> 82 (Special Issue A):1513.
Paul Williams, DDS, Class of 2001	Williams, P., Montufar-Solis, D., and Duke, P.J. A three-dimensional culture system supports development of incisors and molars in maxilla and mandible of cultured murine first arches. <i>Teratology</i> 61(6):446. Williams, P.S., Montufar-Solis, D. and Duke, P.J. 1999. Initiation of molar development in murine first arches cultured in a three-dimensional system. <i>Gravitational and Space Biology Bulletin.</i> 13(1):27.
Hieu Nguyen, DDS, Class of 2001	Nguyen, H.C. Montufar-Solis, D. and Duke P.J. 1999. Tissue engineered cartilage repairs a mouse skull defect. <i>J. Dent. Res</i> (IADR Abstracts):78: 218. Nguyen, H.C., Montufar-Solis, D., and Duke, P.J. 1998. Embryonic limb bud cells grown in a bioreactor produce cartilage suitable for bone repair. <i>Gravitational and Space Biology Bulletin</i> 12(1):23.
Melissa Wadler, DDS, Class of 2000, MS Ortho 2003	Wadler, M., Williams, N., Montufar-Solis, D., and Duke, P.J. 2000. A transgene for muscle hypertrophy alters skeletal growth. <i>J. Dent. Res.</i> (IADR Abstracts):327.
Monty Rieger, Ph.D, DDS, Class of 1999.	NASA/Texas Space Grant Consortium Fellowship
Imrek, Allan, DDS Class of 1994	J. Duke, Montufar-Solis, D. and Imrek, A. 1993. Changes in extracellular matrix area and cell size in tibial epiphyseal growth plates of SL3 Rats. <i>ASGSB Bulletin</i> 7:95.

Martha Hudson , DDS, Class of 1993	NASA/Texas Space Consortium Fellowships: 1991-1992 and 1992-1993 Hudson M*, Matt M, Duke PJ and <u>D'Souza RN</u> . Effects of Gravitational Changes on Tooth Development. <i>J. Dent Res.</i> 72: Abstract #865, 1993
Jaime Vergara, DDS, MS Perio resident	J. Vergara, D. Montufar-Solis and P.J. Duke. 1992. Space flight affects metaphyseal vascularization of rat tibias. <i>ASGSB Bulletin.</i> 6(1):50.
Jimmy Chan, DDS, Class of 1989	Worked on dissections of centrifuged animals
Eliza Wu, DDS, Class of 1989	Worked on dissections of centrifuged animals
Sam Leifeste, DDS Class of 1988 Nina Leifeste, DDS Class of 1988	Jennifer Moore, Jackie Duke, William S. Leifeste, and Nina S. Leifeste. 1988. Cephalometric analysis of skull changes due to excess gravity. <i>J. Dent. Res.</i> 67:194. J. Moore, J. Duke, W.S. Leifeste, and N.P. Leifeste. 1988. Cephalometric evidence of skull changes in excess gravity. <i>ASGSB Bulletin</i> 1:35.
Lab Technicians/ Res. Assistants/ Associates	Projects
Verna Hubbard	Worked on the CELLS experiment. As histotechnician, cut sections for various projects.
Ruby Grant	Worked with various aspects of space flight experiments.
Jerry Campbell	EM of various tissues. Jackie Duke, Liliana Janer and Marion Campbell. 1985. Microprobe analyses of epiphyseal plates from Spacelab 3 rats. <i>The Physiologist</i> 28:378.
Jeanette White	Worked with the Skylab simulation at the DSI.
Jorge Arizpe	Head technician for the CELLS experiment. In charge of all hardware testing. Began studies on tissue engineering with cartilage.
Hitesh Kapadia, DDS, MS 2005	Worked on CELLS experiment.

Liliana Janer, DDS Class of 1989	Jackie Duke and Liliana Janer. 1985. Gravity as a teratogen. <i>Teratology</i> 31:31A. Jackie Duke and Liliana Janer. 1985. Growth and differentiation of mammalian embryonic tissues exposed to hypergravity <u>in vivo</u> and <u>in vitro</u> . <i>The Physiologist</i> 28:262. Jackie Duke, Liliana Janer, and Marion M. Campbell. 1984. Acceleration of fusion in mouse palates by <u>in vitro</u> exposure to excess G. <i>J. Embryol. Exp. Morph.</i> 82S:209.
S. Das	Worked with Dr. Durban on the growth factor studies using the NASA bioreactor. E.M. Durban and S. Das 1998. The role of gravity in regulating the production of epidermal growth factor. ASGSB
Beth Daane Cabera	Carried out first algae studies on a KC 135. Also did first cultures of chondrocytes in the rotating bioreactor. P.J. Duke, E. Daane, and D. Montufar-Solis. 1993. Studies of chondrogenesis in rotating systems. <i>J. Cell Biochem.</i> 51:274-282
Dina Montufar-Solis	Worked on IML 1 and 2. Has studied growth plates of rats from various US and Soviet spaceflight missions, and from suspension and centrifugation studies. Directed tissue engineering studies using NASA equipment and developed new storage techniques for calcifying algal cells for the International Space Station.
Faculty	Systems studied
Elisa Durban, Ph.D., J.D.	B.D. Greer, P.D. Barreto, J. Duke, and E.M. Durban. 1991. Epidermal growth factor production is a gravity sensitive process in the mouse submandibular salivary gland. <i>ASGSB Bulletin.</i> 5():56 S. Das, C.W. Patrick, Jr., M. Miller, T. Thompson, and E.M. Durban. Differentiation of human salivary epithelial cells in simulated microgravity. ASGSB 1998.
Rena D'Souza, Ph.D., D.D.S.	Hudson M, Matt M, Duke PJ and D'Souza RN. 1993. Effects of Gravitational Changes on Tooth Development. <i>J. Dent Res.</i> 72: Abstract #865,
Mary Marsh, Ph.D.	Studies the calcifying unicellular alga <i>Pleurochrysis carterae</i> , and its relatives, responsible for CO ₂ fixation in the ocean. Marsh ME, Ridall AL, Azadi P, Duke PJ . Galacturonomannan and Golgi-derived membrane linked to growth and shaping of biogenic calcite. <i>J Structural Biol:</i> 139(1):39-45, 2002.
Jackie Duke, Ph.D.	Worked on several shuttle and Soviet biosatellite flights. Ran the DB centrifuge, and bioreactors.
Cindy Farrach-Carson, Ph.D.	Worked on : Vitamin D Analogs as Countermeasures for Bone Loss in Space