dentistry in the age of genomics
The problem [with genetic research] is, we're just starting down this path, feeling our way in the dark. We have a small lantern in the form of a gene, but the lantern doesn't penetrate more than a couple of hundred feet. We don't know whether we're going to encounter chasms, rock walls or mountain ranges along the way. We don't even know how long the path is.

— Francis S. Collins, MD, PhD
Former Director, National Human Genome Research Institute; Director, National Institutes of Health
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With the achievement in 2003 of the completion of the sequencing of the roughly three billion letters of DNA that spell out the genetic code of our species, the field of genomics emerged as one of the most important areas in the biological sciences. Genomics—the study of all the genes within an organism and their interactions with one another as well as within the environment—has led to great advances in our understanding of the biological information contained in our own genome and in those of many other organisms. These advances, in turn, have opened an entirely new era in medicine and, not surprisingly, in dentistry.

In this issue of Global Health Nexus, we explore some of the ways in which genomics is influencing dental research and the implications of this research for patient care. We are privileged to begin this section with an article by Harold Slavkin of the University of Southern California (USC), who provides an in-depth introduction to the subject, along with personal reflections on the history of the human gene sequencing project and his predictions for the future of dentistry in the age of genomics.

We are also honored to include an interview with the distinguished scientist Bruce Paster of Forsyth Institute and Harvard University, who is the leading authority on methods for the rapid identification and enumeration of oral microorganisms and their roles in oral and systemic diseases. Rounding out this section is a discussion among senior NYU College of Dentistry faculty who are utilizing genomics in their research. These faculty members speak frankly about the challenges of interpreting the flood of data that has emerged from the sequencing of the human genome and about the possibilities for creating new knowledge and improved patient care based on these data.

“The level of scientific sophistication reflected in students in ways that can only occur where there is a schools with such a commitment get something more experience as they proceed into various private practice
The level of scientific sophistication reflected in these articles permeates and elevates the education of students in ways that can only occur where there is a commitment to cutting-edge research. Students at dental schools with such a commitment get something more from their education, and they will almost certainly use this experience as they proceed into various private practice and institutional settings.

This issue of *Global Health Nexus* also features a program that is unique to NYUCD in utilizing the expertise of psychologists to study the relation between the level of verbal and physical aggression that occurs between parents and the extent to which oral health problems occur in their children. The program, described on p. 32, has great potential for creating new knowledge, strengthening community, and expanding resources for change and improved public health.

In this issue you will also learn about research being conducted collaboratively by the NYU College of Dentistry and its College of Nursing that has found that dentists and dental hygienists could screen a staggering 20 million Americans for chronic physical illnesses. Equally important, collaborative research shows that blood from periodontal disease can be used to screen for diabetes.

As always, you will meet some of our remarkable students, faculty, staff, administrators, and alumni. All are working to bring innovative ideas to the forefront of our academic enterprise and to provide an environment of excellence in which they can thrive. In this regard, I extend my deepest thanks to our donors, whose generosity and support have helped propel these ideas into actions. An alumnus who typifies these qualities is Dr. Elliott M. Moskowitz, Class of 1972, whose recent $1.2 million gift will create the Elliott M. Moskowitz Orthodontic Wing. You can read about Dr. Moskowitz’s reasons for making his extraordinary gift on p. 56.

Also of note is a progress report on the dental school’s expansion into a new, interdisciplinary building that we are constructing at 433 First Avenue, across the street from our existing facility. Outfitted with the latest technology for learning and discovery, the new building is designed specifically to promote an educationally stimulating, professionally collaborative environment. To learn about the new building’s many distinctive features and how you can help speed its momentum, be sure to read the story on p. 68.

I hope you will agree with me that the articles in this issue of *Global Health Nexus* illustrate an important point about the NYU College of Dentistry: Here are researchers, educators, students, forward-thinking administrators, staff, and benefactors, all of whom share a commitment to improving the quality of life for our patients and an exhilarating working environment for our community.
The biological revolution dividends continue to arrive! They are being delivered from universities, government laboratories, foundations, hospitals, and clinics, and from a growing number of biotechnology industries. These dividends are international, not restricted by national boundary conditions. They impact our language, how we think, how we diagnose, how we plan and implement clinical procedures, how we consider therapeutics that are gene-based, and even how we design and fabricate biomaterials for cell, tissue, and organ regeneration. It’s been and remains thrilling for all of us!

My personal exposure to the biological revolution started in high school, when I first heard about Watson and Crick and their discovery of the structure and possible biological functions of deoxyribonucleic acid (DNA) from my chemistry teacher, Miss Nellie Rogers. That was 1953. Later, as I was completing my dental studies, Francis Crick proclaimed, “We are living in a biological revolution,” as he received the Nobel Prize in 1964 along with James Watson and Maurice Wilkins. I heard more about this ‘revolution’ from Marshall Urist as he shared with me his discovery of bone morphogenetic ‘factor’...
Human Genetic Variations, and Variation in DNA Sequences
(less than 0.1% of Human Genome)

3.2 billion letters of human DNA encoded within 21,009 genes
1 Base per 1,000 Shows Single Nucleotide Polymorphism
during my seven years of private practice; we both practiced one day a week in the same building, and Marshall (an orthopedic surgeon and clinical scholar) became a close friend and my patient.

My awareness grew during my postdoctoral education and training, though I never would have imagined that I would attend the Asilomar Conference held in Monterey, California, in 1975, when recombinant DNA guidelines were crafted. Imagine being present at the inception of the rules and procedures for the human gene for insulin to be inserted into the genome of a bacterium, yeast, plant, or animal, and that organism producing recombinant human insulin protein for the treatment of diabetes and other important human therapeutics (growth factors, hormones, antibodies, anti-microbial therapeutics, and a large array of other pharmaceuticals). In fact, Robert Swanson and Herbert Boyer founded Genentech—the first biotech company in the United States—in 1976 in South San Francisco. At that time, they reported cloning the gene encoding EGFR (epidermal growth factor receptor, HER1) used in studies of cancer and cancer therapy.

Across the Bay, Bill Rutter and his research team founded Chiron in Emeryville, California, and enabled many advances, including recombinant insulin, a number of gene-based diagnostic tests for blood elements, and the Hepatitis B vaccine. Today, the United States is the largest market and leading consumer of biotechnology products in the world, and now home of more than 1,300 firms involved in achieving the goals of the biological revolution. Of the 5.5 million scientists and engineers in the United States, approximately 1.3 million are involved in the biological sciences and related industries. Biotechnology-derived pharmaceuticals were valued at $67 billion in 2010.

After production of antibodies to detect the major protein found in enamel (amelogenin), and identification of the messenger RNAs (mRNAs) for amelogenin in the late 1970s, my laboratory, including Mal Snead, Maggie Zeichner-David, and Alan Fincham, in collaboration with Savio Wu (then at Baylor), would, in 1983, be the first to clone the mouse gene for amelogenin, the major protein found in the bioceramics identified as enamel. Along the way, several postdoctoral fellows in our research group, Ed Lau and James Simmer (now at the University of Michigan), discovered that the amelogenin gene produces multiple and different mRNA transcripts by a process termed ‘alternative splicing,’ and thereby produces multiple translation products or protein isoforms of varying molecular weights that enlarge the proteome. Alternative splicing is a common mechanism for the generation of multiple isoforms. Many genes are alternatively spliced in tissue-specific, developmentally regulated, and hormone-responsive manners. The central dogma of years ago that “one gene produces one messenger RNA that produces one protein” is no longer true. The total number of possible proteins from the genome can far exceed the number of genes.

The unexpected has always dominated my career. By the late 1980s, we had identified and mapped the human amelogenin gene to both the X as well as Y chromosomes (AMELX and AMELY). This was an unexpected discovery—a variant of a functional gene encoded in two different chromosomes. Thereafter, several investigators used our discover-
In the mid-1990s, it was evident to me that genomics would include microbial genomics and viral, bacterial, and yeast microbes (‘the Microbiome’). These applications have become reality.
Many of us overestimate the short-term impacts of new technologies and underestimate their long-term effects.
In October 2004, the entire Human Genome was completed—the 6.2 billion nucleotides or bases, annotated within 21,000 genes encoded within and mapped to specific locations in the 23 pairs of human chromosomes, were identified. We had entered ‘the Post-Genomic Era.’ Essentially, a ‘parts list of life’ was now available online or in hardcopy. It was thrilling!

**THE SHORT-TERM DIVIDENDS FROM THE HUMAN GENOME**

Francis Collins is now director of the entire NIH enterprise. In 2000, when Francis was serving as director of the Human Genome Project, he shared his predictions with NIH leadership as to where the biological revolution was going. According to Francis and his PowerPoint presentation of 2000, there will be six major themes delivered as dividends from the completion of the Human Genome:

- Predictive genetic tests will be available for a dozen conditions
- Interventions to reduce risk will be available for several of these disorders
- Many primary-care providers will begin to practice genetic medicine
- Pre-implantation genetic diagnosis will be widely available, and its limits will be fiercely debated
- A ban on genetic discrimination will be in place in the United States
- Access to genetic medicine will remain inequitable, especially in the developing world.

Importantly, all six of Francis’s predictions from the year 2000 have come true. It is also fair to assert that the promise of a biological revolution in human health remains very real. It is further valid that many of us overestimate the short-term impacts of new technologies and underestimate their long-term effects.

**THE BIOLOGICAL REVOLUTION CONTINUES**

I have repeatedly learned that science informs research and development, technology, and clinical practice. Sometimes translational research that ultimately yields a clinical trial or material requires one or two decades and many millions of dollars. For over a century, scientific discoveries have been translated into technology that enables diagnostics, treatments and procedures, therapeutics, and biomaterials that have revolutionized the oral health professions.

The discovery of chemicals to achieve anesthesia revolutionized surgery. The discovery of X-rays led to radiology and how we image hard and soft tissue structures. The discovery of antimicrobial therapeutics profoundly changed clinical outcomes associated with acute and chronic infectious diseases—viral, bacterial, and yeast infections. A number of discoveries through adhesive chemistry led to sealants, an array of composite resins, and
the bonding of porcelain to enamel. The discovery of fluoride and fluoridated drinking water to reduce the prevalence of tooth decay has been extraordinary. The discoveries from the digital revolution have and will continue to enhance how we see, how we take impressions, and how we design and fabricate restorations for tooth replacement. Science remains the fuel for innovations, applications, and advances in clinical dentistry, medicine, pharmacy, and nursing.

**Genomics 101**

Following fertilization, the single cell nucleus contains the entire human genome, 21,000 functional genes and 19,000 non-expressed pseudogenes, packaged within 23 pairs of chromosomes. In addition, a few dozen genes are inherited directly from our mothers via their transmission of the mitochondrial organelles within their ova. The mitochondria contains DNA (deoxyribonucleic acid) called mitDNA. Genomics is the study of all of these genes and their interactions with one another as well as with the environment. These collective genes are encoded within the nuclear DNA and the mitochondrial DNA within cells and represent “the parts list of life.”

Beyond the fertilized ovum, following a series of cell divisions, we eventually become mature adults consisting of ten trillion cells, each somatic cell containing the complete human genome. The length of DNA that encodes these genes within each somatic cell is approximately six feet. The DNA is formed from 6.2 billion nucleotides or bases (T, thymidine; A, adenosine; G, guanosine; and C, cytosine).

The language of genetics is the sequence and patterns created from Ts, As, Gs, and Cs. The genetic code is the representation for the various amino acids within triplets or codons (e.g., TCG, GCT, etc.). Each codon within DNA encodes for a specific amino acid (e.g. alanine, methionine, proline, arginine, tryptophan, etc.). The sequence of amino acids therefore provides the information and bioactivity of a specific protein (enzyme, co-factor, hormone, growth factor, a structural building block of bone or dentin, neurotransmitter, etc.). Only two percent of the entire length of DNA encodes the information for functional genes. The remaining DNA contains highly repetitive sequences that do not encode genetic information. The functional genes encoded within the nucleus as well as the mitochondria produce a total of 100,000 different proteins and this is called “the proteome.”

Each functional gene has an anatomy that consists of a promoter region, an enhancer region, and a series of exons that contain the encoded information, and interspersed introns that do not contain informative base sequences. At the end of each gene is a stop codon (AAA). In summary, the DNA in our cells contains chains of A, C, T, and G. More than six billion of these chemical bases, strung together in 23 pairs of chromosomes, exist in every single somatic cell in our body. Along this enormous sequence of chemical bases, one in every 1,200 bases, on average, will differ. This difference is a source of genetic variance among people, known as single nucleotide polymorphisms or SNPs. From the investment in the Human Genome Project, we now have 10 million SNPs known to occur in the human genome and these have become “tools” for analyzing human genetic variance around the world now annotated and assembled in the International HapMap Project (see http://snp.cshl.org/whatishapmap.html).
The investment in genomics has provided the mechanisms for tissue-specific, developmentally appropriate, and hormone-responsive gene regulation throughout the human lifespan. We are now on the verge of “the $1,000 genome” that can enable the detection of subtle variants, mutations, or misspellings that reveal human disease, disorders, resistance or susceptibility, and even a sense of our ancestral histories.

High throughput genotyping, the availability of millions of SNPs, and bioinformatics have enabled “personalized medicine and dentistry.”

**INTRODUCING “-OMICS” IN THE POST-GENOMIC ERA**

How will we utilize the various “-omics” in the oral health professions? First, let’s untangle some of the emerging terminology.

In the emerging lexicon of “-omics,” we identify:

- **Genomics** describes the complete set of genes in organisms in terms of gene structure and function(s).
- **Comparative genomics** is the study of many diverse organisms—viral, bacterial, yeast, plant, and animal—for analyses in evolution, environmental studies, and/or in health and disease.
- **Epigenomics** is the study of all of the chemical modifications (methylation, acetylation, etc.), beyond the inherited genetic information, that can modify or regulate many features of the human condition, such as metabolism.
- **Transcriptomics** describes the total number of messenger RNA transcripts derived from genes. In humans, the process of alternative splicing results in multiple and diverse transcripts produced from a single gene. As humans contain 21,000 different functional genes in the nucleus of every somatic cell in the body, the number of transcripts (the transcriptomes) is far greater, likely exceeding 100,000 different mRNAs.
- **Proteomics** describes the total number of proteins produced from a particular genome. In humans, our proteome is greater than 100,000 different proteins.
- **Metabolomics** describes all the genes associated with metabolism, metabolism of nutrients as well as drugs. Genes encoded within chromosomes in the nucleus of every somatic cell in our body, as well as genes encoded within the mitochondrial DNA in the mitochondria directly inherited from our mothers, cooperatively regulate metabolism.
- **Diseasomics** describes diseases and their relationship to genes, micro- and macro-environments, and social determinants. This field of inquiry incorporates a taxonomy of networks that has the potential to unify various forms of databases. Biomedical researchers are attempting to redefine diseases by clustering or finding patterns and associations between different symptoms, signs, physiology, socioeconomic determinants, genes, protein, and so much more. The various databases suggest that diseases often cluster within specific socioeconomic groups that further align with a number of risk factors associated with disease and disorder patterns. For example,
analyses between children, poverty, diabetes, obesity, hypoglycemia, and hyper-insulin databases are starting to change nosology or the classification of disease.

Pharmacogenomics describes all genes that affect or are affected by pharmaceuticals such as non-steroid anti-inflammatory drugs, analgesics, and psychotropic drugs. These areas of exploration, and the plethora of data sets reflecting the yield from the biological revolution of the last 60 years, clearly impact diagnostics, therapeutics, biomaterials, and clinical outcomes throughout the health professions, including the oral health professions. I’m imagining that the dividends from these quarters will significantly impact how we understand and manage autoimmune disorders, chronic facial pain, and xerostomia.

PERSONAL REFLECTIONS REGARDING THE BIOLOGICAL REVOLUTION

There is a nexus formed by the convergence of clinical medicine, clinical dentistry, and the biological revolution. The dividends from the discovery of DNA, recombinant DNA technology, and the emerging field identified by “-omics,” continue to change the human condition and how we advance as health professions.

Fundamental scientific discoveries were augmented by clinical observations that elucidated the inheritance of single-gene, or monogenic disorders, also known as Mendelian disorders since they are transmitted in a manner consonant with Mendel’s laws of inheritance. Today, the National Library of Medicine at the NIH in Bethesda, Maryland, hosts the online compendium known as Mendelian Inheritance in Man (OMIM) that has annotated more than 100 years of documented human genetic disorders. We now have many thousands of disorders and these can be readily accessed on the Internet or in hardcopy. Rapid advances reveal that 20 percent of human diseases are now known to be inherited as Mendelian single gene mutations, whereas 80 percent are complex and reflect multiple gene and multiple environmental interactions.

As we look to our futures, the future of the oral health professions, I suggest we ask ourselves a simple question. “Are we ready for the dividends from the biological revolution?” Are we allocating resources to educate and train oral professionals for the future, a future that offers the promise of gene therapies, increased cell, tissue, and organ regeneration, integration between digital and biological ways of knowing, and so much more? Are we prepared to utilize biology and gene-based therapeutics in the diagnosis and treatment of oral diseases and disorders? Are we ready to employ saliva as an informative fluid from which we can diagnose diseases and monitor the efficacy of treatments? Are we prepared to employ growth factors and other biological ingredients in the repair and regeneration of craniofacial, oral, and dental tissues? Are we prepared to use the
revolution? Are we allocating resources to educate and offers the promise of gene therapies, increased cell, tissue, and biological ways of knowing, and so much more?

principles and data gained from the $1,000 genome, from personalized medicine, in the oral health professions? Are we ready?

A list of references appears in the online version of this article at http://www.nyu.edu/dental/nexus/index.html.
Gene-based Discoveries May Help Clinical Wishes Come True:
A CONVERSATION WITH DR. BRUCE PASTER

Bruce J. Paster, PhD, is senior member of the staff and head of the Department of Molecular Genetics at The Forsyth Institute, and professor of oral biology medicine, infection and immunity and director of the Human Microbe Identification Microarray Core at the Harvard School of Dental Medicine. The major research objective of the Paster laboratory is to develop methods for the rapid identification and enumeration of oral microorganisms so that we may elucidate their roles in oral and systemic diseases. The Paster laboratory utilizes a number of molecular techniques, such as nucleic acid sequencing, gene amplification via polymerase chain reaction, gene cloning, DNA probe development, DNA hybridization, in situ hybridization, and, more recently, DNA microarrays. In a recent conversation with Global Health Nexus, Dr. Paster addressed the promise and challenges inherent in genomics research.

“It is extremely important to study the discover genes involved in disease processes, With the availability of the genome data mining will likely reveal much
**Global Health Nexus (GHN):** How does human genome sequencing impact microbiology?

**Dr. Paster:** It lets us understand genes that affect the interaction of bacteria with our bodies. Almost more important is the sequencing of the genomes of human-associated bacteria, known as the microbiome. Information from these studies is allowing us to better understand how our microbiome helps us digest our food, how bacteria may cause disease, and, better yet, how bacteria keep us healthy.

**GHN:** What is Forsyth’s role, and your role in particular, in the Human Microbiome Project (HMP) funded by NIH?

**Dr. Paster:** Forsyth scientists are the major supplier of DNA from oral bacteria to the HMP genome sequencing centers. Forsyth has DNA for production of approximately 200 reference genomes. My role has focused on analysis of a particular subfraction of ribosomal RNA known as 16S rRNA to better understand the microbial diversity of the oral cavity.

**GHN:** Many studies focus on a specific group of bacteria associated with oral diseases. How important is it to study genomics in the oral cavity in the effort to improve oral health?

**Dr. Paster:** It is extremely important to study the genomes of the oral bacteria because we can discover genes involved in disease processes, such as antibiotic resistance genes and toxins. With the availability of the genome sequences of most of the cultivable oral species, data mining will likely reveal much information.

**GHN:** What are the questions and the challenges involved in doing genomics in the oral cavity?

**Dr. Paster:** Questions include the following:
- What bacteria are present in the oral cavity?
- How stable is the oral microbiome over time?
- What proteins, enzymes, toxins, etc., does each specific bacterium make?
- Can genetic factors be identified that control host-bacterial interactions?
- What is the role of oral bacteria in human health and disease?

Among the challenges are understanding:
- which of the over 700 common species in the oral cavity are important in health and disease,
- how the significant variability in the oral microbiome from person to person affects our analyses,
- how diet and the person’s health status may affect the oral microbiome,
- the complexity of bacterial-host interactions.

**GHN:** What is the HOMIM project and what is its current status?

**Global Health Nexus (GHN):** genomes of the oral bacteria because we can such as antibiotic resistance genes and toxins. sequences of most of the cultivable oral species, information.”
**Dr. Paster:** Since 1986, Dr. Floyd Dewhirst, who is also at The Forsyth Institute, and I have used molecular analyses based on 16S rRNA sequencing to identify over 700 predominant bacterial species in the oral cavity. About 35 percent of these species has not yet been cultivated. Using this information, we developed for our own research the Human Oral Microbe Identification Microarray, known as HOMIM, which allows for the simultaneous detection of about 300 of the most prevalent oral bacterial species, including many that have not yet been cultivated.

Since 2008, HOMIM (http://mim.forsyth.org) has also been available to the scientific community for the rapid determination of bacterial profiles of clinical samples from the human oral cavity, esophagus, and lung. HOMIM is recognized worldwide as a valuable research tool by many investigators from academic institutions (over 60 teams), government (six teams), and industry (10 companies). Twelve peer-reviewed publications, three reviews describing HOMIM, and many presentations at national and international meetings have resulted from these studies. Under development are microarrays that target bacterial species from the human gastrointestinal tract and the macaque oral cavity.

**GHN:** What is the relevance of the HOMIM project for oral research?

**Dr. Paster:** The HOMIM project has tremendous relevance for oral research in the following areas:

- determining and comparing bacterial associations in oral health and disease, including different types of periodontitis, caries, gingivitis, ventilator-associated pneumonia, endodontic and odontogenic lesions, abscesses, and halitosis,
- determining the efficacy of therapies; e.g., mouth rinses, antibiotic treatment, scaling and root planing, and laser or periodontal surgery,
- determining the progression of oral diseases,
- determining those patients at risk for periodontitis and other oral diseases.

For my own research, I am using HOMIM to identify those microbial species or microbial profiles (“danger profiles”) of periodontal sites at risk for developing periodontal disease.

**GHN:** What have you discovered involving microbial genomics in the oral cavity that has relevance for systemic diseases?

**Dr. Paster:** HOMIM indeed has utility beyond determining bacterial associations in oral health and oral diseases. Specific oral bacterial species, bacterial complexes, or entire oral microbial profiles, as determined from HOMIM analyses, may serve as potential biomarkers for non-oral systemic diseases. In a recent publication, we noted a significant decrease in overall diversity in the oral microbiome of pediatric Crohn’s disease as compared to that of healthy children and children with ulcerative colitis.

In another study, we reported that there may be oral microbial biomarkers for pancreatic cancer. For example, *Neisseria elongata* and *Streptococcus mitis* were detected significantly less often in the saliva of cancer patients than in saliva of healthy controls. In contrast, levels of *Granulicatella adiacens* were significantly higher in cancer subjects.
**GHN:** Will these findings lead to changes in the way dentistry is practiced, with specific reference to pathogen-based early detection, which will allow instantaneous chairside quantification of oral bacteria in plaque or saliva samples?

**Dr. Paster:** If microbial danger profiles can be used to identify specific sites at risk for periodontal disease, clinicians will be able to focus on those sites for therapy, such as scaling and root planing and localized antibiotic delivery. Progress can be determined after treatment by monitoring the response of the “at-risk” microbial profiles; e.g., change to microbial profiles typically detected in healthy sites. Consequently, we may be able to halt disease before it occurs.

For example, with systemic diseases, such as pediatric Crohn’s disease, the presence of certain bacterial species or bacterial complexes in the oral cavity would be indicative of those children who have not yet been diagnosed with the disease. If successful, the impact is huge for Crohn’s patients since early diagnosis means prompt and proper treatment, not only for those with Crohn’s but for those with other intestinal diseases or disorders. The key here is that this would be a non-invasive diagnostic test—patients would much rather spit in a tube than provide a stool sample, or even be subject to a biopsy.

**GHN:** Despite global efforts toward prevention and cure of infectious diseases, they remain major problems. What are the implications for using molecular genetic approaches to study various aspects of infectious diseases with respect to prevention and cure?

**Dr. Paster:** Bacterial identification based on 16S rRNA sequences is much more accurate and rapid at identifying bacterial species than the older phenotypic methods that relied on culture techniques. The molecular methods can also be used to identify microorganisms that cannot presently be cultivated, which represent at least half of all human-associated bacterial species. Who is to say that those species that you cannot grow are any less important than those you can grow?
Dentistry in the Age of Genomics: Q&A with NYUCD Researchers

A group of senior researchers at the NYU College of Dentistry is actively engaged in exploring genomics as a means of advancing knowledge of human genetics, the origins and evolution of human diseases, and the development of therapeutic initiatives to treat disease.

Global Health Nexus recently asked several of these individuals to talk about the future of genomics in dentistry, including individual research projects utilizing genomics. Participants included Dr. Louis Terracio, professor of basic science and craniofacial biology and vice dean for research; Dr. Daniel Malamud, professor of basic science and craniofacial biology and director of the HIV/AIDS Research Program; Dr. Brian Schmidt, professor of oral and maxillofacial surgery and director of the Bluestone Center for Clinical Research; Dr. Walter Bretz, associate professor of cariology and comprehensive care; Dr. Steven Engebretson, associate professor and chair of the Ashman Department of Periodontology and Implant Dentistry; Dr. Page Caufield, professor of cariology and comprehensive care; and Dr. Yihong Li, professor of basic science and craniofacial biology.

