

SDM Posts Strong Research Performance in FY 2022

The UConn School of Dental Medicine had another strong year for research in Fiscal Year 2022, which ended June 30, 2022.

- Total new extramural research funding received by the SDM in FY22 was \$12.5M (total funding for all years of new grants received).
- The SDM maintained its high ranking of #8 among all US dental schools, based on direct funding received from NIH for NIH FY21. This ranking is not adjusted for faculty size.
- During FY22, SDM faculty and trainees filed 11 invention disclosures and 17 patent applications.

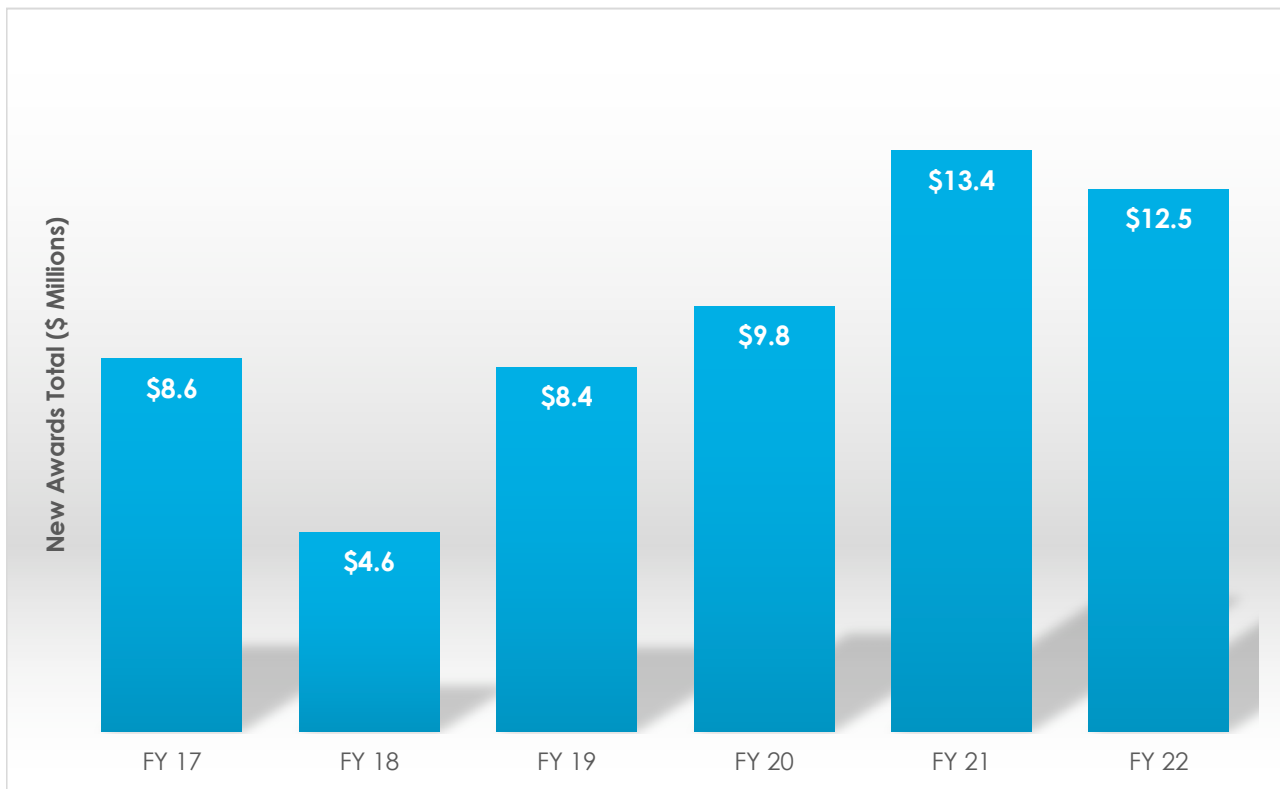
Additional details on research funding and commercialization activities are included in this newsletter.

