

IADR Innovation in Oral Care Awards

Celebrating our 2018 winners

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Letter on behalf of IADR Presidents (2004-2019) and the IADR Innovation in Oral Care Awards Committee (2004-2019).

For the past 16 years IADR has proudly partnered with GlaxoSmithKline Consumer Healthcare (GSK) in sponsoring the IADR Innovation in Oral Care Awards. The intent of the awards is to help investigators pursue innovative and novel research in oral care, above and beyond the bounds of traditional dental research. These awards provide opportunities for investigators to conduct oral health research that will have a direct impact on the oral health of the public.

Since 2004, GlaxoSmithKline Consumer Healthcare has generously contributed over \$3 million USD to IADR to fund 49 recipients of the IADR Innovation in Oral Care Awards.

The prestige of the IADR Innovation in Oral Care Award was established early and continues to grow. This success could not have occurred without a review committee of IADR members who have participated in the program.

The current, past and present IADR Presidents and IADR Innovation in Oral Care Awards Committee Chairs thank GSK for 16 years of generously supporting the awards, the awards committee members who volunteered their time and all of the IADR members who have submitted such high-quality applications and make the committee's job very difficult over the years.

Our partnership with GSK has been invaluable and we hope to continue this partnership for many years to come with the ultimate goal of improving oral health worldwide.

IADR Presidents 2004-2019

Stephen Challacombe (2003-04), Paul Robertson (2004-05), Takayuki Kuroda (2005-06), Stephen C. Bayne (2006-07), Deborah Greenspan (2007-08), J.M. Ten Cate (2008-09), David M. Williams (2009-10), Maria Fidela De Lima Navarro (2010-11), E. Dianne Rekow (2011-12), Mary Macdougall (2012-13), Helen Whelton (2013-14), Yoshimitsu Abiko (2014-15), Marc Heft (2015-16), Jukka Meurman (2016-17), Angus W G Walls (2017-18), Rena D'Souza (2018-19).

IADR Innovation in Oral Care Awards Committee Chairs (2004-2019)

John Greenspan (2004), John Stamm (2005-07), Mariano Sanz (2008-09), Lakshman Samaranayake (2010-11), Johann DeVries (2012), Alvaro Della Bona (2013), Mary Walker (2014), Michel Goldberg (2015), Margherita Fontana (2016), David Herrera (2017), Deepak Saxena (2018), Cinthia Tabchoury (2019).



Introduction from **Dr Teresa Layer**

Vice-President, Oral Health Category
Research and Development, GSK

This year marks 16 years of GSK supporting the IADR Innovation in Oral Care Award. Following a new tradition started for the 15th anniversary, this booklet is designed to share the story behind last year's winners. We hope that this will provide inspiration for future entrants to uphold the extremely high standard of entry for this award.

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 bring differentiated, high-quality and needed healthcare products to as many people as possible, with our three global businesses, scientific and technical

know-how and talented people. We are proud to partner with the IADR through this award in order to recognise and support first hand true innovation in research.

I would like to thank all of the applicants for the awards this year and I look forward to seeing the development of their research projects.

Dr Teresa Layer

Vice-President, Oral Health and
Skin Health Category Research and
Development GSK



Professor Rajesh Lalla

DDS PhD

Professor (with tenure), Associate Dean for Research, School of Dental Medicine, University of Connecticut Health

Professor Rajesh Lalla attended dental school in India where he grew up before heading to Connecticut, USA for his PhD. He is currently Professor of Oral Medicine, at the University of Connecticut School of Dental Medicine. In this interview he shares thoughts on his research career and tips for prospective award winners.

Can you tell us about your career to date?

I grew up in India where I went to school and then came to Connecticut in the 1990's for my PhD studies, as well as a residency in Oral Medicine. After completion of my studies I accepted a Faculty position here at the University of Connecticut and transitioned my research interest into clinical research, with a special focus on oral complications in patients receiving cancer therapy.

I'm currently a Professor of Oral Medicine at the School of Dental Medicine where I am engaged in teaching, in service and also in administrative responsibilities as part of my Associate Dean for Research role. My area of research is oral soft tissue conditions; in the past I have completed studies on canker sores or aphthous stomatitis as well as oral fungal infection but my primary focus is on the oral side effects of cancer therapy and mainly on oral mucositis.