There’s no reason why dentistry would do anything but be a major player in genomics research, depending on the disease.

Vice Dean Louis Terracio
Global Health Nexus (GHN): Dr. Terracio, as vice dean for research, could you provide an overview of the prospects for dental research and patient care in the age of genomics?

Dr. Terracio: Genomics is only one of many ‘omics that are populating modern science. Proteomics—the large-scale study of proteins—is the other big area that people are looking at. People are using many other forms of evaluation for data collection and any of those that are dominating the research front in medicine are appropriate to dentistry. The head/neck/oral cavity lends itself to all the same sorts of evaluations that one is seeing dominate medicine. So there’s no reason why dentistry would do anything but be a major player in genomics research, depending on the disease.

There are folks in this group who are interested in cancer, like Brian, and those who are interested in genomic analysis, like Walter, Yihong, and Page, who are all interested in the microbiome, or the totality of microbes, including their genetic elements and environmental interactions in a defined environment. Dan is involved in multiple investigations using saliva samples collected with a swab from the mouth as a less-invasive and instantaneous alternative to drawing blood and sending samples to the laboratory to determine risk for and onset of disease. Steve is doing research with the ultimate aim of treating diabetes. Page and Yihong are using genetic criteria to conduct research in caries development. It’s where we should be.

If there’s a reason why dentistry may not in some ways be as active in genomic research as medicine, it’s probably because the technology costs a lot of money. If a dental school is not affiliated either with a major medical center or a major research institute, then having access to all the technology to move forward in this field becomes problematic. Luckily for NYUCD, through professional collaborations across the country and around the world, as well as access to analytical methods across the street at the NYU Langone Medical Center, we’re able to take advantage of all of the major ‘omic technologies, including genomics.

GHN: What role does genomics play in the research that each of you is conducting?

Dr. Malamud: In discussing genomics in dentistry, I think that you can look at this in two ways. First, the oral cavity is a source of DNA that allows you to look for anything in the entire body, and if you do a Pub Med search correctly, you find that 90 percent of the publications refer to the oral cavity as the easiest way to obtain DNA. Second, many people are thinking about using genomics as a tool for studying dental diseases. To Lou’s comment about less money available for genomics technology at dental schools as opposed to medical schools, I would add that if a researcher focuses exclusively on oral diseases, there are a smaller number of opportunities compared to systemic diseases. Since there are a limited number of dental diseases, it’s not surprising that there is less research in this area.
A key opportunity for dentistry in genomic research lies in being able to predict a person’s risk for developing dental caries...This approach is applicable not only to the development of dental diseases, but also to systemic diseases.

Dr. Walter Bretz

**Dr. Bretz:** Despite the low number of dental diseases, what’s interesting and attractive is that we can measure these diseases; we can sample people over time; we can be predictive, which is something that you can’t do with other diseases, like cardiovascular disease, in which genetic predisposition is very important, but sampling over time is not an option.

From my perspective as a scientist investigating the oral microbial profile, a key opportunity for dentistry in genomic research lies in being able to predict a person’s risk for developing dental caries. Certain groups of people, like twins, are especially good population samples for genetic research in caries development.

Scientists seeking to predict a person’s risk for developing dental caries by identifying the presence of harmful bacteria have, to date, identified only about 800 of the thousands of microbes residing in the human oral cavity. But now, working collaboratively with the Venter Institute and TIGER (Twins Institute for Genetics Research) in Brazil on a four-year study funded by the National Institute of Dental and Craniofacial Research (NIDCR), NYUCD is utilizing a new genetic sequencing technique to speed the process of identifying the remaining bacteria that play the most important role in tooth decay. The new technique, known as enrichment gene sequencing, will enable us to uncover the existence of many more species than those that have been identified so far with traditional sequencing. The oral microbial profile we develop will enable us to predict which of the twins are likely to develop caries and which will remain healthy. This approach is likely to enhance our understanding of dental caries onset and development and may enable the future development of novel treatment strategies.

This approach is applicable not only to the development of dental diseases, but also to systemic diseases. Two years ago my research team was awarded a grant by the National Institutes of Health (NIH) to look at rheumatoid arthritis (RA) and the potential link to oral and intestinal flora. In fact, we recently had a paper accepted for publication by the journal *Rheumatism and Arthritis* reporting on the very distinct signatures of the oral microbiome among early-onset, never-treated

**Potential genetic and environmental risk factors play an important role in the research that my collaborators and I conduct to understand the etiology of early childhood caries (ECC).**

Dr. Page Caufield
RA patients and patients with chronic RA.

**Dr. Caufield:** Potential genetic and environmental risk factors play an important role in the research that my collaborators and I conduct to understand the etiology of early childhood caries (ECC), one of the major public health problems affecting millions of preschool children, especially those in low-income populations both in the United States and around the world. Using such approaches, we were able to characterize a number of risk factors associated with cariogenic bacterial colonization in children with ECC. In a newly funded NIH project, we will look further at the genetic diversity of *Lactobacillus* populations in children with severe ECC in order to identify a subset of genetic elements that contain “virulence” determinants associated with the development of ECC.

**Dr. Li:** The question of whether or not there is a significant difference in the microbial species between healthy and diseased conditions, including dental caries and periodontal diseases, is one that my collaborators and I are actively pursuing. We are trying to understand the interaction of oral microbial diversity with other diseases, including HIV infection, oral cancer, gastric precancerous lesions, and infants of preterm/low birth-weight. Other key questions are whether or not changes in the relative abundance of members of the microbial communities are clinically important, and how oral microbes interact with host and immune environmental factors.

**Dr. Schmidt:** I’ve always been interested in the incidence and prevalence of oral disease. So compare periodontal disease to heart disease. Probably very similar prevalence, but we do much more in terms of cardiovascular disease. Let’s take head and neck cancer as an example. There will be 50,000 cases of head and neck cancer in the US this year.

**We are trying to understand the interaction of oral microbial diversity with other diseases, including HIV infection, oral cancer, gastric precancerous lesions, and infants of preterm/low birth-weight.**

Dr. Yihong Li
There will be 10,000 brain cancers. The genome project has given us much more information and we’ve been able to glean clinically useful information for brain cancer, whereas for oral cancer we’ve not been able to do that, so it’s a much more complex challenge.

Oral cancer has what we’ve termed “capricious clinical behavior.” Patient A will have an oral cancer; it can be big and that patient will get treatment and will be alive in five years. Patient B has a much smaller oral cancer. They look exactly the same under the microscope, and that patient doesn’t live for two years. If you’re diagnosed today with oral cancer, you have a 50 percent chance of being alive in five years, and we don’t know which side of that 50 you’ll be on. That’s been the real challenge.

Just because we understand the genomics, that doesn’t mean it’s a blueprint for how that cancer’s going to behave. So for the last eight to nine years we’ve been trying to identify a genomic marker that will help us understand which patients will get metastasis. And then the cancers are so good at DNA mutation that they evolve, so cancers recapitulate evolution in nature, and these cancers evolve so the metastasis at a genomic level looks totally different from the oral cavity primary tumor, which just adds another layer of complexity. Within the last year we have developed what’s called “massively parallel genome sequencing,” which means that you can sequence the entire exons (the parts of the gene that code information for protein synthesis) for very complex genes up to 50 exons in a single gene.

**Dr. Engebretson:** One of the things we’re looking at in the area of periodontal disease is gene expression research using microarray technology, and it’s giving us the opportunity to study thousands of genes from a single tissue sample. Even though costs are still high, prices have come down enough to allow us to look at biomarkers in gene expression profiles for patients who have responded well to therapy and for those who have responded less well. As in cancer research, we might someday be able to use a gene expression profile to help with a prognosis for a disease.

The interdisciplinary nature of this type of research is really strong, particularly with regard to bioinformatics, which requires expertise in a number of different disciplines to get any useful information. A lot of different types of problem-solving skills go into this type of research. Let me give you an example of a program using bioinformatics that we’ve been using for gene expression profiles. It was developed, I understand, by members of the KGB who defected to the West and somehow wound up in Bethesda, Maryland, where they were put in charge of a project called natural language programming. These people had experience writing algorithms that go out into cyberspace and pick up associations or words that are close together and other words that are far apart in order to interpret information about the ways the spies were passing messages. They decided to look at biology in the same way, using the same process to create software to find associations between molecules or genes and then map them out to see how they interact.

You can always tell how two things interact, but what about the things around them? This program allows you to see what the surrounding interactions are and what their...
significance is. These biological association networks can then help to identify biological pathways that are relevant to disease study and allow for experimentation to go forward. These programs know nothing about periodontitis or inflammation and they don’t care, but they know how to write programs that can help me to find out this information.

**GHN: What do you see as the role of genomics in dental education and practice?**

**Dr. Terracio:** A key reason for genomics education for dental health professions is that education is about the future, not the past, and we have entered an era in which genetics and genomics are playing a vital role in oral health research and dental practice. Each new day brings advances in genomics that add to the number of dental conditions whose genetic component is understood. The need for dental professionals to understand, recognize, and utilize genetics and genomics in their daily practice grows commensurately with these scientific advances.

Dentists have long recognized a genetic component to dental health problems, especially in the areas of abnormal tooth formation or physical malformations, such as a cleft lip or palate, resulting from hereditary conditions. But patients now expect more, whether it’s their risk for periodontal disease, or the connections between oral and systemic diseases, or the value of utilizing genetic tests to predict risk of disease in individual patients. Our students need to review the scientific literature and be able to evaluate it.

From the standpoint of what the practitioner needs to know, while it might not be imperative to learn to do informatics, practitioners should know how to assess the literature, because biomarkers for oral cancer and periodontics and other oral diseases may turn out to be valid, and practitioners need to know how they can best advise their patients about whether or not they should have this analysis.

**Dr. Bretz:** We had a large sample of twins and applied whitening procedures to them. Although both groups responded well to the whitening procedures, the identical twins had much less variation in the treatment response than the fraternal twins, suggesting that there might be a genetic component operating. Anecdotally, if you read the literature, many studies have found that some people respond very fast to whitening procedures, whereas others do not. So I think that practitioners will eventually find those kinds of applications especially useful.

**Dr. Engebretson:** A related area that may turn out to have special interest for the practitioner is pharmacogenetics, the branch of pharmacology that deals with the influence of genetics on a person’s response to specific drugs, and with tailoring a drug therapy at a dosage that is most appropriate for an individual patient.

**Dr. Schmidt:** The reality is that it is difficult to fit all the new information—on genetics and biochemistry and genetics and immunology and pathophysiology and genetics and bioinformatics—into a four-year dental school curriculum and into a dental practitioner’s continuing education. But that shouldn’t stop us from seeking ways to disseminate this information. We need a biomarker for insatiable curiosity.
The Center for Skeletal and Craniofacial Biology has been established at NYUCD with funding from a National Institutes of Health (NIH) grant. The center is led by Dr. Nicola Partridge, an authority on molecular endocrinology and bone and mineral research, who joined NYUCD in fall 2009.

According to Dr. Partridge, the mission of the center is to raise the tempo of research into diseases affecting craniofacial development and bone—including cleft palate and bone loss related to osteoporosis, kidney failure, cancer metastasis, and periodontal disease. The center’s research is expected to lead to new knowledge about and new and improved treatments for these and other conditions, and to be a magnet attracting outside academics and postdoctoral fellows to undertake research using the center’s resources.

The center’s goals are to recruit new faculty in craniofacial bone biology, as well as collaborators from other NYU schools, to perform such research and synergize their activities, publish high-impact papers, submit NIH instrumentation grants for the center, oversee the use of core facilities, increase the funding of center members, submit NIH PPG (program project grants) and center applications, and engage members in clinical trials and obtain patents and patent income.

Rationale

In 2010, when the NIH announced a new, more competitive review process for applications, the message to researchers across the country was that if you want an NIH grant, you must prove to us that your research will exert a sustained and powerful influence in your field.

“The NIH used to evaluate research proposals on the basis of how well a study was designed and whether previously published data supported the need for additional research,” explained Dr. Partridge. “The changes that were announced in 2010 put the burden on scientists to show how likely it is that their research will have a major scientific impact. In addition, the NIH reduced the share of funding for basic science, allocated more money to clinical and translational studies, and put greater emphasis on funding multidisciplinary studies.”

Maintaining funding levels for bone research—and eventually expanding them—has long been a priority for NYUCD, both in terms of research and discovery and grant income. Dr. Partridge, whose research has been continuously funded by the NIH for over 20 years, lost no time in preparing NYUCD for the coming changes in funding, launching monthly meetings that brought together researchers from half a dozen departments to present updates, share ideas for strengthening grant applications, and
explore the kinds of multidisciplinary collaborations that would appeal to NIH reviewers.

Dr. Partridge also stepped up recruiting, hiring five new researchers for the basic science faculty—a move that brought the total number of NYUCD faculty involved in craniofacial and bone research at the start of the 2011–12 academic year to 16 in six departments, with over $16 million in combined grants. The addition of the new basic science faculty provided the foundation for expanded research activities and for the establishment of a Center for Skeletal and Craniofacial Biology.

**Specific Objectives**

Specific center objectives include:

- facilitating access to research facilities at NYUCD, thus enabling faculty members throughout the College to utilize resources such as the hard tissue imaging laboratory in the Department of Biomaterials and Biomimetics, and the flow cytometry core laboratory in the Department of Basic Science and Craniofacial Biology.

- developing new research facilities, such as a bone histology unit in the Department of Basic Science and Craniofacial Biology.

- applying for NIH funding to acquire new research instruments, such as a microCT scanner that will be managed by the Department of Orthodontics and shared by faculty from throughout NYUCD as well as from the NYU Langone Medical Center.

- identifying promising new areas for research and developing and critically reviewing new grant proposals to fund studies in these areas. Key to this effort will be the use of mock study sections that will meet with principal investigators prior to a grant submission to appraise their proposal and provide recommendations for strengthening it. The mock study sections will be staffed by faculty members acting as peer review experts who serve on real-world study sections that critically evaluate grant applications on behalf of the NIH.

- encouraging researchers to meet to discuss findings from pilot studies and to explore new alliances leading to the expansion of those studies into larger, more sophisticated multiyear grants involving several faculty members. The resulting increase in collaborative research is expected to lead to more high-quality, peer-reviewed faculty publications.

- sponsoring clinical trials leading to new treatments and patents.

- recruiting additional full-time faculty, as well as visiting scholars, researchers on sabbatical, and postdoctoral students.
Dr. Jean-Pierre Saint-Jeannet, formerly a professor of developmental biology at the University of Pennsylvania School of Veterinary Medicine, joined the center in January 2012 as a professor of basic science and craniofacial biology. Dr. Saint-Jeannet, who holds an MS degree in neuroscience and a PhD in developmental neurobiology from Université Paul Sabatier in France, brings to NYUCD a four-year, $2 million NIH grant to research proteins regulating embryonic development in frog oocytes, as well as mutations that may presage the development of craniofacial defects.

Dr. Saint-Jeannet’s research on neural crest cells that develop into facial bone, spinal and autonomic ganglia, and connective tissue around the brain and spinal cord will complement the work of Dr. Juhee Jeong, an assistant professor of basic science and craniofacial biology, who studies proteins that regulate early-stage development in mouse models. The two researchers are expected to develop a partnership leading to collaborative studies that provide a broader picture of early-stage craniofacial development.

The Center for Skeletal and Craniofacial Biology also includes Dr. Racquel Z. LeGeros, Linkow Professor of Implant Dentistry and professor and associate chair of the Department of Biomaterials and Biomimetics; Dr. Timothy Bromage, professor of biomaterials and biomimetics and of basic science and craniofacial biology; Dr. Cristina Teixeira, associate professor and interim chair of the Department of Orthodontics; Dr. John Evans, professor of basic science and craniofacial biology; Dr. Amr M. Moursi, associate professor and chair of the Department of Pediatric Dentistry; Dr. Mani Alikhani, assistant professor of orthodontics; Dr. John Ricci, associate professor of biomaterials and biomimetics; Dr. Paulo Coelho, assistant professor of biomaterials and biomimetics; Dr. Zoya Kurago, assistant professor of oral and maxillofacial pathology, radiology and medicine; Dr. Seiichi Yamano, assistant professor of prosthodontics; Dr. Shoshana Yakar, associate professor of basic science and craniofacial biology; Dr. Despina Sitara, assistant professor of basic science and craniofacial biology; Dr. Xin Li, assistant professor of basic science and craniofacial biology; and Dr. Rodrigo Viecilli, assistant professor of orthodontics.

The following NYU School of Medicine faculty are collaborating with the center: Dr. Bruce Cronstein, Esserman Professor of Medicine and professor of pathology and pharmacology; Dr. Thorsten Kirsch, professor of orthopaedic surgery, cell biology, and pharmacology, vice
chair for research in the Department of Orthopaedic Surgery, and director of the Musculoskeletal Research Center at the NYU Hospital for Joint Diseases; Dr. Stephen Honig, clinical associate professor of medicine and director of the Osteoporosis Center at the NYU Hospital for Joint Diseases; and Dr. Ann Danoff, associate professor and director of the Division of Endocrinology, Diabetes and Metabolism, NYU School of Medicine.

“The intellectual richness and scholarly diversity that these individuals bring to the center allow us to look forward to a period of remarkable research advances in the area of craniofacial bone biology,” says Dr. Partridge.
Sam Bae, ’12, Wins First Place in ADA/Dentsply Student Clinician Research Program, Basic Science Competition

Dr. Sam Bae, Class of 2012, was awarded first place in the basic science category of the 2011 American Dental Association/Dentsply Student Clinician Research Program at the ADA annual meeting in Las Vegas, Nevada. All US dental schools participate in this program, which was founded to encourage original clinical and basic science research, promote student membership in the ADA, and introduce students to dental society activities.

Dr. Bae received the award for his work on sensory neurons involved in cancer pain and carcinogenesis that is outlined in his poster entitled “Local Effect of IB4+ Neurons in Carcinogenesis and Pain.” Dr. Bae conducted his research under the tutelage of Dr. Brian Schmidt, director of the Bluestone Center for Clinical Research and professor of oral and maxillofacial surgery. Dr. Schmidt is an expert in cancer genomics and cancer pain.

The award marks the second time that Dr. Bae has been recognized for his investigation of cancer pain. In April 2011, he received a Dentsply Award at the NYU College of Dentistry’s annual Student Research Day competition which allowed him to enter the national ADA/Dentsply Student Clinician Research Program and to present his work at the Las Vegas competition.

Dr. Bae has conducted research since his first year as an NYU dental student. In 2009, he coauthored a presentation on staining characteristics of sports drinks on dentin and enamel with Dr. Calogero Dimaggio, Class of 2011. Dr. Bae and Dr. Dimaggio were mentored by Dr. Mark Wolff, associate dean for predoctoral clinical education and professor and chair of the Department of Cariology and Comprehensive Care, and by Dr. Timothy Bromage, professor of biomaterials and biomimetics and of basic science and craniofacial biology.
NYU Study Concludes That Dentists Could Screen 20 Million Americans for Chronic Physical Illnesses

AN OPPORTUNITY TO IDENTIFY DIABETES, HYPERTENSION, AND OTHER CHRONIC DISEASES

Nearly 20 million Americans annually visit a dentist but not a general healthcare provider, according to an NYU study published in the *American Journal of Public Health*.

The study, conducted by a nursing-dental research team at NYU, is the first of its kind to determine the proportion of Americans who are seen annually by a dentist but not by a general healthcare provider.

This finding suggests that dentists can play a crucial role as healthcare practitioners in the front-line defense of identifying systemic disease which would otherwise go undetected in a significant portion of the population.

"For these and other individuals, dental professionals are in a key position to assess and detect oral signs and symptoms of systemic health disorders that may otherwise go unnoticed, and to refer patients for follow-up care," said Dr. Sheila Strauss, an associate professor of nursing at the NYU College of Nursing and co-director of the Statistics and Data Management Core for NYU’s Colleges of Nursing and Dentistry.

During the course of a routine dental examination, dentists and dental hygienists, as trained healthcare providers, can take a patient’s health history, check blood pressure, and use direct clinical observation and X-rays to detect risk for systemic conditions, such as diabetes, hypertension, and heart disease.

The NYU research team examined the most recent available data, which came from a nationally representative subsample of 31,262 adults and children who participated in the Department of Health & Human Services 2008 annual National Health Interview Survey, a health status study of the US population, which at that time consisted of 304,375,942 individuals.

Physicians, nurses, nurse practitioners, and physician assistants were among those categorized as general healthcare providers for the purposes of the survey.

When extrapolated to the US population, 26 percent of children did not see a general healthcare provider. Yet over one-third of this group, representing nearly seven million children, did visit a dentist at least once during that year, according to survey results.

Among the adults, one quarter did not visit a general healthcare provider, yet almost a quarter—nearly 13 million Americans—did have at least one dental visit.

When combined, adults and children who had contact only with dentists represent nearly 20 million people.

Ninety-three percent of the children and 85 percent of the adults had some form of health insurance, suggesting that while many of those who did not interact with a general healthcare provider may have had access to general health care, they opted not to seek it.

Coauthors on the study included Dr. Michael C. Alfano, executive vice president of New York University and former dean of the NYU College of Dentistry; Dr. Donna Shelley, clinical associate professor of cariology and comprehensive care at the NYU College of Dentistry and clinical associate professor of medicine and associate director of research at the NYU Langone Medical Center Division of General Internal Medicine; and Dr. Terry Fulmer, dean of the Northeastern University Bouvé College of Health Sciences, and former professor and dean of the NYU College of Nursing.

This finding suggests that dentists can play a crucial role as healthcare practitioners in the front-line defense of identifying systemic disease which would otherwise go undetected in a significant portion of the population.
Professors Heyman and Slep are part of a growing trend among dentists trying to understand how psychological factors affect oral health, especially when it comes to cracking the code on the causes of early childhood caries.

Two studies underway at the College of Dentistry are exploring the effect of family dynamics on oral health. What does mental health have to do with dental health? Quite a bit, according to Richard Heyman, PhD, and Amy Smith Slep, PhD, psychologists who joined the College of Dentistry in July 2011. Professors Heyman and Slep, who co-direct the Family Translational Research Group within the Department of Cariology and Comprehensive Care, are part of a growing trend among dentists trying to understand how psychological factors affect oral health, especially when it comes to cracking the code on the causes of early childhood caries.

The College of Dentistry faculty has long included psychologists, such as Hillary Broder, PhD, who have tended to focus on teaching dental students to treat patients with sensitivity and to communicate effectively with them. Professor Broder’s research has focused on how dental care affects a patient’s quality of life.

According to Mark Wolff, DDS, PhD, professor and chair of the Department of Cariology and Comprehensive Care and associate dean for pre-doctoral clinical education at NYUCD, “There is a major change happening in our beliefs about the impact of psychological factors, both on patient behaviors and on the biology of oral health. We
need to ask how psychological events relate to tooth decay. For example, when we ask why someone doesn’t brush, we need to think about whether he or she suffers from depression.”

Many factors contribute to the intransigence of early childhood caries. They include lack of parental education or acceptance of caries as normal, lack of access to dental care, and poor insurance coverage. However, until now, family dynamics have not been explored systematically as a contributor to oral health. In early 2008, Professor Heyman was contacted by a program officer at the National Institute for Dental and Craniofacial Research (NIDCR), part of the National Institutes of Health (NIH), because the agency was seeking to fund novel approaches to improving oral health. Professors Heyman and Slep, who research couples in conflict, immediately wondered whether it would be possible to find out whether conflict was affecting their research subjects’ oral health.

Research had already shown that couples’ conflict can lead to increases in blood pressure, lower immunological functioning, and slower wound healing. Professors Heyman, Slep, and their group had collected data on how family and environmental factors affect children’s and adults’ physical and psychological health. It wasn’t a stretch to ask whether these factors would also impact oral health, yet no one had researched this question. Seeking an oral health collaborator, Professors Heyman and Slep approached Associate Dean Wolff, and the team was awarded an NIH grant of $1 million, in 2009, to conduct a study.

Many factors contribute to the intransigence of early childhood caries. They include lack of parental education or acceptance of caries as normal, lack of access to dental care, and poor insurance coverage. However, until now, family dynamics have not been explored systematically as a contributor to oral health.
The team collected data on nearly 150 families, taking blood and saliva samples, conducting physical exams, and administering questionnaires. In September 2011, they were ready to present preliminary data to the NIDCR Council. The researchers found that the more verbal or physical aggression that occurred between parents, the more oral health problems occurred in the child. The question was, Why?

“There are two hypotheses about how oral health is affected by parental discord,” Professor Heyman says. “First, lax supervision of children, as an outgrowth of discord, directly impacts children eating sugary cereals and beverages, and not brushing. The second is a biological response. There is strong research showing that family conflict and stress affect the immune system.”

Lax parenting may be an even stronger influence on tooth decay than violent behavior,” says Associate Dean Wolff. "Allowing children to eat sugary food is something seen even among well-educated people. We have to understand the psychological causation of tooth decay to prevent it. A simple lecture on brushing isn’t going to improve things. You have to change parenting behaviors.”

Now, Professor Heyman and Slep’s group, together with Associate Dean Wolff and NYUCD’s Dr. Ananda Dasanayake, professor of epidemiology and health promotion, are turning their findings into action, developing an intervention for couples where discord may impact the oral health of their very young children.

