Greetings from the Director

2016 has arrived! I have no idea where 2015 went—a complete blur—but a fabulous year for the Oral Biology program. New students arrived; new faculty joined the program; multiple graduates have now joined our wonderful alumni cohort; and students continue their service to the School of Dentistry: as graduate teaching assistants in the DDS microbiology course, by moderating MS thesis presentations and MS peer study sections, and in their research—presenting at meetings and winning awards!

We’ve taken some small steps in mentoring students for “what comes next.” This year sessions included the construction of a CV and writing a cover letter. What would you have liked to know before you moved out of the graduate student role? Please send suggestions for topics to me. Our incoming students have benefitted tremendously from participating in the Biomedical and Biological Sciences Program first-year groups. As we had hoped, their participation has created a wider social and scientific network and more opportunities to give short presentations.

I invite you to support the Oral Biology program by contributing to the new Dental Foundation of North Carolina Oral Biology fund. Your contributions will be used to benefit our students—from little things like replacing the small refrigerator in the study room that has stopped working to defraying costs for attendance at a special workshop or meeting. No contribution is too small and all will be much appreciated. See the message from Paul Gardner, executive director of the Dental Foundation of North Carolina for more details.

I hope you enjoy our newsletter! More details on the “happenings” in the program can be found inside. Please visit soon and often!

—Ceib Phillips

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Welcome, New Students!

2014

Lu Sun received his Bachelor's and Master's degrees in Dentistry from Tianjin Medical University. Upon graduation he worked in the Tianjin Medical University Hospital in the Department of Dentistry as a research assistant and dentist. His research interest is tissue engineering related to Periodontology. Hobbies include swimming and playing football.

Sing Wai Wong received his dental degree in 2011 from Jinan University and completed a three-year residency program in Prosthodontics at Peking University and the Hospital of Stomatology. He loves skiing, snowboarding, swimming, and playing Warcraft.

2015

Eman Hefni was born and raised in Saudi Arabia; she graduated in 2011 from King Abdul Aziz University—College of Dentistry in Jeddah. She worked as a teaching assistant in the periodontology department at Umm Al-Qura University in Makkah. Last year she was enrolled in a one-year fellowship program in the periodontology department at UNC—Chapel Hill. She is married to Anmar Kensara (Master’s candidate in Operative Dentistry). They have a son, Adnan, and a daughter, Zehna.

Dr. Sehrish Javaid completed her DDS in 2007 at the University of Health Sciences in Lahore, Pakistan. In 2011 she received a Master's degree in Oral Biology from the University of Minnesota as a Fulbright scholar. Currently she holds a fellowship from the Royster Society at UNC. She is a member of the social media committee of the Society. She likes volunteering, traveling, and cooking.

Dr. Lauren Katz is from Charlotte, NC and earned her Bachelor’s degree in Chemistry and a Doctorate of Dental Surgery at UNC—Chapel Hill. Currently she is pursuing a PhD in Oral Biology as well as advanced training in Prosthodontics. In her free time Lauren enjoys exercising, rock climbing, and spending time with family and friends.

Dr. Aatish Thennavan completed his Dental degree at the Rajiv Gandhi Institute of Health Sciences in Bangalore, India and completed his residency in Oral & Maxillofacial Pathology & Microbiology at Manipal University in Manipal, India. Besides science he loves to write, paint, and travel.
PhD Student Accomplishments

**Dr. Kevin Byrd** (Host-Pathogen) won the Turner Award at the 2015 Dental Research in Review Day for his poster presentation, “LGN/GPSM2 Controls Cellular Division Orientation in Developing Murine Oral Epithelia.” At the 2015 AADR he exhibited the project as an oral presentation and was awarded first place in the senior category of the AADR Johnson & Johnson Healthcare Products Hatton Awards. Dr. Byrd is mentored by Dr. Scott Williams, an Assistant Professor in the Department of Pathology and Laboratory Medicine.

