

Bioscience startup company seeks a mechanical solution to dry mouth



Oral Fluid Dynamics' artificial salivary gland is hoping to provide relief to a share of the 60 million Americans who suffer from dry mouth.

J Robert Kelly, DDS, PhD, Reconstructive Sciences

Drs. Robert Kelly, Martin Freilich and Douglas Adams began a start-up company known as Oral Fluid Dynamics and are developing an artificial salivary gland to combat the problem of dry mouth. With assistance from the UConn SPARK Technology Commercialization Fund, Accelerate UConn and Connecticut Innovations, they hope to bring the product to clinical trials within the next 3 years.

Please see the link below for the full article and additional photos, which appeared in the Hartford Business Journal, August 22, 2016 edition:

http://www.hartfordbusiness.com/article/20160822/PRINT_EDITION/308189914/1002



Martin Freilich, DDS,
Reconstructive Sciences



Douglas Adams, PhD,
Orthopaedic Surgery

FALL, 2016

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Dental Students Attend NIDCR Summer Research Program

Two second-year dental students, Sean Burke and Blake Bandeff, spent their summer in Bethesda, MD in the NIDCR Summer Research Program.



Sean Burke worked in the Craniofacial and Skeletal Disease Branch in the Lab of Pamela Robey, PhD. His research

project was related to skeletal stem cells (SSCs) and their growth when implanted into mice. Specifically, the CD146 marker, thought to identify SSCs, was knocked out of one set of mice to analyze the importance of this marker for bone growth in SSCs transplants. "Working this summer at NIH allowed me to learn a lot about the field of research as well as

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NIDCR Summer Research (Continued from Page 1)

explore all of the events offered on campus”, said Sean. He continues, “with such a positive experience this past summer, I would recommend the NIDCR summer research program to any first-year dental student”.



Alana Marczak, the 2016 Student Research Day Dean’s award winner, and **Emily Sachs** will present their research at the Hinman Student Research Symposium, October 28-30, 2016 in Memphis, TN.



HINMAN STUDENT RESEARCH SYMPOSIUM



Blake Bandeff worked in the Molecular Physiology and Therapeutics branch under the guidance of Ilias Alevizos, DMD, MMSc, an Oral and Maxillofacial Pathologist. Their research focused on developing an optimal 3D *in vitro* model for studying Sjögren’s Syndrome, an autoimmune disease that commonly affects the salivary glands leading to various adverse oral manifestations. Their research attempted to show polarization and localization of important structural proteins in acinar-like structures composed of primary salivary gland cells derived from biopsied human minor salivary glands through the use of immunofluorescence and confocal microscopy.

Both students enjoyed their time at NIDCR. Said Blake Bandeff, “the NIDCR Summer Dental Student Program was a great way to gain exposure to some of the most innovative and influential research in the dental field, while also building experimental and analytical skills that I will use throughout the course of my dental career”.



Steven Halepas, 2016 Student Research Day recipient of the Associate Dean’s Award, recently represented UConn Health at the annual Colgate Dental Students’ Conference on Research.

ADA Foundation
Charitable Assistance | Access to Care | Research | Education
52nd ANNUAL COLGATE DENTAL STUDENTS’ CONFERENCE ON RESEARCH
ADAF/ Dr. Anthony Volpe Research Center, Gaithersburg, Maryland
October 2-4, 2016



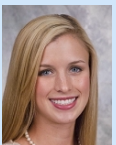
Faith Adewusi, 2016 Student Research Day recipient of ADA Dentsply Student Clinician Award, will represent UConn Health at the annual American Dental Association Meeting.

ADA 2016
AMERICA’S DENTAL MEETING®

October 20-24
Denver



Veneta Qendro will attend the New England Immunology Conference, October 15-16, 2016 in Woods Hole, MA.



Sydney Schneider was a panel speaker and presented her research at the AAOMR annual meeting held September 28 – October 1, 2016 in Scottsdale, AZ.



The American Academy of Oral and Maxillofacial Radiology



Johnny Joseph and Patience MeoBurt presented their research last month at the American Society for Bone and Mineral Research meeting.



Student Poster Competition

Submission deadline: November 14, 2016

Contact Dr. Tadinada for specific submission instructions. Send one-page abstract to Alicia Wright (awright@massdental.org)

For more info visit: <http://yankeedental.com>



Student Research Fellowship

Application deadline: January 13, 2017

If applying, please contact Dr. Tadinada. See link below for complete information:

<http://www.iadr.org/i4a/pages/index.cfm?pageid=3569#.V-0UY0ulbDM>



Medical/Dental Student Research Day will be held on Monday, March 13, 2017 in the new Academic Rotunda. Please mark your calendars to attend this important event to support our students. Look for additional event information

which will be posted in the coming months!