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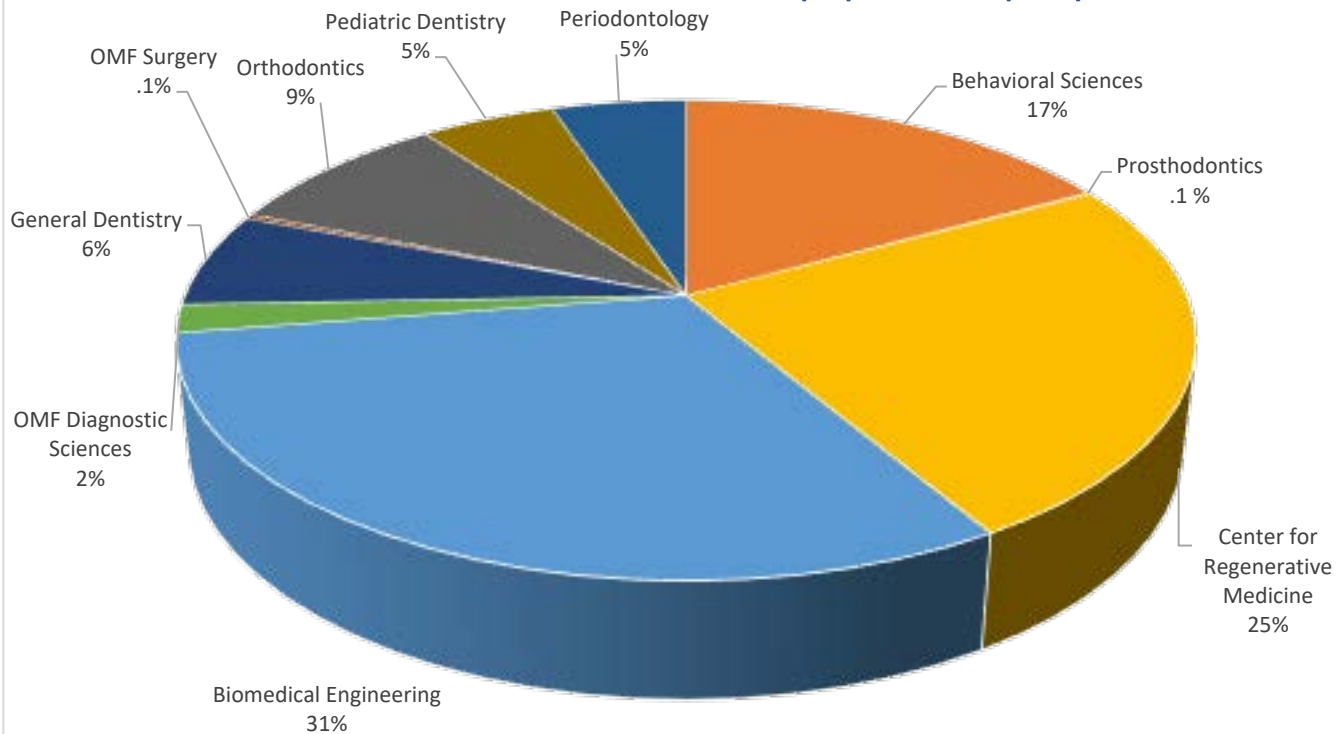


SDM New Sponsored Project Awards



New awards include the total project value for all years for new projects and competitive renewals.

SDM EXTRAMURAL FUNDING 7/1/2021-6/30/2022



These figures represent funding received specifically in FY22 only.

SDM Division / Unit	Direct Costs Received in FY 22	Indirect Costs Received in FY 22	Total Grant Awards for FY22
Behavioral Sciences and Community Health	1,096,353	436,850	1,533,203
Biomedical Engineering	1,895,950	906,190	2,802,140
Center for Regenerative Medicine and Skeletal Development	1,727,150	477,032	2,204,182
General Dentistry	351,429	224,915	576,344
Oral and Maxillofacial Diagnostic Sciences	105,516	65,930	171,446
Oral and Maxillofacial Surgery	21,940	5,485	27,425
Orthodontics	632,045	154,273	786,318
Pediatric Dentistry	318,799	144,000	462,799
Periodontology	292,231	168,247	460,478
Prosthodontics	7,279	1,820	9,099
TOTALS	6,448,692	2,584,742	9,033,434

SDM Technology Commercialization Activity Report

	FY16	FY17	FY18	FY19	FY20	FY21	FY22
Invention Disclosures Received	2	2	2	3	11	14	11
Patent Applications Filed	2	0	1	1	5	20	17

An Invention Disclosure is the inventor(s) disclosing to the University that their work has led to an advance that may be a novel invention. In each of the last 3 fiscal years, the number of invention disclosures filed by SDM faculty were 3-4 fold higher than in previous years.

