UBDENIST

NEWS FROM THE UNIVERSITY AT BUFFALO SCHOOL OF DENTAL MEDICINE

FALL 2017



125 YEARS OF RESEARCH AND SCHOLARSHIP

3RD IN A SERIES OF THREE SPECIAL ISSUES

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ON THE COVER:

A typical research scene illustrates the focus on advancements in oral health and disease control for which the UB School of Dental Medicine has become known over the decades.

UBDENTIST

News from the University at Buffalo School of Dental Medicine

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Greetings to all,

This has been a banner year for the School of Dental Medicine. While the 125th anniversary has certainly been the icing on the birthday cake, the heritage and tradition of quality and innovation that this milestone represents continues to add to the school's outstanding reputation.

This celebratory year coincided with our school's accreditation review, conducted every seven years. Painstaking preparation for the accreditation site visit had been ongoing for over two-and-a-half years. Our efforts proved fruitful: the school earned re-accreditation with flying colors, without a single shortcoming in the over 200 standards for the nine dental school programs that were reviewed.

Among the many positive comments from the Commission on Dental Accreditation site visitors were: "Young research faculty very enthusiastic."... "Predoctoral students made a huge impression in their support of the institution." and, "I think it (institution of objective structured clinical examinations) is incredible and something few schools could achieve!" These results attest to the strength of our programs as we complete our 125th year.

In another banner development, our school's formidable body of research was highly ranked in this year's Shanghai Ranking of research-intensive dental

schools around the world. We were ranked 11th out of 200 dental schools and 9th among U.S. dental schools based on measures of the quality and impact of our research.

Research became a focus for our school in 1960 when then-Dean James

English organized the nation's first Department of Oral Biology in the U.S. This was of seminal importance because it established a critical mass of scientists focused around oral disease. The research legacy of our scientists and clinical investigators is described in the following pages of this issue which focuses on our living legacy of research as we bring down the curtain on our 125th anniversary year.

The milestone 40th anniversary of the Buffalo Niagara Dental Meeting this past October is also highlighted in these pages. This year's meeting was notable for new courses by young practitioners, tours of the new Preclinical Simulation Center in Squire Hall, and featured speaker National Institute of Dental and Craniofacial Research Director Dr. Martha Somerman. Dr. Somerman made two outstanding presentations in which she reviewed our school's research contributions and provided career guidance to our junior faculty members.

Many thanks to all who have made this year so special and memorable. As always, it is our alumni, students, faculty and staff who continue to forge our success.

Sincerely,

Joseph J. Zambon, DDS '74, Perio Cert. '83, PhD '84 Dean, School of Dental Medicine

Joseph J. Jambon

NewsBriefs

Scholarships and awards presented to students at event

On August 16th, a reception was held to present over 35 scholarships and awards with a dollar value of over \$350,000 to dental students. The awards recognized academic standing, clinical achievement and a strong commitment to community service. The event was sponsored by the School of Dental Medicine, the Office of Academic and Student Affairs and the UB Dental Alumni Association.

CLASS OF 1964

THOMAS C. LABENSKI (CLASS OF 1985) SCHOLARSHIP AWARDEES ROBERT DAVIS, '18 (L) AND TAREK HUSSEIN, '18 (R) WITH DEAN ZAMBON. HUSSEIN ALSO RECEIVED THE CLASS OF 1952

SCHOLARSHIP.

SCHOLARSHIP AWARDEES (L TO R) FARID CUMPLIDO, '19. DEAN ZAMBON, RONALD ZIELIN, '64, KEITH MESIDOR, '19, YUNG-HUA LEE, '20. NOT PICTURED RENA PATEL, '19





DENTAL ALUMNI ASSOCIATION AWARDEE SPENCER BIERLEIN, '18 WITH DEAN ZAMBON (L) AND JOSEPH GAMBACORTA, '93 (R).

Alan J. Gross Awardees for teaching excellence

The annual Alan J. Gross Awards for Excellence in Teaching were presented in November to three faculty members selected by dental students based on their enthusiasm for the subject taught, their ability to convey information clearly, and a genuine concern for students. This year's awardees are pictured with Dean Joseph Zambon and student representatives: Dr. Hoangcam Nguyen with Class of 2018 representative, Danielle Rivera Doi; Class of 2019 student Kathleen Gonzales with Dr. Patrick Battista. '09, AEGD Cert. '10, Endo Cert. '12; Dean Zambon; and Deborah Tirsun representing the Class of 2020 with awardee Dr. Benita Sobieraj, '97, AEGD Cert. '98.





Evelyn Jung-

A PIONEERING FACULTY MEMBER IN RESEARCH AND EDUCATION



EVELYN JUNG

Evelyn Jung, Class of '30, forged her way through an otherwise male-dominated profession to leave her mark on education and research. Joining the faculty shortly after graduating, she served under deans Squire, Groh, Gauchet, English, and Feagans. For a time, she was the only female faculty member.

Dr. Jung devoted her efforts to the development of the Department of Radiology. Those who were fortunate enough to have had her as a professor know that her primary interest was her students and her primary goal was to ensure that each student had a real working knowledge of radiographic techniques and diagnosis. In the radiology clinic, she wore a green coat rather

than the traditional white one; noting that individuals are less fearful of the color green, thus avoiding white-coat syndrome.

In addition to educating students, she was the first part-time research faculty member at the dental school. Her research on Controlled demineralization of bone specimens, published in 1970 in the journal Oral Surgery, Oral Medicine, Oral Pathology, provided a preservation technique for teeth and bone. Using this research, she embedded radiographs along with jaw anatomy in acrylic resin, to provide real-life diagnosis scenarios—a method well beyond the times.



Dr. Jung valued her relationship with the dental school and encouraged young women who had an interest in dentistry to pursue the profession that "provided useful work and lifelong study."

—Robin L. Comeau

< RADIOGRAPHS OF DR. JUNG'S PRESERVATION TECHNIQUE FOR TEETH AND BONE. This is the third of three special issues of UB Dentist celebrating the 125th anniversary of the founding of the school. The magazine is focusing content around the three branches of the school's mission—service (highlighted in Spring 2017 edition), education (focus of Summer 2017 edition), and research.

Research has been a part of the school for many years but really came into its own with the establishment of the first Oral Biology department in the U.S. in 1960. Our research has grown significantly since, making great strides in oral health and disease control as you will see in the following pages.

Instead of attempting to encapsulate 125 years, we are providing highlights from the past 25 years, supplemented by the words of faculty, staff and alumni who have been part of this journey. To see

IN CELEBRATION OF THE UBSCHOOL OF DENTAL MEDICINE OVER THE PAST 125 YEARS

more of the picture, we suggest you read about the first 100 years in the "Roots of Renown," a monograph published in 1992 and edited by former clinic dean Richard Powell. We would also suggest you refer to the Quasquicentennial Compendium and to old issues of UB Dentist, or view them on the school's website to refresh your memory of the past 25 years using the stories and pictures.

In this issue's focus, you will see how the school has developed its research-intensive reputation in the words of the scientists and investigators who are advancing the understanding of the oral spectrum. Some of the interviews were videotaped and will be available to watch on our web site. The full text of each will also be available, forming a complete oral history as we come to this final issue of our anniversary year.

We hope these issues will provide snapshots of moments from the past 25 years.

125YEARS OF RESEARCH AND SCHOLARSHIP

Research update and preparation for the future

PREPARED BY ANNE E. MEYER, PHD, ASSOCIATE DEAN FOR RESEARCH

A few weeks before Dr. Martha Somerman, director, National Institute of Dental and Craniofacial Research (NIDCR) visited Buffalo to speak at the 40th annual Buffalo Niagara Dental Meeting and to give special seminars to celebrate the school's 125th anniversary (see article on Page 25), she requested, for historical perspective, a list of research grants that had been funded by the institute before 1993.

CONTINUED ON PAGE 8



he request posed a bit of a problem due to the trend to drastically reduce storage of paper files and the poor accessibility of files stored on older electronic media. Eventually, we hit upon a small treasure trove of information in the online collection of the U.S. Library of Congress. We learned that, in 1968, Sebastian Ciancio, then a faculty member in Periodontics (now Distinguished Service Professor and, chair, Department of Periodontics and Endodontics), was the recipient of a National Institutes of Health (NIH) R01 grant on "Mucopolysaccharides in gingivitis and periodontitis." The grant budget was \$13,497 (\$62,500 in 2016 dollars).

How times have changed! By 1975, the average R01 grant to our school was \$45,000; in 1980, the average was \$79,000 (\$245,000 in 2016 dollars). In 2016/17, the average R01 award from NIDCR to the school was \$388,600. By the 1970s, the school became more successful in attracting funding from

NIH programs designed to help new faculty investigators. Back then, these grants were coded "R23." The school's R23 recipients in the 1970s included Rosemary Dziak ("Bone cell calcium regulation") and Michael Levine ("Specificity of salivary aggregation by oral bacteria"). Both of these individuals remained very productive in research, eventually reaching the role of tenured, full professor in the school. Although NIH has discontinued the R23 program, newer programs give young researchers, including clinicians, a more even playing field when competing for NIH funding.

The remainder of this article addresses the nature of the research endeavor in our academic setting and how the interests and efforts of our students, faculty, and staff intertwine.

It takes a village

The phrase "it takes a village" has applications well beyond child-rearing and community service. Research collaboration is a major facet in our faculty's scholarly endeavors and productivity. This is a trend that supports national and international goals toward "team science" and more efficient problem-solving.

In 2016/17, 58 percent of the school's active sponsored projects involved collaborations with other schools at UB and/or institutions and companies outside of UB. As evidenced by authorship, 89 of the 109 research articles published in 2016 and cited in the Web of Science (Science Citation Index) involved collaborations outside of the dental school.

Research translation to the 'real world'

Another measure of research impact and success is translation of new discoveries from basic and applied research into clinical studies and commercialization.

Concrete steps taken to protect the intellectual property (IP) of these discoveries include IP disclosures, patent applications, and awarding of patents from the U.S. Patent & Trademark Office (USPTO). UB's School of Dental Medicine has a strong record of clinical studies.

Faculty research at our school takes place at all levels; from the basic research of molecular and cellular biology and genomics to understanding underlying epidemiologic factors of oral cancer. The scope of the school's applied and clinical research includes studies of in-vitro and in-vivo responses to new tissue engineering scaffolds and artificial saliva, as well as evaluation of new dental care products such as mouth rinses and denture liners.

The school's research also includes the translational aspects of bringing laboratory and in-vivo research

advances to the clinic. These translational research efforts are best exemplified by the healthy number of new technology disclosures submitted by faculty, staff, and students for consideration by the university's Technology Transfer Office (TTO). While only a small number of disclosures will ever "go the distance" and become patents, the TTO actively markets a larger number to industry for potential licensing and additional research and development support. Further development of the school's intellectual property includes additional industry-sponsored research projects, several of which have been "matched" with budgets from the New York State Center for Advanced Technology at UB.