Recent Grant Awards

Congratulations to the following faculty on obtaining new research funding:

NIH Funding:

Dr. Mark Litt (R01) - "Individualized Assessment and Treatment Program for Alcoholism: Treatment and Mechanisms"

Dr. Peter Maye (R21) - "Cherubism and Transforming Growth Factor Beta Signaling"

Dr. David Rowe (R13) - "Cryohistological assessment of the mineralized skeleton"

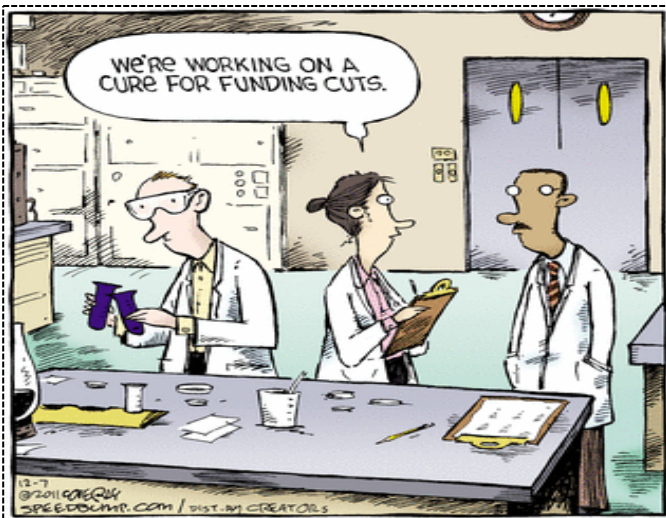
CT Innovations:

Dr. Ivo Kalajzic - "Transplantation of Mesenchymal Stem Cells as therapy for Osteogenesis Imperfecta"

Associations / Foundations:

Dr. Sumit Yadav / Joy Chang (NESO) - "Effects of Sustained Release of RANKL on the Rate of Orthodontic Tooth Movement"

Dr. Aditya Tadinada / Bailey Proft (AAID Foundation) - "Comparative Evaluation of 2 CBCT protocols for preoperative implant site evaluation"



New Director of Sponsored Program Services Announced



Paul Hudobenko has been named the new director of UConn Health Sponsored Program Services in the Office of the Vice President for Research. Paul succeeds Dana Carroll who became the Associate Vice Provost for Research at Northeastern University.

Paul is a graduate of the University of Connecticut and has worked at UConn Health since 1986. He has served in a variety of research administration roles, initially concentrating on financial reporting, budgeting and the post award side of research administration before shifting to Pre-Award Sponsored Program Services in 2001. More recently, Paul has been serving as the Interim Pre-Award Director of Sponsored Programs Services since September 2015. His considerable experience in research administration at UConn Health and his broad understanding of the full life cycle of grant and contract awards will serve him and the University well as he takes on new leadership responsibilities in SPS.

Congratulations Paul!

UConn's Startup Interns Build CT's STEM-Talent Pipeline



Dr. Caroline Dealy, Associate Professor in the department of Reconstructive Sciences realized that there were no UConn students working in the TIP program, which was created 13 years ago. So 5 years ago, Dr. Dealy created UConn's Technology Incubation Program (TIP) summer internship initiative.

To read the full article written in the Hartford Business Journal, August 15, 2016 edition, please use the following link:

<http://www.hartfordbusiness.com/article/20160815/PRINTEDITION/308129966>

FACULTY SPOTLIGHT



WTIC Radio - a discussion with **Dr. Avinash Bidra**, regarding the importance of flossing recently was aired on the WTIC morning show: http://bit.ly/bidra_WTIC

Dr. Rajesh V. Lalla was elected as President-elect of the Multinational Association of Supportive Care in Cancer (MASCC) at its June 2016 annual meeting in Adelaide, Australia. MASCC is an international scientific organization dedicated to research, practice and education in all aspects of supportive care for patients with cancer. Its membership includes physicians, nurses, scientists, dentists, pharmacists and other healthcare professionals from over 60 countries. Dr. Lalla will take over as MASCC President in June 2018 and will be the first non-physician to serve in this role. MASCC has a close affiliation and annual joint meeting with the International Society of Oral Oncology (ISOO), which addresses oral complications of cancer therapy. **Dr. Douglas E. Peterson** was one of the three founders of ISOO and was instrumental in setting up the alliance between MASCC and ISOO in 1998. He was recently honored with ISOO's first ever Distinguished Service Award, which he received in Adelaide along with Dr. Mark Schubert of the Seattle Cancer Care Alliance. Dr. Peterson is also a previous recipient of the MASCC Distinguished Service Award.



