

LSU PERIODONTICS

LSU SCHOOL OF DENTISTRY DEPARTMENT OF PERIODONTICS

July 2020

Periodotal Department Continues Tradition of Academic Excellence.

Dr. Brian Goldfarb wins Southern Academy or Periodontology Pennel Competition.



We would like to congratulate Dr. Brian Goldfarb, currently a 2nd year periodontal resident, for his first place in the Southern Academy of Periodontology's annual Billy M. Pennel Graduate Student Research Competition. LSU Perio enters this competition every year and this is the second time in 3 years one of our residents has won the first place award.

Dr. Goldfarb's research will evaluate the anti-inflammatory effects by evaluating the change in cytokine expression of gingival fibroblasts when patients are exposed to three different types of mouth rinses. He will evaluate chlorhexidine, an essential oil mouth rinse and Smart Mouth Clinical DDS oral rinse. Smart Mouth Clinical DDS is mouth rinse currently sold over the counter in stores. It claims to be as effective as chlorhexidine mouth rinse, without the negative side effects such as staining or taste alteration.

Dr. Goldfarb said he is incredibly honored to have been selected to win the Pennel Competition considering all of the other great research projects that were entered. He also expressed gratitude for the time and effort put forth by Dr. Pooja Maney and Dr. Thomas Lallier to help in his research.

Dr. Mary Elizabeth (Bush) Joyce Receives The Wilderman Award.



Third-year periodontics resident Mary Elizabeth (Bush) Joyce DMD, MSD, received The Malbern N. Wilderman Award this year in recognition of her excellence in academics, meritorious research, clinical proficiency, and exemplary interpersonal relationships. The award is only given when a very high-achieving third-year resident finishes the LSU Department of

Periodontics residency with high honors in all phases of the program. During her time at LSU, Dr. Joyce distinguished herself with all around excellence and was the winner of The 2018 Southern Academy of Periodontology Billy M. Pennel Graduate Student Research Competition. The last recipient of The Malbern N. Wilderman Award was Dr. Eugenia Prokopets, from the Class of 2016.

Dr. Joyce earned a Bachelor's of Science in Biology from Washington and Lee University, and graduated magna cum laude. She received her DMD from University of Alabama at Birmingham. Upon graduation from the LSUSD periodontics residency, she is joining a private practice in the Tampa, Florida area.

Dr. Wilderman served as chairman and program director of the periodontics departments at Loyola University and LSUSD. Considered one of the best periodontists in the country, he was nationally renowned for his research in bone and wound healing. Dr. Ronald Monica, a dental student at Loyola University during Dr. Wilderman's tenure, started the Wilderman Award at LSUSD in 2000.

After receiving the award, Dr. Joyce said, "I was honored to be presented with the Wilderman Award. The Department of Perio at LSU really helped me to excel throughout my residency and it is truly special to be among the great recipients of this award. I hope to be a great ambassador for LSU Perio throughout my career."



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Farewell to the Class of 2020 (from left, with Dr. Pooja Maney)

Dr. Hector Carmona - will be an associate at Periodontal Health Group in the Montebello area of Los Angeles. He looks forward to returning to sunny Southern California to serve the people in the community where he grew up in. Most of all, he looks forward to returning to his place of worship- Dodger Stadium!

Dr. Mary Elizabeth (Bush) Joyce- will be joining Tampa Bay Periodontics and Implant Dentistry in Tampa, FL. Dr. Joyce and her husband, Tim, are excited for the move, and look forward to cheering on the Saints against the Bucs!

Dr. Hillary Wright- going to New Orleans' sister city, Charleston, SC to begin her career with Trident Dental Partners. She is looking forward to being close to the beach, sailing, and working on her golf game while sporting all of her LSU/ Saints gear!

Resident Research Abstracts

In vitro Transcript Expression by Gingival Fibroblasts on Barrier Membranes

Mary E. Bush, DMD, Pooja Maney, BDS, MPH, PhD, Jeanne St. Germain, RDH, Archontia Palaiologou, BDS, PhD, Thomas E. Lallier, PhD

Background: The ideal barrier membrane for periodontal surgeries should be epithelial cell-occlusive, non-reactive, maintain space, promote healing, and easy to handle. Collagen membranes are widely used for regenerative procedures, but success depends on primary closure during healing to prevent infection or rapid resorption of the material. Amnion chorion membranes, from human placenta, are more recently developed and marketed as having enhanced healing potential for periodontal procedures. Three different barrier membranes were compared for their ability to support cell attachment, differentiation and wound healing.