In 2016/17, there were 14 sponsored clinical studies in progress in our clinics. During the same period, faculty submitted 17 IP disclosures to UB's TTO and, based on IP disclosures made in previous years, the university submitted two patent applications to USPTO and negotiated one commercialization license with a company. All of these measures depend on an active faculty that has the confidence to forward their ideas for intellectual property to the TTO. While the initial disclosure is a relatively simple process, follow-up discussions with the TTO, sponsors, and potential licensees require more time and commitment from the inventors.

Show me the money

Our researchers are also working under the university's clearly expressed expectation of "show me the money." In 2016/17, externally-funded research awards (all sources) totaled \$5.2 million; a 9 percent increase over the prior year, but less than 2013/14 and 2014/15 due to loss of two midcareer faculty to other universities over the past two years who had achieved a high level of success with their research grant applications. Still, 78 percent of the school's 73 full-time faculty (tenured, tenure-track, or non-tenure track) were active in externally-funded (66 projects) and unfunded (numerous projects) research in 2016/17. Of the 40 full-time tenured and tenure-track faculty hired before Spring 2017, 90 percent were active in research in 2016/17; 95 percent of these individuals have extramural funding records.

Between January 2013 and March 2017, the school hired more than 10 tenure-track, research-capable faculty members. Nearly all of the new faculty members are clinicians with either MS or PhD research degrees. Another four new tenure-track faculty arrived in Summer 2017 (two in the Department of Oral Biology; two in the Department of Orthodontics). The school recognizes the importance of and follows through on the development of its faculty through mentoring. Well-mentored faculty researchers, in turn, have the experience and motivation to serve as effective mentors for students.

Front and center: the students

The school maintains a rich research environment for support of the DDS, clinical-postgraduate, MS, and PhD training programs. Approximately 40 faculty comprise a cadre of excellent mentors for predoctoral (DDS) students interested in engaging in basic, translational and clinical research and scholarship. The school's student research program provides opportunities for dental students to become involved in research during the academic year as well as in the summer inter-session period. This can result in publications and presentations that reach a national audience. The annual Student Research Day allows for local presentations and engages the entire school community.

The Dental Student Research Group (DSRG) is an association of dental students with an objective to facilitate, support and promote research-related activities in dental school. The group was particularly effective in generating interest among students in Fall 2017, as evidenced by a significant increase in the number of "letters of intent" submitted by students and their mentors as the first step toward their applications to participate in our 2018 Summer Research Program.

For the past several years, there has been increasing emphasis on integration of research within the predoctoral curriculum. Courses have been developed and implemented with assignments drawing from evidence-based medicine, evidence-based learning, and biological basis of oral diseases that serve as a bridge between the basic science courses and the clinical program, linking research into the predoctoral curriculum.

Recent curriculum reform emphasizes the role of science and evidence-based decision-making in clinical practice, and critical thinking skills are integrated throughout the curriculum. There is increasing integration of basic, behavioral and clinical sciences and the development of small-group treatment planning activities through all four years.

Efforts by individual faculty have sparked interest among the students for working with newer technologies, such as imaging and CAD/CAM. The number of students seeking research opportunities with faculty interested in clinical technologies has increased each year.

From an August 2015 survey of all of the school's DDS students, we learned that the students were particularly interested in short-term projects to learn more about clinical practice management, treatment planning options, materials science, behavioral or social sciences, and communicating more effectively with their patients. As the school prepares to refresh its curriculum for the future, we are working to identify opportunities to make the most of this interest and enthusiasm among the students for scholarship and research.

Department of Oral Biology – Research and Graduate Teaching Mission



ROBERT GENCO, SUNY DISTINGUISHED PROFESSOR, ORAL BIOLOGY, APPOINTMENTS IN PERIODONTOLOGY, MICROBIOLOGY, AND IMMUNOLOGY; FORMER CHAIR

EARLY DAYS: "The first dean focused on establishing a research program here was James English. A wonderful story often told that when he became the dean he had something like 100 brand new faculty

lines and he decided to take 20 of those and establish an oral biology department with a research and graduate teaching mission. I graduated in 1963, went to Penn for four years and got a PhD and periodontal training. I came back to UB in 1967. By then, the Oral Biology department was developed. I was one of the last people hired in that first round of 20. So it was a thriving department with a surprising amount of funded research already.

"Between '63 and now, UB's Oral Biology department and the dental school have become leaders in research and graduate training. I think many things went into that. One, is that there was strong support from the university, as well as support from a succession of deans. It was a research department where you were asking important questions about health and disease. Having such a strong research department didn't detract from training the students to be very fine dentists. That was something that was always a challenge to make sure that all of our faculty understood that if you have strength in research, it doesn't take from strength in clinical training. I think we've had both over these years. It's always been that we strive to do both very well."



FRANK SCANNAPIECO, PROFESSOR, CHAIR, ORAL BIOLOGY; ASSOCIATE DEAN, FACULTY AND PROFESSIONAL DEVELOPMENT

NOTABLE RESEARCH: Our department has focused on several areas. Most prominently would be microbiology and immunology research, and a lot of work was done early on in mucosal immunology, and then the response of oral bacteria by the host

in the context of periodontal disease and dental caries. Another big effort was radiation biology. Dr. Genco developed a lot of research programs in immunology and microbiology, periodontal pathogenesis, and risk assessment for periodontal disease. Another big area was bone biology. Michael Levine was a pioneer of salivary biology and biochemistry, and his laboratory did a lot of work identifying the components of saliva.

CURRENT RESEARCH: "Over the last 10 years, we have hired quite a number of new faculty. We have about 15 or 16 faculty in the department now, and at least half of them are younger folks. In addition to continued focus on some of the traditional areas, we have people who are interested in salivary gland development and also tooth development. We have a young investigator who is focused on using light as a therapeutic agent in wound healing and tissue regeneration. We also have people looking at autoimmunity and basic cell biology, connective tissue biology and bone biology.

PERSONAL: "I had a very circuitous route. When I was in college, I majored in biology—simply because I liked it—and then soon realized, 'Well, you know, what am I going to do with this?' And I thought I was going to be a teacher, so I went to graduate school, and then I stumbled into oral microbiology. I just happened to find a laboratory that allowed me to do my research, and that's where I discovered dental research. Most go to dental school because they want to be a dentist, but I actually went because I wanted to be educated in dentistry for the purpose of educating and informing myself about dental research. Following dental school at University of Connecticut, I came to Buffalo to do my PhD and, at that time, Buffalo was very well recognized, and it was a good decision for me. I've enjoyed the last decades here."



STEFAN RUHL, PROFESSOR, ORAL BIOLOGY, DIRECTOR, PHD PROGRAM

PHD PROGRAM: "Our PhD program in Oral Biology is truly something special, because there are not that many Oral Biology departments in the country, or worldwide. Our program had its

50th anniversary two years ago. It's the oldest PhD program in Oral Biology in the country, and maybe even worldwide. I'm very proud to be right now the director of this PhD program. Our topic is oral biology, so everything that happens in the mouth, including teeth, bone, the periodontal tissues, saliva, salivary glands, and the microbiota in the mouth is part of the topics that we investigate here.

"Indeed it is demanding. They need to take a number of

"...research is a

that requires

continuity."

ASHU SHARMA

full-time activity

advanced courses, and depending if they directly sign up to our program we have a curriculum of required courses, and then we have choices that fit to their or their mentors' topic of research. So there's a lot of freedom, also.

"We also have students who join our program coming from the PhD program in the biomedical sciences. Some of these folks have already studied a year in the biomedical sciences, after which they choose oral biology as their place to proceed in research. These students have already completed a number of courses, and we try to integrate this into our program and give them credit for that."

NOTABLE ALUMNI: SCANNAPIECO: "We have a very large group of graduates who studied with Michael Levine. His goal was to develop an artificial saliva, based on the components that are normally found in saliva. In that process, 15 or 16 PhD students came out of his lab over the years. Many of them went on to develop their own laboratories. We've had about 90 PhD graduates. The people that came through here over the years have gone on all over the world, populating not just dental schools, but medical schools, or research institutes, or they work for various companies in research and development. They work for professional societies as scientific directors. And besides PhD students, many people have come through the department as post-docs, and visiting professors; all kinds of people have come through over the years. So there's a tremendous legacy. The school has never faltered from its commitment to support oral biology and research."

Oral Biology Faculty Research Profiles



ASHU SHARMA, PROFESSOR, ORAL BIOLOGY

"I study pathogens of periodontal disease. Periodontal disease or periodontitis is a very common oral infection that leads to tooth loss in adults. Basically, pathogenic bacteria living under our gums cause inflammation that leads to tooth loss. Periodontitis, in addition to causing local inflammation of

the gums and loss of teeth, is a risk factor for systemic disease such as cardiovascular diseases, and diabetes. Also, there is some evidence indicating that if you have a chronic periodontal infection with a specific group of pathogens then your chances of developing Alzheimer disease increase significantly. I am trying to understand how periodontal pathogens induce these effects. So far progress has been pretty good. I have, fortunately, been funded for the past

two decades or so by the NIDCR. Overall, focus so far has been to identify the critical virulence factors and antigens of periodontal pathogens. The ultimate goal of course is to come up with some novel drug targets and/or vaccines for the treatment of periodontitis.

"Over the years I have mentored three PhD students, four Master's, about eight post-doctoral fellows, and numerous undergrads through UB's CURCA program—a good program to enroll students into research. In my lab we study both the host response, like how the body is reacting to periodontal pathogen, and the pathogenic factors inducing inflammation. There are lots of opportunities to do both types of research in my lab for students. But, I always ask them first about their interests, which is very important since without passion nothing works.

"The department has been very supportive. We've had good and supportive chairs over the years. They have made sure that we get ample time for research activities. This has been a very important factor because research is a full-time activity that requires continuity. You often have to come on weekends to take care of experiments and writing and reviewing, etc. You are constantly thinking about ideas, like "What's going to happen if my hypothesis fails etc?" You're thinking about ideas even in your slettimes. I would say it's a constant process, and it's

etc?" You're thinking about ideas even in your sleep many times. I would say it's a constant process, and it's a passion you have to follow.

"Science always had been my main passion. And learning cutting-edge science through textbooks and journals in graduate school was fun and intriguing, but there was that desire to try things firsthand that was making me restless. So I moved to the United States, the Mecca of science, to fulfill my dream. I've been very fortunate that my journey to pursue science and everything else has been very, very encouraging and fulfilling."