Outside of the University of Connecticut I am also the President of the Multinational Association of Supportive Care in Cancer or MASCC which is focussed on supportive care issues for oncology patients.

"I am also the President of the Multinational Association of Supportive Care in Cancer or MASCC which is focussed on supportive care issues for oncology patients."

When you reflect back on your career, what are some of the key moments that you think contributed to your success?

The first would have to be moving to the United States and coming to UConn, which I selected partly because of its strong reputation for research and also partly as I received a full scholarship to come here for my PhD studies. My PhD involved interesting work relating to oral cancer and the role of angiogenic factors in oral cancer.

I also had the chance to work with one of my mentors here, Dr. Douglas Peterson, who was very interested and active in the area of oral complications of cancer therapy. The opportunity to work with him initially on some of his studies meant I was exposed to clinical research and specifically to this field of the oral side effects of cancer therapy. This led to my interest and then activity in this particular field of research.

On some of those studies I realised an interest in translational and clinical research and so, shortly after being appointed to my faculty position, I was able to apply for and receive a K23 grant from the US National Institutes of Health or NIH. This is a career development grant which is given for five years and enables you to spend

time as a junior faculty person on research. This was a seminal moment, as it allowed me the protected time to really build a clinical research career and get the experience and then gain other grants.

"There's increasing recognition of the importance of oral health and also of the relationship between oral and systemic health"

What advice would you give to other dental professionals and scientists considering entering into oral research?

I would definitely encourage them to enter the field. I think the opportunities are tremendous and there's increasing recognition of the importance of oral health and also of the relationship between oral and systemic health.

I would also like to tell them that the reality is that success in academic research is tied to success in being able to secure funding for your research. We all know that this is very competitive, especially in terms of getting funding from NIH or other public health agencies in different countries. My advice to them would be that it's not only important to have a good idea that is backed by science and by some preliminary data, but it's also important to be able to communicate this in a very clear and compelling way. I would suggest that they would either need to be excellent scientific writers themselves or get help from a professional grant writer or a colleague who is an excellent scientific writer.

What did it mean to you, from a personal and professional perspective, to receive the GSK IADR Innovation in Oral Care Award?

It was and is genuinely very exciting to have received the award. From a personal point of view, it was really a validation that the idea and the concept had some merit and that maybe we were on the right track with these fledgling entrepreneurial efforts we are engaged in. And from a professional point of view, other

Winner of the 2018 GSK IADR Innovation in Oral Care Award

Novel Long-acting Topical Anaesthetic Product for Oral Mucositis Pain

than the natural high that comes from winning a professional award, I think it was a very important endorsement from IADR and from GSK on the merits of the proposal and the idea. This becomes very important when trying to convince investors or industry partners and other funding agencies that the project has merit and has been recognised at an international level.

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

My suggestion to them would be to really think outside the box in terms of what they propose – this award is specifically about innovation after all. But at the same time they should be realistic in terms of what can be accomplished with the time and the resources that they have available. It is also very important to have a strong team, which not only has the scientific background and expertise, but also where possible some business understanding and expertise. I would say that more and more we are seeing an increasing emphasis on the translation of research to something of benefit to human health or on technology commercialisation. So this particular award mechanism really is quite important in terms of pushing us in the direction of translating something towards commercialisation.

So, what does the future hold for you?

As my career has evolved over the last couple of decades I've been spending a greater proportion of my time on administrative and leadership type roles and duties and I

“We are seeing an increasing emphasis on the translation of research to something of benefit to human health or on technology commercialisation”

expect that to continue. I am however, very excited to continue my research and also specifically to continue this project supported by the Innovation in Oral Care Award and see how far we can push it. Hopefully one day it can help patients who are suffering from oral mucositis and potentially also other conditions that cause oral pain.

Longer term I feel I have some books in me that I want to write, although right now I certainly don't have the time! I have ideas for fiction and non-fiction books.

Can you tell us something about yourself that isn't on your professional resume?

I am a very data driven person, I tend to be organised – some may say too organised! Other than that, I enjoy walking and self-reflection – sometimes even deeper thoughts like why we exist. I like to read self-help books to try to improve myself in terms of soft skills. I am keen to improve my abilities in helping people to solve their problems.