“The birth of a new baby is a good time to intervene with families because past research has shown that’s when they are most open to changes in their couple relationship,” Professor Heyman says. “Couples realize that a baby can put a strain on their relationship. The aim of the intervention is to lower risk factors and get messages out on good preventive health care.”

The NIDCR awarded the team a clinical trial planning grant to adapt and test an intervention that has been shown to help couples develop healthier relationships with each other and with their children. The intervention was developed in Australia and is currently being tested by the team. NYUCD researchers want to find out whether this intervention can also produce improvements in physical and oral health.

Up to 30 families are being recruited from maternity wards at Bellevue Hospital Center and Stony Brook University Hospital. The researchers are seeking families whose newborn children are already considered at high risk for poor oral health due to low family incomes, parents who have no more than a high school education, and at least one non-European-American parent. Couples who participate will watch DVD segments on conflict resolution and healthy parenting. They also will be assigned a coach, who will check in and help them improve their conflict-resolution and parenting skills. And they will complete a workbook that reinforces those messages with exercises.

This project is the first to intervene with new parents on multiple levels to prevent childhood caries. The aim is that, by improving noxious family environments, instilling daily oral health-promoting behaviors in children, and encouraging parents to bring the child to regular dental checkups, the children’s early oral health will be demonstrably better than is typical.

The couples’ intervention takes place over eight sessions, timed to intersect with the developmental
stages of their infant, from 3 to 12 months. This timing covers the period of tooth eruption and transition to recommended dental visits. It also covers both the newborn and toddler periods and allows families breaks between sessions and time to review material and solidify their skills. To examine the impact on oral health, dental exams will be performed on the children at 15 months. Researchers will look directly for early childhood caries as well as contributing factors such as bacteria and saliva hormones related to stress.

—Barbara Kancelbaum

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DR. MICHAEL LORBER SEEKS CLUES TO CHILDHOOD ANGER AND AGGRESSION

Understanding the earliest origins of child development is the focus of Dr. Michael Lorber, a recently appointed research scientist in the Department of Cariology and Comprehensive Care.

Dr. Lorber was previously a member of a team, based at the University of Minnesota, conducting a 30-year study of development from infancy through adulthood and how people respond to unsupportive environments, both behaviorally and physically. He is particularly interested in charting the early development of aggressive and defiant behaviors among children.

The results of Dr. Lorber’s study with the Minnesota team (Dr. Byron Egeland is a coauthor) show that negative parenting toward infants at three and six months of age, compared with infant temperament, was a stronger predictor of child anger and maternal hostility at 24 and 42 months, and eventually of conduct problems at school entry (such as physical aggression, defiance, explosive behavior). Dr. Lorber’s team observed more than 260 mothers and their children while the mothers fed their children as infants and taught them challenging tasks in toddlerhood, recording levels of negative and positive parenting, as well as child anger. Difficult infant behavior was measured via observations in the neonatal period and via maternal report at three and six months.

With the information garnered from this study, Dr. Lorber hopes to develop interventions to break the cycle of hostility very early on.

Dr. Lorber is working with Drs. Amy Smith Slep and Richard E. Heyman, professors of family translational research in the Department of Cariology and Comprehensive Care, to fine-tune interventions to prevent violence and improve family dynamics among high-risk couples, with the aim of improving mental, physical, and oral health. These interventions will be tested in an upcoming randomized controlled trial of a multi-component intervention to prevent early childhood caries. To view an interview with Dr. Lorber on this subject, go to http://watch.ctv.ca/news/#clip556648

—Barbara Kancelbaum
Study Finds That Blood from Periodontal Disease Can be Used to Screen for Diabetes

**ORAL BLOOD TEST COMPARES WELL TO FINGER-STICK SAMPLES**

Oral blood samples drawn from deep pockets of periodontal inflammation can be used to measure hemoglobin A1c, an important gauge of a patient’s diabetes status, an NYU nursing-dental research team has found. Hemoglobin A1c blood glucose measures from oral blood compare well to those from finger-stick blood, the researchers say. The findings are from a study funded by an NYU CTSI (Clinical and Translational Science Institute) grant awarded to the research team last year.

Hemoglobin A1c is widely used to test for diabetes. According to guidelines established by the American Diabetes Association, an A1c reading of 6.5 or more indicates a value in the diabetes range.

The NYU researchers compared hemoglobin A1c levels in paired samples of oral and finger-stick blood taken from 75 patients with periodontal disease at the NYU College of Dentistry. A reading of 6.3 or greater in the oral sample corresponded to a finger-stick reading of 6.5 in identifying the diabetes range, with minimal false positive and false negative results. The findings were published in November 2011 in the *Journal of Periodontology*.

“In light of these findings, the dental visit could be a useful opportunity to conduct an initial diabetes screening—an important first step in identifying those patients who need further testing to determine their diabetes status,” said the study’s principal investigator, Dr. Shiela Strauss, associate professor of nursing and co-director of the Statistics and Data Management Core for NYU’s Colleges of Nursing and Dentistry.

Dr. Strauss added that some patients may find the oral blood sampling in a dentist’s office to be less invasive than finger-stick sampling.

The one-year study utilized a version of a hemoglobin A1c testing kit that was initially developed specifically to enable dentists and dental hygienists to collect finger-stick blood samples and send them to a laboratory for analysis. The testing kit was adapted to enable analysis of both oral blood and finger-stick samples. Dr. Strauss points out that the hemoglobin A1c testing method requires only a single drop of blood to be collected, applied to a special blood collection card, and
In the January 2012 issue of the International Journal of Dental Hygiene (http://onlinelibrary.wiley.com/doi/10.1111/j.1601-5037.2011.00542.x/abstract) reported on an NYU nursing-dental study that found that periodontal patients and dental providers consider the dental visit an opportune occasion for a diabetes screening and generally prefer gingival crevicular blood over finger-stick blood collection for diabetes screening.

The study, led by Dr. Mary Rosedale (far right), assistant professor of nursing, surveyed 120 patients in the NYUCD periodontal program, and conducted in-depth interviews with nine patients, a nurse practitioner, and eight dental providers to assess if oral blood samples drawn from deep pockets of periodontal inflammation can be used to measure hemoglobin A1c, an important gauge of a patient’s diabetes status.

Dr. Rosedale’s co-investigator on the study was Dr. Shielia Strauss, associate professor of nursing at the NYU College of Nursing and co-director of the Statistics and Data Management Core for NYU’s Colleges of Nursing and Dentistry.

International Journal of Dental Hygiene Article Reports on NYU Study Findings That Patients and Dental Providers Respond Well to Diabetes Screening at Dental Visits

An article published online in the January 2012 issue of the International Journal of Dental Hygiene reported on an NYU nursing-dental study that found that periodontal patients and dental providers consider the dental visit an opportune occasion for a diabetes screening and generally prefer gingival crevicular blood over finger-stick blood collection for diabetes screening.
DR. STEVEN P. ENGBRETSON, a national and international authority in the areas of periodontology and implant dentistry, has been appointed the new chair of the Ashman Department of Periodontology and Implant Dentistry.

Dr. Engebretson comes to NYUCD from the School of Dental Medicine at Stony Brook University, where he served as associate professor of periodontology and implant dentistry since 2008. An expert in the area of diabetes and oral health, Dr. Engebretson earned his dental degree at Harvard University after receiving a BA from New York University. He also holds an MS degree in periodontics from Columbia University and an MS degree in biostatistics focusing on patient-oriented research from the Mailman School of Public Health at Columbia University. He is the founder of KT Therapeutics, LLC, and OraDelivery, LLC, privately held biotechnology companies, and is a prolific author and lecturer.
Mr. John D. McIntosh has been appointed senior director of clinical revenue cycle management and financial operations. Prior to joining the College, he held several senior financial positions at TIAA-CREF, including director of enterprise interpretation, director of financial operations, and director of institutional service plan conversions and corporate data management. Mr. McIntosh will provide leadership to NYUCD’s Total Quality Improvement initiative—which aims to simplify business processes and improve the student and patient experience—and will manage and oversee clinical billing, accounts receivable, cash accounting, bank reconciliation, and clinical financial statements. Mr. McIntosh earned an MPA degree with a concentration in finance and management from Columbia University.

Ms. Rhonda Alphonso, previously director of administration for the New York Structural Biology Center, has been appointed assistant director of grants administration and business operations. Ms. Alphonso earned a master’s degree in nonprofit management from the Robert J. Milano Graduate School of Management and Urban Policy of the New School University.
**MS. LISA COX** has been appointed a clinical instructor in dental hygiene. Ms. Cox earned a degree in dental hygiene from St. Clair College in Canada, and an MPH degree from A.T. Still University’s Arizona School of Dentistry & Oral Health.

**DR. ANN C. ECKARDT ERLANGER** has been appointed an assistant research scientist in cariology and comprehensive care. Dr. Erlanger earned MS and PhD degrees in school-community psychology from Hofstra University.

**DR. ERIN GROSS** has been appointed a clinical assistant professor of pediatric dentistry. Dr. Gross earned a DDS degree and a PhD in oral biology from Ohio State University College of Dentistry, and a certificate in pediatric dentistry from Ohio State University College of Dentistry and Nationwide Children’s Hospital.

**MS. HOLLY HARPER**, formerly a clinical instructor in dental hygiene at Phoenix College, has been appointed a clinical instructor in dental hygiene. Ms. Harper earned a master’s degree in education from Northern Arizona University.

**DR. RICHARD E. HEYMAN**, formerly a research professor of psychology at Stony Brook University, has been appointed a professor of family translational research in the Department of Cariology and Comprehensive care and a co-director of the Family Translational Research Group. Dr. Heyman earned MS and PhD degrees in clinical psychology from the University of Oregon.
**MS. ALISON KURTZ** has been appointed assistant director of global outreach programs in the Office of International Initiatives and Development. Ms. Kurtz was previously a case manager at the law firm Milberg LLP. She holds an MPH degree with a concentration in health policy and management from Hunter College.

**DR. KERRY MAKIN-BYRD** has been appointed an assistant research scientist in the Department of Cariology and Comprehensive Care. Dr. Makin-Byrd earned an MS in psychology and a PhD in clinical psychology from Pennsylvania State University.

**DR. MATTHEW MALEK,** ’09, and PG Endodontics ’11, has been appointed a clinical assistant professor of endodontics. Dr. Malek earned a dental degree from Azad University College of Dentistry in Iran, and served as director of the National Iranian Steel Company dental clinic.

**DR. DANIELLE MITNICK** has been appointed an assistant research scientist in the Department of Cariology and Comprehensive Care. Dr. Mitnick earned MA and PhD degrees in clinical psychology from Stony Brook University.

**MS. MARY D. OLIVERA,** formerly a central sterile materials manager at the NYU Langone Medical Center, has been appointed director of instrumentation and sterilization. Ms. Olivera earned an MS degree in healthcare administration from Iona College and a certification in healthcare leadership, a fellowship in central sterilization, and a registered central service technician certificate from the International Association of Healthcare and Materials Management.
DR. JEAN-PIERRE SAINT-JEANNET, formerly a professor of cell and developmental biology at the University of Pennsylvania Perelman School of Medicine, and a professor of animal biology at the University of Pennsylvania School of Veterinary Medicine, has been appointed a professor of basic science and craniofacial biology. Dr. Saint-Jeannet earned an MS in neuroscience and a PhD in developmental neurobiology from Université Paul Sabatier in France.

MR. JOSE SANTIAGO, formerly a training manager for the U.S. Army Dental Corps detachment at Fort Dix, New Jersey, has been appointed a clinic manager.

DR. AMY M. SMITH SLEP, formerly a research professor of psychology at Stony Brook University, has been appointed a professor of family translational research in the Department of Cariology and Comprehensive care and a co-director of the Family Translational Research Group. Dr. Smith Slep earned an MA and a PhD in clinical psychology from Stony Brook University.

DR. NICK M. TOVAR has been appointed an assistant research scientist in biomaterials and biomimetics. Dr. Tovar earned a PhD in biomedical engineering from Rutgers University/University of Medicine and Dentistry of New Jersey.

MS. QUEEN WALKER, formerly an administrator in a private dental practice in New York City, has been appointed a clinic manager. Ms. Walker earned a master’s degree in public policy and administration from Metropolitan College of New York, and a certificate in dental assisting from Columbia University School of Dental Medicine.
DR. YINGJIE WU, formerly a research associate professor in the Division of Endocrinology, Diabetes and Bone Disease at the Mount Sinai School of Medicine, has been appointed a research scientist in the Department of Basic Science and Craniofacial Biology. Dr. Wu earned an MS in biochemistry from Shenyang Agricultural University in China and a PhD in molecular biology and biochemistry from Beijing Agricultural University.

DR. SHOSHANA YAKAR, formerly an associate professor of endocrinology, diabetes and bone disease at the Mount Sinai School of Medicine, has been appointed an associate professor of basic science and craniofacial biology. Dr. Yakar earned an MSc in botany and a PhD in genetics from Tel Aviv University.

Congratulations also to:

DR. TUNDO O. AKINYEKE, JR., has been appointed an assistant research scientist in basic science and craniofacial biology. Dr. Akineyeke earned a PhD in biomedical sciences and cancer biology from Meharry Medical College.

DR. MICHAEL F. LORBER, formerly a research scientist at Stony Brook University, has been appointed a research scientist in the Department of Cariology and Comprehensive Care. Dr. Lorber earned an MA in psychology and a PhD in clinical psychology from Stony Brook University.

DR. JOHN P. NELSON, formerly a consultant and senior research scientist in the Family Translational Research Group at Stony Brook University, has been appointed a senior research scientist in the Department of Cariology and Comprehensive Care. Dr. Nelson earned a master’s degree in social work from Louisiana State University and a PhD in social work from the University of Minnesota.

MS. JOYCE RABEL, formerly a supervisor for the U.S. Postal Service, has been appointed a group practice clinic manager for Dr. Eric Studley and Associates.
Promoting our Own

**DR. ANDREA SCHREIBER**, clinical professor and vice chair of the Department of Oral and Maxillofacial Surgery, has been appointed associate dean for postgraduate and graduate programs at NYUCD, effective July 1, 2012. Andrea received her bachelor’s degree from Barnard College, Columbia University, and her DMD from the Harvard School of Dental Medicine. She completed a general practice residency at Columbia-Presbyterian Medical Center and her oral and maxillofacial surgery training at New York University-Bellevue Hospital Center. Andrea has served for over a decade as a consultant to the Commission on Dental Accreditation for Postdoctoral Programs. She is a Diplomate of the American Board of Oral and Maxillofacial Surgery, and, among other scholarly accomplishments, has authored several book chapters in the areas of perioperative patient management, autoimmune disease, salivary gland disease, and geriatrics.

**MS. KATHRYN AIYEKU**, formerly senior clinic manager for data integrity, has been promoted to assistant director of clinical operations.

**MS. MARION ASA FU-ADJAYE**, formerly a patient services representative, has been promoted to clinic manager.
MS. MADIHA BHATTI, formerly assistant director of student affairs, has been promoted to director of student affairs.

DR. NELSON DA SILVA, formerly an assistant professor of prosthodontics, has been promoted to associate professor of prosthodontics.

DR. KENNETH FLEISHER, formerly a clinical assistant professor of oral and maxillofacial surgery, has been promoted to clinical associate professor of oral and maxillofacial surgery.

MS. LINDA FRIERSON, formerly a clinic manager, has been promoted to supply manager.

MR. WAYNE GREEN, formerly a billing specialist, has been promoted to clinic manager.
**MS. DEBRA HENRY**, formerly a lead patient services representative, has been promoted to clinic manager.

**MR. STEVEN M. KAHN**, senior financial analyst in the Office of Finance and Administration and former interim director of financial management and business operations, has been promoted to director of business support systems and research administration. Steve will retain his responsibilities as senior financial analyst and will have a matrix reporting structure to the Office of Research.

**DR. MARCI H. LEVINE**, formerly an instructor in oral and maxillofacial surgery, has been promoted to assistant professor of oral and maxillofacial surgery.

**MS. FREDELYNE PARIS**, formerly a senior clinic manager, has been promoted to senior clinic operations training manager.
**Dr. Steven J. Resnick**, formerly a part-time clinical associate professor of cariology and comprehensive care, has been promoted to full-time clinical associate professor of cariology and comprehensive care and group practice director.

**Ms. Topaz Murray**, formerly an assistant clinic manager, has been promoted to clinic manager.

**Mr. Seth Yaboah**, formerly a patient services representative, has been promoted to clinic manager.

**Dr. Yu Zhang**, formerly an assistant professor of biomaterials and biomimetics, has been promoted to associate professor of biomaterials and biomimetics.

Congratulations also to:

**Dr. Maurice L. Edwards**, formerly a part-time clinical assistant professor of oral and maxillofacial surgery, has been promoted to full-time clinical assistant professor of oral and maxillofacial surgery.
For the third consecutive year, NYUCD hosted the New York State Global Health Forum, an initiative cosponsored by The Associated Medical Schools of New York and The New York State Academic Dental Centers.

The daylong event, held in December, brought together nearly 100 faculty, staff, and students from medical schools, dental schools, affiliate nursing schools, and public health schools throughout New York State to focus on utilizing emerging information and communications technologies to improve global health.

Dr. Robert Berne, NYU’s executive vice president for health, welcomed the guests. Featured speakers included Dean Bertolami and Dr. Michael P. O’Connor, vice dean for finance and administration, along with faculty members from Weill Medical College, Mount Sinai School of Medicine, Columbia University Medical Center, NYU College of Nursing, and NYU School of Medicine. As in previous years, Dr. O’Connor was a key organizer of the forum.
In September 2011, as part of the second United Nations Summit on health—the High-level Meeting of the General Assembly on the Prevention and Control of Non-Communicable Diseases—the UN held a side event on oral health at the NYU College of Dentistry.

Entitled “Putting Teeth into NCDs: Encouraging Priority Actions for Non-Communicable Diseases,” the event featured H.E. Jakaya Mirisho Kikwete, president of the United Republic of Tanzania (whose daughter is a dentist) and Ali Velshi, a CNN anchor and chief business correspondent for the network.

NYUCD’s associate dean for academic affairs, Dr. Andrew I. Spielman, introduced President Kikwete, who stated in his opening address that “Often, oral health issues are overlooked…at the national and global stage; it is a sad reality that…oral health is not seriously recognized as a public health concern and deserving of serious attention.”
Around the World with NYUCD’s International Education Programs

ROYAL COLLEGE OF SURGEONS IN IRELAND CHOSES NYUCD AS SOLE NORTH AMERICAN SITE FOR ANNUAL EXAMINATIONS

The Royal College of Surgeons in Ireland (RCSI) has chosen NYUCD as the sole North American site for its annual membership examinations. NYUCD is the only institution in North America with an accredited three-year RCSI oral surgery program designed for internationally trained dentists who seek to improve their clinical skills and to practice outside of the United States. Other RCSI testing centers are located in Europe, Asia, and the Middle East.

“The establishment of a testing center at NYUCD offers candidates for membership both greater convenience and the opportunity to combine exam-taking with other professional activities in New York, such as attending continuing education courses,” said Dr. Brendan O’Connor, a clinical assistant professor of oral and maxillofacial surgery and an RCSI clinical examiner.

TAIWANESE ALUMNI EXPAND REACH

In January 2012, the NYUCD Taiwanese Study Club held its first meeting in conjunction with the Taipei Congress of Oral Implantologists. Dr. Jung Tyng Hsu, a 2003 graduate of the Advanced Program for International Dentists in Implant Dentistry, and a past president of the Taiwan Congress of Oral Implantologists, presented a lecture on implant placement in the sinus area, and Dr. Grace Su, clinical associate professor of cariology and comprehensive care, presented an update on the Advanced Programs for International Dentists.

NYUCD PROFESSOR PRESENTS AT CHINA’S LARGEST DENTAL MEETING

In October 2011, Dr. Yon Lai, a clinical professor in the Advanced Program in Orthodontics for International Dentists, presented “Trends in Orthodontics: Have We Learned Anything Lately,” at China’s largest dental meeting, DenTech China. Dr. Lai is the first NYUCD orthodontics faculty member to present at the meeting, held annually in Shanghai.
NYUCD FACULTY INVITED TO PRESENT IN ABU DHABI

Dentists from the Middle East and North Africa have long been active in NYUCD’s Advanced Programs for International Dentists. More than a quarter of the 129 students currently enrolled in the programs come from that region. At the invitation of its Middle Eastern alumni, NYUCD faculty who teach in the Advanced Programs for International Dentists were asked to present a series of lectures in Abu Dhabi, the capital of the United Arab Emirates, in fall 2011.

Dr. Paul A. Rosenberg, professor and chair of the Quartararo Department of Endodontics and director of the Advanced Program in Endodontics for International Dentists, spoke at New York University’s Abu Dhabi campus. Dr. Rosenberg presented a seminar entitled “Endodontic Pain: Biologic Causes and Preventive Strategies.” More than 200 dentists from the Middle East attended Dr. Rosenberg’s presentations.

Three faculty members also participated in the First International Dental Conference at Al Noor Hospital in Abu Dhabi. They were Dr. Lupo Villega (esthetic dentistry) Dr. Vera Tang (implant dentistry and periodontics), and Dr. Roque Braz De Oliveira (implant dentistry and periodontics).

28 COUNTRIES REPRESENTED AT 2011 INTERNATIONAL PROGRAMS GRADUATION

One hundred and thirteen students from 28 countries graduated from the Advanced Programs for International Dentists in 2011. Among the graduates wearing traditional costumes were Dr. Makiko Suzuki of Japan, Dr. Samia Albazde of Libya, and Dr. Mariko Tsutsui of Japan.

Far right, Dr. Makiko Suzuki, esthetic dentistry program (center), with Dean Bertolani and Dr. Steven David
Near right, Dr. Samia Albazde, interdisciplinary dentistry, holding certificate, with, from left, Dean Bertolani, Dr. Richard Trushkowsky, and Dr. Anabella Oquendo
program graduates conducted during the 2009–2010 academic year under the guidance of Dr. Ralph V. Katz, professor and chairman of the Department of Epidemiology and Health Promotion.

Dr. Brar and his colleagues conducted a literature review entitled “Use of Ayurvedic Diagnostic Criteria in Ayurvedic Clinical Trials,” which was performed to evaluate whether or not Ayurvedic diagnostic criteria or Western medical diagnostic criteria had been used in published Ayurvedic clinical trials. The study has been accepted for publication by the Journal of Alternative and Complementary Medicine.

“The rationale for the study,” says Dr. Brar, “is that Ayurveda, as an ancient system of medicine, follows its own principles to diagnose and assign treatment to patients, principles which are entirely different from those used in conventional Western medicine. Accordingly, the use of Western medical diagnostic criteria in Ayurvedic clinical trials would raise methodological concerns about the possible—if not likely—misclassification of subjects for proposed Ayurvedic treatment regimens and call into question the validity of the findings of the Ayurvedic clinical trials.”

The study identified a total of 45 Ayurvedic clinical trials published between 1980 and 2009. Analysis revealed that not one of the 45 studies reported “only-and-full” use of the full spectrum of Ayurvedic diagnostic criteria. In fact, 29 percent of the articles used only Western medical diagnostic criteria. Only 25 percent of the articles reported use of at least one Ayurvedic diagnostic term. Rarely were more than two Ayurvedic diagnostic criteria reported.

“In short,” says Dr. Brar, “we found evidence that the clinical trials designed to test the effectiveness of Ayurvedic interventions did not use Ayurvedic diagnostic criteria in those trials. When published, the study’s findings are certain to add to the debate concerning the use of Ayurvedic diagnostic criteria in Ayurvedic clinical trials.”

“Ayurveda, as an ancient system of medicine, follows its own principles to diagnose and assign treatment to patients, principles which are entirely different from those used in conventional Western medicine.”
Four Brazilian scientists are conducting research at NYUCD as visiting scholars for the 2011–2012 academic year. All four come to NYUCD with grants from foundations associated with the Brazilian government that assist postdoctoral researchers and PhD candidates studying abroad.

**Dr. Rodolfo Bruniera Anchieta,** a PhD candidate in prosthodontics at São Paulo State University Araçatuba School of Dentistry, is conducting research on surface treatment, ossoeintegration, and biomechanics of dental implants, under the guidance of Dr. Paulo G. Coelho, assistant professor of biomaterials and biomimetics. Dr. Anchieta earned a DDS degree and an MS in prosthodontics from the Araçatuba School of Dentistry. Dr. Anchieta’s research is supported by FAPESP, the São Paulo State Foundation for the Support of Research.

**Dr. Lucas Silveira Machado,** a PhD candidate in dentistry, and **Dr. Fernando Pozzi Semeghini Guastaldi,** a PhD candidate in oral and maxillofacial surgery, both at São Paulo State University Araçatuba School of Dentistry, are also being mentored by Dr. Coelho.

Dr. Machado is conducting research on surface treatment, ossoeintegration, and biomechanics of dental implants. He earned a DDS degree from the Ribeirão Preto University School of Dentistry and an MS in dentistry from the Araçatuba School of Dentistry. Dr. Machado’s research is also supported by FAPESP.

Dr. Guastaldi is conducting research on implant bone grafting materials. He earned a DDS degree from the Ribeirão Preto University School of Dentistry and an MS in oral and maxillofacial surgery from the Araçatuba School of Dentistry. His research is supported by CAPES, the Foundation for Coordinating Improvement of Higher Level Personnel.

