

Curriculum Vitae

NEEL BHATAVADEKAR

PERSONAL

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EDUCATION

<u>Degree</u>	<u>Institution</u>	<u>Year</u>
Diplomate	American Board of Periodontology	2008
Residency in Periodontology	University of North Carolina at Chapel Hill	2004-2007
Master of Public Health (Health Policy Administration)	University of North Carolina at Chapel Hill	2005-2007
Master of Science (Biomedical Engineering)	University of Florida, Gainesville	2002-2004
Bachelor of Dental Surgery	University of Bombay, India	1996-2001

PROFESSIONAL EXPERIENCE

Assistant Professor- Department of Periodontology, University of Texas Health Science Center, Houston.	(Aug 07- Aug 09)
Adjunct Faculty- Department of Biomedical Engineering, Rice University, TX.	(Feb 08- Present)
Adjunct Faculty- Department of Periodontology, University of North Carolina at Chapel Hill	(May 08- Present)
Chief resident- Department of Periodontology, University of North Carolina at Chapel Hill.	(2006- 2007)
Fellow- Clinical product development division, R&D division. Astra Tech. Molndal, Sweden.	(Aug 2006)
Intern- Cecil G. Sheps Center for Health Services Research, Chapel Hill. Project: Analysis of NHSC dental workforce and its health policy implications. Mentor: Dr. T.Konrad	(2005)

Research Assistant- (2002-2004)

Department of Biomedical Engineering, University of Florida.

- Center for Dental Biomaterials- Research projects: 1) Antibacterial effects of Propolis on *Streptococcus mutans*. 2) Formulated a novel test protocol for *in vitro* analysis of remineralization/demineralization in enamel; involved use of confocal microscopy, and nanoindentation. Mentor: Dr.K.J.Anusavice
- Applied Biomechanics Lab- Biomechanical image analysis of CT scans. Developed Matlab code for CT scan image analysis. Mentor: Dr.A.J.Rapoff

Intern-

Dental Division, Tutogen Biomedical Inc., Florida (2003)

- Chief research collaborator between Tutogen- (Germany) and (US).
- Expedited formulation of clinical trial protocol for several products- represented Tutogen in collaborative efforts with several Universities in the US.
Bone graft, membranes R& D- Invented new design for drug delivery system for bone grafts.

Research Associate- (2001–2002)

Indian Institute of Technology (IIT, Bombay)

- Worked in collaboration with Dept. of Materials Science and the Industrial Design Center on the possibility of using ceramic inks to create dental implants using rapid prototyping technology.

Dental Clinical Intern- (2001- 2002)

Nair Hospital Dental College, KEM Hospital, Bombay.

CLINICAL AND RESEARCH INTERESTS

- Implant dentistry and novel bone augmentation techniques
- Mucogingival soft tissue surgery
- Optimizing biomechanic and biomaterial applications in periodontal therapy
- Clinical trials and product development

DENTAL LICENSE

- **Dental license #0023541** (2007-Present)
IV sedation/conscious sedation permit
State of Texas
- **Dental license** (2001- Present)
Maharashtra State, India.

ACADEMIC OR PROFESSIONAL APPOINTMENTS

- University of North Carolina at Chapel Hill
Graduate Student Representative, Dept. of Periodontology (2006- 2007)
- University of Florida at Gainesville
Founding Vice-President - Biomedical Engineering Graduate Student Association at the University of Florida. In charge of Industry Relations and Entrepreneurship (involving establishing a closer link between local Florida enterprises and the department, for purposes of internships, research contracts and jobs). (2002)
- University of Mumbai
Treasurer-Dental Student Association (2000)
Nair Hospital Dental College

PROFESSIONAL MEMBERSHIPS

- American Academy of Periodontology
- American MENSA
- International Team for Implantology (ITI- Switzerland), nominated membership
- Sigma Xi- Scientific Research Society, Invited membership.
- Biomedical Engineering Society (US)
- International Association of Dental Research
- Indian Dental Association (IDA, Bombay branch)
- Society of Biomaterials and Artificial Organs (India)

COMMITTEE AND PEER REVIEW APPOINTMENTS

- **Reviewer**, Journal of Periodontology (Feb 08- Present)
- **Editorial Board**, Journal 'Dentistry India' (Dec 08-Present)
- **Planning Committee**, Academy of Osseointegration(AO) Workshop 2010 (April 09- Present)
- **Editorial Board**, Journal of the Indian Dental Association (Sept 09- Present)
- **Faculty Senate**, University of Texas Health Science Center (Oct 08- Present)
- Promotion Tenure Committee, University of Texas Health Science Center (Oct 08- Present)
- Peer-review Committee, Department of Periodontology, UT (Oct.08-Nov 08)
- Member, Search Committee for new faculty appointments (Sept 08- Present)
- Masters thesis committee:
 - Dr.Sayma Memon, University of Texas (Oct 07- Present)
Role of bisphosphonates in dental implant patients
 - Dr.Lauren Brownfield, University of Texas
 - Kevin Keys (DDS student),Summer research project mentorship (Summer 08)
- Biomedical Engineering Graduate Student Association Council (2002-2004)
University of Florida, Gainesville