What is your favourite song or piece of music and why?

For me the song which comes to mind is 'Another Day in Paradise' by Phil Collins, one of my favourite singers. It's a song that really reminds me how fortunate I am to be living the life I am. I also really like the beauty and simplicity of classical music and have been listening to Für Elise by Beethoven almost every evening recently which I find very calming.





Dr Prasanna Neelakantan

BDS, MDS, PhD, FISDR

Clinical Assistant Professor in Endontology,
Faculty of Dentistry, University of Hong Kong

Dr Prasanna Neelakantan is from Chennai in India and trained as a dentist before moving to join the University of Hong Kong. In this interview he talks about his career journey, the Hong Kong 'work-life' balance and his love of music.

Can you tell us about your career to date?

I trained as a dentist in India and when I completed my post graduate training in 2008, I continued to work at the same school in Chennai. Whilst working at the dental school I also ran 2 private practices specialising in aesthetic dentistry and endodontics. In 2012, I was offered the opportunity to do a PhD in Amsterdam as a part time candidate, whilst still teaching and working in India. Then in 2016, I was offered a position in Hong Kong. I didn't bat an eyelid to choose the position as the University of Hong Kong Faculty of Dentistry is one of the top ranked dental schools in the world, with a phenomenal research culture.

I am a clinical endodontist, which means a majority of my interests revolve around root canal treatment, the treatment that is often falsely accused of being the most painful! I have a special interest in preventive treatments. But I must say, my real passion lies in microbiology. At the University of Hong Kong, I teach the undergraduate and postgraduate students, perform research and have a number of administrative responsibilities. I also serve as the Assistant Dean of Research at the faculty.

How do you find working in Hong Kong?

A typical work day in India would involve teaching full day, then off to my private practice to treat patients all evening and write my research

papers in the wee hours of the day when the world is sleeping in my side of the world. Although the work style in Hong Kong is not any less demanding, I have my protected time to follow my passions in terms of what I want to do. For instance, I have my protected research time which definitely has a remarkably positive impact on the way I work. So although there are similarities in the work culture between the two places, there are dramatic contrasts as well. All in all, I certainly feel a work-life balance in Hong Kong, which may be very different from what other people may feel. It is all about perspectives I guess?

Thinking back to the GSK IADR Innovation in Oral Care Award, what did it mean to you professionally and personally to win this award?

So I should say, firstly, that was probably one of the happiest moments of my life. In India, during the time I was working, there were not too many research grant opportunities. This often results in the inability to perform what is viewed as high impact or cutting-edge research. I've always been passionate about research and wanted to do something which is more cutting edge, more leading technology. When I moved to Hong Kong the first thing was to start applying for external grants. Hong Kong is a very, very competitive environment in terms of grants and success rates are quite low. I have to say I was not very positive when I applied for the IADR GSK award.

The minute I got the email about winning the award I called up the people who mean the most in my life within seconds.

From a professional perspective the global recognition was a starting point for my grant track record. And I think considering that this was the first ever IADR I attended, and I won this award, it was a huge boost to my morale.

When you reflect on your career, what are some of the key moments that helped you drive your success?

Looking back at my academic career I would say there are probably four key moments. The first was my first ever published paper in 2008. The second was in April 2012 when Paul Wesselink from the Academic Centre for Dentistry, Amsterdam accepted me to be his PhD candidate. I was very fortunate to be his PhD student. The third biggest moment was in 2016 when I had the PhD degree in my hands and the fourth was of course being offered the job in Hong Kong.

As a scientist and a dentist, what advice would you give to others considering entering oral health research?

Oral health research is more complicated now than it has ever been.

"Oral health research is more complicated now than it has ever been."

What could be a grantable or fundable project, or a publishable paper five years ago would probably not even enter a stage of peer review now. So, things are changing. People want innovation every day and a lot of

times we tend to overlook smaller things and want to go along the same beaten track. We probably need to take a step back, do a bit of unlearning and see where we have gone wrong and think of other possible options.