**Dr. Daniel Galera Bernabe,** a postdoctoral research fellow from the São Paulo State University Araçatuba School of Dentistry’s Immunopharmacology and Oral Oncology Center Laboratory, is working in the laboratory of Dr. Brian Schmidt, professor of oral and maxillofacial surgery and director of the Bluestone Center for Clinical Research. Dr. Bernabe’s research focuses on examining the relationship between oral cancer, anxiety, and pain. Dr. Bernabe earned a DDS degree and MS and PhD degrees in oral medicine from the Araçatuba School of Dentistry, and completed a residency in oral and maxillofacial surgery at the Clinics Hospital of São Paulo University. His work in Dr. Schmidt’s laboratory was initially supported by FAPESP and is now being funded by NYUCD.
The National Institute of Allergy & Infectious Diseases, part of the National Institutes of Health, has awarded a joint, five-year, $3.2 million grant to the NYU College of Dentistry and the University of Medicine and Dentistry of New Jersey (UMDNJ) to conduct the first study to evaluate whether gp340, a protein found in saliva and other mucosal secretions, can prevent HIV transmission in vivo. The study is being led by Dr. Daniel Malamud, professor of basic science and craniofacial biology and director of the HIV/AIDS Research Program at the NYU College of Dentistry, and Dr. Min Lu, professor of microbiology and molecular genetics at the Public Health Research Institute Center of the UMDNJ-New Jersey Medical School. Dr. Malamud will generate the gp340 molecules and smaller fragments of the molecule for laboratory analysis, and Dr. Lu will analyze the biophysical interactions of these proteins with HIV.

Dr. Malamud’s research on the antiviral
Activity of gp340 and other human salivary proteins has been funded by the NIH for over 25 years. Although it has been established that salivary proteins can protect against the HIV virus, the mechanisms by which the proteins offer protection are not fully understood.

Gp340 was shown to inhibit HIV transmission in earlier in vitro research. Dr. Malamud and Dr. Lu will evaluate gp340 antiviral activity in mice that have had their immune systems replaced with an implanted human immune system—an experimental model developed by Dr. Victor Garcia-Martinez, professor of medicine at the University of North Carolina School of Medicine and a co-investigator on the study.

The researchers will inject the mice’s salivary glands with a vector carrying a gene that produces the portion of gp340 that has been identified as inhibiting HIV infection. Once the mice have secreted the gp340 fragments in their saliva, the investigators will inject HIV into the oral cavity. They will also inject a second group of mice that has not been injected with the gp340 gene with HIV and will compare the two groups to determine whether gp340 protected the first group from infection.

The study will also analyze the impact of gp340 on HIV transmission in the mouse female reproductive tract. Previous in vitro research has suggested that gp340 on the surface of cells in the reproductive tract may enhance HIV infection by binding HIV to vaginal cells. The researchers plan to assess whether introducing soluble gp340 into the female reproductive tract would override the binding of surface cells to HIV and reduce HIV infection.

Findings from the study could help in the development of new antiviral drugs to protect against HIV.

In addition to Dr. Garcia-Martinez, co-investigators on the study include Dr. William Abrams, research professor in the department of basic science and craniofacial biology, and Ms. Cheryl Barber, a research scientist in the department of basic science and craniofacial biology, both at the NYU College of Dentistry.

Although it has been established that salivary proteins can protect against the HIV virus, the mechanisms by which the proteins offer protection are not fully understood.
NYUCD Names Elliott M. Moskowitz Orthodontic Wing in Recognition of $1.2 Million Gift, Moskowitz “Give a Smile” Fund Also Created

NYUCD has named the Elliott M. Moskowitz Orthodontic Wing in recognition of a $1.2 million gift from Dr. Moskowitz, an alumnus of the NYU College of Dentistry and an internationally respected orthodontist, researcher, author, and editor for over 40 years. NYUCD has also created the Elliott M. Moskowitz “Give a Smile” Fund, which will build on Dr. Moskowitz’s gift to secure the additional resources required for construction and renovation.

A long-time faculty member of the NYU Department of Orthodontics and a distinguished alumni leader, Dr. Moskowitz has served both as president of the NYU Dental Alumni Association and the NYU Orthodontic Alumni Society.

According to Dr. Moskowitz, “The past several years have seen immense strides by the NYU Department of Orthodontics in education, research, and patient care, including the creation of the Consortium for Translational Orthodontic Research, or CTO, which functions as a nucleus for the integration of basic science, clinical science, and industrial resources in the field of orthodontics. The department has also expanded...
the scope of its community services, which each year includes care for thousands of medically indigent youngsters and adolescents suffering from a wide range of orthodontic conditions. Excitement and enthusiasm among faculty and alumni have never been greater; facilities, however, have not kept pace with these advances. I made my gift in order to give something meaningful back to my department; for me that means providing the seed money to build physical facilities that are commensurate with the department’s increasingly visible role in the profession and the community.”

Said Dr. Charles N. Bertolami, Dean of the NYU College of Dentistry, “Dr. Moskowitz’s great generosity testifies both to his extraordinary devotion to his alma mater and the future of his specialty area. His decision to contribute in such an extraordinarily generous way demonstrates tangibly to pre- and postdoctoral students how integral giving back to society is to the privilege of being a professional. We are honored to name the Elliott M. Moskowitz Orthodontic Wing in recognition of his thoughtful and generous gift and hopeful that others will join him in helping to transform a 20th century clinical and research environment to reflect 21st century technology, design, and function.”

For more information on the Elliott M. Moskowitz “Give a Smile” Fund, please call 212.998.9920.

“Over and over again, our alumni and friends demonstrate their belief in NYUCD’s vision for the future by making the College a philanthropic priority,” said Dean Bertolami, adding: “Our gratitude to them is boundless.”
Severe early childhood caries can destroy most of a child’s teeth by age three, and disproportionately affects underserved populations, including American Indians and Alaskan natives. Although the link between Lactobacilli bacteria (Lb) and severe early childhood caries has been known for almost a century, progress in delineating which of 140 Lb species are responsible for the disease has remained elusive.

The recent development of whole genome sequencing has made it much easier to identify destructive bacteria. Now, an NYU dental research team has received a four-year, $2.2 million grant from the National Institute of Dental and Craniofacial Research (NIDCR), part of the National Institutes of Health (NIH), to use whole genome sequencing to identify those strains of Lb that contribute to the development of severe early childhood caries.

The study’s principal investigators, Dr. Page W. Caufield, professor of cariology and comprehensive care, and Dr. Yihong Li, professor of basic science and craniofacial biology, will analyze several hundred bacteria samples from children with severe early childhood caries and their parents, and from caries-free children and their parents. Sampling and collection will take place at Bellevue Hospital Center in New York.

Sequencing will be conducted by co-investigators at
University College in Ireland and at the Wellcome Trust Sanger Institute in the United Kingdom. Drs. Caufield and Li will collaborate with experts on bacterial genome evolution at the American Museum of Natural History to identify sequences common to children with severe early childhood caries and to their parents.

Earlier research led by Drs. Caufield and Li identified virulent strains of *Streptococcus mutans*, another group of bacteria commonly associated with severe early childhood caries. Dr. Caufield, a microbiologist and infectious disease specialist, and Dr. Li, a molecular epidemiologist, demonstrated that these bacteria are transmitted from mother to infant during intimate contact.

“The findings from our new study, as well as the earlier research on *Streptococcus mutans*, will help propel the development of a diagnostic test that dentists can administer chairside to identify those at risk,” said Dr. Caufield.

“Severe early childhood caries is one of the most prevalent chronic diseases in underprivileged populations,” added Dr. Li. “Much still needs to be learned about how the disease develops, and how it can be prevented. Our study will help to fill those gaps.”

Co-investigators on the Lb study include Dr. Silvia Argimón, research scientist in cariology and comprehensive care; Dr. Charles Larsen, clinical assistant professor of pediatric dentistry; Dr. Untray T. Brown, clinical associate professor of pediatric dentistry; Dr. Robert Norman, research associate professor of epidemiology and health promotion; and Dr. Peter Catapano, Jr., clinical associate professor of pediatric dentistry, all of the NYU College of Dentistry. Dr. Catapano is also a clinical associate professor of pediatrics at the NYU School of Medicine and director of the pediatric dental clinic at Bellevue Hospital Center.

Additional co-investigators include Dr. Paul O’Toole, senior scientist at University College, Ireland; Dr. Julian Parkhill, senior scientist at the Wellcome Trust Sanger Institute; Dr. Rob DeSalle, curator of the Sackler Institute for Comparative Genomics of the American Museum of Natural History; and Dr. Paul J. Planet, a research associate at the American Museum of Natural History and a fellow in the pediatric infectious disease division of the Columbia College of Physicians and Surgeons Children’s Hospital of New York.

Drs. Caufield and Li are also focusing on how severe early childhood caries affects children living on American Indian reservations. They are participating in a series of outreaches to Indian reservations, under the auspices of the American Dental Association, and will incorporate their observations into the NIH study.
NYU College of Dentistry has been selected as one of five institutions that are sharing a $20.7 million grant from the National Institute of Dental and Craniofacial Research (NIH) to the Forsyth Institute to find new ways to diagnose and fight periodontal disease. As the recipient of a $1.8 million subcontract, NYUCD will screen research subjects and collect biological samples that will contribute to the overall project, “Biomarkers of Periodontal Disease Progression.”

This major, five-year project, involving 500 subjects across all sites, explores periodontal disease from the microbiological, genetic, and immunological perspectives. The goals are to expand the use of biomarkers to understand why people develop periodontal disease, under which circumstances the disease is most likely to progress, and how periodontal treatment impacts patients’ biomarkers.

To varying degrees, periodontal disease affects 40 percent of adults in the United States and can lead to loss of bone that supports the teeth. NYUCD will focus on identifying biomarkers among 75 subjects with periodontal disease compared with 25 control subjects. In December 2011, NYUCD began to collect clinical indicators and biological samples such as saliva, plaque, and gingival crevicular fluid from research subjects. It will send these samples to the Forsyth Institute for analysis to identify biomarkers. The Forsyth

Ms. Amy Hinkelman, former research coordinator at the NYU Bluestone Center for Clinical Research, with Dr. Patricia Corby
Institute is an independent research organization that focuses on oral health.

“Biomarkers are factors in people’s blood, dental plaque, saliva, or tissue that might indicate that they are more susceptible than others to developing periodontal disease,” says Dr. Patricia Corby, principal investigator on the NYUCD grant and assistant professor of periodontology and implant dentistry and associate director of the NYU Bluestone Center for Clinical Research. “By identifying these factors, we will be able to design more specific treatments for this condition; thus we’re changing the paradigm of how we diagnose and treat periodontal disease.”

A traditional biomarker for periodontal disease is bleeding on probing. Other biomarkers include a high degree of disease-associated bacterial colonization affecting the tissues that surround and support the teeth or the presence of cytokines—types of proteins that are secreted by numerous cells in the body, which are associated with inflammation. Biomarkers may indicate the presence or absence of periodontal pathogens, gingival and periodontal inflammation, an inflammatory-immune response to certain pathogens, or tissue destruction.

Although these biomarkers can be associated with periodontal disease, they also can be associated with other systemic diseases. To isolate biomarkers for periodontal disease, researchers will exclude any patients with other systemic diseases such as heart disease or diabetes. Because so many periodontal patients do have comorbidities, the researchers expect to screen 10 subjects for each one who fits the criteria.

In addition to looking for biomarkers through this study, researchers are exploring a novel approach to treat periodontal disease. According to Dr. Corby, periodontists generally treat the entire mouth with scaling and root planing—under the assumption that the entire mouth is affected or as a preventive treatment approach. Research at the Forsyth Institute has shown that progression of the disease is site-specific as well as episodic. Patients may do well with a more conservative approach to treatment and steady monitoring to determine whether and where the disease is progressing, says Dr. Corby. Patients in the study will return every two months for monitoring of specific sites and to see whether changes have occurred. In places where the disease is advancing, researchers will treat only the parts of the mouth that are progressing toward disease.

“We want to look at people who respond to this therapy and see how their biomarkers change due to the therapy that we’re proposing,” says Dr. Corby, noting that the presence of certain biomarker microbes might make some sites in the mouth progress more quickly than others. “If the study succeeds (and this is a preliminary trial), it might change the way the profession treats periodontal disease.”
“We want to look at people who respond to this therapy and see how their biomarkers change due to the therapy that we’re proposing,” says Dr. Corby, noting that the presence of certain biomarker microbes might make some sites in the mouth progress more quickly than others. “If the study succeeds (and this is a preliminary trial), it might change the way the profession treats periodontal disease.”

A theory underpinning the study is that periodontal disease is not just a chronic infection, as was once thought, but is related as much, if not more, to inflammation and other immune-system functions. Understanding the biomarkers for inflammation that are associated with periodontal disease will help determine how to treat people.

In addition to Dr. Corby, co-investigators from NYUCD include Dr. Robert Schoor, clinical associate professor of periodontology and implant dentistry and director of the Advanced Education Program in Periodontics; Ms. Rosemary Hays, clinical associate professor of dental hygiene and assistant academic director of the dental hygiene program; Ms. Cynthia J. Howard, clinical assistant professor of dental hygiene and junior research scientist at the NYU Bluestone Center for Clinical Research; and Ms. Judith Kreismann, clinical associate professor of dental hygiene.

The overall project is led by Dr. Richard Teles, a senior member of the staff at the Forsyth Institute and director of the Center for Clinical and Translational Research at Forsyth.

Dr. Teles hopes ultimately to develop diagnostic tests to help identify subjects and sites in the mouth that are most susceptible to periodontal disease progression.

—Barbara Kancelbaum
NIH Grant Using Genomics to Tailor Oral Cancer Treatment Awarded to Dr. Brian L. Schmidt, NYU College of Dentistry, and Dr. Donna G. Albertson, University of California, San Francisco

The National Cancer Institute (NCI), part of the National Institutes of Health (NIH), has awarded a two-year grant to Dr. Brian L. Schmidt, professor of oral and maxillofacial surgery at the NYU College of Dentistry, and Dr. Donna G. Albertson, professor at the UCSF Helen Diller Family Comprehensive Cancer Center. The grant will fund groundbreaking research to customize treatment for oral cancer patients. Drs. Schmidt and Albertson have identified candidate genomic markers in tumors that predict if an oral cancer is likely to spread (metastasize) to the neck.

Oral cancer is often fatal if it spreads to the neck and remains untreated. Current clinical and radiographic examination provides limited information for diagnosis of early neck metastasis of oral cancer. Nearly all cancers within the oral cavity must be surgically removed. An additional and extensive surgery (neck dissection) is also performed to remove lymphatic tissue in the neck if there is any clinical or radiographic evidence of neck metastasis. Patients who present with no evidence of metastasis in the neck often undergo a preemptive neck surgery because untreated occult (hidden) metastasis reduces life expectancy by half.

The work of Drs. Schmidt and Albertson will validate genomic markers that will ultimately be used to rule out neck dissection in oral cancer patients with no clinical evidence of neck metastasis and who have tumors containing specific genomic profiles. Dr. Albertson notes, “It has taken us eight years of research to converge on a genomic marker that could be used to tailor treatment for oral cancer patients. We look forward to testing this marker in a clinical study and this funding will help us to develop the appropriate laboratory test for such a trial.”

Currently, neck surgery for those suffering from oral cancer entails a three-to-four hour major procedure involving critical anatomic structures and is associated with life-altering morbidity, including stroke. For most patients this procedure is unneeded but employed as a pragmatic solution to the dilemma posed by the specter of occult metastasis. Dr. Schmidt states, “We can dramatically improve quality of life if we can accurately identify those who do not need a neck dissection. Morbidity and recovery time would be reduced, and we would alleviate anxiety for many patients and families.”

Dr. Schmidt will conduct the clinical portion of the study through the NYU Bluestone Center for Clinical Research, which he directs. Dr. Schmidt and his team will recruit subjects, enroll patients, and collect the specimens. The samples will then be sent to the UCSF Helen Diller Family Comprehensive Cancer Center where Dr. Albertson’s group will process and analyze the samples. Drs. Schmidt and Albertson foresee improved care for oral cancer patients once their newly identified genomic marker is validated.
NYU CD in the News

A SAMPLING OF RECENT MEDIA COVERAGE

CBS-TV and The Wall Street Journal reported on an NYU nursing-dental study led by Dr. Sheila Strauss, associate professor of nursing, which concluded that dentists could screen 20 million Americans for chronic physical illnesses. The CBS report aired in over 90 US cities, while the Wall Street Journal story was featured in both the online and print editions of the newspaper. In addition, the news was featured on the nationally syndicated Osgood File radio program; on CNN and National Public Radio blogs, on Health.com and Medscape.com, and on numerous other Web sites.

CBS2 New York interviewed Dr. Moursi on collecting stems cells from children’s teeth.

Health & Medicine Week reported on an article about practice-based research and its role in dental education that Dr. Frederick A. Curro, director of recruitment, retention, and operations for the PEARL Network, authored for the Journal of Dental Education. Health & Medicine Week also reported on the following NYU CD faculty research: human bone evolution, Dr. Timothy Bromage, professor of biomaterials and biomimetics and of basic science and craniofacial biology; fracture-resistance of ceramics, Dr. Nelson da Silva, associate professor of prosthodontics; regenerative medicine, Dr. John Ricci, associate professor of biomaterials and biomimetics; Alzheimer’s – periodontal disease link, Dr. Angela Kamer, assistant professor of periodontology and implant dentistry; and apoptosis, Dr. Pablo Peixoto, adjunct assistant professor of basic science and craniofacial biology.

Bloomberg.com interviewed Dr. Amr Moursi for a story about baby root canals and behavior management techniques used in pediatric dentistry.

Wine Spectator reported on an NYUCD study that found white wine can cause tooth staining.

Obesity, Fitness and Wellness Week reported on a study about apoptosis led by Dr. Pablo Peixoto, assistant professor of basic science and craniofacial biology.

Medical Devices and Surgical Technology Week reported on a study about bone augmentation for dental implants led by Dr. Craig M. Misch, clinical associate professor of periodontology and implant dentistry.

Change News quoted Dr. Mea Weinberg, associate professor of periodontology and implant dentistry, in an article about the link between oral and systemic health.

Fitness quoted Dr. Mark Wolff in an article about toothbrushes and oral hygiene.

Clear Health Costs, an informational Web site about health care costs, interviewed Dr. Mark Wolff for a story about affordable dental care.

Woman’s Day interviewed Dr. Elliott Moskowitz, ’72, professor of orthodontics, for an article about braces.
ABC7 New York Eyewitness News interviewed Dr. Amr Moursi for a story about children’s oral health.

ABC7 Eyewitness News interviewed Dr. Mark Wolff, associate dean for predoctoral clinical education, about online dental discount offers.

ABC7 Eyewitness News broadcast a series of interviews with NYUCD faculty in conjunction with the College’s annual fall oral health screening, including Dr. Brian Schmidt, director of the Bluestone Center for Clinical Research, on oral cancer research; Dr. Ronald Craig, associate professor of basic science and craniofacial biology and of periodontology and implant dentistry, on the link between diabetes and periodontal disease; and Dr. Amr Moursi, associate professor and chair of the Department of Pediatric Dentistry, on children’s oral health.

ABC7 New York Viewpoint interviewed Dr. Brian Schmidt about the Bluestone Center for Clinical Research, which Dr. Schmidt directs.

WebMD and Press & Sun Bulletin also interviewed Dr. Moursi for stories about pediatric oral health.

AARP Bulletin and In Style magazine interviewed Dr. Mark Wolff for stories about tooth whitening.

National Geographic interviewed Dr. Andrew Spielman, associate dean for academic affairs, for a story on the history of toothbrushes.

The History Channel interviewed Dr. Brian Schmidt, director of the Bluestone Center for Clinical Research, about an NYU study that uses a psychoactive agent to promote enhanced well-being for cancer sufferers. News about the study was also featured by Salon.com, Bloomberg.com, the San Francisco Chronicle and BusinessWeek.com.

The Huffington Post interviewed Dr. Mark Wolff and Dr. Miriam Robbins, associate professor and associate chair of the Department of Oral and Maxillofacial Pathology, Radiology and Medicine, for an oral health and nutrition story.

Dental Tribune reported on a study led by Dr. Angela Kamer, assistant professor of periodontology and implant dentistry, which examined the link between gum inflammation and Alzheimer’s disease.

USA Today interviewed Dr. Mark Wolff for an article about the relationship between nutrition and oral health.

Good Housekeeping interviewed Dr. Wolff about the impact of certain foods on tooth shading.
ADA News reported that Dr. Page Caufield, professor of cariology and comprehensive care, and Dr. Yihong Li, professor of basic science and craniofacial biology, were awarded a $2.2 million NIH grant to decode the genome of caries-causing bacteria. New York State Dental Journal and Dimensions in Dental Hygiene also reported the news.

HealthNewsDigest.com reported on an NYU nursing-dental study led by Dr. Shiela Strauss, associate professor of nursing, which found that blood from periodontal disease can be used to screen for diabetes. The news was also reported by DentistryIQ.com, DentistNewsNetwork.com, and Dental Practice Marketing and Management Blog.

The Journal of the American Dental Association reported on a study on antiviral-corticosteroid combination therapy for Ball’s Palsy led by Dr. Lewis Lampert, clinical assistant professor of oral and maxillofacial pathology, radiology, and medicine.

TIME.com interviewed Dr. Michael Lorber, research scientist in cariology and comprehensive care, for an article about his research on young children’s aggressive behavior. Dr. Lorber’s research was also featured by the CIV television network, Public Radio East, FoxNews.com, and TheAtlantic.com.

Dentistry Today reported on a $3.2 million NIH grant for HIV prevention research that was awarded jointly to Dr. Daniel Malamud, director of the HIV/AIDS Research Program, and the University of Medicine and Dentistry of New Jersey.

ABCNews.com reported on a study led by Dr. Leila Jahangiri, associate professor and chair of the Blatterfein Department of Prosthodontics, that examined the relationship between acidity in swimming pool water and dental enamel erosion. The news was also reported by Dental Assistant, All You magazine, and DrBiCuspid.com.

Bangor Daily News reported on a visit to Washington County, Maine, by the NYUCD-Henry Schein Cares Global Student Outreach Program. WABI-TV Bangor and Downeast Coastal Press also reported on the visit.

The New York Times interviewed Dr. Amr Moursi, associate professor and chair of the Department of Pediatric Dentistry, for an article about early childhood caries, and Dr. Moursi was quoted in follow-up articles appearing on ABC.com and CBS.com.

Westchester Loop quoted Dr. Cristina Teixeira, associate professor and interim chair of the Department of Orthodontics, in a story about affordable orthodontic care at dental schools.
**Martha Stewart Living** quoted Dr. Patricia Corby, assistant professor of periodontology and implant dentistry, on the importance of flossing.

**Chelsea Clinton News** interviewed Dr. Ronald G. Craig, associate professor of basic science and craniofacial biology and of periodontology and implant dentistry, about the relationship between periodontal disease and heart disease.

**Queens Family** interviewed Dr. Neal Herman, professor of pediatric dentistry, for an article about tooth decay in children. The story also appeared in *Brooklyn Family* and *Bronx Family*.

**Access** quoted Ms. Ashley Grill, clinical assistant professor of dental hygiene and coordinator of information dissemination and protocol development and training for the PEARL Network, in an article about career opportunities for dental hygienists in practice-based research.

**HealthCanal.com** reported on a study led by Dr. Victoria Raveis, professor of cariology and comprehensive care, which examined the impact of public policy changes on California hospitals.

**Doctor Radio**, a Sirius/XM satellite radio station powered by the NYU Langone Medical Center, invited Dr. Mark Wolff, associate dean for predoctoral clinical education and professor and chair of the Department of Cariology and Comprehensive Care, to host a four-part series on oral health entitled *Start Summer with a Smile*. Dr. Wolff is the first NYUCD faculty member to be offered the opportunity to host a Doctor Radio program. Topics and guests were: aesthetic dentistry—Dr. John Calamia, professor of cariology and comprehensive care, and Dr. Larry W. Rosenthal, ’72; implants—Dr. Mitchell Bloom, clinical associate professor of periodontology and implant dentistry, and Dr. Marjan Moghadam, clinical assistant professor of prosthodontics; children’s oral health—Dr. Amr Moursi, associate professor and chair of the Department of Pediatric Dentistry; braces—Dr. Michael Apton, clinical assistant professor of orthodontics; oral medicine—Dr. David Sirois, associate professor of oral and maxillofacial pathology, radiology and medicine and associate dean for graduate programs; and oral surgery—Dr. Robert Glickman, professor and chair of the Mecca Department of Oral and Maxillofacial Surgery.

**Doctor Radio** also featured an additional series of interviews with the following NYUCD faculty: Dr. Rima Bachiman Sehl, associate professor of epidemiology & health promotion, geriatric oral health; Dr. John Calamia, professor of cariology and comprehensive care, aesthetic dentistry; and Dr. Leila Jahangiri, associate professor and chair of the Blatterfein Department of Prosthodontics, restorative dentistry; Dr. Steven Engebretson, associate professor and chair of the Department of Periodontology and Implant Dentistry, the connection between oral health and heart health; and Dr. Michael Lorber, research scientist in cariology and comprehensive care, on a study he led to uncover clues to young children’s aggressive behavior.