PUBLICATIONS

PEER REVIEWED JOURNAL ARTICLES

- Application of cytodetachment technology to implant surface analysis. *Bhatavadekar NB, Hu J, Keys K, Ofek G, Athanasiou KA. Submitted to Clinical Oral Implants Research.*
- Helping the clinician make evidence based implant selections: A systematic review and qualitative analysis of dental implant studies over a 20 year period. *Bhatavadekar NB. Submitted to the Journal of Oral and Maxillofacial Implants.*
- Choosing a dental implant: An evidence based approach as a viable option. *Bhatavadekar NB. Accepted for publication in Dentistry India.*
- Modulation of the host inflammatory response in periodontal disease management: exciting new directions. *Bhatavadekar NB, Williams RC. 2009. Int Dent J. 59:305-308.*
- Clinical decisions and quality of evidence available for dental implants. *Bhatavadekar NB. Journal of Periodontology 2009; 80(10),1559-1561.*
- New directions in management of periodontal disease by host modulation. *Bhatavadekar NB, Williams RC. Journal of Clinical Periodontology. 2009. 36:124-126.*
- The use of digital volume tomography in imaging an unusually large odontome in the mandible. *Bhatavadekar NB, Bouquot JE. 2009. Pediatric Dentistry. 31:438-41.*
- Long term tomographic assessment of an intrabony defect treated with enamel matrix protein. *Bhatavadekar NB, Paquette DW. J Periodontol. 2008 Sep;79(9):1802-8.*
- Plasma Cell Gingivitis. *Bhatavadekar NB, Khandelwal N, Bouquot JE. Tex Dent. J. 2008. Apr; 125(4):380-383*
- Assessing the evidence supporting the claims of select dental implant surfaces: a systematic review. *Bhatavadekar NB. Int Dent J. 2008. Dec; 58(6):360-70.*
- Holding up the oral health safety net: The role of NHSC alumni dentists in NC. *Bhatavadekar NB, Rozier GR, Konrad TR. Submitted to NC Medical Journal.*
- Application of Image-based weighted measure of skeletal bending stiffness to great ape mandibles. *Bhatavadekar NB, Daegling DJ, Rapoff AJ. Am J Phys Anthropol, 2006. Oct;131(2):243-51*

ABSTRACTS

- 'CT-based weighted measures of skeletal stiffness: A new quantitative tool.' *Bhatavadekar NB, Daegling DJ, Rapoff AJ. Special issue of the Proceedings of the Annual Meeting of the International Association of Dental Research conference (Baltimore, 2005).*
- 'Combination of tt-Farnesol with kaemferol and quercetin against *S.mutans* UA159'. *Bhatavadekar NB, Anusavice KJ, Rodrigues PH, Kozarov E, Progulske-Fox A. (Issue of the Proceedings of the International Association of Dental Research conference, 2004).*

- Image-based weighted measures of skeletal stiffness: case studies of Great Ape mandibles *Rapoff AJ, Bhatavadekar NB, Daegling DJ. American Journal of Physical Anthropology 2004; 123(S38):165. (Special Issue of the Proceedings of the Annual Meeting of the American Association of Physical Anthropologists).*

THESES

- **Master of Public Health (Health Policy and Administration):** Holding up the oral health safety net: The role of NHSC alumni dentists in NC. Mentor: Dr. T.R. Konrad, Dr. Gary Rozier. 2007.
- **Master of Science (Biomedical Engineering):** Image-based weighted measures of skeletal stiffness. Mentor: Dr. A.J. Rapoff. May 2004.

INVITED PRESENTATIONS

- 'New Frontiers in Tissue engineering'. Inaugural conference of the International Clinical Dental Research Organization. Pune, India. September 2009.
- 'Cytodetachment technology for implant surface assessment'. Straumann Research division. Basel, Switzerland. March 2009.
- 'Comparative literature assessment of dental implants'. Straumann seminar. Basel, Switzerland. March 2009.
- 'Regenerative applications of signaling molecules'. International Academy of Periodontology. Agra, India. April 2009.
- 'Bioengineering and Dental Implants: Clinical relevance'. Encode Continuing Education. Mumbai, India. April 2009.
- 'Radiological advances in Periodontology and Implant dentistry'. Dubai Health Care City, Dubai. Nov, 2008.
- 'Clinical advantages of BMP, PDGF, and other biomodifiers'. Boston-University Dubai Dental School, Dubai. Nov, 2008.
- 'Signaling molecules and their clinical regenerative applications'. Harvard School of Dental Medicine, Boston. Oct.2008.
- "Clinical applications of growth factors". State University of New York at Stony Brook. Sept 2008.
- "Biomaterials and Biomechanics: Exciting applications in Implant Dentistry". Department of Biomedical Engineering, Rice University. Nov 2007.
- "Clinical and biomechanical aspects of the dental implant". Houston Society of Oral Surgeons. Houston, TX. Nov 2007.
- Clinical grand rounds presentations "Periodontal surgery for the general dentist". University of Texas, Houston. Oct. 2007, Jan 2009.