Methods: Three membranes were examined: Bio-Gide™ (BG, collagen), BioMend-Extend™ (BM, crosslinked collagen), and BioXclude™ (AC, amnion chorion). Gingival fibroblasts (GFs) were allowed to attach to the membranes for 24 hours in minimal essential media containing 10% fetal bovine serum. After attachment, membranes and GFs were transferred to fresh media, and allowed to grow for an additional 48 hours. RNA was isolated from these cells, and transcripts were examined via RT-PCR.

Results: Exposure of GFs to the membranes resulted in reduced expression of growth factor transcripts. However, BM significantly enhanced the expression of GDF5 and FGF2. Exposure of GFs to BM, BG and AC resulted in differential increase in expression of cytokine transcripts. IL-6 and IL-8 were significantly increased with AC, while TNF α was significantly increased with BM. Collagen transcripts were significantly reduced for all membranes.

Conclusion: While all three membranes are designed to block epithelial invasion, they also support the survival of gingival fibroblasts. These membranes differentially support GF expression of growth factors and cytokines that promote wound healing (GDF5, FGF2, IL-1 β , IL-6, IL-8, and TNF α).

Resident Research Abstracts

Retrospective Chart Review to Evaluate the Outcomes of Osseodensification for Implant placement in a Residency Program.

Hector M. Carmona, DDS, Pooja Maney, BDS, MPH, PhD, Jeanne St. Germain, RDH, Katherine Carmona BDS, Liz Mayer RDH, Thomas E. Lallier, PhD.

Purpose: To examine the survival rates of implants placed using osseodensification (OSD) burs (Densah®) in a periodontal residency program.

Materials & Methods: A retrospective chart review was conducted to evaluate maxillary implants placed using either OSD or conventional implant drills. Furthermore, this study examined the effect on survival rate of OSD with simultaneous sinus elevation. Examined parameters were implant brand, implant length, insertion torque value (ITV), implant stability quotient (ISQ) at placement and uncover, CT Hounsfield units, age of patient, and the use of SSRI and PPI's.

Results: A total of 290 implants in 162 patients, with 146 implants in the OSD group and 144 in the control group, were analyzed. The overall survival rate was 98% for the control group and 95% for the OSD group. Patient age, implant brand, implant length, and SSRI or PPI use had no significant effect on implant survival. Within the OSD group, implant survival rates were very similar for with and without sinus elevation (95% and 94% respectively). However, within the sinus elevation group, implants where additional graft material was used, showed a survival rate of 90% vs implants where no graft material was used had a survival rate of 100% and this difference was statistically significant.

Conclusion: Within the limitations of this study, the use of OSD for implant placement and indirect sinus elevations in a residency program is a viable option and yielded comparable results to conventional drilling protocols. The indirect sinus elevation is technique sensitive and care should be taken with the use of additional graft material and increasing amount of elevation.

Utilization of a Periodontal Endoscope in Nonsurgical Periodontal Therapy: A Randomized, Split-Mouth Clinical Study.

Hillary N. Wright, DDS, Elizabeth T. Mayer RDH, MS, Thomas Lallier, Ph.D., Pooja Maney, BDS, MPH, PhD.

Background: The removal of calculus to obtain gingival health has long been proven as an integral part of non-surgical periodontal therapy. However, literature on non-surgical approaches to enhance access to effectively remove calculus are still lacking. The use of a periodontal endoscope (Perioscopy®) is one such very promising approach.

Methods: Twenty-five (25) patients were recruited for the study that exhibited mild to moderate periodontitis with probing depth not greater than 6mm and at least one multi-rooted tooth per arch. This study aimed to evaluate clinical parameters after traditional scaling and root planing (SRP) using loupes for visualization, with Perioscopy® aided SRP using a split mouth design. Therapy was rendered by the same hygienist, while the evaluations were done by the same periodontal resident at baseline, one month, three months, six months, and twelve months after therapy.