The University reviews all Invention Disclosures received and files patent applications on those that are most promising for commercial application. In FY22, 17 patent applications were filed on behalf of SDM faculty, which is a several-fold higher than in years before FY20.

SDM Faculty associated with patent applications filed in FY22

Dr. Changchun Liu: 6 patent applications

Dr. Ali Tamayol: 5 patent applications

Dr. Tannin Schmidt: 3 patent applications (one with Dr. Sumit Yadav)

Dr. Caroline Dealy: 1 patent application

Dr. Kshitiz Gupta: 1 patent application

Dr. Liisa Kuhn: 1 patent application



Dr. Changchun Liu



Dr. Ali Tamayol



Dr. Tannin Schmidt

Student and Trainee Recognition



We would like to acknowledge the students, residents (and mentors) who presented their research posters at the CSDA Dental Meeting held at Mohegan Sun in May.

Students:

Jane Conway (mentor: Dr. Aditya Tadinada)
 Jay Dalal (mentor: Dr. Alix Deymier)
 Emma Dzialo (mentor: Dr. Aditya Tadinada)
 Max Einbinder (Dr. Aniuska Tobin)
 Arvene Golbazi (Dr. Eliane Dutra)
 Nathalia Hernandez (mentor: Dr. Aditya Tadinada)
 Ryan Higgins (mentor: Dr. Peter Setlow)
 Julia Mainelli (mentor: Dr. Foteini Touloumi)
 Anthony Perez-Pino (Dr. Seema Kurup)
 Maayan Schmidt (mentor: Dr. Madhur Upadhyay)
 Samantha Sheppard (mentor: Dr. Easwar Natarajan)
 Caroline Thomas (mentor: Dr. Aditya Tadinada)

Residents:

Dr. Charla Apolonio (mentor: Dr. Aditya Tadinada)
 Dr. Maryam Buholayka (mentor: Dr. Aditya Tadinada)
 Dr. Kevin Hawthorne (mentor: Dr. Aditya Tadinada)
 Dr. David Manz (mentor: Dr. Suzy Torti)
 Dr. Kavya Shankar Muttanahally (mentor: Dr. Aditya Tadinada)
 Dr. Birkin Owart (mentor: Dr. Blythe Kaufman)
 Dr. Bastian Rojas (mentor: Dr. Bianca Sciarresi)
 Dr. Anusha Vaddi (mentor: Dr. Aditya Tadinada)
 Dr. Ke Wang (mentor: Dr. Sumit Yadav)



Emma W. Winchester (mentor: Dr. Justin Cotney) presented a poster at the Tooth Morphogenesis and Differentiation conference held in Prague.



Congratulations to Yasir Suhail (mentor Dr. Kshitiz), who was recently awarded a K99/R00 NIH Pathway to Independence Award.

Congratulations to the CSDA Poster Award Winners:

Students:

1st Place: Emma Dzialo
2nd Place: Maayan Schmidt
3rd Place: Jay Dalal and Ryan Higgins

Residents:

1st Place: Dr. David Manz
2nd Place: Dr. Charla Apolonio
3rd Place: Dr. Anusha Vaddi and Dr. Kavya Shankar Muttanahally

The Orthodontics Program has been recognized nationally for its research activity, receiving at least 38 awards from the American Association of Orthodontists.

<https://today.uconn.edu/2022/07/uconn-orthodontics-program-recognized-nationally-for->

The Skeletal Biology and Regeneration Student Poster Symposium and Award Ceremony was held on Friday, September 30 and was featured in a recent article in UConn Today:

<https://today.uconn.edu/2022/10/skeletal-biology-and-regeneration-students-recognized-in-for-research-excellence/#>

William B. Upholt Student Achievement Award



2020

Dr. Elise
Pitmon
(mentor: Dr.
Keping Wang)



2021

Dr. Laura
Doherty (mentor:
Dr. Archana
Sanjay)

Eric N. James Scholar Award



2021

Rosalie Bordett
(mentor: Dr.
Sangamesh
Kumbar)



Jane Conway (mentor: Dr. Aditya Tadinada) and Maayan Schmidt (mentor: Dr. Madhur Upadhyay), recipients of the Dean's Award at the 2022 SDM Dental Student Research Day, presented their research at the annual Hinman Student Research Symposium held October 28-30 in Memphis.



THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER COLLEGE OF DENTISTRY

27th HINMAN STUDENT RESEARCH SYMPOSIUM



MEDICAL / DENTAL STUDENT RESEARCH DAY WILL BE HELD ON WEDNESDAY, MARCH 1, 2023. PLEASE MARK YOUR CALENDARS AND PLAN TO ATTEND THIS VIRTUAL EVENT!

ADDITIONAL INFORMATION WILL BE SENT VIA EMAIL

SDM Student Summer Research

This year, 21 students participated in our School of Dental Medicine Summer Research Program. Their research will be presented at our upcoming Medical/Dental Student Research Day which will be held on March 1, 2023. At this time, we would like to acknowledge our summer research students and their mentors:

Samira Abdelrehim and Jake Wallach (mentor: Dr. Eric Bernstein)

Eddyson Altidor (mentor: Dr. Caroline Dealy)

Matthew Arremony (mentor: Dr. Frank Nichols)

Dedrian Barrett (mentor: Dr. Sejal Thacker)

Richard Cadena (mentor: Dr. Martin Freilich)

Julia Clapis (mentor: Dr. Frank Nichols)

David Cruzate (mentor: Dr. Alix Deymier)

Jason Deck (mentor: Dr. Liisa Kuhn)

Samantha DePalma (mentor: Dr. Jean-Denis Beaudoin)

Olivia Dort (mentor: Dr. Mary Guerrero)

Gosia Fryc (mentor: Dr. Alan Lurie)

Spencer Infranco (mentor: Dr. Foteini Touloumi)

Michael Luu (mentor: Dr. Liisa Kuhn)

Mychael McKeever (mentor Dr. Sumit Yadav)

Thomas Nelson (mentor: Dr. Aditya Tadinada)

Pablo Piedra Prieto (mentor: Dr. Liisa Kuhn)

Christine Schiller (mentor: Dr. Aditya Tadinada)

Peter Schwalm (mentor: Dr. Martin Freilich)

John Todd (mentor: Dr. David Schafer)

Michael Truhlar (Mentor: Dr. Alix Deymier)

Faculty Recognition



Congratulations to Dr. Frank Nichols, recipient of the 2022 UConn Board of Directors Faculty Recognition award. <https://today.uconn.edu/2022/04/2022-uconn-health-board-of-directors-faculty-recognition-awardee-is-dr-frank-nichols/>

Dr. Nichols' research on Porphyromonas gingivalis was featured in an article in UConn Today: <https://today.uconn.edu/2022/06/puzzling-bacterial-signals-in-our-blood/>



Congratulations to Dr. Kshitiz whose manuscript on cardiac maturation has been published in Cell Reports and featured in UConn Today: <https://today.uconn.edu/2022/07/creating-an-adult-like-mature-human-cardiac-tissue/>



Dr. Liisa Kuhn's research using 3D printing technology to benefit breast cancer survivors was recently featured in UConn Today and highlighted in the Hartford Courant on October 25, 2022:

<https://today.uconn.edu/2022/10/3d-printing-technology-benefits-breast-cancer-survivors/>

Hartford Courant link: <https://www.courant.com/news/connecticut/hc-news-3d-printed->



Congratulations to Dr. Aditya Tadinada, recipient of the Horace Hayden Award at the Connecticut State Dental Association's meeting held in May.

Congratulations also for his recent appointment as incoming President for the Diagnostic Sciences Group for IADR/AADOCR.



Congratulations to Dr. Rajesh Lalla, recipient of the 2022 Distinguished Service Award from the Multinational Association of Supportive Care in Cancer (MASCC).

<https://today.uconn.edu/2022/08/lalla-recognized-with-top-honor-from-international-cancer-society>

Dr. Lalla also featured in an article in the American Dental Association News, "Pathways to dentistry: Researchers move dental profession forward".

<https://www.ada.org/publications/ada-news/2022/june/pathways-to-dentistry-researchers-move-dental-profession-forward>

Clinical Research Support Program

Program for providing support for pilot or limited-scope clinical research projects in the SDM.