ROSEMARY DZIAK, PROFESSOR, ORAL BIOLOGY

"Over my whole research career, I have been involved with bone, mainly bone on a cellular level, trying to understand the cell type that's involved in bone formation. Most recently, I've

moved from very basic science of bone biology to what we call tissue engineering. My research group and I have established a material that could be used as a bone scaffold in a lot of different applications where there's a large bone

CONTINUED ON PAGE 12

defect that's not going to heal by itself. This material acts literally like a scaffold for bone cells in the person's body to regenerate new bone.

"Other people have bone scaffolds. Our particular product is fairly unique. It's a nano-sized material. The individual particles are smaller, so it gives more surface area and the cells have more places to adhere and start the bone regeneration process. We have a patent—my co-investigators on the patent and I have formed a start-up company.

"My research group has always been very studentoriented. I've been here since 1976, and, although over the years I've had technicians and post-docs, it's tended to be mainly students, both Master's and PhD students. Most recently I've had a lot of Master's students because I think the tissue engineering work has kind of lent itself (because) we use a lot of hands for relatively short-term projects and

see how people could help in various aspects. It's also very appealing to Master's students, who may be here doing research for like a year, that they need something that they could get data fairly quickly—significant data.

"My research group has always been very studentoriented."

ROSEMARY DZIAK

"It (tissue engineering) really incorporates a lot of the basic studies that we've been doing and it's now like a translational aspect to our work. YoungBum Park was a PhD student here about seven years ago, and his work really initiated this work with nano-material. Now he's

a tenured professor at Yonsei University Dental School in Seoul, South Korea. Since he left, we've kept (the work) going and expanded it. So it was very student-oriented, even at that point.

"In the early '70s when I was going to graduate school, there were a lot of opportunities for women who were interested in science. I went to a small women's college in the late '60s, and was very fortunate that I got involved in a short-term summer program at Oak Ridge National Laboratories. They give you a project; it took me some time to realize what I was doing, but it was bacteriology. Because of that opportunity, that agency kept me informed of other opportunities. After I finished college, I started getting inundated with phone calls from schools who had a program affiliated with this national laboratory. I had like six major fellowships offered to me when I was about to get my Bachelor's in biology. So I just took the best one, and that was that. So I think that's why I've always been very student-oriented, because I've seen the advantages."

STEFAN RUHL, PROFESSOR, ORAL BIOLOGY

"My main interest is to find out how bacteria in the oral cavity are able to attach to surfaces, because we see this as the first step in bacterial colonization. The two major dental and oral diseases that we have are dental caries and periodontal disease. Both of them are dependent on bacteria colonizing surfaces, which originally is a harmless event that may even be beneficial to health in the mouth, but if these biofilms turn into pathogenic habitats – which happens with our modern lifestyle, sugar consumption, and all these kinds of things—then we are prone to get dental caries or periodontal disease.

"Also, what we became interested in more recently is—and this just happened by serendipity—we were investigating saliva, and human saliva is very special. There are no good animal models available to study that, like rodents, because they have a very different composition of saliva. So we thought why not investigate saliva of our evolutionary closest relatives, which would be the great apes. Genetically they are almost identical to us and will have the same salivary composition that we have. But when we started doing that, we found that the saliva of the primates is very different from our human saliva, and this ignited a new area in my research.

"I have actually a longstanding collaboration that I had already before I came here to Buffalo, and this is in Germany in Regensburg at my university where I worked before. We have a very successful collaboration with a chemist there, Dr. Rainer Muller, in what happens if biomaterials are being inserted into the oral cavity. If bacteria colonize the surfaces of fillings and crowns, they can cause pathological effects; they can cause secondary caries, gingivitis, periodontal disease. So the industry is very much interested in developing biomaterials that discourage bacterial attachment, or are bacterial repellent. We are also collaborating with people who are very knowledgeable in the glycobiology field: Dr. Ajit Varki at the University of California San Diego, and Dr. Paul Sullam at the University of California San Francisco, and others at University of Maryland, Vanderbilt University, University of California, Davis, and Emory University, who help us with certain aspects of our research.

"I've always been interested in natural sciences. My other interest is I'm talented with manual work, so I thought, "Why not combine my scientific interest with my interest in manual work? And then you have two options: You could become a medical doctor or a surgeon, or you can become a dentist." And a profession as a dentist was more appealing to me, because I was initially thinking of going into private practice. While I was studying at dental school, I volunteered in a scientific laboratory at our university, an immunology lab. And I think this is when I got interested in science, very much. I think it was due to the mentor that I met at that time. He was a very inspirational person in many aspects."



JASON KAY, ASSISTANT PROFESSOR, ORAL BIOLOGY

"I mostly look at immunology and interactions with oral bacteria in a broad sense. Specifically looking at how the oral microbiome interacts with the immune system both for oral diseases, like periodontal disease, and how it can influence systemic diseases. That's the long term, overarching

goal. My work is more specifically looking at phagocytes and how they engulf and destroy the microorganisms.

"We're trying to get a better understanding of how the oral microbes can contribute to disease. It's known that there are some that contribute to disease and that's fairly well understood, but I think what we're trying to understand is how certain organisms that are normally not causing disease can change with their interactions with the immune system, whether it's other inflammatory things going on or other systemic diseases and how those interactions between the immune system and oral microbes can change. The long-term goal would be to understand those interactions and interfere with those directions to help prevent diseases, both in the oral and systemic diseases resulting from that.

"I think the main thing is I just enjoy research. I started when I was doing my undergrad and was transitioning to a master's degree. I like the environment. I like the ability to ask questions that people really haven't asked before. It just intrigues me."



JILL KRAMER, ASSISTANT PROFESSOR, ORAL BIOLOGY

"I study Sjögren's Syndrome, an autoimmune disease in which patients can develop dry eyes and dry mouth. And so the dry mouth is my connection to dental research, actually, but there are many other serious systemic disease manifestations that can result.

Ultimately, patients can develop lymphoma,

which is the most serious sequela of the disease. So it has both an oral and a systemic component.

"A challenge in the field of Sjögren's Syndrome is that there aren't any FDA-approved therapeutics that actually address the disease etiology, and so patients basically now receive palliative therapies. And so there's a lot of work to identify fundamental disease mechanisms, and ultimately the hope is that these can be targeted. Then hopefully we can use this information to identify patients that are early in the course of their disease. Right now we don't have any early disease markers, so I think that progress is being

made, to identify patients that are early on, before they've really had tissue destruction occur. And then also, to design therapeutics that then can inhibit these pathways that culminate in inflammation, in order to prevent or reduce patients from progressing in their disease.

"I trained here, and I was really excited to come back. I think one of our strengths is that we're very diverse, so some of us have an interest in salivary gland biology; other people study bacteria; we have a very strong candida group here —a fungal group—so I think that gives us a really wide perspective on oral biology. There are many very accomplished people here in the department. So I think it's a good environment for mentorship, and that's one of the reasons I was drawn back here.

"In this department, I've been collaborating with Dr. Rose-Anne Romano. She is an expert in genetics, and we've been working together to start some projects that involve genetic analysis of salivary tissue in Sjögren's Syndrome. I've also set up a collaboration with Katherine Ovitt, also an expert in salivary gland biology, at the University of Rochester.

"I think I knew fairly early on that research was very interesting to me. I was very naturally curious. I thought about pursuing medical school, but I decided that PhD training was probably something that I would enjoy more. And I was extremely fortunate when I came to Buffalo that the woman that I ended up training with—Sarah Gaffen—had just been hired right around the same time. She was just a fantastic mentor; we had a really good synergy. Her level of enthusiasm and talent enabled me to start this journey and to come this far."

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RESEARCHERS FROM THE PAST 15 YEARS IN ORAL BIOLOGY NOT PROFILED ABOVE

Current: Praveen Arany, Mira Edgerton, Elaine Haase, Keith Kirkwood, Hyuk Jae Edward Kwon, Rose-Anne Romano, M. Margaret Vickerman, Michele Visser, Ding Xu

Past: Ola Baker, Libuse Bobek, Moon-II Cho, Richard Evans, Sarah Gaffen, Steven Gill, Sara Grossi, Howard Kuramitsu, Michael Levine, Chunhao Li, Molakala Reddy, Michael Russell, Hakimuddin Sojar, Mine Tezal, Shuying Yang



Researchers in Clinical Departments



SEBASTIAN CIANCIO, DISTINGUISHED SERVICE PROFESSOR, CHAIR, DEPARTMENT OF PERIODONTICS AND ENDODONTICS

"Prior to the 1970s, we were looking at different components of saliva to see what we could identify that might be useful for diagnosing periodontal disease. And then, we started to work on some commercial products with various companies

making mouth rinse products. We've brought a number of products to market from the research we've been doing here. A product then came onto the U.S. market after about seven years of research was called Periostat, a low-dose antibiotic which helps the tissues—including bone—to form better around teeth where there is disease. It's been exciting, because these are the things that are helping patients in the end to keep their teeth for a longer time period.

"Recently, we've been working on a product called Lubricity, for dry mouth. It moisturizes the patient's mouth, and the longer they use it, it builds up a layer in the mouth. A study that just preceded this one is an anesthetic spray, where we demonstrated that we can avoid giving a patient a needle injection in order to numb the upper teeth. We were one of the developing research teams for that product. Now it's available to dentists to use in their practice.

"Our objective in the Center for Clinical Dental Studies is to test in humans these products that we've done research on in the past either in animals or in the laboratory. Currently, we're studying this product that is a small tray connected to a little battery-operated device. The patient puts it in their mouth, similar to a mouthguard, for 20 minutes a day. It kills bacteria around the teeth. We're hoping this product can overcome the need for medications, such as antibiotics, to treat gum disease.

"For the future, we're looking more at regeneration techniques, how to regenerate bone around teeth. As a matter of fact, this electrical device we're working on also has the ability—in animal models so far—to show that you can regenerate some bone around teeth. So if we can use devices like this, we can help not only treat natural teeth that have problems, but also implants.

"Many of our former students are on the faculties of major universities across the country. And they are either associate deans for research—a couple are deans—at other schools, others are directors of research centers. And we collaborate with them in some of the projects that go on across the country.

"I think that the way I became interested in research was that I realized that when you're doing teaching, we should not just be teaching but we should be trying to find ways to look for new ways to treat patients. And so that's how we got involved in various research projects that are primarily patient oriented."



RICHARD OHRBACH, PROFESSOR, OR AL DIAGNOSTIC SCIENCES

"My interest was much more fundamental, like, 'How does pain affect people? How does our behavior, our thoughts, our beliefs—how does all of that come together in the

experience of pain?' And so TMD and orofacial pain within a dental environment is a very good research model. It has characteristics very much like headache, which is a much more prevalent problem, and very much like low back pain, which is an extremely prevalent problem. And TMD has elements of both of those other major pain disorders but yet has a lot of advantages as a research model.