**Sesame Street Workshop** Healthy Teeth, Healthy Me Oral Health Initiative included the NYUCD Smiling Faces, Going Places mobile dental van in a video DVD.
Construction Update: Spring Groundbreaking Ceremony Planned for New Building at 433 First Avenue

NYU will hold an official groundbreaking ceremony in spring 2013 for the new, 170,000-square-foot building currently under construction across the street from the NYU College of Dentistry. The new building will provide 55,000 additional square feet for NYUCD, along with a permanent home for the NYU College of Nursing and research space for a new NYU Bioengineering Institute.

This new facility will occupy a prime location at 433 First Avenue—right in the heart of NYU’s health-sciences corridor—where it will be surrounded by some of the world’s preeminent healthcare and teaching institutions. Occupying one entire city block, the new facility will provide a unique interprofessional teaching, learning, and research center—a dynamic and forward-thinking urban community housed in an educationally stimulating, professionally collaborative environment.

The facility will enable NYUCD to add significant teaching space and to relocate offices for student services, as well as for two academic departments—

A highlight of the new building plan is the unique and beautiful Student Commons, which will create a central meeting and study location designed to give all students the “Red Carpet” experience, which Dean Bertolami describes as a “tangible way of showing our students how highly they are valued as individuals and as the future healthcare professionals they will become.”

The Student Commons is designed to inspire interprofessional study, discussion, and sharing of ideas.
Biomaterials and Biomimetics and Epidemiology and Health Promotion.

Outfitted with the latest technologies for learning and discovery, the building will enable NYUCD and its partners to dispense with the traditional practice of educating students in “silos,” when patients expect them to work in collaborative teams in dental practice.

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Demolition of the previously existing buildings on the site—the Guggenheim Building at 339 East 25th Street and the Basic Science Building at 433 First Avenue—was completed on September 1, 2011. Construction of the new building is now in progress, with occupancy planned for early 2015.

According to Dean Bertolami, “The new building will be nothing short of transformational for our students, faculty, and the surrounding community.” To learn about naming opportunities in the new building, please call Assistant Dean Rita Startup at 212.998.9920.

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The Cochrane Collaboration Selects NYUCD for First North American Training Initiative

The Cochrane Collaboration, an international, nonprofit organization dedicated to helping clinicians, researchers, purchasers, and patients make healthcare decisions based on up-to-date, reliable, and accurate information, is partnering with the NYU College of Dentistry (NYUCD) to train NYU dental and nursing faculty to conduct systematic reviews of the scientific literature related to oral health. This partnership makes NYUCD the first North American training site for The Cochrane Oral Health Group Global Alliance, which conducts symposia using Cochrane systematic review training techniques.

The Cochrane Oral Health Group Global Alliance, based in Manchester, England, is one of 52 groups around the world belonging to The Cochrane Collaboration, and is organized by the University of Manchester and the University of Dundee in Scotland.

Cochrane Reviews are internationally recognized as the highest standard in evidence-based health care, which the American Dental Association (ADA) defines as “an approach to health care that requires the judicious integration of systematic assessments of clinically relevant scientific
evidence, relating to the patient’s oral and medical condition and history, in concert with the dentist’s clinical expertise and the patient’s treatment needs and preferences.”

The Cochrane Collaboration at NYU kicked off in December, with an inaugural seminar and two-day advanced systematic review workshop.

The impetus for the partnership came from Dr. Analia Veitz-Keenan, clinical assistant professor of oral and maxillofacial pathology, radiology and medicine, and a member of the evidence-based dentistry group of the International Association for Dental Research (IADR). Dr. Veitz-Keenan is director of NYUCD’s Cochrane Collaboration project.

According to Dr. Joan A. Phelan, professor and chair of the Department of Oral and Maxillofacial Pathology, Radiology and Medicine, “NYUCD’s partnership with The Cochrane Collaboration provides a framework for developing literature reviews that are internationally recognized as the gold standard in translating evidence into clinical practice and incorporating evidence into dental education.”

Cochrane Reviews are internationally recognized as the highest standard in evidence-based health care.
Dr. Eileen Sullivan-Marx
Named Dean of the College of Nursing

Dr. Eileen M. Sullivan-Marx, a nationally recognized leader in caring for older adults, has been named dean of the NYU College of Nursing, effective July 1, 2012. Dean Sullivan-Marx is currently a professor of scholarly practice and associate dean for practice and community affairs at the University of Pennsylvania School of Nursing, where she holds the Shearer Endowed Term Chair in Healthy Community Practice.

In announcing her appointment jointly with Dr. Robert Berne, NYU’s executive vice president for health, Dean Bertolami said, “The recruitment of Eileen Sullivan-Marx to lead the College of Nursing at this pivotal time adds momentum to the College’s ability to shape the future of the nursing profession. All of us at the College of Dentistry look forward with great anticipation to working with her to expand opportunities for interdisciplinary health sciences education and scientific partnership resulting from the 2005 alliance that created a College of Nursing within the College of Dentistry.

“I want to thank Dr. Judi Haber, who has served as interim dean since July 1, 2011. She demonstrated great leadership and dedication during the past year. I also want to thank all the members of the search committee, especially Professor Hila Richardson, who chaired it. She and the other committee members did an excellent job, bringing us a truly outstanding candidate—a testament to their hard work and great judgment.”

Said Dr. Haber: “I am delighted to welcome Eileen as the new academic leader of the College of Nursing. Her prominence as a national nursing and interprofessional healthcare leader position her as the perfect dean to advance the College’s longstanding commitment to innovation and excellence in research, education, and practice.”

“I am thrilled that the work of the search committee has resulted in bringing Eileen to be our new dean. She is an outstanding leader in health care and a visionary in nursing practice and education. The next chapter of the College’s history is in good hands,” added Dr. Richardson.
Dr. David A. Sirois Steps Down as Associate Dean for Graduate Programs

Dr. David A. Sirois, associate dean for graduate programs since 2005, has announced that he will be stepping down from that post on June 30, 2012, the end of the academic year, in order to devote more time to his teaching and research responsibilities. Dr. Sirois, an associate professor of oral and maxillofacial pathology, radiology and medicine, is an expert in the neurophysiology and psychophysical aspects of chronic facial pain and in intervention strategies to relieve that pain. His specific focus is on the underlying causes of temporomandibular joint disorder, or TMD, a condition characterized by jaw and face pain that often radiates to the neck and shoulders and affects up to 10 percent of adults.

As associate dean for graduate programs, Dr. Sirois has partnered with faculty in NYUCD’s graduate degree programs and in the postdoctoral specialty programs to enhance NYUCD’s reputation for excellence in specialty training, patient care, and scientific discovery. Dr. Sirois has played a key role in fostering a rich collaborative educational and research experience for NYUCD’s diverse group of trainees.

A highlight of Dr. Sirois’s tenure was the flawless accreditation site visit of the postdoctoral programs conducted by the Commission on Dental Accreditation (CODA) of the American Dental Association (ADA) in 2010. CODA gave the programs no recommendations—the highest possible score.

In addition to his research into the causes and treatment of TMD, Dr. Sirois’s basic and clinical investigations focus on oral mucosal, salivary gland disorders, and microbiology. This work includes the development of an improved animal model to study radiation-induced salivary gland injury and radioprotection, pharmaceutical/clinical drug trials, immune-mediated salivary gland disease, and oral-clinical pathological correlates of disease in HIV infection and AIDS.
Graduation 2012

On May 9, 2012, the Class of 2012 saw their dreams come true as they received their degrees and certificates before a crowd of more than 2,500 people in Avery Fisher Hall at Lincoln Center.

In addition to the conferral of degrees and certificates, highlights of the ceremony included welcoming remarks from Dr. Robert Berne, executive vice president for health, on behalf of New York University, presentation of the Strusser Award for outstanding contributions to improved public health to ABC7 meteorologist, Lee Goldberg, the on-air spokesperson for the annual NYUCD/ABC7 free screening (see related story on p. 83), and hooding of the DDS candidates by their group practice directors.

The ceremony, which was presided over by Dean Bertolami, conferred approximately 330 DDS degrees, as well as Advanced Education and Clinical Research Program certificates, MS degrees in clinical research, and BS and AAS degrees in dental hygiene.

“The NYU College of Dentistry today celebrates the achievements of our newest alumni, and of the faculty, families, and friends who have guided
them to this momentous day,” said Dean Bertolami. “Getting to this day has taken more than hard work, dedication, and discipline,” he added. “It has also taken a commitment to educational excellence, a strong community service orientation, and a growing global perspective, all of which have made this class so special. We wish all our graduates great success and happiness in the years ahead.”
Alexis Cohen, ’12, Selected as All-University Commencement Speaker

Alexis L. Cohen, Class of 2012, was selected from a group of 17 representatives of NYU’s schools and divisions as the student speaker for the 2012 All-University Commencement Exercises held in Yankee Stadium on Wednesday, May 16, 2012.

In her letter informing Dean Bertolami of Alexis’s selection, Dr. Lynne P. Brown, NYU’s senior vice president for university relations and public affairs, wrote: “Alexis is clearly a remarkable student and member of the NYU community, and I am confident she will serve as an excellent representative of the entire NYU student body during the ceremony.” As all of her friends at the College of Dentistry know, Alexis is indeed “remarkable” and her selection as student speaker brings great honor to NYUCD.

Alexis, who received a dual degree in dentistry and in global public health on May 16, has demonstrated a passion to engage in the world at large and to make a difference through education and prevention. Self-described as someone who likes to think “big,” she has without a doubt demonstrated a broad vision—not only excelling in her academic requirements but going well beyond them to tackle an exceptional array of extracurricular pursuits. She has consistently impressed her teachers, fellow students, and NYUCD staff with her combination of intelligence, unassuming demeanor, and solid leadership skills—whether it’s promoting student involvement in our annual Oral Cancer Awareness Walk, spearheading student-led Haiti-relief efforts, volunteering in rural Guatemala, or participating in NYU outreaches to Grenada and Ghana with the goal of expanding access to disease prevention and sustainable health care.

Thinking “big” also describes Alexis’s generosity of spirit. Through her personal example of dedication and passion, she succeeds in creating a community of purpose in all of her endeavors. NYUCD is extremely proud to have been represented by Alexis Cohen at the 2012 All-University Commencement Exercises.

In her letter informing Dean Bertolami of Alexis’s selection, Dr. Lynne P. Brown, NYU’s senior vice president for university relations and public affairs, wrote: “Alexis is clearly a remarkable student and member of the NYU community, and I am confident she will serve as an excellent representative of the entire NYU student body during the ceremony.”
NYUCD Students Win All Major ACP Awards

NYUCD students made history by sweeping the awards competition at the 2011 annual session of the American College of Prosthodontics.

Dr. Rebecca Sternberger, ’12, won first place for her poster, “Nervosa About Bulimia?” Second place went to Srikar Vulugundam, ’13, for his poster, “Liver Transplant-Late Implant Failure Prognosticator”; and Dr. Andrew Kung, ’12, won third place for his case report, “Resin-bonded Metal Ceramic Fixed Partial Denture.” Poster recognition was also awarded to Dr. Ahmed Beheiry, ’12, for “Management of Female Bruxism and Prognosis of Prosthetic Treatment.” All four awardees were mentored by Dr. Kenneth S. Kurtz, clinical associate professor of prosthodontics, with Dr. Kung receiving additional mentoring from Dr. Gerald Barrack, clinical professor of prosthodontics. Student travel expenses were provided by the Northeastern Gnathological Society (NGS).

Dr. Terry Y. Lin, PG Prosthodontics Program Class of 2011, was the first-place winner of the prestigious Sharry Award for his research entitled “A Bioactive Collagen Membrane Carrying PDGF for Bone Tissue Engineering.” Dr. Lin’s research mentor was Dr. Seiichi Yamano, assistant professor of prosthodontics.
NYU’s College of Nursing (NYUCN) partnered with NYUCD in November 2011 to host a health fair at the Grand Street Settlement, a naturally occurring retirement community (NORC), in Lower Manhattan. This “Health Fair for Healthy Aging” kicked off NYUCN’s Elder Care Program (ECP), funded by a $1.2 million grant awarded to NYUCN by the Health Resources and Services Administration (HRSA). The grant allows NYUCN to provide primary care services and other health-related services to over 4,000 seniors in Lower Manhattan over the next three years.

With the arrival of nurse practitioner interns, dental students, their respective faculty members, and other staff, the Grant Street Settlement’s multipurpose room was transformed into a health fair, with a dozen stations containing health information and offering services including diabetes testing, blood pressure screening, a BMI screening, dental hygiene education, and dental screening. Workshops discussed what to bring to the primary care nurse practitioner visit, and offered tips on tooth and denture care. NYU health professionals and students served 130 seniors throughout the morning.

During the fair, nurse practitioner interns were paired with dental students for the services offered, providing important interprofessional care for the seniors and offering students an appreciation of what each discipline provides for the overall health of a patient.
seniors and offering students an appreciation of what each discipline provides for the overall health of a patient.

“Interprofessional care allows nurse practitioner interns and dental students to appreciate both the overlap and the uniqueness of their roles,” said the Elder Care Program project director and clinical associate professor of nursing Dr. Leslie-Faith Morritt Taub. “The Gerontological Nurse Practitioner Organization, the American Academy of Family Physicians, and the National Interprofessional Organization on Oral Health, among others, recognize the need to enhance the role of primary care clinicians in the promotion of oral health for all. When we looked around, everyone from the nurse practitioner and dental teams was pitching in. I don’t recall being prouder of the students,” Dr. Taub remarked.

Assemblyman Brian Kavanagh, who represents part of the Lower East Side, attended the event, greeted the seniors and Grand Street staff, and had his blood pressure checked by NP intern Abby Yenkinson.

“It’s always great when local agencies and institutions are willing to come out into the community and address an identified need,” said Assemblyman Kavanagh. “Thanks to the NYU College of Nursing and their partnership with the NYU College of Dentistry, over 4,000 Lower East Side seniors will receive services that are vital for their health and well-being.”

—Christopher James
A Bird’s-Eye View Into the Scholarship and Aspirations of NYUCD’s NIH Postdoctoral Fellows

From the time Dr. Ralph V. Katz joined NYUCD in 2000 as professor and chair of the Department of Epidemiology and Health Promotion, his responsibilities and initiatives have been varied, exciting, and rewarding. They include leading a faculty of impressive achievers and introducing innovative educational opportunities for dental students.

Perhaps less well known is Dr. Katz’s role for the past 20-plus years as the principal investigator for an NIH National Research Service Award (NRSA) Institutional Research Training Grant (T32) in Oral Epidemiology, which is designed to support postdoctoral training at institutions having the potential to supervise and develop research training programs in epidemiology. As such, Dr. Katz is both the supervisor and motivator-in-chief for a group of talented National Institutes of Health (NIH) Postdoctoral Fellows, who typically spend three to four years in the MS in clinical research track or five years in the PhD in epidemiology track. Both tracks focus on population-based research training. The PhD track has enrolled dentists who are concurrently enrolled as PhD students in epidemiology, either at Columbia University or Johns Hopkins University. Dr. Katz recently submitted a new competitive NRSA research training grant seeking funds to support the next five-
year period. At a one-day research retreat, a group of Dr. Katz’s postdoctoral fellows, including one Visiting Fulbright Fellow, presented their current research, which offers a bird’s-eye view into the scope and quality of the research that the postdoctoral fellows conduct under the guidance of Dr. Katz, Dr. Douglas Morse, associate director of the T32 Program, and the four other epidemiologists in the Department of Epidemiology and Health Promotion: Drs. Ananda Dasanayake, Mary Northridge, Stefanie Russell, and Walt Psoter.

Lin Li, DDS, MS, completed five years as an NRSA T32 postdoctoral fellow in epidemiology at NYUCD in spring 2011, having previously completed her MS in clinical research degree in 2008. Dr. Li’s research focuses on oral cancer, health behavior, and health disparities. She has actively collaborated with researchers from different disciplines on multiple projects. In addition to research, she has found her passion in teaching, and has taught the Skills in Assessing the Professional Literature (SAPL) course, within both the postgraduate and the predoctoral dental programs. She aspires to become an independent researcher and to teach full-time at the university level. She is currently enrolled in the PhD in epidemiology program at Louisiana State University in New Orleans.

Richa Chhibber, BDS, MS, a third-year NRSA T32 postdoctoral fellow in epidemiology and health promotion, completed her MS in clinical research degree in 2010 and conducts research on oral health, health disparities, and health behavior. Her primary research interest is in assessing the risk factors associated with oral cancer, especially among South Asians. She is also interested in addressing ethical issues in research, especially regarding the informed consent process and conflict of interest. She aspires to become a full-time faculty member at a university where she can teach as well as dedicate herself extensively if not exclusively to conducting independent and collaborative research among underserved populations.

Christian R. Salazar, MPH, MPhil, a fourth-year NRSA T32 oral epidemiology predoctoral fellow, is completing a PhD degree in epidemiology at Columbia University. His research focuses on understanding how oral diseases relate to cancer etiology, treatment, and outcomes in vulnerable populations. Christian came to NYUCD having completed two years of training at the National Cancer Institute (NCI) and in the Cancer Epidemiology, Biostatistics, and Environmental Health Program at Columbia University. Chris is the first-ever non-dentist in the history of Dr. Katz’s T32 program.

Rima Gluzman, DDS, MS, a fifth-year NRSA T32 postdoctoral fellow in epidemiology who completed her MS in clinical research degree in 2008, has served since 2008 as an examiner in two oral health-related human research studies. Her primary research interest is in geriatric dentistry. Currently she serves as a team leader and a lead examiner in an ongoing “Oral Health of Homebound Elderly” study, which will identify the oral health status of nearly 1,000 homebound elderly New Yorkers currently participating in the Mount Sinai Visiting Doctors program.

Dr. Katz is both the supervisor and motivator-in-chief for a group of talented National Institutes of Health (NIH) Postdoctoral Fellows, who typically spend three to four years in the MS in clinical research track or five years in the PhD in epidemiology track.
Sarah Rothenberg, who earned a D Env (Doctor of Environmental Science and Engineering) from UCLA in 2007, was awarded a prestigious National Science Foundation (NSF) International Research Fellowship in 2008. Between 2008 and 2010, she lived in Guizhou Province, China, where 600 years of historical mercury-cinnabar extraction has severely polluted the water, air, and paddy soil. During three rice-growing seasons, Dr. Rothenberg characterized mercury cycling in rice paddies, and investigated mitigative measures to reduce residential methylmercury exposure through rice ingestion. In January 2011, Dr. Rothenberg joined the T32 postdoctoral training program at NYU CD with the goal of quantifying the environmental risks associated with mercury amalgam use in developing countries. She is the second-ever non-dentist in the training program’s history. In her first scientific abstract written at NYU, Dr. Rothenberg identified a major flaw in the international index for calculating mercury pollution from dentistry, one which seriously overestimated its impact. Based on her findings, the international committee is currently revising the index.

Bianca A. Dearing, DDS, a fourth-year NRSA T32 postdoctoral fellow in epidemiology, is a pediatric dentist whose research interests are in pediatric oral health, health disparities research, and influencing health policy. She is involved in a collaborative doctoral degree program between NYU and Columbia University. After earning a certificate in clinical research at NYUCD, she continued her graduate studies in the PhD program in epidemiology at Columbia University’s Mailman School of Public Health, where she is currently a third-year graduate student. Her professional goals are to acquire a full-time faculty appointment and to develop as an independent researcher specializing in pediatric oral health.

Maria Chondronikola, MS, RD, a Fulbright Fellow who earned her MS in nutrition degree from the NYU Department of Nutrition and Public Health (CAS), is focusing on expanding NYUCD’s nutrition curriculum as a joint nutritional consultant to NYUCD’s Departments of Epidemiology and Health Promotion and Cariology and Comprehensive Care. In a six-month period, Ms. Chondronikola successfully developed an expanded nutritional curriculum that focuses on the integration of nutrition education into the education of dentists and nurses, and, specifically, on the role of nutrition and lifestyle in the prevention and treatment of chronic conditions (i.e., obesity-associated metabolic disorders, cancer, and pediatric asthma). After completing her doctorate in nutrition at the University of Texas Medical Branch, she plans to conduct translational research and provide nutrition education to other healthcare professionals.

At a one-day research retreat, a group of Dr. Katz’s postdoctoral fellows presented their current research, which offers a bird’s-eye view into the scope and quality of the research they conduct.
NYUCD and ABC7 Celebrate 27 Years of Brightening New Yorkers’ Smiles

Last fall, NYUCD once again opened its doors to the community to provide free oral screenings to New Yorkers of all ages in collaboration with its longtime media partner, ABC7. The event marked the 27th year of the NYUCD/ABC7 partnership. As in previous years, Colgate donated oral health products and the NYU College of Nursing provided staff who conducted general health screenings. Dr. Molar Magic (aka Dr. Bruce Lish, ’94) and Colgate’s Dr. Rabbit Mascot entertained youngsters.

Over the course of three days, more than 2,000 adults and children received free dental screenings (and oral cancer screenings for adults), vouchers for free comprehensive examinations and polishings, free dental sealants and custom-made mouth guards (for children and adolescents), free diabetes and blood pressure screenings, and free toothbrushes and other oral hygiene products.

ABC7 promoted the screenings vigorously on the air, including broadcasting stories about oral cancer, periodontal disease, and children’s oral health featuring NYUCD faculty experts. ABC7 meteorologist Lee Goldberg (see related story on p. 74), served as the on-air spokesperson for the event.
NYUCD and the New York State Dental Foundation Team Up to Create a Web-based CE Course to Enhance Dentists’ Understanding of Oral Cancer

The NYU College of Dentistry (NYUCD) and the New York State Dental Foundation (NYSDF) have partnered to develop a new web-based video continuing education (CE), two-credit course designed to assist dentists in identifying and managing cancer of the oral cavity as well as precancerous conditions. The course, “Detecting and Managing Oral Precancer and Cancer,” is presented by NYUCD’s Dr. Ross Kerr, associate professor of oral and maxillofacial pathology, radiology and medicine, and Dr. Brian L. Schmidt, professor of oral and maxillofacial surgery and director of the Bluestone Center for Clinical Research. It is available on the foundation’s website, www.nysdflearning.org.

“Early diagnosis of oral cancer significantly impacts both treatment and survival,” say Drs. Schmidt and Kerr. Guided by that philosophy, they use clinical cases to highlight the following topics:

- the current epidemiology of oral cancer (including information related to HPV+ oropharyngeal cancers); the clinical features that are suggestive of oral cancer and potentially malignant oral lesions;
- the indications for emerging adjunctive diagnostic techniques (including imaging, tissue autofluorescence, toluidine blue staining, cytopathologic techniques, and HPV testing); and
- an update for participants on the management of patients diagnosed with epithelial dysplasia and oral cancer.

The objectives of the webinar are to enable dentists to:

- understand the epidemiologic shift in the demographics and the risk factors for oral cancer;
- understand the clinical features suggestive of oral cancer and potentially malignant oral lesions;
- be familiar with new methods of detection and mapping of oral cancer and epithelial dysplasia; and
- be familiar with the current management strategies for oral cancer and epithelial dysplasia.

“At the completion of the course, oral and maxillofacial surgeons will have increased knowledge regarding oral cancer and potentially malignant oral lesions, and will be able to effectively manage the patients referred to them by general dentists,” say Drs. Kerr and Schmidt. “Earlier diagnosis of oral cancer will lead to a significantly improved outcome for patients.”

Dr. Ross Kerr, left, and Dr. Brian Schmidt
Chinese Teachers’ Delegation Visits
Smiling Faces, Going Places Dental Van

A group of 25 elementary school teachers from Shenzhen, China, spent a day last summer visiting NYUCD’s Smiling Faces, Going Places mobile dental care program during its outreach to the Vernon Avenue Head Start program in Brooklyn. Each year the Smiling Faces, Going Places program provides oral health care for thousands of underserved children throughout New York City.

The teachers were in New York to pursue graduate studies at the College of Mount Saint Vincent and to learn firsthand about educational and healthcare programs for preschool and school-age children. The Center for International Teacher Training at the College of Mount Saint Vincent, which coordinated the visit, selected the NYU program as an example which could inspire the Chinese teachers to develop a similar program in Shenzhen, a city the size of New York.

HOMESCHOOLED TODDLERS CHOOSE NYUCD FOR FIELD TRIP

A group of 11 homeschooled, preschool-age youngsters and their parents visited NYUCD in October for a field trip coordinated by student volunteers from the Class of 2012. The student volunteers provided screenings, lunch, and an interactive presentation for the toddlers, who attend the ROC (Resource and Opportunity Center) for Homeschoolers in Manhattan. The event was sponsored by the NYUCD chapter of the Hispanic Student Dental Association (HSDA) and the Pediatric Dentistry Club. Dr. Charlie Larsen, clinical assistant professor of pediatric dentistry, served as faculty supervisor for the field trip.

The Class of 2012 volunteers included Rose Amable, Dayana Escobar, Rubi Marconi, Alejandra Ortega, David Aranbayev, Nathalie Lee, Doan Do, Dena Sapanaro, Michelle Kim, and Selin Avman.
Dr. Mark Wolff Hosts Four-Part Sirius XM Doctor Radio Series on Oral Health

Doctor Radio, the popular Sirius XM radio station which broadcasts health and medical information programmed by the NYU Langone Medical Center, featured a four-part series on oral health hosted by Dr. Mark Wolff in July 2011.