I think one of the things with any award or grant is for the researchers

Winner of the 2018 GSK IADR Innovation in Oral Care Award

A Dual-acting, Nano-capsulated Varnish for Targeted Prevention of Childhood Caries

to be very clear about the objective of the body who is giving the funds. If you take the IADR Innovation Award for example, there are clear guidelines which say that the fund is for projects that look towards preventive dentistry.

I think another important piece of advice is to ensure you have a very strong team. This ensures that every aspect is taken care of and any contingency plan is always ready. These days it is so important to go out and collaborate. And for truly international awards, we may need to extend that reach beyond our building, university or even country.

What does the future hold for you?

The frank answer is I couldn't tell you! In January 2016, if someone asked me if I would be in Hong Kong, I would have laughed about it because I never expected it. I never expected that I would win the IADR Innovation award or the Joseph Lister Award. So, I really do not know what the future holds for me. But my aspirations are to identify optimal aids that can translate to products later on, which can be used for treating or preventing biofilm-mediated infections.

Ten years down the line what I would want to see is some kind of product generated out of the research I have done where we can have something which can handle biofilms or infections. Despite the evidence that we have and the research that's being done, we are still not able to control biofilm infections.

Can you tell us something about yourself that isn't on your professional resume?

I'm a major foodie – if I'd not been a dentist or medical professional, I would've probably gone on to be a

chef! I love cooking and inventing recipes and I've even contemplated food blogs. Food and coffee are the two things which people can literally bribe me with to get stuff done!

What is your favourite song or piece of music and why?

I love to listen to South Indian or Tamil music. There is a fabulous musician called Ilayaraja who is always on my playlist. There is one specific song (Ennulle Ennulle, a soothing song from a Tamil film Valli), which I literally run on loop. If I am writing a grant proposal, or if I am stressed, that's the song that runs on my headphones.

“These days it is so important to go out and collaborate”





Professor Luiz E Bertassoni DDS, PhD

Assistant Professor, School of Dentistry
Restorative Dentistry, Oregon Health and
Science University

Professor Luiz E Bertassoni is an Assistant Professor in the School of Dentistry, Oregon Health and Science University. He graduated from dental school in Brazil before moving to San Francisco, Sydney, Australia and then returning to the US where he now has a lab in Portland. His research interests include dental and craniofacial regeneration.

Can you tell us a bit about your career to date?

I started my career in dentistry in 2002 when I was at dental school in Brazil and then moved to a position in California at USCF with Bill and Sally Marshall. That was when I received a couple of scholarships to do my PhD in Biomaterials at the University of Sydney with Professor Mike Swain in the school of Dentistry. During this time I also started teaching in the dental school.

My research career evolved from there. I was mostly working with development of biomaterials and characterisation of dental tissues. At that point, when I moved to Harvard and MIT, I started to work on tissue engineering. When I finished my postdoc I went back to Sydney, started the lab, started working with students and started developing my own research programme.

Now in my lab we've been doing lots of research on dental and craniofacial regeneration. We focus a lot on vasculature and on mineralised tissues and we take advantage of a lot of microscale engineering tools to fabricate different types of tissues.

We use the tissues that we engineer in the lab to understand disease conditions and come up with healing solutions for some of these diseases. We've worked a lot on dental pulp, vasculature and bone regeneration and using our bone models to understand different aspects of bone marrow, as well as bone cancers.

Thinking back to the GSK IADR Innovation in Oral Care award what did it mean to you personally and professionally to win the award?

For me personally it was very exciting, a real achievement. This has always been a very prestigious award – both of my supervisors have received this award before so it is always something you have as a milestone, right? I guess once you achieve something that people that you look up to have received in the past, that means you're on the right track.

As far as research goes, I think it's one of the few awards out there that allows you, and actually encourages you, to think outside of the box. And that's the type of research we like to do in our lab. One of the reasons that I got into research is because in dental school I always had a sense that dentistry had become somewhat stagnated as far as the development of new technologies and I wanted to change that.

The funding situation for research is difficult; there are limited risks that people are willing to fund. So to have GSK support these types of research projects and encourage the real innovative aspect of that work is tremendous.

When you reflect on your career, what are some of the key moments that helped drive your success so far?