Results: In general, an increased benefit was found with the use of Perioscopy® at posterior multi-rooted sites compared to anterior single rooted teeth. Maxillary multi-rooted interproximal sites favored the use of Perioscopy® at the three month time period, in terms of clinical attachment level (CAL). Mandibular multi-rooted interproximal sites showed more improvement with traditional SRP in terms of CAL than with the use of Perioscopy®.

Conclusion: Greater improvement was seen with the use of Perioscopy® in multi-rooted sites compared to single rooted and Perioscopy® was specifically beneficial in maxillary multi-rooted sites.

Academic Year 2019-2020 Publications from LSUSD Periodontics

Our department has been hard at work in the research arena and has published the articles listed below during the 2019-2020 academic year. Authors associated with LSU Perio are noted in **purple**. Past residents and faculty that have moved on are noted in **green**. The provided links are active and will take you directly to the abstracts.

Published Articles:

Dragonas P, Katsaros T, Schiavo J, Galindo-Moreno P, Avila-Ortiz G. Osteogenic Capacity of the Sinus Membrane following Maxillary Sinus Augmentation Procedures: A Systematic Review. *Int J Oral Implantol* 2020;13(3):1–20

Dragonas P, El - Sioufi I, Bobetsis YA, Madianos P. Association of Vitamin D with Periodontal Disease: A narrative review. *Oral Health Prev Dent*. 2020; 18(2):103-114. DOI: [10.3290/j.ohpd.a44323](https://doi.org/10.3290/j.ohpd.a44323)

Dragonas P, Foote M, Yu Q, **Palaiologou A, Maney P**. One-year implant survival following lateral window sinus augmentation using plasma rich in growth factors (PRGF): a retrospective study. *Med Oral Patol Oral Cir Bucal*. 2020 Mar 6. DOI: [10.4317/medoral.23482](https://doi.org/10.4317/medoral.23482)

Katsaros T, Mayer E, Palaiologou AA, Miguel Romero-Bustillos M, **Evans GH**, Lallier TE, **Maney P**. Effect of Different Concentrations of Commercially Available Mouthwashes on Wound Healing Following Periodontal Surgery: A Randomized Controlled Clinical Trial. *Clin Oral Investig* 2020 Feb 19. Online ahead of print. DOI: <https://doi.org/10.1007/s00784-020-03232-5>

Palaiologou AA, Schiavo JH, **Maney P**. Surgical Treatment of Periodontal Diseases - a Review of Current Clinical Research. *Current Oral Health Reports* 2019 6: 198–208 (Invited review). DOI <https://doi.org/10.1007/s40496-019-00226-5>

Sonkar J, Maney P, Yu Q, **Palaiologou AA**. Retrospective Study to Identify Associations between Clinician Training and Dental Implant Outcome Using MATLAB. *Int J Implant Dent*. 2019 Aug 9;5(1):28. DOI: [10.1186/s40729-019-0182-6](https://doi.org/10.1186/s40729-019-0182-6)

Published Abstracts / Presented at Professional Meetings (* = presenter):

***Bush ME, Maney P, St. Germain J, Palaiologou AA**, Lallier TE. In vitro Transcript Expression by Gingival Fibroblasts on Barrier Membranes *Dent Res* 99 (Spec Iss A): 2624, 2020. <https://iadr.abstractarchives.com/abstract/20iags-3319753/in-vitro-transcript-expression-by-gingival-fibroblasts-on-barrier-membranes>

***Altatbaei K, Maney P**, Ganesan SM, Dabdoub SM, Kumar PS. Comparative Metagenomic Analysis of Localized Aggressive Periodontitis. *J Dent Res* 98 (Spec Iss A):2382 2019 <https://iadr.abstractarchives.com/abstract/19iags-3183443/comparative-metagenomic-analysis-of-localized-aggressive-periodontitis>

Alumni News



Dr. Jyoti Sonkar from the LSU Perio class of 2018 applied for The Charles Finley Scholarship Award from The AAP Foundation and won it for Boston University. Dr Sonkar said that the award will be utilized to offset the cost of conducting a periodontal workshop/seminar.