Entitled *Start Your Summer with a Smile*, the live, call-in program featured Dr. Wolff, professor and chair of the Department of Cariology and Comprehensive Care and associate dean for predoctoral clinical education, leading a series of interviews on aesthetic dentistry, implant dentistry, pediatric dentistry, and oral and maxillofacial issues, including disorders of the temporomandibular joint (TMJ).

NYUCD faculty experts appearing with Dr. Wolff included Dr. John Calamia, professor of cariology and comprehensive care; Dr. Marjan Moghadam, clinical assistant professor of prosthodontics; Dr. Mitchell Bloom, clinical associate professor of periodontology and implant dentistry; Dr. Amr Moursi, associate professor and chair of the Department of Pediatric Dentistry; Dr. Robert Glickman, professor and chair of the Department of Oral and Maxillofacial Surgery; and Dr. David Sirois, associate professor of oral and maxillofacial pathology, radiology and medicine and former associate dean for graduate programs. Dr. Bill Bongiorno, clinical assistant professor of cariology and comprehensive care, guest-hosted for Dr. Wolff on the implant dentistry program.

The program was so successful that Doctor Radio has invited Dr. Wolff to host a second series of programs daily during the week of August 6, 2012.
Dr. Paul A. Rosenberg to Step Down as Chair of the Quartararo Department of Endodontics

Dr. Paul A. Rosenberg, professor and chairman of the Dr. I.N. and Sally Quartararo Department of Endodontics at NYU since 1990, has announced that he will be stepping down from the chairmanship once a successor is chosen. Dr. Rosenberg will continue to be engaged in teaching and scholarly activities as a full-time faculty member in the Quartararo Department of Endodontics.

As chairman, Dr. Rosenberg has shown true leadership and has compiled a list of significant achievements. His chairmanship has been marked by national and international recognition of NYU’s postgraduate program in endodontics as one of the leading programs in that specialty. The program was one of the first in the nation to introduce implants into an endodontic advanced education curriculum and to include endodontic residents in outreach programs to underserved areas. His residents have provided care in Nicaragua, the Dominican Republic, Grenada, Alaska, and Maine. He also introduced NYUCD’s first mentoring program for predoctoral students. A highlight of his chairmanship was the naming of the department in honor of Dr. I.N. and Sally Quartararo.

Dr. Rosenberg has had other notable achievements, including serving as the NYU College of Dentistry’s first associate dean for graduate programs, as a director of the American Board of Endodontics, and as a scientific reviewer for the Journal of Endodontics. He has been recognized with the prestigious NYU Distinguished Teaching Award, the highest award presented for teaching by New York University. In 2008, NYUCD recognized him with the naming of the Paul and Maxine Rosenberg Education Wing.

Dr. Rosenberg’s chairmanship has been marked by national and international recognition of NYU’s postgraduate program in endodontics as one of the leading programs in that specialty.
Maine Outreach: A Firsthand Account

In Machias, Maine, in rural Washington County, it is not uncommon to drive 100 miles or more to find a dentist. Only six dentists practice in this 3,200-square-mile county that stretches from the Atlantic coast to the Canadian border.

The case of Michael Krick illustrates the challenges involved in obtaining dental care. When Michael’s 10-year-old son, Dashel, needed two extractions, his only option was to travel over 100 miles to see a dentist in a neighboring county.

“I lost a couple of days’ work, drove more than 200 miles, and spent $500, plus gas costs,” Mr. Krick said, adding that it would take him months to pay off the bills.

I met Mr. Krick in October when he brought his eight-year-old daughter, Sisaly, to be screened by a returning NYUCD-Henry Schein Cares Global Student Outreach team in an improvised clinic in Machias, seat of Washington County. The 31-person team visited Machias for six days, providing comprehensive care to 307 children and emergency care to 234 adult family members. It was the third visit to Maine since October 2010, when the Northeast Delta Dental Foundation awarded a $100,000 grant to NYUCD to help launch a series of visits to the state. Although I have previously written about the Maine outreach program for Global Health Nexus,
this was my first in-person visit, enabling me to more fully grasp the needs of the population.

The unemployment rate in Washington County is 10 percent, a fact that is attributable to the seasonal industries—lobstering and blueberry picking among them—in which residents are employed. Families in Machias consider dental care a luxury and have barely enough money to cover essential living expenses for the winter months when there is no work.

It’s common to hear people express frustration about finding a dentist. “If you have an emergency, forget it—the nearest dentist usually has months-long waiting lists, so you end up going to the emergency room,” said Britannia Balyint, a teacher in Machias who brought her two daughters, Lilyana, two, and River, nine, to be screened by the NYU team.

These obstacles are exacerbated for fishermen living on rocky islands just off the Maine coast who depend on US Postal Service mail delivery boats to take their young children free of charge to the mainland when they need to see a dentist or other healthcare provider. But when the children reach age five and no longer qualify for free passage, many parents cannot afford to transport them to the mainland.

The NYUCD-Henry Schein Cares program offers parents a much-needed alternative, providing comprehensive treatment twice annually for children in a central location. The Washington County Children’s Program, a local non-profit agency, provides the children with two additional fluoride varnish treatments
annually, and those receiving ongoing care have seen tooth decay in children decline to more than 30 percent in just one year, from 2010 to 2011.

“NYUCD has brought hands-on care to a community that needs it very much,” said Ms. Kathleen Walker, Northeast Delta Dental’s director of external affairs.

“We feel that our community has been given a huge gift by the NYUCD-Henry Schein Cares program,” added Washington County Children’s Program Oral Health Coordinator Ms. Teresa Alley.

For their part, students on the trip said that outreach provides a sense of fulfillment.

“This is why I went into dentistry,” said Stephanie Serpa, a third-year dental student, adding that she would like to continue to volunteer part-time for community service after she graduates and begins working in private practice.

“This is a life-changing experience,” remarked Mohamed Abdelhakim, ’13.

He added, “On a personal level, it’s gratifying to help people with access to care, and as a dentist, I’ve found myself able to handle lots of challenging cases.”

“You gain a lot of respect for what dentists are capable of accomplishing,” added Daniel S. Rubinshtein, ’13.

The temporary clinic in which the students worked was divided into triage, pediatric dentistry, oral surgery, endodontics, and restorative areas. Students rotated through each section.

“In triage, students have to make clinical judgments quickly,” said Dr. Andrew I. Spielman, associate dean for academic affairs and professor of basic science and craniofacial biology.

“Students transition seamlessly and gracefully from the ideal working conditions of the dental school to the more challenging environment of an improvised outreach clinic,” added Dr. Spielman.

Dr. Timothy Oh, director of the Caring Hands of Maine Dental Center, a nonprofit clinic in neighboring Hancock County that provides follow-up treatment to patients seen by the NYUCD team, hopes that the experience will convince some students to choose a career in dentistry in rural Maine.

“There are lots of opportunities to have a stable practice in a rural setting without the competitive pressures and high start-up costs of an urban area saturated with dentists,” said Dr. Oh, who worked alongside the NYUCD team. “If I could get one or
two of the NYUCD students to set up practice here after graduation, it would
do a tremendous amount of good.”

**Outreach Teams Return to Alaska and Upstate New York**

NYUCD-Henry Schein Cares Outreach teams traveled to Hudson in upstate New York for five days in October 2011 and again in January 2012, the eighth and ninth visits, respectively, to the public schools in the town since 2009. A 35-person NYUCD team treated 333 children and 120 adults in October and a 20-person team treated 374 children in January. The final two visits of the three-year Hudson, New York, outreach program were conducted in April and June 2012.

In December 2011, a 19-person NYUCD-Henry Schein Cares Outreach team paid its first visit to Yakutat, a remote village in southeastern Alaska, screening and treating 116 children and 50 adults. NYUCD began outreach to rural Alaska in 2009. A return visit is planned for winter 2012.

—Ami Finkelthal

**NYUCD STUDENT, FACULTY, AND STAFF OUTREACH PARTICIPANTS**

**Machias, Maine, October 2011**

**DDS students:** Mohamed Abdelhakim, Sara Khoshroozeh, Daniel Rubinshtein, Stephanie Serpa, Lucio Cardoso, Parul Aggarwal, Mohammad Allamarvdasht, Mr. Sherman Farahani, Sana Kazmi, Tony Tran, Muzaffar Ayesha

**Postdoctoral residents:** Alexandra Glickman, oral and maxillofacial surgery; George Jong, Jeff Lo, pediatric dentistry; Melissa Wilner, Cherish Im, Stephanie Hardwick, endodontics

**Dental hygiene students:** Nandita Kapadia, Nishu Singh

**Faculty:** Stuart Hirsch, Andrew Spielman, Robert Glickman, Courtney Linenberg, Nancy Dougherty, Jill Fernandez, Andrew Schenkel

**Administrators:** Rachel Hill, Alison Kurtz, Lisa Haystrand, Danielle Becker

**Yakutat, Alaska, December 2011**

**DDS students:** Andrew Kung, Sahel Farhangi, Vincent Fung, Stephen Greiner, Jordan Martin, John Matthes, William Perez

**Postdoctoral residents:** Darchelle Braxton, Nikko Lee, Stella Ioannou, pediatric dentistry; Jeffrey Albert, endodontics

**Faculty:** Stuart Hirsch, Gayle Miranda

**Administrators:** Rachel Hill, Danielle Becker, Alison Kurtz, Lisa Haystrand

**Hudson, New York, October 2011**

**DDS students:** Gregory Wang, Jack Fan, Kia Farideh, Suvana Hashim, Ronny Le, Sweta Shah, Andy Vu, Zuwu Zhou

**Postdoctoral residents:** Allan Pang, Chang Ryu, Thuan Nguyen, Michael Wahl, Stella Ioannou, Mary Katsoudas, Naim Rayyan, Neha Jhala, pediatric dentistry; Abdulaziz Abu Melha, endodontics

**Dental hygiene students:** Omar Batista, Jennifer Pyo, Joelle Burd, Dana Moroney, Miriam Kim, Nivedita Puri

**Faculty:** Stuart Hirsch, Maurice Edwards, Huzefa Talib, Neal Herman, Charlie Larsen, Evan Hershkowitz, Jill Fernandez, Aneta Mejia

**Administrators:** Rachel Hill, Danielle Becker, Alison Kurtz, Lisa Haystrand

**Yakutat, Alaska, December 2011**

**DDS students:** Andrew Kung, Sahel Farhangi, Vincent Fung, Stephen Greiner, Jordan Martin, John Matthes, William Perez

**Postdoctoral residents:** Darchelle Braxton, Nikko Lee, Stella Ioannou, pediatric dentistry; Jeffrey Albert, endodontics

**Faculty:** Stuart Hirsch, Gayle Miranda

**Administrators:** Rachel Hill, Danielle Becker, Alison Kurtz, Lisa Haystrand

**Hudson, New York, January 2012**

**Postdoctoral residents:** Michael Wahl, Cindy Tran, Courtney Beed, Vincent Van, Katrina Liu, Mary Katsoudas, Neha Jhala, pediatric dentistry

**Dental hygiene students:** Omar Batista, Ruth Berhane, Joelle Burd, Annette Huynh, Kristy Lee, Valerie Repetto

**Faculty:** Neal Herman, Jill Fernandez, Amber Watters

**Administrators:** Rachel Hill, Danielle Becker, Alison Kurtz
Vodou (aka voodoo), a system of spiritual rituals and practices brought to Haiti from West Africa in the 18th century, is typically portrayed in the popular culture as a manifestation of the “dark arts.” But it was the tangible, worldly artistry of vodou flag makers that made a collector of Dr. Ralph Katz, professor and chair of the Department of Epidemiology and Health Promotion.

When Dr. Katz visited Haiti for the first time, in 1987, to conduct research, a colleague told him about a clandestine operation run at a warehouse-like art store named “Pierre, Pierre,” where he could buy original vodou flags. Today, his collection includes 26 richly sequined, beaded, velvet cloths that were used at vodou ceremonies to summon a specific god. The flags typically use a “veve,” a term for intricate religious line drawing symbols specific to each ‘Iwa’ (or god spirit) that resemble Native American sand drawings.

“While both light and dark forms of magic are traditionally part of vodou,” says Dr. Katz, “there is only rare use of the ‘dark forms,’ and then only to impose social penalties on miscreants. The real magic is in the craftsmanship that goes into these flags. The artists who created these ravishing artifacts are a dying breed, but their art has finally begun to attract the esteem it deserves among the educated middle class in Haiti after decades of being shunned as a ‘peasant belief.’ In fact, the most recent former dean at the University of Haiti School of Dentistry bought and displayed a vodou flag in his office while he was dean.”

Dr. Katz’s vodou flag collection has been exhibited at the University of Connecticut’s College of Fine Arts and at Trinity College in Connecticut, as well as locally at Baruch College in New York City.
WHEN YOUR DENTIST IS A BUNNY RABBIT, WHO NEEDS LAUGHING GAS?

The incredulous patient demanded an immediate explanation from his dentist. “Whataya mean I have a bad bite?” exclaimed the patient. “I don’t even have teeth!”

A routine checkup? Not exactly. Daffy Duck was the patient, Bugs Bunny his dentist, and the scene was a cartoon rendering of a dental examination that Chuck Jones, the legendary animator and director of Looney Tunes, Merrie Melodies, Dr. Seuss’s How the Grinch Stole Christmas, and other classic cartoons, conceived for a series of limited edition, hand-painted, dental-themed animation cels, so called because they were painted on cellulose acetate.

The eight dental cels that Jones created between 1987 and 1999 featured Porky the Pig, Marvin the Martian, and other classic Warner Brothers characters. Dr. Miriam R. Robbins, clinical associate professor and associate chair of the Department of Oral and Maxillofacial Pathology, Radiology and Medicine, acquired all eight of the cels, along with others that featured characters from the Animaniacs, The Flintstones, and Rocky and Bullwinkle. Four cels hang in her office at NYUCD and the others are displayed in her apartment in lower Manhattan, where she maintains a collection of some 100 cels (not all dentally themed).

Collecting animation cels has been a lifelong passion. When she was 13, Dr. Robbins discovered an animation shop near her home in Hastings, New York, where she could purchase images of her favorite TV characters. “These hand-painted pictures are truly a lost art,” she explains. “Today, computer-generated cartoons are the standard.”
The Class of 2013 has scored a first-attempt pass rate of 99.4 percent on Part I of the National Board Dental Examinations. This is four points higher than the national average. In every category of the exams, our students scored between 4.5 and 8 percent higher than the national average. Considering that the Class of 2012 scored a first-attempt pass rate of 100 percent on Part I of the National Boards last year and that the Class of 2011 scored a 98.6 percent first-attempt pass rate on Part II of the National Boards, it becomes clear that NYU dental students are raising the bar on performance standards nationally.

On behalf of everyone at NYUCD, Global Health Nexus offers hearty congratulations to our wonderful students and to the outstanding faculty members who guided them to success. Students and faculty celebrated their achievement at a party in their honor hosted by Dean Bertolami.
Dr. Miriam Robbins (left), clinical associate professor and associate chair of the Department of Oral and Maxillofacial Pathology, Radiology and Medicine, and chair of NYUCD’s Academy of Distinguished Educators, was recently interviewed by Mr. William Eidtson (right), director of NYUCD Professional Development, about the mission, vision, and specific plans for the future of the Academy, which recently celebrated its second anniversary. Following are excerpts from that conversation.

**Mr. Eidtson:** How do you define the mission of the Academy?

**Dr. Robbins:** The Academy’s mission is to enhance overall teaching at NYUCD and to spur excitement among our faculty and encourage them to think outside the box. The words that Dean Bertolami used when he asked the founders to propose a plan for the Academy are very telling. He said that he envisioned the Academy as a think tank, a place where faculty could spread their wings and not be afraid to fail. It should be a place, he said, where people feel free to fail because learning from failure will ultimately improve the overall quality of teaching at the College. What a liberating message!

**Mr. Eidtson:** What role does the Academy play in the life of the College?

**Dr. Robbins:** The Academy exists to encourage excellence and to provide essential recognition of faculty accomplishments. This includes all faculty, clinical science as well as basic science faculty.
Although excellence in teaching is central to the mission of educating tomorrow’s healthcare providers, it is often undervalued and under-supported. The Academy strives to create an environment that enhances the status of health professions educators.

We do this by providing a forum for faculty to develop initiatives and learning strategies that will improve their pedagogical practices, their ability to develop learning materials, and their ability to mentor both fellow faculty and students.

Mr. Eidtson: I understand that during the Academy’s first year, you were necessarily focused on structuring the Academy, creating bylaws, etc. What are your plans currently?

Dr. Robbins: The Academy is modeled on the highly successful Academies of Medical Educators at both Harvard University and the University of California, San Francisco (UCSF). To create a model for NYUCD that would aspire to the stature of those programs while reflecting the specific nature and character of NYUCD required substantial time. Now that we have an infrastructure, bylaws, committees, and additional members in place, the founding members have all begun to explore Academy-sponsored research projects that reflect their specific interests.

I am exploring alternative methods of teaching. One of the models I am testing is the “inverted classroom,” which employs a wide variety of learning styles, including social media. Tony Vernillo is partnering with the Alden March Bioethics Institute to develop online certificate programs in bioethics. Mitch Lipp is developing patient-centered interactive e-learning modules that provide feedback and encouragement to predoctoral orthodontics students. Eric Baker is experimenting with peer instruction with students and developing digital learning modules for students in anatomy and other courses. And Marjan Moghadam is developing an electronic chairside “pocket guide” for clinical procedures.

Other Academy initiatives include a popular series of national and international speakers who are experts in their areas, including dentistry of course, but also in medicine, neuroscience, and pedagogy, to name a few. Also, the Academy has created the Clinical and Educational Scholarship Showcase, which provides a formal showcase for clinical scholarship. It is modeled on NYUCD’s annual Research Day, which showcases student research. Our showcase offers an opportunity for clinical faculty to show what they are doing.

The Academy is also planning a new publication to debut this fall, the Journal of the Academy of Distinguished Educators, to be co-edited by Mary Northridge, assistant professor of epidemiology and health promotion and editor-in-chief of the American Journal of Public Health, and Elyse Bloom, assistant dean for communications and public affairs and editor of Global Health Nexus. It will be an online, peer-reviewed journal, which, in addition to giving our faculty an additional venue for publication, will seek to foster interdisciplinary and interprofessional collaboration by inviting experts from other institutions to provide their views on education writ large.

Mr. Eidtson: Where would you like to see the Academy in five years?

Dr. Robbins: I think that the Academy needs to be a continually evolving, dynamic organization whose ultimate goal is to have the entire faculty at the College as members. This brings me back to Charles’s incredibly powerful and broad-minded statement that “if it doesn’t work, it doesn’t work. The important thing is to explore.” Typically, faculty members are not encouraged to do things like that and I really think that it will motivate faculty to go where no one’s gone before in seeking to improve teaching.
The NYU Academy of Distinguished Educators has inducted their 2011–2012 members. They are Dr. Elena Cunningham, adjunct assistant professor of basic science and craniofacial biology; Dr. Maureen McAndrew, clinical associate professor of cariology and comprehensive care; Dr. Mary Northridge, assistant professor of epidemiology and health promotion; Dr. Andrew Schenkel, clinical assistant professor of cariology and comprehensive care; and Dr. Analia Veitz-Keenan, clinical assistant professor of oral and maxillofacial pathology, radiology and medicine.

Dr. Joan Phelan, professor and chair of the Department of Oral and Maxillofacial Pathology, Radiology and Oral Medicine is the Academy’s first honorary member.

“NYUCD takes great pride in the outstanding contributions to dental education, research, and scholarship of these newest members of the Academy, and in the recognition by the Academy of Dr. Joan Phelan as its inaugural honorary member. In selecting Dr. Phelan for this distinction, the Academy has set a very high bar for future honorary members,” said Dean Bertolami.
First, educating a dentist took less than half the time it takes today, plus an additional year of clinical practice in the Infirmary before being awarded a license to practice. The academic year, consisting of didactic and clinical training, lasted approximately five months—from early October through early March. Through spring and part of the summer, another three months were dedicated to clinical training in the Infirmary. Each student was assigned a clinical preceptor from among the faculty. All lectures were offered at the same time to all enrolled students that year, regardless of whether they were first- or second-year students. There was no high school or other prerequisite and no specific age requirement for application. It took 13 more years for the New York State Board of Regents to mandate that a student must be at least 21 years old to be eligible to practice dentistry in New York. Prior to that time, students who applied to dental school were as young as 16. Some required their parents to vouch for them so that they could apply.

Among a total of 211 students enrolled in all classes in 1887, 80 percent came from the US, the majority from the New York area. The remainder came from 14 different countries, including Europe, South America, Central America, Canada, and the West Indies. Such diversity was common, even in the first 22 years of the College's history. An analysis of the 545 alumni of the College who graduated from the time of the College's founding in 1865 through 1887 reveals that 19 percent (103 students) came from 30 countries, and, upon graduation, decided to practice outside the US in countries that included North, Central, and South America, Australia and Europe. Still, a majority of the graduates, 40 percent (218 graduates) went into practice in New York, while another 41 percent established practices elsewhere in the US.

**Location, Location, Location**

After renting rooms at four different locations in the vicinity of 23d Street and Broadway during its first
several years, in 1869 the College settled into a rental of several floors in a four-story building at the northwest corner of 23d Street and Second Avenue (225 East 23d Street). (Figure 1)

The College remained in this building until 1891, when, due to its increased enrollment and impending change in the curriculum from two to three years, it moved to 203–207 East 23d Street, at the current site of the School of Visual Arts.

The year 1887 was one of significant expansion. Minutes for the annual meeting of the College's Board of Trustees reveals a $65,000 budget ($1,675,555 in today's dollars)*, of which $1,237 went for rental space. This translates into $31,887 in today's dollars.

The Dean of the College was Frank Abbott, MD, professor of dental surgery and therapeutics (Figure 2), who had joined the College as one of its founding members. In 1887, Frank Abbott was a member of the Board of Trustees and Faculty Council and was serving his 18th year as dean. Frank Abbott led the school for another 10 years, until his death in 1897, at which time another founding member, Professor Faneuil Weisse, became dean.

Even in 1887, the College had a 7:1 student-to-faculty ratio. There were five professors, three lecturers, five assistants, and 18 clinical faculty members for the Infirmary.

The curriculum, comprising far fewer subjects than the current one, included regional anatomy, practical anatomy (laboratory), visceral anatomy, physiology, histology, practical histology (laboratory), chemistry, practical (laboratory) chemistry, oral surgery (lectures and clinics), hospital clinics (today's hospital

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*Estimates are based on the Consumer Price Index (CPI).

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Fig 1. At 23d and 2d Avenue, the site of NYCD in 1887 (1869 through 1891). The original building (in the inset) is no longer in existence. Today, this site houses the American Sign Language and English Lower School.

Fig 2. Dr. Frank Abbott
dentistry), operative dentistry, mechanical dentistry (lectures and clinics), and dental therapeutics. Hospital clinical practice took place at Charity and Bellevue Hospitals. Anatomy dissections were performed at the Department of Anatomy at the University of the City of New York (today’s NYU School of Medicine).

The curriculum required students to use a total of 24 textbooks, some of which are still in use today, including Gray’s Anatomy. Also among the books that students used were Weisse’s Practical Human Anatomy, Holden’s Osteology, Green’s Pathology, Wedl’s Dental Pathology, Harris’s Dictionary of Dental Surgery, Richardson’s Mechanical Dentistry, and Mitchell’s Dental Chemistry.

In order to attend a lecture or clinical training at the Infirmary, students were required to purchase a ticket to individual courses and clinics. Tuition covered the cost of the tickets. Instruments and books were extra and they were quite expensive. Tuition for the two years was $255 ($120 + $135). The two summer Infirmary tickets were purchased separately for an additional $90 ($45 + $45). (Figures 3 and 4) The total fees for two years, $345, would represent $8,893 in today’s dollars.

The winter schedule for 1886-87 reveals that students had 13-hour days (9 am to 10 pm), either in class/clinic and/or labs (Figure 5). A typical spring schedule from March through June was eight hours, 9 am to 5 pm, consisting mostly of clinics or labs for underclass students.

Upon graduation, students received a large diploma with elegant handwriting on parchment. Figure 6 shows the 1889 diploma of Ralph Waldo Emerson (unrelated to the poet).

The life of a dentist in 1887 was very different from what it is today. A period photo (Figure 7) shows a dentist treating a patient. There was no electricity or running water. Because of the lack of electricity, all treatment had to take place during daylight. Patients were seated in rooms facing large windows. By all accounts a foot-pedal-operated (treadle) drill was used. Anesthesia, primarily laughing gas or ether, available for 40 years, was used for extractions but not for fillings or other dental procedures. The dentist shown in Figure 7 is Dr.
Henry N. Dodge, son of one of the founding members of the College, J. Smith Dodge, Jr. He is in his street clothes with no gloves, mask, or shields. The work of the great microbiologists—Koch, Pasteur, Lister—had not yet penetrated the day-to-day operations of a dental office. Gloves and local anesthesia, such as Novocaine, had to wait another 18 years before being introduced in 1905.

Fig 5. Schedule for the Winter (October through March) and Spring (March through June) sessions.

Fig 6. A diploma from 1889 bearing the recipient’s name, Dr. Ralph Waldo Emerson (unrelated to the famous poet).

Fig 7. Dr. Henry N. Dodge, the son of one of NYCD’s founding members, J. Smith Dodge, Jr., in his office in Morristown, N.J. Photo taken on July 5, 1886. There was no electricity or running water.
Since arriving at NYUCD in June 2009, Hans Hwa-Pen Hsu, DDS ’13, hasn’t gotten much sleep.