I think that the ability of collecting multidisciplinary information along the way is really what allowed me to bring all the pieces together to do what I am doing at the moment. A critical piece was when I did my second postdoc at Harvard and MIT, when I was forced to think outside of the scope of dentistry. The first project I had was to bio print the liver, which I certainly never thought I would be doing as a dentist. But that decision forced me to think of completely different ways of dental research. So I think that the ability to transition to different areas and eventually bring it all back to the field of dental research was something that was instrumental to my career development in allowing me to develop my research programme.

What advice would you give to other dental professionals and scientists considering entering oral health research?

I would say think out of the box. I think that's what dentistry needs. If there are 1000 people doing one thing, then don't do it again just because it's popular. Think of new ways of proposing different solutions, new ways of doing dentistry.

To me, the core purpose of research is to innovate and push forward and that's what we need nowadays. We need young, courageous and intelligent people to take the risks and fight the status quo and really push things forward.

"This has always been a very prestigious award – both of my supervisors have received this award before so it is always something you have as a milestone, right?"

"The first project I had was to bio print the liver, which I certainly never thought I would be doing as a dentist!"

Winner of the 2018 GSK IADR Innovation in Oral Care Award

mRNA Nanodelivery for Treatment of Dentin Hypersensitivity

What is your advice to researchers out there looking to apply for the GSK IADR Innovation Award?

I think that probably the secret for a successful application would be something that is highly innovative that hasn't been proposed before, but at the same time has a relatively near-term clinical application, or at least something that clinicians and researchers can see the feasibility in the relatively short term.

What does the future hold for you?

We are working really hard in the lab every day to really turn a lot of things into reality. In the future we would like to expand our research platform. We would like to turn some of these technologies into real solutions. Clinically, we would like to be able to train more people into doing these things as well.

We have also been trying to create a multidisciplinary and diverse environment for our labs, specifically and essentially, train people to have this diverse mentality both in terms of science and personal background.

Tell us something about yourself that isn't on your resume?

Besides doing research I'm a musician. I've recorded a number of songs and released albums. Actually, we had quite a bit of a following back home in Brazil before I turned into a full time professor and scientist. I also like to surf and travel. I think that had a lot to do with my PhD being done in Sydney. So when I'm not in the lab, I'm here

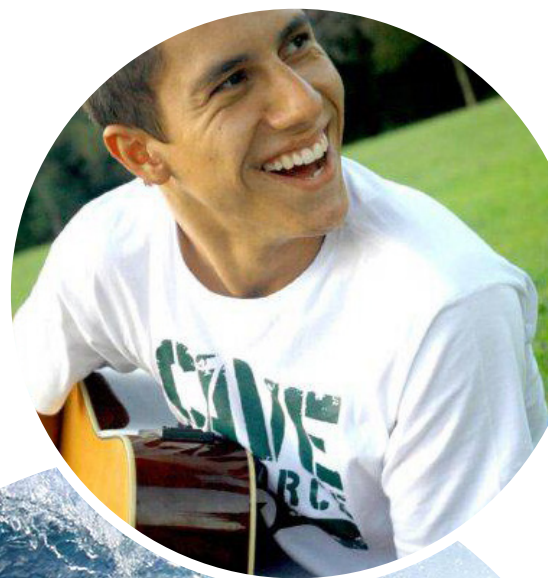
"We need young, courageous and intelligent people to take the risks and fight the status quo and really push the thing forward."

"Besides doing research I'm a musician. I've recorded a number of songs and released albums. Actually, we had quite a bit of a following back home"

looking for barrelling waves or just playing guitar and singing on stage somewhere.

What's your favourite song or piece of music?

This is a difficult question as a musician – it's like choosing your favourite child! I think the one piece of music that I would say was really important for my upbringing and my life, that I can always trace back to happy moments, was reggae music. I always enjoy listening to reggae – it takes me back to happy, fun moments on a beach somewhere and it takes away all heavy pressures of work and everything and I can trace it back to several moments in my life.



Luiz surfing in Indonesia



Dr Teresa Layer

Vice-President, Oral Health Category Research and Development, GSK Consumer Healthcare

This year Dr Teresa Layer will retire from GSK following a career in oral health research spanning over 25 years. In this interview she shares memories from her career including the highly successful partnership with the IADR and the development of the Innovation in Oral Care Award.

