

# IADR Innovation in Oral Care Awards Celebrating our 2019 winners

## Introduction from **Adam Sisson**



Vice-President & Head of Oral Health Research  
& Development, GSK

GSK is a science-led global healthcare company with a special purpose: to help people do more, feel better, live longer. Our goal is to be one of the world's most innovative, best performing and trusted healthcare companies. GSK's aim is to meet the everyday healthcare needs of as many people as possible, by bringing differentiated, high-quality, expert recommended and scientifically backed healthcare products to market. GSK is proud to partner with the IADR for the 17th year of the Innovation in Oral Care awards in 2020.

I would like to thank all of the applicants for their submissions and congratulate this year's winner on their award and I look forward to seeing the development of their research projects. This document celebrates the winners in 2019, based on interviews, ahead of the announcement of this year's recipients at the IADR General Session in Washington in March.



## Comment from **Paula Moynihan**, IADR President

As the IADR celebrates 100 years of scientific excellence in dental, oral and craniofacial research worldwide, we are pleased to announce the continued success of this collaborative award. The IADR Innovation in Oral Care Award serves to support dental research that has a direct impact on public health. It is intended to help investigators pursue innovative and novel research in oral care, above and beyond the bounds of traditional research.

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Find out more about the IADR Innovation in Oral Care Awards  
and how to apply by visiting

[www.iadr.org/IADR/Awards/Grants-Awards/IOCA](http://www.iadr.org/IADR/Awards/Grants-Awards/IOCA)



# Marco C. Bottino, DDS, MSc, PhD, FADM

Associate Professor, Department of Cariology, Restorative Sciences & Endodontics  
University of Michigan School of Dentistry

**Winner of the 2019 IADR Innovation in Oral Care Award:**

*Injectable In-Situ Forming Controlled Release RvE1 Gel for Periodontal Reconstruction*

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Professor Bottino's career in dentistry began at the Universidade Paulista, São Paulo, Brazil where following on from his DDS degree he studied for an MSc in Nuclear Technology at the University of São Paulo. During that time he developed an appreciation of the strong role materials science plays in biomaterials development, as well as the need to make these materials readily translatable to a clinical setting, which culminated in a PhD degree in Materials Science at The University of Alabama at Birmingham (US). In his current role as a tenured Associate Professor at U of M, Professor Bottino has inaugurated a highly translatable Bioprinting facility within the School of Dentistry and established the first Postgraduate Programme in Regenerative Dentistry in the United States.

## **What advice do you have for researchers looking to apply for awards such as this?**

After an unsuccessful submission for this award nearly 10 years ago, I decided to try again. If I've come this far, anyone can. My advice is: determination, focus, resilience, a long-term vision, humility to learn from your mistakes, and above all else, trust that the best is yet to come. Lastly, I would say that the IADR Innovation in Oral Care Award is the perfect funding mechanism to explore the development of novel materials and therapeutic strategies to improve dental, oral, and craniofacial health.

## **What predictions do you have for key milestones in oral health care over the next 100 years?**

I am positive that the next 100 years in dentistry will encompass not only a revolution in the development of new restorative materials with unique properties including antimicrobial and regenerative/reparative properties, but also more predictable clinical strategies to regenerate dental tissues lost by trauma and/or disease. Meanwhile, the advances in the areas of digital dentistry, precision medicine, and artificial intelligence are set to promote a significant

paradigm shift in the way dentists diagnose, treat, and monitor oral diseases. The aforementioned topics, all of which will significantly improve the quality of human life, depend critically on multi- and interdisciplinary collaborations.

## **What does the future hold for you?**

I am very excited to continue my research in regenerative dentistry, which includes this exciting project thanks to the generous support of the IADR Innovation in Oral Care Award. We consider that the proposed gel can be translated as an "over-the-counter" therapeutic to aid in periodontal regeneration. Hopefully, the prospect of changing the prognosis of a tooth from "questionable" to "favourable" will help prolong the lifetime of the natural dentition and enhance health-related quality of life for millions of patients worldwide.