[Guiding Principle for this program](#)

The SDM aims to encourage and support increased clinical research activity by SDM clinical faculty.

[Program Benefits](#)

Subject to the processes and limitations described in this document, the following institutional resources may be made available for SDM faculty wishing to conduct clinical research:

1. Research Assistant support to help with IRB and other administrative processes involved in clinical research, such as subject enrollment or appointment scheduling.
2. Staff support to help with using axiUm for clinical research projects
3. Statistical consulting services for study design, power calculations, and data analyses (submit separate form at: <https://statsconsulting.uconn.edu/project-submission-sdm/>)
4. When appropriate, mentoring support will also be provided, especially for junior faculty who are encouraged to work with a mentoring committee.

[Process](#)

SDM faculty requesting support will be asked to submit a research protocol as well as details about resources requested in a fillable form. The submission will be reviewed by a committee consisting of the Associate Dean for Research, Associate Dean for Faculty Affairs, and Director of the Dental Clinical Research Center. The committee may consult with other parties as needed to help with review of the submissions. The results will be communicated in writing to the Principal Investigator. When applicable, the committee will also help to identify appropriate mentors, collaborators, and training opportunities that can help the project succeed.

If resources are awarded, the Principal Investigator is expected to submit an annual report describing progress and outcomes including abstracts, publications, conference presentations, grant applications etc. as well as continued resources requested for the following year, if any.

Clinical Research Support Program (continued)

Limitations

1. This support is intended only for investigator-initiated projects for which there is no funding available yet or limited funding from a professional association or foundation that does not cover the costs of requested services. It is not intended to subsidize industry-initiated projects.
2. Staff support is subject to availability of the relevant staff members.
3. Research Assistant support is restricted to administrative processes and does not include clinical dental assisting or related clinical functions.
4. It is the Principal Investigator's responsibility to ensure that all regulatory approvals are in place before any clinical research activity takes place.
5. No waiver of clinical care fees will be considered.

Examples of projects that could be eligible for this support

1. Project involving electronic chart reviews using axiUm for research purposes.
2. Systematic reviews with meta-analyses that need statistical support.
3. Investigator-initiated pilot clinical research studies.
4. Survey and Qualitative Research.



Have you received a recent award, accomplishment or have some interesting news to share with the SDM Research Community? Please forward your news to Lisa Ramsdell (ramsdell@uchc.edu) so it may be included in our next newsletter!

Pre-submission Grant Review Program

Rationale:

Since extramural grant funding is highly competitive, pre-submission reviews of grant applications can increase chances of success. Many PI's obtain such feedback from their colleagues and contacts both internal and external to UConn. This includes discipline-specific internal programs (such as those run by the UCH Bone group and BME) that provide such feedback to applicants. However, some applicants, especially junior faculty, may not have access to an appropriate reviewer for such pre-submission reviews in a particular area of expertise. This **voluntary** program is intended to help such applicants obtain such pre-submission scientific reviews for extramural grant applications to funding agencies such as NIH, NSF, DoD, etc.

Program Description:

1. The PI contacts the SDM Research Office approx. 90 days before the submission deadline, with a request to participate in this program, a draft abstract of the grant application, and names of suggested internal or external reviewers, who may be suitable for the planned grant application.
2. The SDM Research Office will contact the potential reviewers and identify one who is agreeable to review the grant within the requested time-frame.
3. The PI submits the scientific section(s) of the draft grant application to the SDM Research Office approx. 45-60 days before the submission deadline. The SDM Research Office will forward the draft to the identified internal or external reviewer, with a request to provide the review within 15 days.
4. After the review is received, the SDM Research Office will send the review to the PI, ideally about 30 days or more before the submission deadline, so there is time to make any changes in response to the review.
5. For reviewers that are external to UConn, the SDM Research Office will offer them a stipend to conduct the review.

Research Resources

Students, residents, postdoctoral trainees and faculty at the UConn School of Dental Medicine (SDM) have access to a wide range of research resources through the School, UConn Health, and UConn Storrs campus.