**Brittney Ciszek** (Pain Neurobiology) received the Freedland Advanced Education Fellowship in 2014. Brittney’s application, “Characterizing the role of β-adrenergic pathways in the pathophysiology of chronic orofacial pain,” was one of seven received from all graduate programs at UNC for submission to the Howard Hughes Medical Institute International Student Fellowship. Brittney’s mentor is Dr. Andrea Nackley. In 2015 Brittney received the Patrick Flood award for peer leadership in the OBIO program.

**Dr. Sehrish Javaid** received a Royster Fellowship from the UNC Graduate School in 2015. The Royster Society of Fellows offers membership to selected graduate students entering graduate programs across the UNC-Chapel Hill campus and provides five years of financial support, while encouraging interdisciplinary exchange, intellectual enrichment, leadership, and professional development.

**Christine Kim** (Host-Pathogen) won the PhD-level Turner Award at the 2015 Dental Research in Review Day for her poster presentation, “SPLUNC1 dissociates and internalizes the Epithelial Sodium Channel.” Her project was selected for oral presentation for the UNC Academic Research Day, and she was awarded the Sigma Xi Scientific Research Society Travel Award. In 2015 Christine was a finalist in the Junior Investigator in Basic Science category at the North America Cystic Fibrosis Conference, and she received the Young Scientist Award for her presentation at the 8th Federation of the Asian and Oceanian Physiological Societies Congress. Christine is mentored by Dr. Robert Tarran, PhD, an Associate Professor in the Department of Cell Biology and Physiology.

**Dr. Lin Lin** (Host-Pathogen) received a Doctoral Dissertation Completion fellowship in 2015 from the UNC Graduate School for his project, “The role of BP180 in granulopoiesis”. Dr. Lin is mentored by Dr. Zhi Liu, Professor in the Departments of Microbiology and Immunology and Dermatology.

**Dr. Aatish Thennavan** received a Doctoral Merit award from the UNC Graduate School in 2015.
Dr. Sing Wai Wong (Skeletal Biology & Extracellular Matrices) received a Doctoral Merit Assistantship from the UNC Graduate School in 2014, which provides a partial stipend and full tuition for one academic year. Dr. Wong is mentored by Dr. Ching-Chang Ko, a professor in the Orthodontics Department.

Congratulations to Curriculum in Oral Biology Graduates!

2014

Dr. Melanie Alazzam (Skeletal Biology and Extracellular Matrices; mentor Dr. Eric Everett) returned to Jordan University of Science and Technology as an Assistant Professor in the Department of Oral Medicine and Oral Surgery. She recently was appointed as an Assistant Dean in the School of Dentistry.

Dr. Estephan Moana (Pain Neurobiology; mentor Dr. Richard Gracely) is currently a clinical assistant professor at the TMD and Orofacial Pain Division of the University of Minnesota School of Dentistry.

Dr. Rita-Marie McFadden (Host-Pathogen; mentor Dr. Pawel Kiela) is currently a Post-Doctoral Fellow with Dr. Kristi Neufeld at the University of Kansas. She is pursuing mechanisms behind asymmetrical cell division contributing to the onset of colon cancer.

Dr. Chaitanya Puranik (Skeletal Biology and Extracellular Matrices; mentor Dr. Eric Everett) first joined the UNC Operative Dentistry Program as a certificate student in operative dentistry and the lab manager for Dr. Andrea Zandon. In July 2015 Chaitanya moved to the University of Connecticut School of Dental Medicine and began a pediatric dentistry residency.

Emily Yaun Yi (Host-Pathogen) graduated from the Master of Science program in Oral Biology.
Dr. Ning Yu (Host-Pathogen) received the Freedland Advanced Education Fellowship based on her academic achievement, leadership, and service. In 2015 Dr. Yu won the Turner Award during Dental Research and Review Day for her poster, “Impaired Function of Epithelial Plakophilin-2 is Associated with Periodontal Disease,” and she received a UNC Graduate Student Transportation Grant Award to defray her transportation costs to the 2015 IADR meeting in Boston. Ning is mentored by Dr. Steven Offenbacher, Distinguished Professor in the Department of Periodontontology. Dr. Yu also was the first author of “Insulin Response Genes in Different Stages of Periodontal Disease,” published in the Journal of Dental Research in April 2015.