Tell us about your career in oral health research to date?

I have worked for over 25 years in oral health; 22 of those are for GSK and I've had such an exciting career. When I first joined the company in 1997, I worked as a Senior Scientist in toothpaste development in our laboratories. At that time, we had the Macleans and Aquafresh brands and I was then given the opportunity to lead R&D for Sensodyne in 2006 soon after we had acquired it from Block Drug.

We were able to put some fantastic science behind the business.

We optimised our approach to Dentin Hypersensitivity clinical trials and acquired new technologies. We have been able to put amazing science behind our brands with the ambition of creating a speciality oral health business that GSK could be really proud of.

For the past 10 years or so I have had the enormous privilege of being our R&D category head for Oral Health, which has meant that I have been able to lead the scientific innovation for all of our oral health brands. I feel extremely humbled and privileged to have had such a fantastic career over those years.

What is your proudest moment to date?

The moment that stands out would be taking Sensodyne to £1 billion global sales. It was GSK Consumer Healthcare's first billion-pound brand. It was a privilege to really put the science behind the brand to underpin the marketing. I have been incredibly proud to work with an amazing group of colleagues at Weybridge who have worked hard to realise our goals.

GSK has partnered with the IADR for 16 years now and is now sponsoring the IADR Innovation Awards. What are your reflections on the partnership and also the awards themselves?

It has been an absolutely wonderful partnership enabling us to help many young scientists to get their career established. It's given me huge joy personally that we've been able to do this.

Working with the IADR has also enabled us to show what scientific excellence is and how you can partner with the outside world to really

synergistically support what we are doing at GSK.

Is there a particular year or award that stands out for you?

We have been able to sponsor and support some amazing exciting research but the one

"Bringing new innovation like NovaMin to market also makes me proud. The acquisition of this technology changed our world and became Sensodyne Repair @ Protect"

that still stands out for me is the saliva diagnostics work by David Wong. I followed David's work for so many years and it filled me with excitement that you could actually use saliva to potentially diagnose conditions such as mouth cancer and develop diagnostics against that. It was hugely

exciting. Professor Wong is such a distinguished researcher and his work is going to be hugely relevant for the future.

What are your hopes and advice for new scientists embarking on a career in research?

I would offer the same advice as I have taken in my career, which is to dream big, believe in yourself and believe that anything is possible. Have ambition. My ambition was that we would create for GSK a world-class speciality oral health company. I hope that's what, very humbly, part of my legacy will be.

And the other thing is, hold your values at the heart of who you are and try and inspire people to come with you on that journey because, actually, you can't do everything yourself. Be passionate and if you love what you do people pick up on that and they want to follow you.

Can you tell us something about yourself that isn't on your professional resume?

I really enjoy Mozart's clarinet concertos. When I was learning to play the clarinet as a child I challenged myself to learn them. I also love dancing, especially salsa!



Past recipients of the IADR GSK Innovation Award

2004 Recipients:

Jack Ferracane

John Mitchell, and Jack McCarthy, Oregon Health & Science University, Portland, USA
Novel Dental Desensitizing Agent Based on a Biomimetic Approach

Doron Steinberg

Amram Mor, Michael Friedman, and Gilad Bachrach, Hebrew University Hadassah School of Medicine, Jerusalem, Israel
Development of Pharmaceutical Technology for Sustained Release Delivery Systems of Antibacterial Peptides: The Effect on Dental Biofilms and Oral Diseases

Spencer W. Redding

Jose Lopez-Ribot, H. Ralph Rawls, and Gregg Siegel, University of Texas-San Antonio, USA
Prevention of Candida Associated Denture Stomatitis

Marie-Claude Amoureux

Peter Grandics, Nandani Rajapakse, and Susan Szathmary, Clarigen Inc., Carlsbad, CA, USA
Binding of Quorum Sensing Molecules as Antibiofilm Strategy

2005 Recipients:

John Featherstone

Ling Zhan, Pamela DenBesten, Charles Hoover, and Stuart Gansky, University of California – San Francisco, USA
A Novel Antibacterial Approach to Reduce Caries in Children