“It’s usually around five hours during the week,” he says. “But I’ve been used to this sort of packed lifestyle since my undergrad days. It’s just a continuation of keeping busy and getting the most out of each day.”

Indeed. Dr. Mitchell Lipp, clinical associate professor of orthodontics, has worked closely with Hans on education research projects in the Department of Orthodontics, where they have been studying how mock assessments facilitate learning and boost achievements. “What has impressed me most about Hans,” says Dr. Lipp, “is that he is not only a good student in the traditional sense within the metrics of grades, but he is also always extending himself in all these other areas—research, education, leadership, service. He’s really this Renaissance-type of student.”

That’s exactly what one of his other NYUCD research mentors, Dr. Kathleen Kinnally, professor of basic science and craniofacial biology, says: “Hans has his fingers in a lot of pies. He’s one of these Renaissance-type of guys who are amazingly agile and able to handle a lot of different things.”

Prior to his freshman year, Hans participated in an eight-week summer research program in Dr. Kinnally’s lab, where he studied the cytotoxic properties of cellular mechanisms of five novel organogold (III) chemotherapeutic drugs on malignant MDA686LN, MSK Leuk 1 pre-malignant, and Normal Oral Epithelial cells.

“His findings won him the National AADR Student Research Fellowship, of which only 22 are awarded annually,” adds Dr. Kinnally.

Hans continues to play a role in Dr. Kinnally’s lab by mentoring Jacqueline Mo Tin Ng, a senior at NYU’s College of Arts and Science, in moving the research project he started forward. Hans also participates in the Selective in Teaching Skills program and serves as a clinical teaching assistant, helping freshmen and sophomores with their lab work.

Says Hans, “I just like to try new things and test the boundaries of what I am comfortable with. It’s a curiosity I just can’t stop.”
Hans was born in Vienna, where his Taiwanese parents met. At the age of 13, Hans moved with his family to Philadelphia. “I have cousins and uncles who are dentists and I had this fascination with the field,” he says. “When I enrolled in Swarthmore College as an undergraduate, I already had an interest in dentistry.”

A classically trained pianist, Hans spent part of his undergraduate weekends teaching piano as well as Mandarin to young children, an experience that prompted him to want to go into pediatrics. “I thought I would end up going to med school,” he says.

Hans graduated from Swarthmore in 2007 with a BA in biology and Chinese studies and moved to New York City, where he worked for a year as a research technician at the NYU Langone Medical Center studying cell death apoptosis in fruit flies. “That experience of working with microscopes, of working with my hands and fingers in such precise detail, turned me back to dentistry,” says Hans.

He applied to and was accepted by several dental schools and ultimately decided on NYUCD. “The most exciting thing about NYU was the diversity of the student body,” says Hans. “The other thing that really turned me on was that NYU puts a lot of emphasis on research, which is a passion of mine.”

Along with his love of research, Hans is passionate about education. While his work with Dr. Lipp has allowed him to combine both interests, Hans’s ambition has not stopped there. Along with a former Swarthmore friend who works for Citizens Schools, a nonprofit private enterprise that brings learning experiences to middle-school children in low-income areas, Hans developed and established a 10-week after-school program, the NYUCD Apprentice Program. Each week, the program teaches students something different related to dental health, oral hygiene, healthcare issues, and the dental profession. Launched last year at the Brooklyn School for Global Studies, the program was so successful that it has been expanded to two campuses, one in East Harlem and one in Washington Heights. “This is my baby,” says Hans. “What I’m most proud of.”

Another area of interest for Hans is public health. “I went to Grenada this past fall and had the opportunity to work with kids and learn how to interact with them, how to get them to cooperate. It was amazing.”

As if he doesn’t have enough on his plate, Hans also holds numerous leadership positions at NYUCD, including: sole DDS student representative on the Research Advisory Committee (September 2011–present); 3rd-year DDS student representative for the Curriculum Review Committee (April 2011–present); NYUCD Chapter President of the National Student Research Group (July 2011–present); and NYUCD Chapter Vice President of the American Dental Education Association (ADEA).

“Hans is a leader, someone who cares about the community, someone who has this curiosity and can see dentistry on different levels and can contextualize it,” says Dr. Lipp. “I want him to be a dean. I think that he could really have a major impact.”

—Stephanie Susnjara

“The most exciting thing about NYU was the diversity of the student body,” says Hans. “The other thing that really turned me on was that NYU puts a lot of emphasis on research, which is a passion of mine.”
“Everyone who knows me knows me to be a planner,” says Katherine L. John, AAS program in dental hygiene Class of 2012. “In fact, some of my teachers might tell you I’m the most organized, planned-out person they know,” she adds with a laugh.

This personality trait has been key to Katherine’s success at NYU, since Katherine works by day as a full-time payroll/human resources generalist for Milstein Properties-Milford Consultants in Manhattan, and by night, she is completing her last year in the evening component of the dental hygiene program.

“We have several different tracks in dental hygiene and that’s indigenous to NYU,” explains Rosemary Hays, clinical associate professor of dental hygiene. “We have the four-year BS degree program, a degree completion program for a bachelor’s degree, and a two-year or three-year AAS program. The evening AAS program takes three years but allows students to continue to work in order to help with tuition or other expenses.”

Professor Hays interviewed Katherine in 2009, when she was applying to NYU, and has worked with her in the Principles of Dental Hygiene III course. “It impressed me that Katie already had a bachelor’s degree in finance and a full-time job, but that she knew she wanted to do something totally different and went for it at a time when the economy was fragile,” says Professor Hays. “She’s just such a pleasure to have in the program. She’s someone who always has a smile on her face and is a very good student.”

Katherine, who is originally from the Albany area, moved to New York City right after graduating from Siena College. She landed a job immediately in human resources, but eventually realized that she wanted to switch gears.

“Right now I sit at a desk all day and I enjoy myself, but I am not doing anything for the greater good. I wanted a job where I felt like I was really making a difference. Plus, I’m the type of person who likes to meet new people all day long. Dental hygiene seemed like it would fulfill these goals and also allow...”
me the flexibility to have a family," says Katherine. After graduation, Katherine and her fiancé, Timothy Adams, DDS ’12, whom she met at Siena College, plan to marry. “Tim is going to do an oral surgery residency so I will go wherever his residency program takes him and will try to get a position in dental hygiene or work in finance until I get my dental hygiene license. Eventually, we plan to return to the Albany region.”

For anyone, working full-time and going to school is certainly a challenging juggling act. Monday through Friday, Katherine works from 7:30 am to 4:30 pm at Milstein Properties and then attends NYUCD Monday through Thursday, from around 5 pm to 8 pm. “I do a lot of my studying at night, on the weekends, and on my lunch break,” says Katherine.

Katherine has especially enjoyed classes in anatomy as well as principles of dental hygiene. “A lot of people in my class are already working in a private practice, and they have this foundation. But for me it’s all been new, and I really love learning how to clean teeth, what instruments to use. It’s been really exciting.”

Besides her knack for being organized, Katherine also cites the close-knit atmosphere of the evening program as something that helps her to maintain focus. “Classes are so small—around 10 of us—and we all really help and support each other. While the work is still rigorous, the teachers in the evening seem laid-back and everyone is very comfortable and personable.”

Katherine always thought she wanted to work with children but now that she’s had some experience working in a clinic, she’s realized that she really likes providing care for middle-aged and elderly patients, too. “I would like to do a general private practice,” she says. “I grew up going to an amazing one and everyone there was like family—they knew your name and everything else about you. It was such a nice environment, and I can really see myself doing that long term.”

—Stephanie Susnjara

I would like to do a general private practice,” she says. “I grew up going to an amazing one and everyone there was like family—they knew your name and everything else about you. It was such a nice environment, and I can really see myself doing that long term.”
Dr. Ralph Katz, professor and chair of the Department of Epidemiology and Health Promotion, has received the prestigious NYU Distinguished Teaching Award. The award recognizes that—along with research—exceptional teaching, both within and outside the classroom, is among NYU’s institutional priorities. Professor Katz is one of only six NYU faculty members to receive the award this year.

Ralph’s many achievements include conducting groundbreaking research and creating innovative educational opportunities for dental students, including a course in critical evaluation of scientific literature—the only course of its kind in a dental school in the US; receiving an $8.3 million award from the NIH to establish the NYU Oral Cancer RAAHP (Research on Adolescent and Adult Health Promotion) Center; authoring “The Tuskegee Legacy Project,” which reports on the willingness of minorities to participate in biomedical research; and teaching a freshman honors course for the NYU College of Arts and Science entitled “Bioethics, Racism, and Paternalism: Tuskegee as a Case Study.”

Ralph is also the supervisor and motivator-in-chief for a group of NIH postdoctoral fellows, who typically spend three to four years in the MS in clinical research track and five years in the PhD in epidemiology track, focusing on population-based research training. (See related story on p. 80.) A man of many gifts, and of a “larger than life” presence, Ralph Katz is, first and foremost, an extraordinary teacher and mentor. He has a zest for life and learning which he communicates in all of his encounters with students, transforming them into exhilarating, mutual learning exchanges. A perfect example is Ralph’s founding, in 2003, of the “Spaghetti and Science” Society, which meets monthly at an Italian restaurant in Greenwich Village to provide “extra helpings” of science for predoctoral students who hunger for more discussion than is possible in the classroom.

“Ralph Katz understands that the secret to success as a teacher is a combination of scholarly expertise, the effective delivery of evidence-based practices, and a focus both on outcomes and caring for the patient,” said Dean Bertolami. “It is altogether fitting that Ralph’s commitment, energy, and creativity have been recognized with this coveted award.”

A man of many gifts, and of a “larger than life” presence, Ralph Katz is, first and foremost, an extraordinary teacher and mentor.
CONGRATULATIONS TO…

**DR. MANI ALIKHANI**, assistant professor of orthodontics, on coauthoring “Osteogenic Effect of High Frequency Acceleration on Alveolar Bone,” for the *Journal of Dental Research*, which is featuring the article on its cover at http://jdr.sagepub.com/content/91/4.cover-expansion. The study is based on research conducted by CTOR (Consortium for Translational Orthodontic Research) fellows, residents, and a partner in Portugal.

**DR. ARTHUR ASHMAN**, professor of periodontology and implant dentistry, on coauthoring an article entitled “The Use of Light/Chemically Hardened Polymethylmethacrylate, Polyhydroxyethylmethacrylate, and Calcium Hydroxide Graft Material in Combination With Polyanhydride Around Implants in Minipigs: Part 1: Immediate Stability and Function” for the *Journal of Periodontology*.

**MR. ROBERT ATKINS**, on being appointed a lead patient service representative in the Office of Clinical Operations.

**DR. SAM BAE, ’12**, on receiving the American Dental Education Association (ADEA) Gies Foundation/American Association for Dental Research Academic Dental Careers Fellow Award.

**MS. ANDREA BEALL**, clinical instructor in dental hygiene, on authoring an article entitled “A Look at Healthy People 2020 and Oral Health” for *Access*.

**MS. DANIELLE BECKER**, on her appointment as program administrator for global outreach programs in the Office of the Vice Dean for International Initiatives and Development.

**DR. CHARLES N. BERTOLAMI**, Herman Robert Fox Dean of NYUCD, on authoring a column entitled “Access to Dental Care: Is There a Problem?” for the *American Journal of Public Health* and “Moving Ethics Curricula Forward” for a special-emphasis issue on oral healthcare sciences for *Ethics in Biology, Engineering, & Medicine*, an international journal.

Added kudos to Dean Bertolami on receiving the 2012 Foundation of Excellence in Academics Award presented by the New York State Dental Foundation. The award recognizes Dr. Bertolami for his creative and innovative use of science curricula in oral health education.

**MS. MARIE LYDDA BIEN-AIME**, patient services representative, on winning an
NYU Give-a-Violet Award for outstanding service to patients, faculty, and staff at NYUCD.

**DR. BHUPINDER BRAR,** junior research scientist in epidemiology and health promotion, on authoring an article entitled “Use of Ayurvedic Diagnostic Criteria in Ayurvedic Clinical Trials: A Literature Review Focused on Research Methods” for the *Journal of Alternative and Complementary Medicine,* and on presenting an abstract of the article at the annual meeting of the American Public Health Association.

**CHINESE STUDENT DENTAL ASSOCIATION,** on volunteering to provide oral health screenings and treatment referrals to participants at Manhattan Chinatown senior centers. The volunteers included Dr. Christine Wong, Dr. Diana Yeung, Dr. Edward Chu, Dr. Vincent Fung, and Dr. Chi Ho, all of the Class of 2012. The volunteers were mentored by Dr. Theresa Montini, formerly a senior research scientist in the Department of Cariology and Comprehensive Care and currently an adjunct assistant professor of nursing at the NYU College of Nursing.

**MS. DIANA CAMPOS, ’13,** on receiving a scholarship from the National Association of Medical Minority Educators.


**DR. RICHARD COTTY,** assistant professor of basic science and craniofacial biology, on receiving a Faculty Council Teacher Recognition Award.

**DR. FREDERICK CURRO,** director of recruitment, retention, and operations for the PEARL Network, on coauthoring an article entitled “Advantages of the Dental Practice-Based Research Network Initiative and Its Role in Dental Education” for the *Journal of Dental Education,* with Ms. Ashley Grill, coordinator of information dissemination and protocol development and training for the PEARL Network; Dr. Van Thompson, director of protocol development and training for the PEARL Network; Dr. Ronald G. Craig, director of information dissemination for the PEARL Network; Dr. Analia Veitz-Keenan, associate professor of oral and maxillofacial pathology, radiology and medicine; and Dr. Frederick Naftolin, medical director of the PEARL Network.

**DR. GUSTAVO CRUZ,** adjunct professor of epidemiology and health promotion, on authoring an article entitled “Caries Experience Among
Chinese-American Children in Manhattan’s Chinatown” for The New York State Dental Journal.

**DR. NELSON R. DA SILVA,** associate professor of prosthodontics, on coauthoring an article entitled “Performance of Dental Ceramics” for SAGE Journals, with Dr. Paulo Coelho, assistant professor of biomaterials and biomimetics; Dr. Yu Zhang, associate professor of biomaterials and biomimetics; and Dr. Van Thompson, professor and chair of the Department of Biomaterials and Biomimetics.

**MS. IMARA DE MONTFORT** on being appointed executive assistant to Dr. Stuart M. Hirsch, vice dean for international initiatives and development. Ms. de Montfort previously worked at the United Nations and at Weill Cornell Medical College. At Weill, she handled high-level communications, managed budgets, and forecasted revenue goals.

**MR. EDLY DESTINE,** ’13, on coauthoring an article entitled, “The N- and C-Terminal Regions of the Pearl-Associated EF Hand Protein, PFMG1, Promote the Formation of the Aragonite Polymorph in Vitro,” with Dr. John S. Evans, professor of basic science and craniofacial biology, for Crystal Growth & Design.

**DR. ELLIOTT J. DOMBROFF,** clinical assistant professor of oral and maxillofacial pathology, radiology and medicine, on being installed as president of the American Association of Dental Editors.

**DR. NANCY DOUGHERTY,** associate professor of pediatric dentistry and director of the Advanced Education Program in Pediatric Dentistry, on receiving a certificate of appreciation from the New York State Office for People with Developmental Disabilities.

**MR. HAROLD ELIZEE,** on being appointed assistant manager of the central sterilization unit.

**MS. KRISTIN FELIZ,** on being appointed an admissions officer in the Office of Admissions.

**DR. JONATHAN L. FERENCZ,** clinical professor of prosthodontics, on receiving a Distinguished Lecturer Award from the American College of Prosthodontists, and a Founders
Medallion Award from the American College of Prosthodontics Education Foundation.

DR. MICHAEL B. FERGUSON, associate professor of prosthodontics, on being selected by the Commission on Dental Accreditation to conduct a preliminary accreditation consulting visit at the SDM College of Dental Sciences in Dharwad, Karnataka, India.

MS. JILL FERNANDEZ, clinical associate professor of pediatric dentistry, on coauthoring an article entitled “The Use of Mobile Electronic Devices as an Educational Tool in Pediatric Community Service” for The New York State Dental Journal, with Dr. Elise S. Eisenberg, ’84, senior director of informatics; and Dr. Amr M. Moursi, associate professor and chair of the Department of Pediatric Dentistry.

DR. KENNETH FLEISHER, clinical associate professor of oral and maxillofacial surgery, on coauthoring an article entitled “Antibiotic Effects on Bacterial Profile in Osteonecrosis of the Jaw” for Oral Diseases, with Dr. Smruti Pushalkar, assistant research scientist in basic science and craniofacial biology; Dr. Robert Glickman, professor and chair of the Department of Oral and Maxillofacial Surgery; and Dr. Deepak Saxena, assistant professor of basic science and craniofacial biology; and on coauthoring an article entitled “Concentration Dependent Effects of Tobacco Particulates from Different Types of Cigarettes on Expression of Drug Metabolizing Proteins” for Food and Chemical Toxicology, with Dr. Peter Sacks, professor of basic science and craniofacial biology; and Dr. Joseph Guttenplan, professor of basic science and craniofacial biology.

MS. WINNIE FURNARI, assistant professor of dental hygiene, on co-presenting a lecture entitled “Dental Forensics: Post-9/11 Victims’ Identification at NYC’s Medical Examiner’s Office” for the NYUCD Faculty Staff Development Center; and on having an article she authored for Registered Dental Hygienist, entitled “10th Anniversary of 9/11,” selected by the editors of DentistryIQ as one of the most important articles of 2011 for dental hygienists.
MS. MARIANNA GALENO, AAS in dental hygiene, ’12, on authoring an article entitled “Intimate Partner Abuse and the Role of the Dental Hygienist,” for Access.

MS. RIFKA GERMAIN, on being appointed a lead patient service representative in the Office of Clinical Operations.

DR. JENNIFER GIBBS, assistant professor of endodontics, on coauthoring an article entitled “Public Health Surveillance of Dental Pain via Twitter” for the Journal of Dental Research.

MS. RHODA GLADSTONE, clinical professor of dental hygiene, on receiving a Faculty Council Teacher Recognition Award.

DR. ROBERT GLICKMAN, professor and chair of the Department of Oral and Maxillofacial Surgery, on being appointed chair of Institutional Review Board D, a human subject review board at the NYU Langone Medical Center.

MR. JEFFREY GOETZ, ’14, on receiving a New York Academy of Dentistry Summer Research Grant for a project entitled “Bone Repair using 3D Printed Tricalcium Phosphate Scaffolds.”

DR. DAVID L. GLOTZER, ’58, clinical professor of cariology and comprehensive care, on serving as a coordinator of the AMA’s CitizenReady Program on emergency preparedness, presented as part of the 10th anniversary ceremonies commemorating the September 11, 2001, terrorist attacks.

DR. GARY GOLDSTEIN, professor of prosthodontics, on receiving a Distinguished Service Award from the American College of Prosthodontists New York Section and the Educator of the Year Award from the Jonathan and Maxine Ferencz Advanced Education Program in Prosthodontics; and on authoring “What Is a Clinical Scholar?” for the Journal of Prosthodontics, and coauthoring “Single Visit Fabrication of a Porcelain Laminate Veneer With CAD/CAM Technology: A Clinical Report,” for the Journal of Prosthetic Dentistry, with Dr. Dean Vafiadis, associate professor of periodontology and implant dentistry.
MR. JOE GREEN, on being appointed an admissions officer in the Office of Admissions.

MS. ASHLEY GRILL, clinical assistant professor of dental hygiene and coordinator of information dissemination and protocol development and training for the PEARL Network, on authoring an abstract entitled “Practice Research Coordinator Involvement Improves Study Participation,” for the Journal of Dental Hygiene; on presenting the abstract at the second North American Dental Hygiene Research Conference; on presenting a lecture entitled “Practice-Based Research Findings from the PEARL Network” at the New Hampshire Dental Hygienists’ Association annual meeting; on being appointed to the American Dental Hygienists’ Association Council on Research; and on winning an NIH K–12 LAB Challenge Award, which solicits ideas for experiments to conduct in K–12 classrooms.

DR. DAVID HIRSCH, associate professor of oral and maxillofacial surgery, on presenting a lecture entitled “Technological Advances: Computer-Aided Surgery” at the annual meeting of the American Association of Oral and Maxillofacial Surgery; and on co-presenting the following abstracts at the meeting: “Mandibular Reconstruction with Free Fibula Flap for Disarticulation Mandibulectomy Defects,” and “Diagnosis of Lymphoma in the Head and Neck,” with Dr. Ashish Patel, a teaching fellow in oral and maxillofacial surgery; “Risk Factors and Aggressiveness of Oral Cavity Carcinomas in Young Patients,” with Dr. Jin Soo Bae, a teaching fellow in oral and maxillofacial surgery; “The Use of Double Barreled Fibulas to Produce Ideal Mandibular Form,” with Dr. Steven Caldronkey, a teaching fellow in oral and maxillofacial surgery; and “Oral Squamous Cell Malignancy Associated with Long-Term Pegylated Liposomal Doxorubicin Treatment for Ovarian Cancer,” with Dr. Calvin Jung, a teaching fellow in oral and maxillofacial surgery, and Dr. Lauren Bourell, a teaching fellow in oral and maxillofacial surgery.

MS. CYNTHIA HOWARD, assistant professor of dental hygiene, on coauthoring an article entitled “Improving Kids’ Oral Health” for Registered Dental Hygienist, with Ms. Jill B. Fernandez, clinical associate professor of pediatric dentistry.

DR. MARY KATHERINE HUTCHINSON, associate professor of nursing, on coauthoring an article entitled “HIV Testing in Dental Care: Opportunities for Nurse Practitioner and Dentist Collaboration,” for The Nurse Practitioner, with Ms. Madeleine Lloyd, clinical assistant professor of global health.

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of oral and maxillofacial pathology, radiology, and medicine, adjunct clinical professor of nursing, and nurse practitioner at the NYU Nursing Faculty Practice.

“Severe and Rapid Erosion of Dental Enamel from Swimming: A Clinical Report,” for the Journal of Prosthetic Dentistry, with Dr. Steven Pigliacelli, adjunct professor of prosthodontics, and Dr. Ross Kerr, associate professor of oral and maxillofacial pathology, radiology and medicine.

DR. LEILA JAHANGIRI, associate professor and chair of the Department of Prosthodontics, on coauthoring a textbook entitled Clinical Cases in Prosthodontics with Dr. Mijin Choi, associate professor of prosthodontics; Dr. Michael Ferguson, associate professor of prosthodontics; and Dr. Marjan Moghadam, assistant professor of prosthodontics. Added kudos to Dr. Jahangiri on coauthoring a book entitled A Guide to Better Teaching: Skills, Advice, and Evaluation for College and University Professors; and on coauthoring an article entitled A Guide to Better Teaching: Skills, Advice, and Evaluation for College and University Professors; and on coauthoring a book entitled

MR. MORILLE JEAN-MARIE, AAS dental hygiene, Class of 2012, formerly a dental assistant at the NYU Dental Faculty Practice, on being a dental assistant at the NYU Dental Faculty Practice, on being promoted to assistant supply manager in the Office of Clinical Operations.

DR. VASILIKI KARLIS, associate professor of oral and maxillofacial surgery and director of the Advanced Education Program in Oral and Maxillofacial Surgery, on leading an anesthesia update symposium on diabetes and a surgical clinic on the “ABCs of Pediatric Outpatient Anesthesia for the OMS” at the annual meeting of the American Association of Oral and Maxillofacial Surgeons, with Dr. Robert Glickman, professor and chair of the Department of Oral and Maxillofacial Surgery.

DR. RALPH KATZ, professor and chair of the Department of Epidemiology and Health Promotion, on co-editing a book entitled The Search for the Legacy of the USPHS Syphilis Study at Tuskegee.
DR. ROSS KERR, associate professor of oral and maxillofacial pathology, radiology and medicine, on receiving the distinguished Service Award presented by the Oral Cancer Foundation.

DR. MEIR KOZLOVSKY, clinical assistant professor of cariology and comprehensive care, on coauthoring articles entitled “Ceramo – Metal Preparation” and “Full Cast Crown Preparation Chamfer,” for MedEdPORTAL, with Dr. Kumar Shanmugam, clinical assistant professor of cariology and comprehensive care, and Dr. Peter Furnari, clinical professor of cariology and comprehensive care. Added kudos to Dr. Kozlovsky for presenting his MedEdPORTAL submission at the 2012 American Dental Education Association (ADEA) Annual Session.

DR. ANDREW KUNG, ’12, on winning third place in the American College of Prosthodontists predoctoral table clinic competition for a case report he authored entitled “Resin-Bonded Metal Ceramic Fixed Partial Denture.”

DR. KENNETH S. KURTZ, assistant professor of prosthodontics, on receiving a Mentor of the Year Award from the Advanced Education Program in Prosthodontics Class of 2011; on coauthoring articles entitled “Engaging Abutment Position Effect in Implant-Borne Screw Retained Three-Unit Fixed Cantilever Prostheses,” for the Journal of Prosthodontics; “Fatigue Testing of Laser Treated Endosseous Implants With An Internal Trilobe Connection,” for the European Journal of Prosthodontics and Restorative Dentistry, with Dr. Robert Berg, clinical assistant professor of prosthodontics, and Dr. Paulo Coelho, assistant professor of biomaterials and biomimetics; and “Interim Prosthetic Phase of Multidisciplinary Management of Cleidocranial Dysplasia: The Bronx Approach,” for the Journal of Prosthodontics, with Dr. Berg.