"I'm part of a very active international group. Pain is a complex problem, and there's no one perspective on pain that is sufficient to understand its complexity. So by its nature it requires that people across disciplines interact, especially the orofacial disorders, which are not so common, and there's no one clinic, in general—with very few exceptions—that has enough patients of that sort to even do real research on. And so it became essential to have some kind of a collaborative arrangement whereby people could work together. And over the 15 years, some marvelous collaborations have been going on with multiauthored manuscripts coming from multiple countries representing multiple perspectives. Ending up in a group or working out the rules by which the group will engage is a really important part of it. And when you have people who can work together, then you get this marvelous synergy of multiple perspectives.

"The big area next is clinical trials. We've learned a lot from two large collaborative projects that I've been involved in. One about diagnosis, and the other one about risk factors that lead to people having the disorders. We now need to translate all of that into application.

"I was a full-time clinician, and I was trying to understand more about complex pain problems that people coming into a dental setting had. I came to graduate school here at UB SDM to learn something about statistics and research design and all that with the idea I was going to leave and go do clinical work again after two years—but as a much smarter clinician. But I discovered that I actually really liked being in a graduate school environment. We were encouraged by the faculty to ask critical questions. We were encouraged to take responsibility for our learning. And finally, for the first time in all my education, I actually really enjoyed it. It was a very productive kind of environment here at UB, in the same department where I am now. So I decided to get a PhD to remain an academic and keep doing research."



ANNE MEYER, ASSOCIATE DEAN FOR RESEARCH, RESEARCH ASSOCIATE PROFESSOR, ORAL DIAGNOSTIC SCIENCES

"Well, our research is from the point of view of biomaterials and the fact that our group concentrates primarily on the surfaces of those materials and how those materials interact with other things—such as cells and

proteins—and how those surfaces change as a function of, for instance, different sterilization methods, and does that help or hurt—all these kinds of things. It's a huge waterfront to look at. So, it's been going well.

"Many of us think of surfaces as mainly the implants, and all kinds of dental and medical devices. But then, for example, what do we really understand about the surface of the eye? What do we understand about the surface of the retina in the back of the eye? With our colleagues in the Department of Ophthalmology, we've just had a new publication come out about understanding the surface science of the retina of the eye, and how that may dictate certain biochemical signaling.

"Back in the 1980s—it seems like ancient history now—the National Science Foundation came out with a report on the top twenty, as you say, "hot areas" to invest in in U.S. research for the next 10 to 20 years, and surface science was one of them.

"NSF invested heavily, and others, including industry, have invested heavily to really understand these biomaterial mechanisms. So, are mechanical properties still important for a hip implant? You bet. Are thermal properties still important for dental composite resins for tooth fillings that replaced amalgam? Absolutely. But then there are the surfaces along with those mechanical properties that help us understand, for example, "Well, do we have to worry a lot about bacterial infection, bacteria sticking to this stuff? If they do stick—and they always will—can we get them off more easily with one type of material than with another?" So there are lots of problems left to solve.

"I was a chemistry major in college, and we were encouraged to do small research projects, and read, and do other things like that. I was very lucky as a new chemist to get a job in a contract R & D company that wrote and submitted grant applications—contract applications—to do big projects with the Environmental Protection Agency on water pollution. And that, to me, was very motivating, as I was a tree-hugger from way back when. I learned a lot, and then moved on to doing other kinds of research. Eventually I started getting curious about some biomedical projects that were going on in a lab down the hall from me, and got involved in that a little bit, and here we are."

"I started getting curious about some biomedical projects...got involved in that a little bit, and here we are."

ANNE MEYER



ROBERT BAIER,
UB DISTINGUISHED
PROFESSOR,
DEPARTMENT OF ORAL
DIAGNOSTIC SERVICES;
PROGRAM DIRECTOR
OF MS BIOMATERIALS
PROGRAM; EXECUTIVE
DIRECTOR OF THE
INDUSTRY/UNIVERSITY

COOPERATIVE CENTER FOR BIOSURFACES

"I began at the dental school in 1984 when I was recruited from Cornell Aeronautical Lab, part of Cornell University. I was working since 1968 predominantly on artificial heart and substitute blood vessels. And there was an opportunity that began for me in 1974 to work with Swedish colleagues in starting to put blocks of pure metals like titanium in people's jaws as dental implants. We were told by our Swedish colleagues when we first began to make these dental implants that nobody would ever want to buy any of them. We'd be lucky if we ever sold seven in the world. Last year they put in 850 million worldwide. It's been an astonishing success.

"First we had to discover what was the nature of the interaction of living and non-living things. We had been using various metals, stainless steel, and various polymers like denture materials, polymethylmethacrylate. It happened to have been observed by the Swedish medical doctor named Per-Ingvar Branemark. We began working together in 1974, and he's been a partner in all this work and the spiritual leader. He discovered titanium could not be taken out of the bone of some rabbits he was working with, studying how bone gets its blood vessels. And on the basis of that accidental observation that he couldn't get the metal out of the bone, he asked what was going on, and could this perhaps be of benefit in surgery, artificial hips and knees, on which I was already working at that time. And I was working with other dentists in Sweden on other ways to keep dental plaque off teeth. I was invited to try to help him explore this phenomenon as to what was going on. So we

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did make the discovery that—absolutely unique—no other material in the world other than titanium does this.

"We discovered that Mother Nature didn't change the rules and so what goes on in the oral cavity goes on also in the heart, in the leg, in the artificial kidney, in a wine-making plant, in pasteurization of milk, on ship-bottoms, and that's

"Now the watchword is...called translational research."

ROBERT BAIER

70 percent of the earth's surface that's wet, salty and biochemically active. So we're learning how to live on planet Earth in a compatible way. We have not yet discovered how to make it (implants) have the other aspect so in the case of hearts and breasts we can actually get it to adhere to tissue better and not form scar capsules and cause the disfigurement that occurs with any tissue type implant that we may use to improve the contours of the body. One of the challenges that we're working on at the moment is trying to get what's

called tissue integration that will be a parallel to what we're working on in bone, osseointegration. So we have part of the problem solved, but not the other part.

"My current research is trying to make an extension of that success into another set of major needs for the human body—portals for tubes that have to go in and out of your body that have to deliver fluids or power or take samples all using this principle of osseointegration with titanium metal knitting to bone and creating an infection-free seal. So that's the nature of what will be my terminal research. I'm an old professor and I want to finish with this."

MS Program in Biomaterials: "The first thing we do in our program is to teach the students how important it is to know biomaterials from the perspective of what goes on in the outer most atomic constitution. We're talking about the last 3-5 angstroms, just a single layer of atoms, not even a molecule. And we teach the students the laboratory methods by which they can determine that non-destructively and from that correlation understand how materials will absolutely interact throughout all of nature, with blood, with saliva, with tissue fluid, with ocean water, with milk, with wine. Then we engage each of the students in a research project to satisfy a particular need.

"As you can probably see in the press, the world has changed. And this is where our benefit comes being simultaneously a biomaterials graduate program and associated with the National Science Foundation-sponsored Industry/University Cooperative Research Center. We were among the pioneers in doing technology transfer. Now the watchword in all of education is what's called translational research. Our program benefits from having a 30-year lead on doing this because the NSF was the first out of the box with this IUCB."

Alumni: "In the course of our most recent reaccreditation in biomaterials, we were obliged to survey all of our alumni. We found them in really interesting places, like quality control managers of major pharmaceutical firms in Switzerland and the quality control materials advisor for major medical device company, DePuy, an artificial hip company in the U.S., and Vice President for Technology for Bausch and Lomb, nearby in Rochester. Our students are all in really excellent situations. Many have gone on for PhDs as well and stayed in academia.

Personal: "My pursuit of research in this field began in Washington DC as a guest of the National Academy of Sciences. I had been given a fellowship to do postdoctoral research and I was there working at the knee of this great scientist who discovered all the surface properties of Teflon. The National Institutes of Health came to my mentor and said have you got a young person who can help us establish the artificial heart and the artificial kidney. And so this gentleman, Dr. Zisman, invited me in to help these people because I was a fledgling surface scientist, and I might be able to help them understand how blood reacted with the materials from which they were going to make the artificial kidney and the artificial heart. I discovered something very quickly that made gains that people working at the NIH mostly medical doctors and biologists had no clue about at all. So we started to make very rapid progress and that's what led me into the work of making the artificial heart. I was part of making the first one that went into the first person, Barney Clark. And then as I noted I was recruited to the dental school by my friends who with their secret snide remark that I wouldn't have to open anybody up".



JANE BREWER, CHAIR, DEPARTMENT OF RESTORATIVE DENTISTRY; CLINICAL ASSOCIATE PROFESSOR

"Faculty in the Department of Restorative Dentistry perform significant research, but our department is primarily focused

on teaching. We are responsible for about 60% of our students' clinical education. Much of our research involves mentoring predoctoral and postgraduate students.

"Originally I was hired in the Department of Fixed Prosthodontics. About 20 years ago when Davis Garlapo was chair and Louis Goldberg was dean, the Departments of Fixed Prosthodontics, Removable Prosthodontics, Operative Dentistry and Dental Materials were combined into a single Department of Restorative Dentistry making it the largest department in the school. Implantology and two advanced education programs—Advanced Education in General Dentistry and Advanced Education in Prosthodontics are also "housed" in our department.

"Gary Wieczkowski, Whiz as we fondly know him, did quite a bit of research in the 70s, 80s, into the 90s actually, as did **Robert Joynt**. They studied the properties of the (then) newer composite resins. Dean William Feagans hired two faculty members—Elaine Davis and Lisa Tedesco—to facilitate research in Operative Dentistry and Fixed Prosthodontics, respectively. Both had PhD's in educational psychology. Dr. Davis is now in the Department of Oral Diagnostic Sciences and continues to mentor postgraduate students and faculty in our department. Dr. Tedesco is now Vice Provost for Academic Affairs and Dean of the School of Graduate Studies at Emory University. Both were important in expanding our department's research activities.

"Carlos Munoz joined us as Chair in 2004 for about seven years. He had a very strong background in dental materials and was Director of Clinical Research at Loma Linda University before coming to Buffalo. He had a very strong relationship with Ivoclar Vivadent, which is in our backyard here in Amherst, completing clinical trials of restorative materials. He also worked with GlaxoSmithKline completing a number of studies with denture adhesives.

"Violet Haraszthy completed her specialty training in periodontology and prosthodontics and as well as a PhD in Oral Biology-current Dean Zambon was her major professor. She has been very active in research and has long history of industrial support performing clinical trials. She looks at the efficacy of many of the dentifrice products and mouthwashes, and has had numerous contracts with Colgate. She has a significant teaching commitment with graduate students and is our associate chair.