Dr. Sonkar is currently a Clinical Assistant Professor at Henry M. Goldman School of Dental Medicine. She is a Diplomate of The American Board of Periodontology. She teaches a predoc perio class, serves as a clinical instructor, a faculty research mentor, and is working on numerous research

Near 100 % Success Rate of LSU Residents on ABP Exam since 2004. The LSU postgraduate program in periodontics postgrad perio program has a very good recent track record in candidates passing the ABP board exam on their first try! 40 out of 41 graduating residents have become diplomates of The ABP. We are very proud of this academic success !!

Join Us In Welcoming Our New: First Year Perio Residents



Dr. Katherine Carmona



Dr. Lauren Langlois



Dr. Emily Williams

Dr. Katherine Carmona Hernandez just completed 2 years with our implant fellowship program under Dr. David Simmons and now joins our periodontics residency. She is from Viña Del Mar, Chile. She attended dental school at The Universidad de Valparaiso. She enjoys the dental school setting and after finishing her residency she would like to do some teaching while working in private practice.

Dr. Lauren Langlois is from Prairieville, LA . She attended LSU in Baton Rouge and earned a Bachelors of Science degree in Biological Sciences. She earned her DDS from LSU Health in New Orleans. She hopes to remain in Louisiana after finishing her residency and would eventually like to work in the southeast Louisiana and remain close to her family.

Dr. Emily Williams is from Atlanta, Georgia. She earned a Bachelors of Arts degree in classical languages from Sewanee: The University of the South. She earned her DMD from The Dental College of Georgia. She would like to stay in the southeast, preferably in a large metropolitan area, but plans on keeping her options open after residency.

Implant Fellows



Dr. Ha Van Nguyen is originally from Vietnam. She has lived in New Orleans since 2008. She earned a Bachelors of Science degree from Loyola University, New Orleans and her DDS from LSU Health, School of Dentistry, New Orleans. Dr. Nguyen has her heart set on practicing in Hawaii.



Dr. Walaa Al Zaibak is from Dominica. She attended The Ibn Sina National College in Jeddah, Saudi Arabia and also earned her BDS degree from the same institution. She is already a periodontist and earned her Master of Science with clinical training in Periodontics from Marquette University in Milwaukee, WI. After completing the fellowship she plans on entering private practice and would like to teach part time.

LSU Perio Welcomes Dr. Eswar Kandaswamy



We would like to introduce our newest faculty member. Dr Eswar Kandaswamy will begin working with LSU Health's Department of Periodontics in August 2020.

Dr. Kandaswamy earned his BDS degree in 2014 from Sri Ramachandra University in Chennai, India. After graduation from dental school he provided dental services for both The Eswari Dental Clinic and The Vignesh Dental Hospital. In 2017, he was accepted into the periodontics residency at The Ohio State University in Columbus Ohio. He served as chief resident in his final year and successfully completed his residency in June 2020.

Dr. Kandaswamy's research at The Ohio State University investigated titanium ion detection in human peri-implant soft tissues. **His research won first place in the clinical science and clinical impact competition at the 2019 AAP convention in Chicago.** His study aimed to explore peri-implant crevicular fluid content and investigate any association between clinical health status, inflammatory mediators, and titanium concentration.

Dental implants were clinically evaluated and sub-grouped based on their health status. Crevicular fluid samples were analyzed for the presence of various inflammatory mediators as well as titanium concentration. Similarly, soft tissue biopsies were obtained from disease sites that were surgically treated. The results revealed that peri-implant disease severity was correlated with increased concentrations of inflammatory mediators. A trend in increased titanium concentration at diseased sites was also noticed.

Dr. Kandaswamy said he was humbled and excited to receive the clinical science and clinical impact award for his work at the 2019 AAP annual meeting. He said the award is a great impetus for him to continue working hard not only on this project but to carry this forward and get a deeper understanding of peri-implant disease etiology and treatment outcomes.

We Greatly Appreciate Your Support

Through the years, numerous alumni of our residency program have contributed to our department on a regular basis and at a high level. The LSU School of Dentistry deeply appreciates the steadfast support of our donors. Numerous individuals have stepped up with generous contributions.