Dr. Yu is now a Post-Doctoral Fellow at the University of Michigan in William Giannobile’s laboratory and will begin a residency program in Periodontics at UM in July 2016.

Dr. Lu Zhang (Host-Pathogen; mentor Dr. Jenny Ting) is now a Post-Doctoral Fellow at the Duke Molecular Physiology Institute. Dr. Zhang received a 3 year American Diabetes Post-Doctoral Fellowship to characterize the function and mechanisms of action of potential soluble factors induced by Pdx-1 overexpression in both human and rat islets that increase functional islet mass.

2015

Rui Wei Liang (Skeletal Biology and Extracellular Matrices; mentor Dr. Lyndon Cooper) is now a Post-Doctoral Fellow at the University of Illinois at Chicago in Lyndon Cooper’s laboratory.

Dr. Thatsanee Saladyanant (Host-Pathogen; mentor Dr. Jennifer Webster-Cyriaque) was awarded a Colgate Research in Prevention Travel Award by the International Association for Dental Research (IADR) at the 2014 American Association for Dental Research, which provided funding to travel to the IADR meeting in Capetown, South Africa to present her research, “Periodontal treatment improves immune activation/inflammation in HIV-positive Patients.” Dr. Saladyanant also received a C.V. Starr Scholarship from the UNC Center for Global Initiatives, which supported her summer work in Malawi. Her project, “The benefits of dental care treatment in HIV-infected patients,” was conducted under the supervision of Dr. Jessie Mlotha, an Adjunct Professor at the UNC School of Dentistry who heads the Dental Departments at the Kmuzu Central Hospital in Lilongwe, Malawi. Thatsanee also received a UNC Graduate Student Transportation Grant Award that supported her transportation costs to the 2015 IADR meeting in Boston.

Dr. Saladyanant is now working as a periodontist in Sanpatong Hospital in Chiang Mai, Thailand and will be participating in the new researcher training for the National Research Council of Thailand.
Introducing the Oral Biology Seminar Series

The Oral Biology Seminar Series (OBSS) is a new research seminar of the School of Dentistry (SOD) open to all faculty, students and staff including visiting scholars and post-docs. Presenters are scientists from different schools on campus as well as from nearby universities and research facilities. In addition, a few times a year, the school brings out-of-state speakers as part of a Visiting Professorship Series.

Topics include the areas of skeletal biology, extracellular matrices, stem cells, regeneration, biomechanics, biomaterials, molecular biology, new technologies/trends in research, oral biology, aging, biofilm, inflammation, immunology, microbiology, cariology, neurosciences, etc. The seminars are organized by Drs. Patricia Miguez and Eric Everett. The OBSS was launched in the fall semester of 2014.

The goals of the seminar are:

- Exchange research data and ideas and seek collaborations among researchers from UNC SOD and other schools/institutions
- Provide opportunities for post-docs, graduate students and visiting scholars to disseminate their research and promote feedback from investigators outside of their laboratory
- Invite non-local exceptional scientists that are experts in specific fields of interest to the SOD community to learn from and start collaborative opportunities

The seminars are usually held most Tuesdays from 1 to 2pm from September through May. Soon the OBSS schedule will be posted on the SOD website.

If you have suggestions for speakers or would like to visit UNC and present your own research, please contact Dr. Miguez at patricia_miguez@unc.edu

Introducing the Orofacial Pain Certificate

The Orofacial Pain Certificate Program is a two year program leading to a Certificate in Orofacial Pain. The Orofacial Pain Certificate Program is approved and accredited by the Council on Dental Education of the American Dental Association. The program include clinics, didactic curriculum, journal club, case conferences, research, and rotations to specialized pain clinics affiliated with the UNC School of Dentistry and UNC Hospitals. Upon completion of the program, students are eligible for examination and certification by the American Board of Orofacial Pain (http://www.abop.net/).

The Orofacial Pain Graduate Program is ideal for the clinician-scientist who intends to pursue an academic career in translational pain research. Upon completion of the Program, successful candidates may transition into the UNC’s Temporomandibular Joint Disorder and Orofacial Pain Research Career Development Award—an NIDCR K12 award. The goal of this K12 program is to foster the career development of independent basic, clinical and translational research scholars who can lead multi-disciplinary research teams to apply novel approaches to orofacial pain research thereby improving the
understanding of these disorders and leading to more effective methods of diagnosis and treatment.