Proposal Development Services

The SDM research community can access scientific editing and other proposal development services through arrangements at the School and University level. For scientific editing support, please contact Laura Didden at ldidden@uchc.edu. For proposal development services and proofreading services offered through the Office of the Vice-President for Research (OVPR), please see <https://ovpr.uconn.edu/services/research-development/services/>

Prospecting for funding opportunities

Pivot-RP is a comprehensive search engine and database for grant funding opportunities available through state, federal, corporate, non-profit, and foundation sponsors. All current UConn faculty, trainees, and staff have access to this database through an institutional subscription. This enables you to identify potential funding opportunities, including research grants, as well fellowships and training grants. It can be especially useful to identify funding opportunities from scientific societies, foundations, and other non-profits. You can also receive weekly alerts with relevant opportunities based on your profile. For additional information and to set up your account, please see this link: <https://guides.lib.uconn.edu/grants/Pivot>

If you would like SDM Research Office staff to help you look for funding opportunities, please contact Laura Didden at ldidden@uchc.edu

Grantwriting Training and Resources

Periodic training on grantwriting for various types of grants is offered by the OVPR. For details, please see: <https://ovpr.uconn.edu/services/research-development/grantwriting/>

Statistical Support

For statistical support for dental residents in Master's degree programs, please contact Dr. Chia-Ling Kuo at kuo@uchc.edu

For all other statistical support needs for SDM students, residents, and faculty, assistance is available through the UConn Statistical Consulting Services, through one of the following options:

1. Free Walk-In (Virtual): For quick questions about statistical issues that can be handled in a 20 minute consulting session. <https://statsconsulting.uconn.edu/walk-in-schedule/>
2. Free Ask Online: Alternatively, you can submit questions online using the submission form at the link below:
<https://statsconsulting.uconn.edu/ask-online-sdm/>

3. Fully Supported Project Engagement: If more in-depth assistance is needed, it will be supported by the SDM, if there is no funding available for the project. Please complete the form at the link below to request such assistance: <https://statsconsulting.uconn.edu/project-engagement-sdm/>

For any questions about support through UConn Statistical Consulting Services, please contact Dr. Timothy Moore at timothy.e.moore@uconn.edu

Internal Funding Opportunities

A variety of internal funding opportunities are open to SDM faculty including the Research Excellence Program, Convergence Awards for Research in Interdisciplinary Centers (CARIC) and the SPARK Technology Commercialization Fund. For details and deadlines, please see: <https://ovpr.uchc.edu/services/research-development/funding/>

Core Facilities

To see all the Core Facilities available to the SDM Research community, please visit: <https://core.uconn.edu/resources>. This page allows you to choose to see all the Core resources at UConn Health, as well as at the Storrs and Avery Point campuses.

Sample Language describing UCH Core Facilities: <https://medicine.uconn.edu/research/core-facilities/>

Health Center Research Advisory Council (HCRAC) programs

- Research Equipment support (includes repair/replacement support and new capital equipment support)
- Emergency Grant Program
- Exploratory Project Transition Award
- Travel Grants for Graduate Students and Postdoctoral Fellows

For information on the above programs, please see the HCRAC website at: <https://ovpr.uchc.edu/services/research-development/research-advisory-groups/hcrac/>

Lincus

Looking for collaborators at UConn? Try Lincus, which tells you which faculty at UConn are working on topics of interest to you. Log in with your UConn Net ID at: <https://lincus.uconn.edu/lincus/cas/landing>

Technology Commercialization Services (TCS)

TCS helps the UConn research community move their research towards practical application. For details, please see <https://innovation.uconn.edu/>

Additional Information

For more information and resources, please see the SDM Research Webpage at <https://dentalmedicine.uconn.edu/research/> and the OVPR Website at <https://ovpr.uchc.edu/>

Research Dean's Corner

Dear Colleagues,

In this Thanksgiving Season, I take this opportunity to thank members of our School's extended research community, including:

- Our students, postdoctoral fellows, and research staff, who work so hard to conduct high-quality research.
- Our faculty who create valuable new knowledge and educate and mentor our trainees.
- Our administrative staff, including those in the SDM Research Office, who provide outstanding support to our researchers.
- Our colleagues in the Office of the Vice-President for Research and other parts of the University, who are vital partners in our research program.



To all of you, I convey sincere thanks and deep appreciation for your efforts. The tremendous success of our School's research program, documented in these pages, would not be possible without the collective commitment of our community towards our research mission.

Wishing you good health and peace in the upcoming holiday season and beyond.

Rajesh V. Lalla, DDS, PhD
Associate Dean for Research

SDM Research Office

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