Peter Holbrook

Thordis Kristmundsdottir, Halldor Thormar, and Skuli Skulason, University of Iceland, Iceland
A Novel Treatment for Cold Sores

Lin Tao

University of Illinois at Chicago, USA
A Novel Formula Protects Infants from HIV

2006 Recipients:

Hyun (Michel) Koo

Thomas Foster, and Robert Quivey, Eastman Department of Dentistry, University of Rochester, USA
A Novel Therapeutic Approach to Prevent Formation of Cariogenic Biofilm

Yen-Tung Andy Teng

Eastman Department of Dentistry, University of Rochester, USA
A Novel Therapeutic Human SCFV-Diobody For Aggressive Periodontitis

Cun-Yu Wang and Lijian Jin,

University of Michigan, School of Dentistry, USA, University of Hong Kong, Hong Kong
Targeting IKK/NF-KB For Periodontitis

2007 Recipients:

Toshihisa Kawai

Forsyth Institute, Boston, Massachusetts, USA
Noninvasive Gingival Delivery of FC-Conjugated Fusion Compounds

Fionnuala T. Lundy and David Orr,

School of Medicine and Dentistry, Queen's University, Belfast, Ireland and University of Ulster at Coleraine, Coleraine, United Kingdom
Characterization of a Novel Calcitonin Gene-Related Peptide (CGRP) Cleavage Enzyme

Gordon Ramage

Glasgow University Dental School & Hospital, Glasgow, Scotland
Improving Oral Care Using Tea Tree Oil and Its Derivatives

2008 Recipients:

Urban Hägg

Lakshman Samaranayake, Richard Kao, and Michelle Yuen, The University of Hong Kong, Hong Kong
A Natural Edible Agent for Reduction of Oral Biofilm

Keith Kirkwood

Medical University of South Carolina, USA
Targeting Post-transcriptional Signaling for Periodontitis

David T.W. Wong

Wei Lao, and Fang Wei, University of California, Los Angeles, USA
SPITDX: A Universal Platform for Salivary Biomarker Detection

2009 Recipients:**Rena D'Souza**

Baylor College of Dentistry, Texas A&M Health Science Center, USA and co-investigators Jeffrey Hartgerink, Departments of Chemistry and Bioengineering, Rice University, Houston, Texas and Gottfried Schmalz, University of Regensburg, Germany
Nanostructured Peptide Hydrogels and Stem Cells for Dentin-Pulp Complex Regeneration

Eric Reynolds

Melbourne Dental School, The University of Melbourne, Australia and co-investigator Stuart Dashper
Development of Oxantel to Prevent Periodontopathogenic Biofilm Formation

Sandra Bordin

University of Washington, Seattle, USA and co-investigator Xingde Li
Optical Coherence Tomography for Non-Invasive Diagnosis of Periodontal Disorders

2010 Recipients:**Robert Patrick Allaker**

Queen Mary & Westfield College, University of London, UK and co-investigators Jie Huang, Department of Mechanical Engineering, University College London and Guogang Ren, School of Aerospace, Automotive and Design Engineering, University of Hertfordshire Hatfield, UK
Multifunction Nano-biomaterials for Implant-based Dental Reconstruction Products

Daniel Grenier

Groupe de Recherche en Ecologie Buccale, Université Laval, Quebec, Canada and co-investigator Francesco Epifano, Faculty of Pharmacy, University G. D'Annunzio of Chieti-Pescara Chieti Scalo, Italy
Therapeutic Potential of Citrus Auraptene for Periodontal Disease

Craig Miller

University of Kentucky College of Dentistry, Lexington, USA and co-investigator Jeffrey L. Ebersole
POC Immunoassay Test Strip for the Diagnosis of Periodontal Disease

2011 Recipients:**Scott DeRossi**

Medical College of Georgia, Augusta, USA and co-investigators Douglas Dickinson, Stephen Hsu, Stephen Looney and Kalu Ogbureke
A Natural Formulation for Patients Diagnosed with Xerostomia

David T. Wong

University of California, Los Angeles, USA
SCPSS: Enabling Technologies for Salivary Biomarkers for Clinical Applications

Hui Wu

University of Alabama at Birmingham, USA and co-investigators Suzanne Michalek and Christian Melander (North Carolina State University)
Development of Small Molecules that Inhibit and Disperse Carcinogenic Biofilms