# Dr Jiang Shan, BDS, MDS, PhD

Post-doctoral Fellow, Restorative Dental Sciences, Faculty of Dentistry,  
The University of Hong Kong

**Winner of the 2019 IADR Innovation in Oral Care Award:**  
*Engineering a Sprayable and Adhesive Hydrogel for Preventing Root Caries*

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Dr Jiang Shan graduated from dental school and completed his master's degree in China. Having moved to Hong Kong to complete his PhD, he developed a passion in discovery of the unknown in dental science as well as promoting the oral health of the public. He is currently working on developing research on antibacterial biomaterial designs which he is excited to share with his peers.

## **What did it mean to you to receive the IADR Innovation in Oral Care Award?**

To receive this award means the world to me and I believe that it will be something I look back on for continued inspiration throughout my career. It was incredibly exciting when I heard that I was granted this International award, and such a huge a milestone in my career. It is so meaningful and encouraging to a young Investigator to be recognised for his or her efforts. I was genuinely lost for words.

## **In your opinion, what have been the 3 defining moments in oral health care over the last 100 years?**

For me, the most obvious and significant impact came from the establishment of the IADR which seeks to improve dental, oral and craniofacial research for health and wellbeing all over the world. The next has to be fluoride therapy which research shows has had a tremendous impact on the health of the population and has been recognised as one of the 10 most important public health milestones of the 20th century. The third biggest has, in my opinion, come from implant dentistry which, having first been introduced in the 1980's, is now considered to be one of the most dynamic and rapidly developing areas within oral care.

## **What predictions do you have for key milestones in oral care over the next 100 years?**

I would expect that we will start to see more effective vaccines for preventing dental caries and other related preventative options. I also believe that a user-friendly, long-standing, effective, novel regime for dental caries/ periodontal disease prevention in both a clinic and community setting is on the horizon. I am extremely optimistic about the future of oral care and I feel privileged to be able to contribute to that.

## **What advice do you have for researchers who wish to apply for awards such as this?**

I would recommend that they should keep their eyes open with regard to updated scientific technology under the requirements of oral health, whilst trying to contribute towards this themselves. Attempting to solve real-life public issues with new concepts and up-and-coming technology, and leading the way in the field, are highly valued.



# Dr Sahar Ansari, PhD

Assistant Project Scientist, Division of Advanced Prosthodontics,  
School of Dentistry, UCLA

**Winner of the 2019 IADR Innovation in Oral Care Award:**  
*A Growth-Factor-Free Adhesive Hydrogel for Craniofacial Bone Tissue Engineering*

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Dr Ansari obtained her MSc in Biomaterials from Queen Mary University before completing her PhD in Craniofacial Biology at the University of Southern California, moving to UCLA School of Dentistry where she now works as an Assistant Project Scientist and Lecturer.

## **What did it mean to you to receive the IADR Innovation in Oral Care Award?**

It is truly an honour for me to receive this prestigious award. The IADR Innovation in Oral Care Award is usually given annually to individuals (Internationally) who are senior and well-established dental researchers. Being one of the recipients of this award shows that my research group has made an impact on the research community worldwide.

## **What advice do you have for researchers out there who are looking to apply for awards such as this?**

I am a real believer in translational research and translating the results of basic science from bench top to the clinic. Many scientists have the answers to clinical problems, however, without collaboration with clinicians or clinician-scientists, these outcomes aren't translated to the clinics for the well-being of patients world-wide.

## **What predictions do you have for key milestones in oral health care over the next 100 years?**

I strongly believe that as a researcher, we really need to collaborate with our clinician colleagues to find answers and novel treatment modalities for patients through translating the results of our scientific research to the clinical settings.

## **What does the future hold for you?**

The future is bright, and I am super excited about it. We read and hear every day about a new breakthrough in science and innovative treatment modality to improve the quality of life of mankind worldwide. My colleagues and I are looking forward to being part of that innovative trajectory.

## **What do you consider are some of the greatest oral care innovations today?**

The introduction of Fluoride as an anticariogenic agent and introduction of Titanium implant dentistry are some of the greatest oral care innovations that I can think of at the moment.