Contributions to our LSU Health Foundation Perio Research and Education Fund go directly toward activities supporting our residents' education, such as attending The AAP and The Southwest Society of Periodontists Annual Meeting for third year students and funding their research. Contributions to The Perio Support Fund are unrestricted and help the Department Chairman take care of immediate needs for the whole department. We greatly appreciate all of our donors.

At the present time, we are aiming for a level in our Research and Education Fund where the State of Louisiana will provide a match, such that our fund becomes an endowed fund. At that time it will spin off regular proceeds to support resident education. We are only \$25K short of the match level due to your prior generous contributions. Please keep this goal in mind. As always, we deeply appreciate and need your continued support! To contribute, [click here](#).

We also wish to thank our **corporate sponsors** for their generous support of our Advanced Education in Periodontics program. Their contributions, whether it be materials and equipment, financial, or advanced clinical training, have enabled us to provide the highest level of education possible. Their commitment to our residents is greatly appreciated!



LOUISIANA SOCIETY OF PERIODONTISTS

Visit GeauxPerio

Visit www.Geaux-Perio.com. Our website was developed with the needs of the busy periodontist in mind. The site features a **board re-certification** module which will save the busy periodontist many hours by not having to find the **ABP's** reading references on their own. **Journal Club** abstracts from current articles of interest pertaining to our specialty are presented and uploaded on a regular basis. Check it out. Full access is available to alumni donors.

LSU PERIODONTICS Newsletter is published by Steven Spindler, DDS and The LSU School of Dentistry Department of Periodontics.

WE WANT YOUR NEWS: If you have personal news to share with our LSU Perio family, please send it to Dr. Spindler at sspin1@LSUHSC.edu

COVID-19 at LSU Health School of Dentistry

They say necessity is the mother of invention. Certainly this pandemic has necessitated creativity and forced reinvention of basic things like masks and face shields. LSU School of Dentistry shifted into high gear in April and began fabricating our own face shields and **N-99** masks and face shields using 3D printing technology. The prosthodontics department collaborated with our onsite dental laboratory and developed the software to make this happen. These is not one-size-fits-all PPE. Different facial forms and features are incorporated into the software design such that each student can be issued protective gear that is nearly custom fit for their facial features. The seal they provide is outstanding.

The filter is actually an inline anesthesia filter with a medical grade HEPA 13 disk incorporated. Prior to COVID-19, these filters were readily available from any anesthesia supply house. They were single use only, however the pandemic changed this as well. Now there are shortages of the filters. The filters are sanitized with UV-C and are re-used. Our students are very well protected according to the current knowledge available.

Further changes include didactic and clinical education by a platoon system. One half of the undergrad class will attend lectures in the morning and have clinic in the afternoon. The reverse is true for the other half of the class.

The perio residency clinic had to be restructured. Residents now have to call and schedule their own patients, asking the appropriate list of questions for COVID-19 prescreening. They ask patients to call them when they arrive and meet them at the elevator when ready to be seated .

We are working in a clinic configuration such that only 50% of the bay is occupied at the maximum. As you can imagine, everything takes longer and it is challenging to make sure residents in training get enough clinic time under these circumstances.

We are trying to limit aerosols as much as possible and take precautions when we have to perform aerosol producing procedures. The school has just recently started testing any patients requiring aerosol procedures for COVID-19, anywhere from 48 -72 hours prior to their appointment.

The clinical education of the current second and third-year residents was interrupted due to the closures and now has slowed down due to the restrictions we have to have in place. Everyone is glad to be back and functioning in clinic. Some patients are hesitant to come back, but many patients are ready to move on with treatment.



- Bacterial filtration efficiency: > 99.999%
- Viral filtration efficiency: > 99.99%
- Flow resistance: 1.5 cm H₂O @ 60 L•min⁻¹
- Low effective dead space: 45 mL
- Electrostatic media in protective membranes
- ISO 5356 Connectors: 15F/22M, 15M/22F
- Bidirectional airflow
- Disposable, for single-patient use only
- Free of latex, PVC, DEHP, BPA
- Transparent housing for visual inspection



Pictured from left , all masked up , are our recently departed third year residents, Dr. Hector Carmona, Dr. Hillary Wright, and Dr. Mary Joyce with Dr. Pooja Maney, The Director of The Advanced Education Program in Periodontics in the back.