- “Assessment of claims proposed by different implant surfaces”. Straumann. Basel, Switzerland. Dec 2006.
- “Clinical trial design and strategic organization for the Astra Tech prosthetic components”. Astra Tech Inc., Molndal, Sweden. August 2006.
- “Dental Biomechanics” for graduate course “Bone Mechanics” University of Florida, Gainesville. Sept.2003.

AWARDS AND HONOURS

- **Diplomate**, American Academy of Periodontology. June 2008.
- **Leverett Graduate Student Merit Award for Outstanding Achievement in Dental Public Health**- third place, awarded by the American Association of Public Health Dentistry (2007)
- **Graduate Education Advancement Board Recognition Award** (2006) - Graduate School at UNC Chapel Hill. Awarded for impact of research on state and people of North Carolina.
- **Elsie and Baxter Sapp Fellowship** (2005). Dental Foundation of North Carolina.
- **University of Florida Annual research day** (2004)- First Place in Scientific Poster Presentation
- **Certificate of Academic Excellence** (2003) - International Center, University of Florida.
- **Tau Beta Pi- Engineering Honor Society** (2003)
- **JN Tata National Scholar** (2002) – selected from a nationwide screening of about 1000 candidates meeting pre-requisite criteria.
- **International College of Dentists Award** (Indian Subcontinent Section, 2001).
- **Scholarships: Statewide** Middle School Scholarship, Nanavati Scholarship, Bhatena Scholarship, Mariwala trust scholarship, Brahman Sabha scholarship, Ratan Tata Scholarship, Bombay Hospital scholarship (2001-2002)
- **Fellowships:** B.D.Bangur Endowment, Gokhale Endowment. (2002)
- **Colgate- Indian Dental Association Award** (1999,2000)

TEACHING RESPONSIBILITIES AND EXPERIENCE

University of Texas, Houston

(2007- Present)

- DS3, DS4 undergraduate student clinics: 190 hours
- **Course Director:** PERI2721:Diagnosis and Treatment(Fall 2008)
- **Course Director:** Surgical clerkship in Periodontics (Spring 2009, Summer 2009)

Graduate level: (hours/semester)

- Current literature in Periodontology: 16 hours
- Case presentation seminar: 16 hours
- Topical seminars in Periodontology: 8 hours
- Graduate Periodontology clinic: 80 hours

University of North Carolina, Chapel Hill

- Advanced Concepts in Periodontology (DENT 303) :4 hours (2005-2006)
Introduction to Periodontal Therapy (DENT 203): 4 hours
- Undergraduate prescription surgery: 10 hours (2004-2006)
- Comprehensive Care Clinic (DENT 239) (2004-2006)
Preventive Recall Clinic (DENT 336),
Diagnosis and Treatment Planning Clinic (DENT 241): 16 hours (varies by semester)

GRANTS, CONTRACTS AND PATENTS

- **Astra Tech**, Molndal, Sweden-'Analysis of cytodetachment technology for analysis of implant surfaces'. Sponsored project. (Dec 08- June 09)
- **Medtronic**. Pre-launch clinical product evaluation. (January 09- April 09).
- **Straumann Inc.**, Basel, Switzerland. Critical analysis of randomized controlled trials. Sponsored project.
- **Invention report-** Novel Bone tack system – *Bhatavadekar NB*. Office of Technology Development, University of North Carolina (Aug 2006).
- **Straumann Inc.**, Basel, Switzerland. Project: Review of literature to assess strength of evidence and claims proposed by implant companies. (Aug 06- Dec 06). Sponsored project.
- **US Patent Pending # 60/517,996**– 'Modification of dermatome-an improvement in skin harvesting technique'. *Bhatavadekar NB, Mozingo DW, Rapoff AJ*.
- **Astra Tech Inc**. Molndal, Sweden. Design of clinical trial to evaluate prosthetic component for implant system. (Aug. 2006). Sponsored project.
- **International patent application (Patent Co-operation Treaty)** PCT US/2004/033596. Devices and systems for preparing and separating skin. *Bhatavadekar NB, Mozingo DW, Rapoff AJ*.

SKILLS AND OTHER INTERESTS

- MATLAB programming
- SPSS programming
- Photography