2012 Recipients:**Simone Duarte**

New York University, USA and co-investigators Deepak Saxena and Nelson Silva
The Influence of Low-Temperature Plasma on Biofilms

Christopher Irwin

Queen's University, Belfast, Ireland and co-investigators Fionnuala Lundy and Brian Walker
Peptide Mimetics of LL-37 as Novel Therapeutics for Periodontitis

Doron Steinberg

Hebrew University, Jerusalem, Israel and co-investigator Michael Friedman
Novel Sustained Release Varnish of Anti-Biofilm/Anti-Quorum-Sensing Agents Against Oral Biofilms

2013 Recipients

Marlise Klein

University of Rochester, New York, USA and co-authors, Danielle Benoit, Hyun Koo and Megan Falsetta Wood
Controlled Release in situ of Antibiofilm Agents via PH-activated Nanoparticle-Carriers

Bernhard Ganss

University of Toronto, ON, Canada and co-author Eli Sone
Novel Peptide Mimetics to Reinforce Dentogingival Attachment

Dong Wang

University of Nebraska Medical Center, Omaha, USA and co-author Richard Reinhardt
Dentotropic Pluronics as Novel Formulation Excipients for Oral Hygiene Products

2014 Recipients

Keith L. Kirkwood

Medical University of South Carolina, Charleston, USA and co-author Frank Alexis of Clemson University
Novel Anti-Inflammatory Nanoparticle Scaffolds for Periodontal Treatment

Yvonne Kapila

University of Michigan and co-authors J Fenno, and Alexander Rickard
The Effect of Nisin on Dental Plaque Biofilm Communities

Jake Jinkun Chen

Tufts University and co-authors Qisheng Tu and Lily Dong
A New Therapy for Treating Diabetic Periodontitis

2015 Recipients

Lizeng Gao

University of Pennsylvania, Philadelphia, USA
Biofilm Elimination and Caries Prevention Using Biomimetic Nanoparticles

Janet Moradian-Oldak

Herman Ostrow School of Dentistry of USC's Center for Craniofacial Molecular Biology, Los Angeles, California, USA
Repairing Tooth Enamel with Chitosan-Amelogenin-based Hydrogel

Alireza Moshaverinia

Herman Ostrow School of Dentistry of USC's Center for Craniofacial Molecular Biology, Los Angeles, California, USA
Regenerative Treatment of Peri-implantitis using Mesenchymal Stem Cells

2016 Recipients

Catherine Ovitt

University of Rochester, New York, USA, and co-investigator Vyacheslan Korshunov
Localized Delivery of Amifostine to Enhance Salivary Gland Radioprotection

Nicholas Jakobovics

Newcastle University, Newcastle Upon Tyne, England, UK, and co-investigators Michael Hall, Philip Preshaw and Grant Burgess
Control of Oral Biofilms using a Natural Marine Microbial Enzyme

H.M.H.N. Bandara

University of Queensland, Australia, and co-investigators Lakshman Samaranayake and Hugh David Charles Smyth
Novel Quorum Sensing-based Liposomal Drug Delivery Against Oral Candida Biofilms

2017 Recipients

Mikako Hayashi

Osaka University, Osaka, Japan, and co-investigators Takayoshi Nakano, Osaka University Graduate School of Engineering, Japan, and Reo Uemura, Osaka University, Osaka, Japan
Riboflavin-UVA Treatment Prevents Root Caries by Promoting Collagen Crosslinking

Grayson Marshall

University of California, San Francisco, USA and co-investigators Stefan Habelitz, Sally Marshall and Kuniko Saeki
Remineralizing Cement for Dentin Caries

Petros Papagerakis

University of Saskatchewan, Saskatoon, Canada and co-investigators Nikos Chronis, University of Michigan College of Engineering and Silvana Papagerakis, University of Saskatchewan, Saskatoon, Canada
Intra-oral Device to Measure Time-dependent Saliva Biomarker Levels



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- inhibition or removal of biofilms etc. adhering to natural or artificial surfaces,
- modification of those surfaces to inhibit biofilms and other deposits, stains and odors,
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