"Ramtin Sadid-Zadeh is one of the first faculty members I hired when I started as chair. He came from the University of Alabama where he studied materials science with John Burgess, and he completed the advanced education program in prosthodontics training as well as a fellowship in maxillofacial prosthetics. Currently, he mentors 8 predoctoral students and 4 prosthodontics residents working on various projects. He focuses on digital workflows, accuracy and effects on psychomotor skill development. He has incorporated intraoral scanners and software to enable students to objectively evaluate their preclinical preparations. They can measure many of the qualities that we look for in crown preparations such as total occlusal convergence and finish-line widths.

"Mary Bush has a very interesting research area. She has looked at many aspects of forensic dentistry. She and her colleagues, Peter Bush, our director of the South Campus Instrument Center, and **Ray Miller**, in the Department of Oral Diagnostic Sciences, have worked in the area of bite-mark evidence. Dr. Bush's research has been picked up by the AP several times and has appeared in numerous print and online media. Her research led to changes in policy and law with

regard to the admissibility of bite-mark evidence in court and has resulted in several criminal convictions being overturned.

"Hyeongil Kim is our program director of the Advanced Education Program in Prosthodontics. He came here quite a few years ago to study prosthodontics, and ended up completing his specialty training and then obtained a DDS and Masters from the school as well as completing an Implant Fellowship. He has done a phenomenal amount of work developing our program and applying new technology to the residents' clinical training. Dr. Kim has mentored many students in materials and clinical techniques and has collaborated with Robert Baier and several colleagues in engineering. He works with some companies from his native country, Korea and most recently received a grant from Dentium for an implant study, in collaboration with Sebastiano Andreana. Equipment that we received from Dentium has been used to develop many of our digital workflows in prosthodontics at the advanced education level.

"Sebastiano Andreana has been familiar to most of us at the school for quite some time. He taught in both Periodontology and Oral Biology in the past and has been director of research at several companies. He left industry to work at Loma Linda University eventually returning to Buffalo to develop our Implant Program. One of his studies with Latifa Bairam, also in our department, was

on the association between anti-depressants lack of osseointegration of implants. Andreana also works with laser technology and has collaborated with Praveen Arany in Oral Biology. His work is diverse and he has a love for what he does.

"We have one more faculty member. **Camila Sabatini**, who is on sabbatical this year in Rochester at the Eastman Institute of Oral Health, at the same time continuing her research here with engineering on the North Campus. She received tenure a couple of

years ago and has collaborated with colleagues in our Oral Biology Department as well as Augusta University, studying mechanisms of dentin adhesion.

"Much of our research involves mentoring predoctoral and postgraduate students." **JANE BREWER**

Future Areas of Research: "We always studied dental materials because they are basic to what we do in restorative dentistry. We're always trying to improve our materials in optical properties, in bonding, in strength. Our clinical trials, similar to those Dr. Munoz performed, have been very useful to industry in terms of product development. That's always a very strong aspect of our research. The same with Dr. Haraszthy's research. The thrust is now on digital technology and implantology. What factors influence the success or failure of implants? How well do the treatments work? How can we improve? Ultimately, our research benefits our patients." CONTINUED ON PAGE 18



PAUL CREIGHTON, INTERIM CHAIR, DEPARTMENT OF PEDIATRIC AND **COMMUNITY DENTISTRY**

"Here is our high level review of our research initiatives. For the past 10 years we have focused on research regarding sedation dentistry under the leadership of **Christopher Heard**. Over the past 18 months the effort has been to diversify our research efforts and to move abstracts to publications. We are gaining traction.

"Tammy Thompson now has partnered with Robert Genco on a study regarding bacteria found in the placenta (thought to be sterile but is not) and bacteria in the oral cavity of the delivering mother. Carrie Wanamaker (and eventually Rachel Anderson and Juan Yepes) is involved in a study that is just starting with Heard and Violet Haraszthy on a project in the PICU. Tammy and **Nicole Ostro** are very involved in simulation education models as well as OSCEfocused education models. **Juan Yepes** is well published but his research has been done in Kentucky and Indianapolis. Josh Mora (psychiatrist) with specialty in addictive

disorders and heroin addiction, is just starting up clinical research involving our adolescent populations. "Dian ChinKit Wells is underway with clinical research focused on the refugee populations as well as career

tracking for minority as well as refugee populations. She is also part of a project in the Buffalo Public Schools called

YRBS which stands for Youth Risk Behavioral Study and is now gaining national attention. "Over the past She is soon to become a faculty member at 18 months the Howard and University at Maryland to recruit more engagement in these efforts for multisite collaboratives. Working with Josh Mora, Wells is hoping to contribute to making our YRBS in Buffalo even more unique as well more

nationally recognized.

effort has been to diversify our research efforts..."

PAUL CREIGHTON

"I have been working with Juan Yepes and with the two dental students who are energized to utilize a caries risk assessment app they

designed to be used in the clinical field (schools and outreach events). Our department has also designed four apps for the evaluation process including residents evaluating faculty, faculty evaluating residents, faculty evaluating students (PYTHON) and students evaluating faculty. Suketu Patel and **Kelly Rose** are focused on this effort and are hoping our research in this area will be ADEA worthy within two years. Doug Olson and Michael Markiewicz are both focused on craniofacial patients and research regarding this patient population."

RESEARCHERS FROM THE PAST 15 YEARS NOT PROFILED

ORAL AND MAXILLOFACIAL SURGERY

Current: John Campbell, Samuel Goodloe III, Richard Hall, Thomas Mang, Joseph Margarone Past: Barry Boyd, Charles Liebow

ORAL DIAGNOSTIC SCIENCES

Current: Alfredo Aguirre, Patrick Anders, Heidi Crow, Elaine Davis, Michael Glick, Yoly Gonzalez-Stucker, Michael Hatton, W. Scott McCall, Raymond Miller, Mirdza Neiders, Alan Ruttenberg, Jose Luis Tapia, Past: Stewart Fischman, Louis Goldberg, Lida Radfar, Lvnn Solomon

ORTHODONTICS

Current: Thikriat Al-Jewair, R. Scott Conley, David Covell, Stephen Warunek, Tingxi Wu Past: Guoqiang Guan, Judith Lampasso, C. Brian Preston, Sawsan Tabbaa

PEDIATRIC AND COMMUNITY DENTISTRY

Current: Joseph Bernat, Margaret Certo Past: Joan Doris, Elias Kaufman

PERIODONTICS AND ENDODONTICS

Current: Stephen Abel, Adham Abdel Azim, Robert Cohen, Abhiram Maddi, Lucila Piasecki, Robert Schifferle, Othman Shibly, Lisa Yerke, Joseph Zambon Past: Carole Pantera, Eugene Pantera, Hiran Perinpanayagam, Bin-Yan Wang

RESTORATIVE DENTISTRY

Current: Donald Antonson, Latifa Bairam, Robert Buhite, Sr., Albert Cantos, Joseph Gambacorta, Anastasia Katsavochristou, Dana Keblawi, Seungyee Kim-Pusateri, Edward Monaco Past: Sibel Antonson, Tammy Bonstein, Jude Fabiano, Davis Garlapo, Darunee Nabadalung



Importance of Collaborations – MS Oral Sciences Training Program



ERNESTO DE NARDIN, PROFESSOR, ORAL BIOLOGY; PROFESSOR, IMMUNOLOGY AND MICROBIOLOGY

"This program was established in 1977 by Norman Mohl, then professor in the Department of Oral Medicine (now Oral Diagnostic Sciences). The whole concept of the program was to give a chance to dentists who were somewhat interested in research or

academia—to be exposed to research without having the full, heavy commitment of a PhD program—to expose them not only to research in a particular discipline, but also to research design. It was a combination of exposing them to some basic science discipline—be it biochemistry, be it pathology, be it immunology—a research component, and an overall preparation, should they decide to continue on in research.

"I took over the program in 1994. The program is the biggest program in the dental school behind the DDS program. It has roughly 40 students. The program does take non-DDS applicants, but the great majority of the students are dentists. The program also caters to the residency programs as it satisfies their research requirements. So, for example, periodontics, prosthodontics, endodontics—many of those residents also do our Master's program. It's a degree program that has to follow the graduate school guidelines, no different than a Master's in biochemistry or a Master's in organic chemistry, or microbiology. But in this case, it's designed to intercalate with the residency programs.

"Our program requires a thesis, which means it requires an original piece of research work with a biological question—materials and methods and approach, results, and discussion of the results. The disciplines are very widely varied. For example, you can do research in biochemistry, in epidemiology, in lasers, in materials, in immunology, and microbiology. And, of course, you can do it in clinical studies."

Notable Alumni: "Many do [continue with research], and we have many. Thomas Van Dyke, he's a Vice President of Clinical and Translational Research at Forsythe Center. Giuseppe Intini, who's an associate professor at the Stem Cell Institute at Harvard University. Of course, we have many of our own. Jane Brewer, who's the chair of Restorative Dentistry; Violet Haraszthy, who is a professor and also I think she is a vice chair or associate chair for Restorative. Alfredo Aguirre, who is the director of the Oral Pathology program; Othman Shibly, who is the director of Periodontics; and Sebastiano Andreana who's the director of the implant program here. And there

are many, many more. Not only that, but many are very well funded. Somebody like, for instance, Mira Edgerton, who has had grants for years and years and years.

"I think the future of dental research will probably follow the trends of all research. Right now there are concentrations on, for instance, genetic polymorphism, and

epigenetics, and the microbiome. All these, in a way, are disciplines that are almost tools—and I say that very carefully, of course—but they can be applied to oral diseases as much as they can apply to systemic diseases. I see that technology, obviously, is big—networks for sharing information is huge. I think that's where research is going. And, of course, materials. People forget that dental work is materials. So that's a big thing that is going on."

Personal: "I came to the dental school for personal reasons. I got my doctorate at Roswell Park Cancer Institute. And at the time while I was looking for a job after my PhD, my then-girlfriend—now wife—was finishing her PhD. The relationship promised permanency, so I stuck around, looked for a job, and I was hired by the dental school as a post-doc. I was treated very well. I was given plenty of resources. And I simply then moved through the ranks. I got my first grant on February 1, 1986, and was funded for 21 years non-stop."

DZIAK: Her mentoring role with MS Oral Sciences students:

"I'm very student-oriented. I really love working with the students. I counted it yesterday: 39 students have gotten a Master's, and I still have four in progress. The Master's program, for me at least, started in 1987. My first Master's student, Abbas Mohammed from Abu Dhabi, did an exceptional job. He chose to work with me because of my bone background, and he wanted to apply it to orthodontics, because, in orthodontics, teeth move through bone. So all the remodeling processes that we studied in bone are very important in orthodontics. He did complete his Master's very quickly, in one year, and he had a very high academic position and also published a paper that's a landmark paper in orthodontics. So he had accomplished a tremendous amount

"Even if each student can't publish a paper, it doesn't mean that each student doesn't do enough work to get a complete manuscript. The student following right behind them is going to continue it, and then usually collectively we could get a fairly good publication. They also want a Master's, because they want that distinction that they have done research. So I would say most of them will go on to an academic career."