Candidates interested in a combined Orofacial Pain Certificate and Oral Biology PhD Program must apply separately to both programs and be independently accepted by both programs. All prospective candidates must hold a DDS, DMD or equivalent degree. For more information, visit [https://www.dentistry.unc.edu/academic/ade/orofacialpain/](https://www.dentistry.unc.edu/academic/ade/orofacialpain/)

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**Alumni News**

**Dr. Roger Arce** (2011), an assistant professor in the Department of Periodontics at Georgia Regents University, was selected as a Fellow by the AAP Foundation to attend ADEA’s Academy for Academic Leadership Institute for Teaching and Learning. This fellowship provides new faculty members with the opportunity to gain competencies in teaching and other academic skills in the context of career planning. He also is an author of a chapter, “Bacteremias of Oral Origin and Potential Implications for Systemic Diseases,” in *Bacteremia: Risk Factors, Treatment and Potential Complications* by Nova Science Publishers (ISBN: 978-1-63117-290-8).

**Dr. Patricia Miguez** (2011), who had been on faculty at the University of Pennsylvania, recently joined the faculty at UNC-CH as a Clinical Assistant Professor in the Department of Operative Dentistry. Welcome home Pat!

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**Faculty News**

**Dr. Antonio Amelio**, assistant professor in the Department of Dental Ecology, worked on a team of scientists to develop a new imaging tool that helps cancer researchers better track tumor development and treatment responses, using the natural light-producing ability of deep-sea shrimp. The design and engineering of the new bioluminescent imaging tool, called the LumiFluor, was described in a study published in the journal *Cancer Research*. For more information visit [https://www.dentistry.unc.edu/researchers-design-biological-flashlight-using-light-producing-ability-of-shrimp/](https://www.dentistry.unc.edu/researchers-design-biological-flashlight-using-light-producing-ability-of-shrimp/)

**Dr. Jennifer Webster-Cyriaque**, professor in the Department of Dental Ecology, is a co-investigator with InSilixa for the development of a rapid oral Human Papiloma Virus (HPV) test. The company hopes to adapt a test originally developed in Webster-Cyriaque’s lab to detect oral HPV at the time a patient comes in for care. For more information visit: [https://www.dentistry.unc.edu/webster-cyriaque-partnering-to-develop-rapid-oral-hpv-test/](https://www.dentistry.unc.edu/webster-cyriaque-partnering-to-develop-rapid-oral-hpv-test/)
New faculty

**Dr. Samual Lai** joined the Eshelman School of Pharmacy in 2010. Dr. Lai attended Cornell University and earned his BS in Chemical & Biomolecular Engineering in 2003. He earned his PhD in Chemical & Biomolecular Engineering at Johns Hopkins University in 2007. Following one year of postdoctoral work, he became a research assistant professor at Johns Hopkins in fall 2008. Dr. Lai’s previous research focused on nanoparticle-based delivery of bioactive molecules to mucosal tissues. He helped pioneer the development of mucus-penetrating particle (MPP) technology, a breakthrough that formed the basis of Kala Pharmaceuticals, launched in 2009.

**Dr. Ricardo Teles** joined the Department of Periodontology in August 2014 as the OraPharma Distinguished Professor. He earned his dental degree in 1988 from the Federal University of Rio de Janeiro. After earning his certificate in periodontology and a Doctor of Medical Sciences in oral biology from the Harvard School of Dental Medicine (HSDM) in 1996, he returned to Brazil and chaired the periodontology department at the Estacio de Sa University School of Dentistry in Rio de Janeiro, rising to school dean. In 2003 he returned to Boston to take a position on the staff in the Department of Periodontology at the Forsyth Institute and as a clinical instructor in periodontology at HSDM. The focus of his research is to examine in vivo the interplay between subgingival polymicrobial biofilms and mediators of the immuno-inflammatory host response. He is married to Flavia Teles.