DR. ESTHER KUYINU, clinical associate professor of prosthodontics, on leading an oral health outreach visit to Nigeria.

MR. JASON KWAN, ’13, on being selected to receive the 2011 Hinman Student Research Symposium Award.
DR. WAYNE KYE, assistant professor of periodontology and implant dentistry, on receiving an American Academy of Periodontology Award for Outstanding Teaching and Mentoring in Periodontics; and on being inducted into the American College of Dentists.

DR. LEWIS LAMPERT, clinical assistant professor of oral and maxillofacial pathology, radiology, and medicine, on coauthoring an article entitled “Combined Antiviral-Corticosteroid Therapy for Bell’s Palsy Yields Inconclusive Benefit,” for the Journal of the American Dental Association.

MR. JEAN PAUL LAURENT, BS in dental hygiene class of 2013, on volunteering for dental outreach at an earthquake survivors’ camp in Haiti.

DR. MARCI LEVINE, assistant professor of oral and maxillofacial surgery, on being inducted into the American College of Dentists.

DR. TERRY LIN, PG Prosthodontics Class of 2011 and clinical assistant professor of prosthodontics, on being selected to receive the Sharry Award for a study entitled “A Bioactive Collagen Membrane Carrying PDGF for Bone Tissue Engineering.”

DR. MITCHELL J. LIPP, clinical associate professor of orthodontics, on presenting a poster entitled “Critical Thinking in Dental Education: What is it? Where did it come from? Where is it going?” with Rory A. Chong and Jeffrey W. Goetz, both Class of 2014, at the annual ADEA session.

DR. WILLIAM MALONEY, associate professor of cariology and comprehensive care, on being elected a fellow of the New York Academy of Medicine; on being appointed to the editorial board of the medical journal Universal Panacea; on coauthoring an article entitled “The Importance of the Use of Methamphetamines in Dental
Practice – Part Two,” for Dentista y Paciente; on coauthoring an article entitled “Ectodermal Dysplasia: Its Dental and Craniofacial Manifestations and Significance in Dental Practice” with Dr. Jake Fried, ’12, for Dentista y Paciente; and on authoring an article entitled “The Significance of Cannabis Use to Dental Practice,” for the Journal of the Michigan Dental Association.

DR. MAUREEN MCANDREW, ’83, clinical associate professor of cariology and comprehensive care, on being elected secretary of the American Dental Education Association (ADEA) Section on Educational Research/Development and Curriculum; on being named to the American Education Association Center for Educational Policy and Research advisory committee; on winning the American Association of Women Dentists Procter & Gamble/Gillette Hayden Memorial Foundation Research Award, and on receiving an NYU Curricular Development Challenge Fund Grant for a study entitled “An On-line Course in Teacher Training for Dental Students.”

Added kudos to Dr. McAndrew for presenting a lecture entitled “Inter-Professional Teaching and Learning: Scholarship for Better Health” at the ADEA annual meeting, and on co-facilitating a faculty development workshop entitled “Focus on Facilitation: Let’s Limit the Lecturing,” with Dr. Ivy Peltz, ’83, clinical associate professor of cariology and comprehensive care; and on coauthoring an article entitled “Creating an Objective Structured Teaching Exam to Assess a Dental Faculty Development Program,” for the European Journal of Dental Education, with Mr. William Eidtson, director of the faculty staff development program; and an article entitled “A Survey of US Dental School Programs That Help Students Consider Academic Careers” with Karanjit Kamboj, ’14. Dr. McAndrew also served as a mentor to Dr. Sam Bae, ’12, NYU’s first ADEA/Gies AADR Academic Dental Careers Fellow recipient; and presented the following lectures at the Tufts University School of Dental Medicine: “Project Millennials: Make it Work with Generation Y,” “Focus on Facilitation,” “Conflict Resolution,” “Giving Effective Feedback,” “Interactive Lecturing,” “Easing the Transition to the Clinic,” “What’s on the Horizon for Dental Education? Adult Learning Theory,” and “Dealing with Difficult Students.”

MR. TERRY MCRAE, on being appointed a patient services representative in the Office of Clinical Operations.

DR. CRAIG M. MISCH, clinical associate professor of periodontology and implant dentistry, on co-authoring an article entitled, “Bone Augmentation of the Atrophic Posterior Mandible for Dental Implants Using rhBMP-2 and Titanium Mesh: Clinical Technique and Early Results” for
the International Journal of Periodontics & Restorative Dentistry.

**DR. MARJAN MOGHADAM,** clinical assistant professor of prosthodontics, on authoring an article entitled “Conversion Prosthesis” for The New York State Dental Journal.

**DR. FREDDERICK MORE,** professor of epidemiology and health promotion, on receiving a Faculty Council Teacher Recognition Award.

**MS. LAUREA MORGAN,** formerly a patient services representative in the Office of Clinical Operations, on being promoted to lead patient services representative.

**DR. ELLIOTT M. MOSKOWITZ,** ’72, clinical professor of orthodontics, on being installed as president of the American Association of Dental Editors.

**DR. MARY NORTHRIDGE,** assistant professor of epidemiology and health promotion, on coauthoring editorials entitled “Public Health Support for the Health Home Model” and “A Systems Perspective for Dental Health in Older Adults,” for the *American Journal of Public Health*; and on coauthoring a report entitled “Vibrant Cities and Urban Forests: A National Call to Action” for the New York Restoration Project urban environmental task force.

**DR. MONICA PAREKH,** clinical assistant professor of prosthodontics, on receiving a Tylman Award for excellence in fixed prosthodontics from the American Academy of Fixed Prosthodontics.
DR. IVY PELTZ, ’83, clinical associate professor of cariology and comprehensive care and group practice director, on presenting a lecture entitled “From Theory to Application: A Study of Knowledge Transfer in Dental Education” at the annual meeting of the Association for Dental Education in Europe, and on being invited to present a lecture entitled “Incorporating Evidence-Based Decision Making Into Written Case Study Capstone Projects,” at the annual meeting of the Association for Dental Education in Europe.

DR. BAPANAIAH PENUGONDA, top right, associate professor of cariology and comprehensive care and group practice director, on coauthoring articles entitled “Infection Control for Air-borne Hazards—Masks and Respirators for Health Care Providers,” for the *Journal of the New York State Academy of General Dentistry*, and “Chronically Retained Acupuncture Needles,” for the *Medical Acupuncture Journal*. Added kudos to Dr. Penugonda for presenting the following lectures: “What Dentists Are Doing to Go Green” at NYUCD; “Introduction to Comprehensive Care and Applied Practice Administration,” and “Licensure/Admission Requirements for Foreign Trained Dental Graduates to Enter into the United States of America,” at RV Dental College in Bangalore and Panineeya Dental College in Hyderabad, Andhra Pradesh, India; “Current Concepts and Issues in Clinical Dentistry” at Sri Sai College of Dentistry, Vikarabad, Andhra Pradesh, India, and Sun Yat-sen University, Guangzhou, China; “Current Trends in Clinical Dentistry” at National University College of Dentistry, Manila, Philippines; “Selection of Face Masks in Contaminated Environments” at the Energy Utility & Environment Conference in Phoenix, Arizona; and “Comparative Evaluation of Radiographic Density of Dental Restorative Materials,” at Stony Brook University.

DR. SCOTT PODELL, above right, clinical assistant professor of cariology and comprehensive care and group practice director, on being inducted as a Fellow of the International College of Dentists.
DR. WALTER PSOTER, assistant professor of epidemiology and health promotion, on coauthoring an article entitled “PCR Detection of Streptococcus mutans and Aggregatibacter actinomycetem-comitans in Dental Plaque Samples from Haitian Adolescents” for Clinical Oral Investigations, with Dr. Stefanie Russell, assistant professor of epidemiology and health promotion; Dr. Ralph Katz, professor and chair of the Department of Epidemiology and Health Promotion; and Dr. Yihong Li, professor of basic science and craniofacial biology; and on presenting a paper entitled “Malnutrition and Gender Differences in Oral Health,” at the American Association of Physical Anthropologists Symposium on “Advances in Understanding Oral Health: Fostering Interdisciplinary Insights on Sex and Gender Differences.” Added kudos to Dr. Psoter on authoring an article entitled “Perspectives of San Juan Healthcare Practitioners on the Detection Deficit in Oral Premalignant and Early Cancers in Puerto Rico: A Qualitative Research Study,” for BMC Public Health; on coauthoring articles entitled “Smoking and Drinking in Relation to Oral Potentially Malignant Disorders in Puerto Rico: A Case-Control Study,” for BMC Cancer, with Dr. Douglas Morse, associate professor of epidemiology and health promotion; “A Survey of the Optometry Leadership: Participation in Disaster Response,” for Optometry, with Dr. David Glotzer, clinical professor of cariology and comprehensive care; “Podiatry and Disaster Response: A Survey of the Professional Leadership,” for the Journal of the American Podiatric Medical Association, with Dr. Glotzer and Dr. Morse; and “A Preliminary Study on the Relationships Between Global Health/Quality of Life and Specific Head and Neck Cancer Quality of Life Domains in Puerto Rico,” for the Journal of Prosthodontics, with Dr. Morse. Dr. Psoter was also awarded a supplementary grant by the National Institute of Dental and Craniofacial Research (NIDCR) to support mentored research training and career development of a minority junior faculty member.

DR. KAREN RAPHAEL, professor of oral and maxillofacial pathology, radiology and medicine, on authoring an article entitled “External Validity and Psychiatric Disorder Exclusions in Orofacial Pain Clinical Trials” for the Journal of Oral Rehabilitation.

DR. VICTORIA RAVEIS, professor of cariology and comprehensive care, on receiving a Rose Doborof Honorable Mention Award for a paper she coauthored entitled “Linking the NIH Strategic Plan to the Research Agenda for Social Workers in Health and Aging,” for the Journal of Gerontological Social Work.
**Dr. Seung-Hee Rhee**, clinical associate professor of cariology and comprehensive care, on being elected President-Elect of the New York State Academy of General Dentistry.

**Dr. Miriam Robbins**, clinical associate professor and associate chair of the Department of Oral and Maxillofacial Pathology, Radiology and Medicine, on receiving certificates of appreciation from the New York State Office for People with Developmental Disabilities.

**Ms. Eileen Rosa**, on being appointed a lead patient services representative in the Office of Clinical Operations.

**Dr. Teresita Salgado**, assistant professor of cariology and comprehensive care, on receiving a Faculty Council Teacher Recognition Award.

**Mr. Robert Santiago**, a development associate in the Office of Alumni Relations, on earning a master’s degree in English Education from the NYU Steinhardt School of Culture, Education, and Human Development; and on being inducted into Pi Lambda Theta, the international education honor society.

**Dr. Brian Schmidt**, professor of oral and maxillofacial surgery and director of the Bluestone Center for Clinical Research, on authoring an article entitled “Two Distinct Routes to Oral Cancer Differing in Genome Instability and Risk for Cervical Node Metastasis” for *Clinical Cancer Research*; on coauthoring an article entitled “Nerve Growth Factor Links Oral Cancer Progression, Pain, and Cachexia” for *Molecular Cancer Therapeutics*; on presenting a lecture entitled “Bench to Bedside” at the annual meeting of the American Association of Oral and Maxillofacial Surgeons; and on presenting the keynote address at the 50th anniversary celebration of the International Association of Oral and Maxillofacial Surgeons held at the Royal College of Surgeons in London.

**Dr. Joel Silver**, assistant professor of cariology and comprehensive care, on coauthoring an article entitled “Immediate Maxillary Replacement Appliance for Anterior Teeth” for *The New York State Dental Journal*, with Dr. James Apltauer, assistant professor of cariology and comprehensive care, and Dr. Jeffrey Blye, assistant professor of cariology and comprehensive care.

**Dr. Roy Sonkin**, clinical assistant professor of cariology and comprehensive care, on co-presenting a lecture entitled “Dental Forensics: Post-9/11 Victims’ Identification at NYC’s Medical Examiner’s Office” for the NYU CD Faculty Staff Development Center.
**MS. RITA A. STARTUP**, assistant dean for development and alumni affairs, on being the featured speaker on development issues at the annual meeting of the Royal Academy of Surgeons in Ireland (RASI).

**MR. JONATHAN TAVERAS**, on being appointed an admissions officer in the Office of Admissions.

**MS. MARINA TIDOE**, formerly a patient services representative in the Office of Clinical Operations, on being promoted to lead patient service representative.

**MR. CHRISTOPHER TUNG**, on being appointed a research administrator for global outreach programs in the Office of the Vice Dean for International Initiatives and Development.

**DR. REBECCA STERNBERGER**, ’12, on winning first place in the American College of Prosthodontists predoctoral table clinic competition for a poster she authored entitled “Nervosa About Bulimia?”

**DR. FARHAD VAHIDI**, associate professor of prosthodontics, on coauthoring an article entitled, “Accuracy of Three Implant Impression Techniques with Different Impression Materials and Stones” for the *International Journal of Prosthodontics*.

**DR. RICARDO VANEGAS-PLATA**, clinical assistant professor of cariology and comprehensive care, on being named Faculty of the Month in both December 2011 and January 2012 by the NYUCD Student Council.
**MS. VERA VANGLER,** on being appointed a grants administrator in the Department of Cariology and Comprehensive Care.

**DR. ANALIA VEITZ-KEENAN,** associate professor of oral and maxillofacial pathology, radiology and medicine, on receiving a Faculty Council Teacher Recognition Award.

**DR. ANTHONY VERNILLO,** professor of oral and maxillofacial pathology, radiology and medicine, on coauthoring an article entitled “The Challenges of Oral-based Diagnostics in Extending the Role of Dentistry as a Health Care Profession: Property Rights, Privacy, and Informed Consent,” for the *Journal of the American College of Dentists,* with Dr. Daniel Malamud, professor of basic science and craniofacial biology and director of the HIV/AIDS Research Program.

**DR. RODRIGO VIECILLI,** assistant professor of orthodontics, on being appointed to the list of top requested article reviewers for the *American Journal of Orthodontics and Dentofacial Orthopedics.*

**MR. SRIKAR VULUGUNDAM,** ‘13, on being awarded second place in the predoctoral table clinic competition at the annual session of the American College of Prosthodontists for a poster entitled “Liver Transplant-Late Implant Failure Prognosticator.”

**DR. MEA WEINBERG,** associate professor of periodontology and implant dentistry, on coauthoring an article entitled “A Profile of Electronic Cigarettes,” for *US Pharmacist,* with Dr. Stuart Segelnick, associate professor of periodontology and implant dentistry.

**DR. RICHARD WELEDNIGER,** assistant professor of cariology and comprehensive care, on co-presenting a lecture entitled “Dental Forensics: Post-9/11 surgery, on winning a resident research award from the American Association of Oral and Maxillofacial Surgeons, and on presenting an abstract entitled “Demethylating Drugs Are Novel Analgesics for Oral Cancer Pain” at the annual meeting of the American Association of Oral and Maxillofacial Surgeons.
Victims’ Identification at NYC’s Medical Examiner’s Office” for the NYUCD Faculty Staff Development Center.

**MS. STEFANIA WILLIS,** clinical instructor in dental hygiene, on authoring an article entitled “A Patient-Centered Approach” for *Dimensions of Dental Hygiene.*

**DR. MARK WOLFF,** professor and chair of the Department of Cariology and Comprehensive care and associate dean for predoctoral clinical education, on coauthoring an article entitled “Nonfluoride Caries-Preventive Agents” for the *Journal of the American Dental Association.*

**DR. SEIICHI YAMANO,** assistant professor of prosthodontics, on receiving the American College of Prosthodontists Education Foundation’s Young Prosthodontist Innovator Award.

**DR. YI YE,** associate research scientist at the Bluestone Center for Clinical Research, for having her work on oral cancer pain featured on the June 2012 cover of the *Journal of Pain.* Earlier this year her work was featured on the cover of *Molecular Cancer Therapeutics.*

**DR. JULIE YIP,** associate professor of periodontology and implant dentistry, on coauthoring an article entitled “Association Between Oral Bisphosphonate Use and Dental Implant Failure Among Middle-Aged Women,” with Dr. Sang-Choon Cho, clinical assistant professor of periodontology and implant dentistry; and Dr. Luisa Borrell, adjunct associate professor of epidemiology and health promotion.

**MR. TEREK YOUNG,** on being appointed a patient services representative in the Office of Clinical Operations.

**DR. YU ZHANG,** associate professor of biomaterials and biomimetics, on coauthoring an article entitled “Improving Fatigue Damage Resistance of Alumina through Surface Grading” for *SAGE Journals.*
Dr. Jay Grossman, ’88, Founder of Homeless Not Toothless, Seeks to Expand Healthcare Options for the Underserved

When Dr. Jay Grossman, ’88, was a child, his family’s summer tradition included inviting a Harlem-based youngster to spend a few weeks with them at their home on Long Island. The impetus for this tradition came from an affiliation between Dr. Grossman’s local synagogue and a Harlem church, which the Grossmans and other Long Island families visited each year. “I used to introduce our summer guest as my cousin,” says Dr. Grossman, “because I felt so close to him. I think that I trace my work with Homeless Not Toothless to those summers, which made me realize that we were so much alike, except that he didn’t have the advantages that I had.”

Homeless Not Toothless, which Dr. Grossman founded in 1992, is a not-for-profit program providing free dental care to the homeless and underserved, including the 28,000 children in foster care in Los Angeles.

The program’s mission is to “raise the pride and dignity of the underserved through the provision of quality dental services.” Currently, there are nearly three dozen private dental practices participating in the program, which has provided over $2 million in services since its inception. Most of the patients are referred by the Venice Family Clinic and local shelters, where their dental needs and the necessity for treatment in a private practice setting are assessed. The dentists and their staff who volunteer their time—including Dr. Grossman’s newest associate, NYUCD alum, Melissa Glaze, Class of 2011—do so without any financial compensation. Moreover, the dentists either pay for laboratory expenses themselves or work with labs which donate their technical expertise as their way of contributing to the cause.

“When you’re toothless,” says Dr. Grossman, “what options do you have, even if you decide to try to get a job and find a home?” Indeed, in today’s ultra-competitive job market, people with unattractive or missing teeth are at a distinct disadvantage. Four in 10 employers think good teeth are essential for employment. Moreover, people missing teeth fear going on job interviews because of how they will be judged. They are also victims of poor nutrition, and the pain of tooth decay leads some to use alcohol to soothe the pain and to develop the habit of keeping their mouth closed when speaking because of poor self-esteem. Once their teeth are restored, Dr. Grossman arranges for them to enter job placement programs.

“It all goes back to the old saying, ‘give a man a fish and you feed him for one day; teach a man to fish, and you feed him for life.’”

In addition to the dentists and laboratories who donate their services, and to individuals and foundations that provide financial support, Dr. Grossman has received significant promotional support for Homeless Not Toothless, including an appearance on a local CNN affiliate and an endorsement and active support from the actress and philanthropist Sharon Stone. To learn more about the Homeless Not Toothless program, go to www.homelessnottoothless.org.

“When you’re toothless,” says Dr. Grossman, “what options do you have, even if you decide to try to get a job and find a home?”
Alumni Association Installs New Officers, Celebrates Quinquennial Classes 1946–2006

Seated, from left: Ms. Elly Koskorelos, Dr. Bill Bongiorno, Dr. Benjamin Godder, Dr. Eric Studley, Dr. Elise Eisenberg, Dr. Michael Leifert. Standing, from left: Ms. Denean Paulik, Dr. Richard Vogel, Dr. Yakir Arteaga, Mr. David Yang, Dr. Vera Tang, Dr. Roya Afshar-Mohajer, Dr. Amin Ayoub, Dr. Ricardo Vanegas-Plata, Dr. David Price, Dr. Ralph Cunningham, Ms. Rita Startup, Ms. Ashley Sharp

ALUMNI ASSOCIATION OFFICERS FOR 2011-12

Immediate Past President: Dr. Ralph Cunningham, ’72
President: Dr. Eric Studley, ’85
President-Elect: Dr. Elise Eisenberg, ’84
Vice-President: Dr. Benjamin Godder, ’85
Treasurer: Dr. Michael Leifert, ’02
Secretary: Dr. Bill Bongiorno, ’73


PNC Hosts Alumni Study Club

A generous gift from PNC Bank underwrote an Alumni Association-sponsored study club featuring Dr. Vasiliki Karlis, standing at right. Dr. Karlis is associate professor of oral and maxillofacial surgery and director of the Advanced Education Program in Oral and Maxillofacial Surgery
Dr. Edward Zuckerberg, ’78, Presents “Social Media: Today’s Ideal Tool for Dental Practice Marketing”

Dr. Edward Zuckerberg, a pioneer in the use of social media to market dental practice, presented a sold-out continuing education course at NYUCD in April on “Social Media: Today’s Ideal Tool for Dental Practice Marketing.”


Over the past several years, his commitment to social media as the chief means of marketing and managing his dental practice has expanded to include Facebook, in large part
because he is related to Facebook’s founder, son Mark Zuckerberg.

“Facebook,” he explained to the attendees, “lets you target your advertising in ways that no other form of advertising can, and delivers the power of your fans’ social networking connections to create the online version of word-of-mouth referrals. In Facebook’s ad setup page, you can select from a variety of demographics to target your market, including but not limited to age groups, geographic locations, gender, academic levels achieved and any interest or job title listed on an individual’s profile. The more specific you are in selecting demographics, the more the target market will decrease, but you will get more bang for your advertising dollar as you assure that your message is only getting out to those you want to receive it.

“In short, Facebook—the ultimate social network marketing tool—allows you to do many of the things you are already doing to market your practice, but much more effectively and at significantly lower cost.”

Over the past several years, his commitment to social media as the chief means of marketing and managing his dental practice has expanded to include Facebook, in large part because he is related to Facebook’s founder, son Mark Zuckerberg.
Alumni in the Spotlight

'50s

DR. BURTON WASSERMAN, Class of 1957 and clinical associate professor of cariology and comprehensive care, on receiving the Jarvie-Burkhart Award, the highest honor bestowed by the New York State Dental Association.

DR. SHELDON WINKLER, Class of 1956, on authoring an article entitled “This Is the Army,” for WWII History magazine.

'60s


DR. GERALD S. GILDENBERG, Class of 1968, on receiving the Academy of General Dentistry’s Lifelong Learning and Service Recognition award.

'70s

DR. ROBERT GOLD, Class of 1970, on being featured in an article entitled “Artist Perseveres Following Brain Injury” in the Addison County, Vermont, Independent. The article describes Dr. Gold’s pursuit of an artistic career after a 1996 car accident left him seriously injured and unable to practice dentistry.

DR. RICHARD D. RIVA, Class of 1975, on being appointed to a four-year term on the New Jersey Board of Dentistry by New Jersey Governor Chris Christie.

'80s


DR. BRUCE BLAU, Class of 1984, on being interviewed on NBC-TV for a story on rampant dental caries in children.

DR. GARY SCHAROFF, Class of 1984, on his election as international secretary of the Alpha Omega dental fraternity.

DR. STEPHEN VUOLO, Class of 1985, on being honored by the Kidney & Urology Foundation of America for his work with developmentally disabled and special needs children and adults.

'90s

DR. LEE R. COHEN, Class of 1998, on serving as past president of the Florida Association of Periodontists, as a trustee of the American Academy of Periodontology and the Florida Dental Association, and as a member of the 17th District (Florida) delegation to the ADA House of Delegates.

DR. KYUNG HA, Class of 1990, on receiving an Academy of General Dentistry Fellowship award.

DR. VASILIKI KARLIS, Class of 1992, associate professor of oral and maxillofacial surgery and director of the Advanced Education Program in Oral and Maxillofacial Surgery, on receiving a university-wide 2012 Distinguished Alumnus Award,
which is given to a “respected and distinguished graduate who has demonstrated extraordinary achievement and/or service in his/her profession, vocation, or social or cultural endeavors.” Dr. Karlis has done extensive international outreach to treat cleft palate in children in medically underserved areas of the world.

**DR. RORY E. MORTMAN**, Class of 1993, on being inducted as a Fellow of the International College of Dentists, and on authoring articles entitled “Technologic Advances in Endodontics” for *Dental Clinics of North America*, and “One Step Revascularization Treatment of an Immature Permanent Tooth with Chronic Apical Abscess” for the *International Endodontic Journal*.

**DR. RUBEN COHEN**, Class of 2002, on receiving the New Dentist Award of the New York State Dental Association. The award recognizes a dentist within 10 years of graduation who is actively involved in organized dentistry and in the community.

**DR. MICHAEL APA**, Class of 2003, on being featured in an article about aesthetic dentistry in *Esquire Magazine*.


**DR. RUBEN COHEN**, Class of 2002, on receiving the New Dentist Award of the New York State Dental Association. The award recognizes a dentist within 10 years of graduation who is actively involved in organized dentistry and in the community.

**DR. DANIEL KANG**, Class of 2005, on organizing a two-week dental outreach trip to rural Guatemala for DOCARE, a non-profit group.

**DR. DAVID SUKOFF**, Class of 2006, on being named Professional of the Year by the Merrick, New York, Chamber of Commerce.
We thank our benefactors

Alumni, faculty, friends, corporations, foundations, and organizations — for their generous support of the College. We are proud to recognize your gifts of cash, pledge payments, planned gifts, gifts-in-kind, and pledges over $25,000, which were made between September 1, 2010, and August 31, 2011.

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