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ERNESTO DE NARDIN

Research Centers

The school has had several research centers that focused on collaboration to be more successful than each researcher could have been on his/her own. Most were funded significantly by the NIH and NSF including the Periodontal Disease Research Center (directed by Robert Genco), the Research Center in Oral Biology (directed by Michael Levine), and Industry/University Cooperative Research Center for Biosurfaces, during a time when those agencies were focused on funding centers. Those that remained active also were supported through partnerships with the university, industry, and individually-funded investigators. The South Campus Instrumentation Center, directed by Peter Bush, is an example of a research service center primarily supported by the school for the benefit of the entire university. The Center for Dental Studies is funded mainly through industry support. The university developed various initiatives centers of strategic strength, clinical and translational research center-to promote collaboration over the years, and researchers from the school have recognized the importance and continued to be major players in these efforts.

ROBERT GENCO, DIRECTOR OF THE MICROBIOME CENTER AND THE PERIODONTAL DISEASE RESEARCH CENTER

Periodontal Disease Research Center – Women's Health Initiative research:

"That's a longstanding project which is a study of postmenopausal women and their diseases. We began the study to look at the effect of osteoporosis on periodontal disease about 15 years ago. We found there was an effect that women with osteoporosis are more prone to develop periodontal disease. Right now, we're looking at the oral microbiome as it may predict periodontal disease in this population. We will study the bacteria that reside in the in the subgingival area to see if they can predict which site in which patients will suffer from periodontal disease over time. Knowing the bacteria or bacterial complexes that predict disease will allow us to incorporate early measures to prevent periodontal disease and associated tooth loss in the future."

Microbiome Center research:

"As director of the UB Microbiome Center, I have a very interesting challenge, to study the microbiome in humans to determine to what extent it contributes to health and disease. As a microbiologist and dentist, I'm interested in the role of the oral microbiome in oral diseases, like caries and periodontal disease. It is becoming increasingly clear, however, that the oral microbiome is also involved in other diseases, and some of these are quite surprising. They probably contribute to heart diseases, such as myocardial infarction. It appears to travel to the colon and is found in colon tumors. (The research has) been a wonderful opportunity to catalyze collaborations among our colleagues in the medical field as well as the dental field to study these and other questions in the emerging field of the microbiome."

Challenges for university-based research today:

"I think a major challenge in academics has always been to make sure that you're able to support your research. In the health sciences, support mainly comes from the federal government, although more and more support is coming from industry. Over the last few decades, the federal government has been fairly stable in its research support, although in fact it's declining recently. So that's always been a problem but it's getting to be worse of a problem. Right now, unfortunately, we have an anti-scientific attitude in the higher levels of our government. However, I'm confident that scholarship and science will be valued eventually. Science always wins, given enough time, the truth will always come out."

ROBERT BAIER, DIRECTOR OF THE IUCB

"Because of our specialty in biosurfaces, the main purpose of our IUCB is to solve unsolved problems usually among mutual competitors. For example, a serious problem that was brought to our attention was household insulation including buildings. It's mostly fiberglass and if you breathe fiberglass you're risking lung cancer. All of a sudden, somebody in Denmark discovered a magic mountain of rock that they could melt into fiber that should have caused cancer but didn't. So somebody had to discover why this melted rock that was turned into insulation like cotton candy could be put in the walls of homes and nobody would get sick. This was a multimillion-dollar international problem which we had to figure out. It was an amazing discovery that otherwise couldn't have been made. There was a particular enzyme in the lung that broke this unique type of rock fiber in half so that these things in your lungs called macrophages could actually eat the little fibers and export them through the lymph nodes and you wouldn't get cancer. And this is now on the market in people's houses all over the world. It saved industries some multimillion dollars and kept the regulatory agencies off their back."

ANNE MEYER, ASSOCIATE DEAN FOR RESEARCH

Collaborations in research:

"That's one thing that we look at on an annual basis: how much of our work is in collaboration, in one way or another, with other schools here at the University at Buffalo—the School of Public Health and Health Professions, School of Engineering, College of Arts and Sciences, School of Medicine—and also institutions, companies, and foundations outside the university. Over the years, our percentage of collaboration has increased dramatically. This is reflected in co-authors from different institutions and organizations on the scientific papers that we publish. And, of course, collaboration is reflected in presentations that are made.

"Where the money meets the road, really, is collaboration in writing grant applications and winning funding for research projects; more and more, this involves collaboration."

AlumniNews

Squire Society Event Held in Appreciation of Donors

IGHTY GUESTS ATTENDED the UB School of Dental Medicine's annual Daniel Squire Society recognition event on August 31st at the Burchfield Penney

Art Center. The event, which acknowledges the generosity of individuals who have given \$1,000 or more to the school, included tours of the center, cocktails and hors d'oeuvres, dinner and remarks from Dean Joseph Zambon.







RECEPTION AT ADA MEETING IN ATLANTA

DEAN JOSEPH ZAMBON AND UB DENTAL ALUMNI ASSOCIATION PRESIDENT JOSEPH GAMBACORTA hosted alumni and friends at STATS, a popular restaurant in Atlanta, GA, during the American Dental Association meeting on October 20th. Some of the 44 guests are in the accompanying photos.



2018 UPCOMING EVENTS

UB Bulls Basketball Pre-party & Game

January 23, 2018, 5:30 pm UB Arena

Give Kids A Smile Day

Sat., Feb. 3

Hanau Cup Hockey Game

Saturday, March 10 Buffalo RiverWorks 6:30–8:00 pm

BOCA Annual Auction

Fri., April 6, 6:00 pm Buffalo Launch Club

Run for Smiles 5K

Saturday, April 14 South Campus Cost \$20

Buffalo Niagara Dental Meeting

Buffalo Niagara Convention

www.BNDMeeting.com

Opening Night Celebration Wednesday, September 26 5:30–8:00 pm

Thursday, September 27 7:30 am–5:00 pm

Friday, September 28 7:30 am–5:00 pm

Remember When Reception

Hyatt Regency Atrium Thursday, September 27 5:30–7:00 pm

Reunion Dinner Dance

Hyatt Regency Ballroom Friday, September 28 6:30 pm cocktails 7:30 pm Dinner

For more information on the above events, contact Sherry Szarowski at ss287@buffalo.edu or (716) 829–2061.

RECOGNIZING YOUR SUPPORT

Special thanks to alumni, staff, faculty and friends who support the School of Dental Medicine. Their generosity helps sustain the tradition of philanthropy and excellence that is the heritage and future of the school. Gifts come in all sizes, provide scholarship support, enhance the work of faculty and student research, and provide equipment and facility upgrades. The following donors made gifts and pledges of \$1,000 or more between July 1, 2016 and June 30, 2017. (Only UB degrees are listed, CRT denotes UB post-doctoral certificate program.)

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Alexander Milman, DDS '01 Edward J. Morrison Mirdza É. Neiders, CRT '74 Charles R. Niles, MD '83, BA '79, and Ellen L. Niles, BS '82 Richard K. Ohrbach, PhD '96, MA '93, MS '89,

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• The 1892 giving society that honors the UB SDM 125th Anniversary. These members have pledged \$1,892 annually over three-year period.

* Deceased

We strive to ensure that gifts are listed accurately. If any information listed is incorrect, please call Maria Murphy in the Office of Philanthropy and Alumni Engagement at (716) 829-3326 or email kusu@buffalo.edu.



Class of '82 Wins the Reunion Challenge!

DEAN JOSEPH ZAMBON OFFERED HIS CONGRATULATIONS to the class of 1982, at the October 6th Reunion Dinner Dance, held at the Hyatt Regency Buffalo. Led by reunion co-chairs Michael Hatton, Joseph Modica, Frances DePlato and Mark Mahaney, the class has successfully raised over \$15,000 as of press time.

Classes celebrating their reunion this year were "challenged" to collectively raise \$25,000, the amount needed to "name" a new operatory as part of the Squire Hall rehabilitation project after the benefactor.

"Longtime faculty member, Dr. Mirdza Neiders, who was educator to the class of 1982, heard about the reunion challenge and generously agreed to donate the difference needed to get this class's total to the \$25,000 mark," said Neil Dengler, assistant dean and director of philanthropy for the dental school.

"A heartfelt thank you goes out to Dr. Neiders, the class of 1982 and all of this year's reunion donors. Rebuilding Squire Hall is a huge undertaking and private philanthropic support will be key in the success of the project," adds Dengler.

To learn more about how you can help in rebuilding Squire Hall, please contact Neil Dengler at (716) 881-7486 or ndengler@buffalo.edu.

ABOVE: CO-CHAIR JOSEPH MODICA IS FLANKED BY DEAN ZAMBON, LEFT, AND CO-CHAIR MICHAEL HATTON.



HAROLD R. ORTMAN, RIGHT, WITH SON LANCE HOLDING PHOTO OF HIS GRANDFATHER HAROLD T.

The Ortman Legacy Continues at UB With Dental School Icon's Bequest

The Ortman name has been prominent in the UB School of Dental Medicine through three generations constituting a century. The presence continues through the bequest of Harold R. Ortman, DDS, '41, to benefit the Dr. Harold and Virginia Ortman Dental Prosthetic Fund in the dental school.

The endowed dental prosthetic fund will provide financial aid annually to students and to support special initiatives in the dental school. His son Lance Ortman, DDS, '73, who retired in

2011 after a career as faculty member, associate dean for clinical affairs, and interim department chair of restorative dentistry, recalled a conversation he had with his father, who died in 2016 at age 98, about the bequest gift to the university. "He saw that as a legacy that is important. He wanted something lasting that would be helpful," said Lance. "He did not want just his name on the wall but something that was going to assist the students and help move the school forward."

Dentistry became a family tradition since Harold T. Ortman graduated from the dental school in 1911. His son, Harold R, became a leading figure in the advancement of restorative dentistry during his 46-year UB career, beginning in an era when dentures were the primary restorative features and continuing up to the dawn of implants. "He thought restorative dentistry was a key piece in offering society improvements in oral health," recalled Lance.

He started the specialty program in prosthodontics and began a scholarship program that supports specialty students. The Harold R. Ortman Graduate Prosthodontics Clinic in the school houses the program. "It was financially difficult coming out of dental school and going into a specialty. It became obvious to him that financial support would be helpful," related Lance. "He started that close to when he retired in his 70s and it continues."

Lance hailed his father's never-ending love for the dental school. "He thought you had a special responsibility as a professional to support the university and give back to the profession. A bequest is part of that–it's your lasting gift."