**Dr. Flavia Teles** joined the Department of Periodontology in August 2014 as a research associate professor. She earned her dental degree in 1997 from the Federal University of Rio de Janeiro. In 2000 she earned her certificate in periodontology from the Pontificia Catholic University, followed by a Master of Science in Periodontology from the State University of Rio de Janeiro in 2004. She earned a Doctor of Medical Sciences in oral biology from Harvard School of Dental Medicine (HSDM) in 2007. She became a faculty member at Forsyth and served as the director of the pre-doctoral oral microbiology and immunology course at HSDM. Her research is dedicated to oral microbiology and to better understand how microorganisms contribute to the pathogenesis of periodontal diseases. She is married to Ricardo Teles.

**Dr. Scott Williams** joined the Department of Pathology and Laboratory Medicine in 2013 as an assistant professor. He earned his AB in Biology at Brown University before enrolling at Columbia University, where he earned an MPhil along with an MA and PhD in Neurobiology & Behavior. As a Postdoctoral Fellow at the Rockefeller University, he researched the role of asymmetric cell divisions in mammalian skin development.
Departures

In December 2015 Lyndon Cooper, Program Director of Advanced Prosthodontics and Stallings Distinguished Professor, accepted the position of Associate Dean for Research and Head of the Department of Oral Biology at the University of Illinois at Chicago College of Dentistry. We wish him well.

After 36 years at the School of Dentistry, Cindy Blake retired on December 31, 2015 from the program manager position for the Oral Biology program. Alumni sent photos and messages that the OBIO students put together as a special remembrance for all the support and nurturing she had given the program. She will be missed by all. Someone new will take over the position, but Cindy can never be replaced!

Message from Paul Gardner
Executive Director
Dental Foundation Of North Carolina

I hope you’ve had a chance to see our wonderful Koury Oral Health Sciences (KOHS) building, which opened just a little over three years ago. It’s a beautiful facility that really pulls the School of Dentistry together—literally and figuratively. In addition to providing critical research space which allowed all of our basic and translational science researchers to move back to campus from Research Triangle, the building offers excellent core research facilities, seminar rooms, an Oral Biology student room, and an atrium in the space among the KOHS, Brauer Hall and First Dental buildings, where alumni, faculty, staff, and students can meet and grab a cup of coffee to start their day or a salad for lunch.

We certainly have some of the best physical facilities for oral and craniofacial research, and now we need to make sure we can support our Oral Biology PhD students at the UNC School of Dentistry in acquiring new research skills, preparing for future careers, and occasionally celebrating accomplishments. To do that we need more than the generous funding provided each year by the School of Dentistry. We need your support for the Dental Foundation of North Carolina (DFNC).

Contributions to the Curriculum in Oral Biology fund will be most helpful because such gifts provide the most flexibility for the Program Director and the Executive Committee to support individual students and the program as a whole. “We’re grateful for the funding from the School of Dentistry and the State of North Carolina,” Dr. Ceib Phillips, Program Director of Oral Biology, says. “But private dollars will help us send our students to special research workshops and career and professional conferences, and to provide small comforts (e.g., replacing that refrigerator in the OBIO student room). Frankly, it’s
almost impossible to do those things now as state and grant funding becomes more limited and constrained. We encourage alumni and friends to contribute to the Curriculum in Oral Biology Fund or any of the other DFNC funds that assist student researchers within the School of Dentistry.”

It’s very easy to make your tax-deductible contribution to the Curriculum in Oral Biology Fund. You can send a check to:

Dental Foundation of North Carolina  
Campus Box 7450  
1090 Old Dental Building  
Chapel Hill, NC 27599-7451

Or you can go to the School’s website and make a secure credit card gift:

https://secure.dev.unc.edu/gift/

We’ll also be happy to help you set up monthly or quarterly credit card charges or automatic bank drafts.

Private dollars are critical to ensure Carolina Dentistry remains one of the top dental schools in the United States. If you have questions or need additional information, please contact me or Dr. Ceib Phillips:

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paul_gardner@dentistry.unc.edu  
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Thank you in advance for your support of Oral Biology in 2016-17!