Left to right: Dr. Douglas Peterson, ISOO President, Dr. Ourania Nicolatou-Galitis, and Dr. Mark Shubert



Dental Dean's Seminar Series

Research Seminar Series

Friends Lecture Room LM034

12:00 - 1:00 pm

Thursday, November 3

Nathaniel Dymont, PhD

Defining the Tendon Lineage to Improve Tissue Engineering Strategies

Thursday, December 15

Sumit Yadav, BDS, MDS, PhD

Is Botox safe and effective for TMD's?

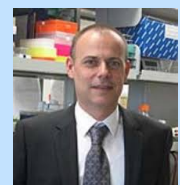


Dr. Liisa Kuhn is representing the SDM on two important committees related to research:

The new UConn Health Website Research Engagement Group, which provides feedback and suggestions for the UConn Health website, as related to research.

The UConn Research Advisory Committee, consisting of faculty representatives from various schools and colleges at UConn. Our prior representative on this committee was **Dr. Ivo Kalajzic**, whose term ended this year.

Thanks to Dr. Kalajzic and Dr. Kuhn for their service.



Grant Funding Opportunities

Career Development:

Colgate C.A.R.E. Program

The Colgate Award for Research Excellence (CARE) Program aims to intensify, accelerate and foster research by young researchers. By providing seed and foundation funding through an annual competition to the best and brightest young academic researchers, Colgate aims to establish an early and vital relationship with these potential leaders within dental research, translational research, clinical care and academics. Application deadline: December 2, 2016. <http://www.colgateprofessional.com/research>

NIDCR:

NIDCR Small Research Grants for Secondary Analysis of FaceBase Data (R03) ([PAR-16-362](#))

National Institute of Dental and Craniofacial Research

Application Receipt/Submission Date(s): Standard dates apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

BD2K Research Education Curriculum Development: Data Science Overview for Biomedical Scientists (R25) ([RFA-ES-16-011](#))

National Institute of Dental and Craniofacial Research

Application Receipt Date(s): December 7, 2016; December 1, 2017, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

NIH Big Data to Knowledge (BD2K) Enhancing Diversity in Biomedical Data Science (R25) ([RFA-MD-16-002](#))

National Institute of Dental and Craniofacial Research

Application Receipt Date(s): November, 14, 2016, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this dates.

Big Data to Knowledge (BD2K) Community-based Data and Metadata Standards Efforts (R24) ([RFA-ES-16-010](#))

National Institute of Dental and Craniofacial Research

Application Receipt Date(s): October 19, 2016; October 19, 2017, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

NIDCR Small Grant Program for New Investigators (R03) ([PAR-16-409](#))

National Institute of Dental and Craniofacial Research

Application Receipt/Submission Date(s): Standard dates apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

NIDDK:**Identification of Mechanisms Mediating the Effects of Sleep on Diabetes-Related Metabolism in Humans (R01) ([RFA-DK-16-005](#))**

National Institute of Diabetes and Digestive and Kidney Diseases

Application Receipt Date(s): February 9, 2017 and October 11, 2017, by 5:00 PM local time of the applicant organization. All are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

NIDA/NIAAA:**Multi-Site Studies for System-Level Implementation of Substance Use Prevention and Treatment Services (R01) ([PAR-16-455](#))**

National Institute on Drug Abuse

National Institute on Alcohol Abuse and Alcoholism

Application Receipt/Submission Date(s): December 15, 2016; July 18, 2017; November 13, 2017; July 17, 2018; November 13, 2018; July 17, 2019; November 13, 2019; July 17, 2020; November 13, 2020, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

Multi-Site Pilot and Feasibility Studies for System-Level Implementation of Substance Use Prevention and Treatment Services (R34) ([PAR-16-456](#))

National Institute on Drug Abuse

National Institute on Alcohol Abuse and Alcoholism

Application Receipt/Submission Date(s): December 15, 2016; July 18, 2017; November 13, 2017; July 17, 2018; November 13, 2018; July 17, 2019; November 13, 2019; July 17, 2020; November 13, 2020, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates. Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.