BNDM 40 Years Old!

MILESTONE BUFFALO NIAGARA DENTAL MEETING OF HISTORIC PROPORTIONS

t was a converging of anniversaries—the 40th Buffalo Niagara Dental Meeting (BNDM) during the 125th year of the School of Dental Medicine as over 2,450 attended the meeting. History was a cornerstone of the early October event, as well as peering into the future of dentistry.

The event brought some different additions to the agenda in honor of the milestones, including some new courses, tours of the new preclinical simulation center at Squire Hall, and a featured speaker, NIDCR Director Martha Somerman

(see accompanying article).



At the opening night birthday celebration for the meeting, champagne and cake were served in the main exhibit hall while a lively band, Central Groove, made up of dental alumni, entertained the registrants. Surprise proclamations were presented from both Buffalo Major Byron W. Brown, who proclaimed October 4–6 as "Buffalo Niagara Dental Meeting Days," and Erie County Executive Mark C. Poloncarz congratulating

the UB Dental Alumni Association and the school for 40 years of "ongoing service to our community" through the Buffalo Niagara Dental Meeting formerly called the Greater Frontier Dental Meeting.

Longstanding members of the BNDM committee were on hand, recalling how the meeting has grown from the modest one-level space at the beginning to completely taking over the cavernous Buffalo Convention Center now.

Stanley Zak, '76, came aboard at the start. "Here I am,

40 years later, still doing it. It's a good way to keep in touch with people and it gives people a different perspective on dentistry," he said. "We draw people from Southern Ontario, Northern Ohio, and Northwestern Pennsylvania. Here in Western New York, there are approximately 1,500 practicing dentists, so almost one out of every two practicing dentists comes to the meeting."

Fellow BNDM committee member Paul Di Benedetto, '79, is right behind Zak in longevity. "I can't say enough about the teamwork that's involved with it to get something like this to come together, to see it grow from what it was 30 years ago is very satisfying," he said. "And you get the satisfaction of giving back to the school, helping fund chairs and professorships and new clinics. You see a good end result for the things that you've done all year."

Another veteran committee member Charles Marchetta, '79, noted, "This dental meeting was established to provide a benefit for the alumni of the school, providing low-cost dental education while providing the same level of speakers that you'll get on a national level at a much lower cost. We're the only nonprofit organization in the country that we're aware of that runs dental meetings and the only alumni association.

Joshua Hutter, '05, is among the few younger alumni who have taken up the mantle of committee work in helping organize the meetings. "This dental meeting is always the highlight of the year for me. Personally, it adds a different facet to dentistry. I think it's very easy for us to see dentistry as just treating patients, but it's interesting to see that there is a lot more to it."

All acknowledged the work of Sherry Szarowski, executive secretary of the UB Dental Alumni Association, and

CONTINUED ON PAGE 26



NIDCR Director Somerman spotlights students and SDM in BNDM sessions



MARTHA SOMERMAN, director of the National Institute of Dental and Craniofacial Research (NIDCR)—the standard-bearer for dental research resources in the U.S.—was a featured speaker at the 40th annual Buffalo Niagara Dental Meeting. Her two Continuing Education sessions were aimed, respectively, at graduate students and SDM personnel and alumni.

The internationally known researcher and educator, who holds a certificate of periodontology from Eastman Dental Center, Rochester, and PhD in pharmacology from the University of Rochester School of Medicine and Dentistry, is an active scientist in addition to her highly significant administrative responsibilities. She stressed the NIDCR's mission to approve dental, oral and craniofacial health through research, research training, and dissemination of health information.

Somerman's first lecture to students was entitled Catalyzing Oral Health Research and Innovation. She said she tried to gear this talk to students and graduate students "but I recognize that many of you are interested in research but who is considering going into private practice?" Only one hand was raised in the student audience. "So you're all thinking of research careers. Did you know that?"

She acknowledged that one of the missions that she had in her pathway to being a director of an institute "where we could really set an agenda for research is recognizing that we're researchers." She chided a divisional aspect: "We're over here. Leave us alone. Why do you want to talk to clinicians?

"For me you need both sides—the basic researchers and the clinical researchers. And we need the dentists in the community communicating with us and we need to communicate better," related Somerman. "So, as you are listening to this lecture today, if you have any thoughts on how to better communicate with the dental community as practitioners out there, I really need that input because they have a lot of advice to give us and we're not getting it,

Somerman continued: one of the things that students may not be aware of is that most of the funding goes to the extramural community. "Twenty-seven institutes and centers at the NIH have intramural programs. Money mostly goes to you and around 300,000 scientists, with a \$40 billion budget," she noted.

Somerman saw a future where all people have the opportunity to lead healthy lives, highlighting

oral health and overall health, precision health, autotherapies, oral biodevices, and workforce diversity.

Her concentrated vision included leveraging technologies for health engineering, self-healing restorative dental materials, caries prevention, targeted drug delivery, research in space with NASA, innovative methods for oral cancer treatment, tooth regeneration from other animals, improving dental visits for children with autism spectrum disorders, salivary diagnostics; emerging technologies for precision health, pain research; translating scientific discovery into clinical practice, innovative treatment to reduce scarring, and practice-based research and opportunities.

Somerman noted that 70 percent of the funding that goes to dental schools comes from NIDCR. "So how are you doing, Buffalo? Not bad. In terms of NIDCR. \$3.5 million to UB and \$2.5 million to the dental school."

Later the same day, her talk to alums and SDM personnel in Farber Hall was entitled, Guiding the Future of Oral Health Research, Together.

Here, Somerman spotlighted the accomplishments of the SDM on its 125th anniversary. She hailed the school's seminal research history beginning in 1960 with the first Department of Oral Biology established in the U.S., acknowledging notable salivary research, oral immunology and microbiology, periodontal research, and bone and connective tissue.

UB researchers were also commended for expanding understanding of periodontal disease; UB immunology research, building microbiome research, salivary biology and glycobiology research salivary diagnostics, emerging technologies for precision health; innovative methods for oral cancer treatment, and pain research.

Somerman emphasized the NIDCR's vision to be the catalyst for driving breakthrough discoveries, pointing to the NIDCR's core—discovery, integration, collaboration.

"Our vision for the future—the year 2030," she related. "Imagine a time when dental, oral and craniofacial health are understood in the context of the whole body, with research and the strategies we use to promote health, prevent and treat diseases, and overcome disparities in health."

HONOR AWARD



RICHARD F. ANDOLINA, SR., graduated from The Ohio State University and received his dental degree from UB in 1980. Following completion of a general practice residency at Millard Fillmore Hospital in Buffalo, he moved back to the Southern Tier area of New York State and established a general dental practice in Hornell.

Dr. Andolina's passion has always been with his profession. In the late '80s he began serving on the Board of the Seventh District Dental Society (Rochester region) becoming its president in 1999. At the state level, he served in numerous positions in the New York State Dental Association culminating in 2016/17 as President. Nationally he has been a member of the ADA House of Delegates since 2001, serving numerous times as the NYS Caucus Chair and chair of the ADA Reference Committee on Practice, Benefits, Health, and Science in 2006.

Dr. Andolina has placed a high priority on the importance of advocacy on the future of the dental profession and for the protection of the public at large. He presently serves as the Chairman of the American Dental Political Action Committee (ADPAC).

A staunch supporter of our dental school, he is a longstanding member of the Dean's Associates and Squire Society. In 2004, he received the Alumni Association's Humanitarian of the Year Award. Dr. Andolina continues to mentor dental students and young dentists, visiting the dental school to speak on ethics and advocacy, and speaking at local and national meetings of the American Student Dental Association. His son Rick Jr., DDS '13, joined his father's practice in 2014.

ABOVE: RICHARD F. ANDOLINA DDS '80 & JOSEPH GAMBACORTA Lisa Jerebko, BNDM coordinator, who bear much of the brunt of the meeting planning details.

Joseph Gambacorta, '93, clinical dean and president of the Alumni Association, kicked off the meeting with a 125th Anniversary History Presentation of the school. "I'm going to try to condense 125 years into about 60 minutes," he said, adding that he would focus on the early history "because I feel it's really important and we never really talk about it."

Gambacorta, an admitted "big fan of history," noted the concept of the school actually beginning 149 years ago in 1868 when dentists from the Buffalo Dental Association attempted to organize a school and encountered resistance from some of the leaders in dentistry in Buffalo. A university council was later formed to support the issue of dentistry and a dental department. "It took them 24 years, until 1892, when Roswell Park put forth a motion for the university council to agree to a dental department and that's when it was created, and classes began on the fourth floor of a building at Main and Virginia streets for the first year. Then

they moved into the medical school at 24 High St. occupying the west wing of the building. Eventually they moved to 25 Goodrich, from 1896 to 1953."

Gambacorta paid tribute to personalities such as Annette Rankin, the first woman to graduate from the SDM and Daniel Squire, a graduate of the first dental school class and its dean from 1912–1935, who was a pioneer in curriculum development.

The Thursday night alumni reunion reception was held in the Squire Hall lobby where attendees were treated to tours of the new preclinical simulation lab replacing the storied B-28 lab now grandly renovated.

Tony Savino, '72, from San Antonio, TX, planned on taking a tour of the new preclinic simulation center. "I understand it's a lot more digital now. When I first started, we were dipping x-rays in developer water but now they pop up on a screen for you," he recalled. "I got a world-class education here."

Michael Hess, '72, said he has been running his class reunion every year since he graduated. "The school gave me wonderful opportunities, like all the other dentists who graduate from here,





ENJOYING **60 YEARS**OF REUNIONS









HUMANITARIAN AWARD

to have a nice career and do well for our

Darlene Riggins-White, '77, was the first African American woman to graduate from the SDM. She served as the representative from her class. "It's a distinguished honor because I made it this long!," she enthused, eagerly showing a photo she brought of her being hooded by former associate dean and clinic director Richard Powell. "There were four women in our class. I was the only African American woman with two African American men graduating in that class."

families. It was tough, but it was well

worth it."

Longtime BNDM committee member Raymond Miller, '85, summarized the BNDM and the reception and dinner dance, "This year it's a good balance of returning classes. We get returning alums integrating with the students. The alums love it, the students love it. I think people enjoy coming back to see what's going on. It's a good thing for the school and for everybody."

Hope to see you in Buffalo next year when the meeting gets an early start from September 26-28, 2018!



1 DEDICATED MEETING VOLUNTEERS; 2 BNDM COMMITTEE RECEIVES PROCLAMATION; 3 JOSEPH GAMBACORTA RECEIVES PRESIDENT'S AWARD FROM CHESTER GARY, '78.



RICHARD F. SHEEHAN, DDS, grew up in South Buffalo. It was while attending Bishop Timon High School, Dr. Sheehan realized his future was in dentistry, stating this as his aspiration in his high school yearbook. In 2008, he received the John Timon Award from Bishop Timon High School.

Dr. Sheehan attended Canisius College and UB School of Dental Medicine. Following graduation in 1962, Dr. Sheehan opened his own practice where he served the public for 53 years.

Dr. Sheehan was very charitable in his own office, never wanting finances to get in the way of providing excellent care to his patients. He also made house calls and hospital visits if you were sick and unable to come to the office for treatment. He provided car service for those patients with transportation difficulties.

Married to his wife Mary for 50 years, they raised five children together. Two of the five followed him into dentistry and a third worked in his office. It was a joy to watch him work and interact with his patients and see the love shared between them. He was a tremendous role model for his children.

Beyond his charitable efforts in his office, he also served at Harvest House for many years, participated in the Katrina relief efforts in New Orleans, and, at the young age of 71, began yearly trips to Haiti to provide dentistry. While the work was arduous, Dr. Sheehan never complained and often extended his visits to Haiti. He loved the opportunity to improve the lives of those less fortunate. Dr. Sheehan lived with charity and kindness as his central focus until his death. His example should inspire us all to follow in his charitable footsteps and to live the best versions of ourselves.

DAUGHTERS MARY SORAL DDS '07 & JULIE SHEEHAN JONES DDS '97, WIFE MARY AND JOSEPH GAMBACORTA



School of Dental Medicine Office of Continuing Dental Education course calendar

UB IMPLANT STUDY CLUB 2018

THURSDAYS (6 TO 9 PM)

FFB. 15 Anastasia Katsavochristou, DDS

Sweden & Martina Hands-on Workshop (members only)

APR. 19 Luis Mota, DMD

MAY 17 Lorenzo Mordini, DDS, MS

UB School of Dental Medicine

SINGLE MEETING NONMEMBER **DENTIST: \$225**

3 CE HRS/MEETING

FEB. 16 (9 AM TO 4 PM)

Is the Future of Orthodontics Clear? Invisalign for Tx of Class II, Class III, Open Bite, Deep Bite, and TMD

Mazyar Moshiri, DDS, MS Sebastiano Andreana, DDS, MS UB Center for Tomorrow, North Campus

UB ALUMNI MEMBER ORTHODONTIST: \$225

NONMEMBER ORTHODONTIST: \$245 **ORTHODONTIC TEAM MEMBER: \$95**

6 CE HRS

WEDNESDAY EVENING **LECTURE SERIES**

(6 TO 8 PM)

APR. 11 Preventive Dentistry and the Microbiome

Keith Kirkwood, DDS, PhD

APR. 18 Clinical Protocols for the Medically Complex Patient Michael Glick, DMD

APR. 25 Cervical Lesions: Restore vs. Soft Tissue Graftina Othman Shibly, DDS, MS

MAY 2 Management of **Medical Emergencies in** the Dental Office

Michael Hatton, DDS, MS

MAY 9 Oral Care for Patients Undergoing Head & Neck **Radiation**

Anastasia Katsavochristou, DDS

MAY 16 Risk to Results: Periodontal Instrumentation for the Advanced Practitioner

Theresa Johnson, RDH, MBA

MAY 23 Endodontic **Treatment Review**

Eugene Pantera, Jr., DDS, MS

Baldy Hall, Room 200G, **UB North Campus (live lecture)**

Distance learning sites: Binghamton, Canton, Jamestown, Norwich, Watertown

TUITION: \$65 (BUF)

Distance learning surcharge applies

NOW AVAILABLE ALSO AS SELF-STUDY ON-LINE (\$45)

2 CE HRS

APR. 20 (9 AM TO 4 PM)

ANNUAL SANFORD B. SUGARMAN LECTURE

In cooperation with Alpha Omega Dental Fraternity & Metro Study Club

Airway Centric Dentistry

Michael Gelb, DDS

Salvatore's Hospitality Center, Buffalo, NY

ALUMNI/AO MEMBER: \$225 NONMEMBER DENTIST: \$245 **TEAM MEMBER: \$95** 6 CE HRS

MAY 3-4 (9 AM TO 4 PM) HANDS-ON WORKSHOP

Stress-Free Endodontics

Adham Abdel Azim, BDS **UB School of Dental Medicine UB DENTAL ALUMNI MEMBER: \$895** NONMEMBER DENTIST: \$995

12 CE HRS

LIMITED ENROLLMENT

MAY 11 (9 AM TO 4 PM) **UB DENTAL HYGIENE SYMPOSIUM**

Microbes on Parade: The Amazing Role They Play in Health & Disease AND

Headliners: Breaking News and Its Effect on Health Care

Betsy Reynolds, RDH The Westin Hotel, Buffalo, NY **TUITION: \$125 BEFORE APRIL 13;** AFTER \$145 6 CF HPS

IUNE 1 (9 AM TO 4 PM)

HANDS-ON WORKSHOP

Practical Use of Lasers in Everyday Dentistry

Sebastiano Andreana, DDS, MS

Praveen Arany, BDS, PhD

Thomas Mang, PhD

Robert Yetto, DDS

UB School of Dental Medicine

UB DENTAL ALUMNI MEMBER: \$395 NONMEMBER DENTIST: \$4295 9 CE HRS including self-study prior to event

JUNE 27-29 (8:30 AM DAILY)

39th Annual Chautaugua **Dental Congress**

WED: TMD: Risk Factors, **Assessment and Treatment**

Richard Ohrbach, DDS, MS, PhD & Sonia Sharma, BDS, MS

THURS: Let's Talk About **All-Ceramic Restorations** Dana Keblawi, DDS, MS

FRI: 3D Endodontic Diagnosis & Treatment Planning

Adham Abdel Azim, BDS

Chautauqua Suites Hotel and Expo Center, Rte. 394, Mayville, NY

DENTIST: \$225 **TEAM MEMBER: \$125** 12 CE HRS

Annamarie Phalen Associate Director,

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SPAIN/ANDALUSIA LAND TOUR

October 11-19, 2018

CE Program-Dr. John Maggio, **Clinical Assistant Professor,** Department of Restorative Dentistry, **UB School of Dental Medicine**

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- Notches on Teeth: Evaluation and Treatment of Non-Carious **Cervical Lesions**
- How Low Should You Go? Treatment of the Deep Caries Lesion





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Updated 12/1/17. All information correct as of press time. UB CDE reserves the right to change tuition, dates, topics and/or speakers as necessary.

ClassNotes

Alumni wedding a banner event

Many alumni gathered to celebrate the wedding of Shaughna Szymanski, '16, and Andrew Winslow, '15. Wedding party alumni included the father of the groom, Brian Winslow, '82, and bridesmaids Kayleigh Comfort, '16, Victoria Mesolella, '16, and Amber Rosenberg, '16.





THE CLASS OF '83 were in Pittsburgh for some college football. Left to right are: Raymond Niceforo, Timothy Seel, David Stasiak, Richard Lynch, Michael Licata, and Norbert Koller.

WE WANT TO HEAR FROM YOU!

Submit your classnotes to Sherry Szarowski at ss287@buffalo.edu and let your classmates know what you've been up to!

InMemoriam

James D. Arthur, '45, of Syracuse, NY, died October 21, 2017, at age 96. He practiced general dentistry for 40 years in North Syracuse, NY. A member of the Naval Reserve, he was recalled to active service during the Korean War. He was a member of the American Dental Association, the New York State Dental Association, and the Onondaga County Dental Association.

Milton O. Clark, '47, of Seattle, WA, died June 30, 2017, at age 96. He served in the Coast Guard, in the Navy as a Pharmacist mate in World War II and as a captain in the Army in the Korean Conflict. He and wife Wendy lived in Old Saybrook, CT, for many years where he practiced dentistry and raised their family. They were active in the community in conservation and loved hiking and the outdoors, waterskiing, crosscountry skiing, music, and opera.

Frank J. Costanzo, '54, of Henderson, NC, died July 17, 2017, at age 92. He was a hard-working dentist and devoted husband and father from Grand Island, NY. He was a charter member of the Boys Club of America in Niagara Falls, NY, president of the Grand Island School Board, and president of the Rotary Club in Grand Island, and a member of the Kiwanis Club.

Philip C. D'Angelo, '61, of Caledonia, NY, died September 2, 2017, at age 83. He was president of the UB Dental Fraternity during his last year of dental school, and served in the U.S. Air Force at Lincoln Air Force Base, Lincoln, NE, from August 1961 to August 1963, after which he opened his dental office in Caledonia where he practiced for nearly 40 years.

Roy G. Darling, Ortho. Cert., '60, of Schenectady, NY, died November 11, 2017 at age 85. He was stationed as a Navy dentist in Japan from 1957 to 1958, and served in the U.S.

Army from 1960 to 1963. He then established his orthodontic practice in Schenectady, where he practiced for 39 years. An outdoor enthusiast, he hiked the Adirondacks, the Rockies and the Alps.

Robert C. Gartler, '47, of Amherst, NY, died October 30, 2017, at age 92. He served as a captain in the Army Dental Corps during the Korean War, and practiced in Amherst. He was president of the UB Dental Alumni Association in 1971 and a member of the St. Apollonia Guild of Catholic Dentists. He volunteered his services at several local nursing homes, retiring in 2002.

Girard A. Gugino, '61, of Getzville, NY, died August 2, 2017, at age 80. He specialized in orthodontics and practiced dentistry for over 50 years in the Buffalo area. He was president of the UB Dental Alumni Association in 1984 and received the UB Dental Alumni Association Honor Award in 1996.

Melvin I. Hamill, '53, of Buffalo, NY, died November 10, 2017 at age 88. He was an Air Force veteran and specialized in orthodontics, graduating from the University of Pennsylvania.

Michael J. Tabacco, '74, of Rockville, MD, and prior of Albany, NY, died July 26, 2017. He was a retired U.S. Navy captain and dentist, and professor of dentistry at University of Maryland, serving in the U.S. Navy Dental Corps for 27 years and in private practice for 25 years in the Washington DC area.

Gerald A. Wysocki, '68, of Hamburg, NY, died October 19, 2017 at age 75. He practiced dentistry in Attica, NY, and is remembered for his joy of skiing and traveling.



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Your gift to the UB Fund helps students like Jorge Swett Tapia be able to attend UB dental school, which he chose after hearing its students are immersed in clinical skills early on. Jorge moved here from New York City, attracted by UB's more-affordable tuition and Buffalo's low rental rates. Despite these cost-savings, Jorge still couldn't afford dental school. He applied for and received a scholarship directed at minorities with urgent financial need. "When I heard that I had received the scholarship to help me pay my tuition, I felt blessed to have it," said Jorge, who was born and raised in Ecuador. After he graduates, Jorge hopes to be a dental associate at a practice near or in New York City.

Gifts to the UB Fund have an immediate impact on students.



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