NIH Update:

Rigor and Reproducibility in NIH Applications: Resource Chart

NIH Grants Policy Website: <http://grants.nih.gov/reproducibility/index.htm>

NIH Website: <https://www.nih.gov/research-training/rigor-reproducibility>

4 AREAS OF FOCUS	WHAT DOES IT MEAN?	WHERE SHOULD IT BE INCLUDED IN THE APPLICATION?
Scientific Premise	<p>The scientific premise for an application is the research that is used to form the basis for the proposed research question(s).</p> <p>Describe the general strengths and weaknesses of the prior research being cited as crucial to support the application. Consider discussing the rigor of previous experimental designs, as well as the incorporation of relevant biological variables and authentication of key resources.</p> <p><i>*See related FAQs, blog post</i></p>	<p>Research Strategy</p> <ul style="list-style-type: none"> ➤ Significance
Scientific Rigor (Design)	<p>Scientific rigor is the strict application of the scientific method to ensure robust and unbiased experimental design, methodology, analysis, interpretation and reporting of results.</p> <p>Emphasize how the experimental design and methods proposed will achieve robust and unbiased results.</p> <p><i>*See related FAQs, blog post, examples from pilots</i></p>	<p>Research Strategy</p> <ul style="list-style-type: none"> ➤ Approach
Biological Variables	<p>Biological variables, such as sex, age, weight, and underlying health conditions, are often critical factors affecting health or disease. In particular, sex is a biological variable that is frequently ignored in animal study designs and analyses, leading to an incomplete understanding of potential sex-based differences in basic biological function, disease processes and treatment response.</p> <p>Explain how relevant biological variables, such as the ones noted above, are factored into research designs, analyses, and reporting in vertebrate animal and human studies. Strong justification from the scientific literature, preliminary data or other relevant considerations must be provided for applications proposing to study only one sex.</p> <p><i>*See related FAQs, blog posts, article</i></p>	<p>Research Strategy</p> <ul style="list-style-type: none"> ➤ Approach
Authentication	<p>Key biological and/or chemical resources include, but are not limited to, cell lines, specialty chemicals, antibodies and other biologics.</p> <p>Briefly describe methods to ensure the identity and validity of key biological and/or chemical resources used in the proposed studies. These resources may or may not be generated with NIH funds and:</p> <ul style="list-style-type: none"> • may differ from laboratory to laboratory or over time; • may have qualities and/or qualifications that could influence the research data; • are integral to the proposed research. <p>The authentication plan should state in one page or less how you will authenticate key resources, including the frequency, as needed for your research. Note: Do not include authentication data in your plan.</p> <p><i>*See related FAQs, blog post</i></p>	<p>Other Research Plan Section</p> <ul style="list-style-type: none"> ➤ Include as an attachment ➤ <u>Do not include</u> in the Research Strategy.

****This chart is based on general instructions for research grant and mentored career development applications. It should only be used as a guide. For all applications, please read the applicable Funding Opportunity Announcement (FOA) & Application Guide for specific instructions.**

Research Dean's Corner

Dear Colleagues,

The SDM Research community suffered a great loss with the passing of Emeritus Professor William B. Upholt this summer. In addition to leading a successful research program, on the genetic regulation of cartilage development and skeletal patterning, for almost 30 years, Dr. Upholt also played a huge role in developing research training opportunities at UConn Health. He served as Director of the Developmental Biology PhD program from 1991-1995, Director of the Skeletal, Craniofacial and Oral Biology PhD program from 1996-2008, Director of the Dentist Scientist program from 1993-2004, and Co-Director of the NIDCR-funded Skeletal, Craniofacial and Oral Biology Training Grant from 2001-2011. Through these roles, he contributed to providing research training opportunities for a very large number of trainees at various levels, including myself. I remember Dr. Upholt as always being gentle and kind and willing to help. Even after his retirement, he continued to stay engaged with the SDM and even attended the SCOB symposium on June 6th this year, despite his ill-health at the time. Dr. Upholt will be missed by many of us.



Photo: Tina Encarnacion

Featured in the photo: Dr. Spenser Smith, Dr. Bill Upholt and Dr. Jon Goldberg

On a more positive note, it's a pleasure to recognize our faculty who have obtained new research funding (listed on page 3). Deserving special mention are Dr. Mark Litt for a new R01, Dr. Ivo Kalajzic for a new Stem Cell Established Investigator grant and Dr. Peter Maye for a new R21. Congratulations!

Our Research Seminar Series is progressing well with excellent seminars by Dr. Peter Maye in September and Dr. Daniel Schwartz in October. I encourage you to join us for future seminars in the series (listed on page 4).

Best wishes,

Rajesh V. Lalla, DDS, PhD

Associate Dean for Research

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