

RESEARCH

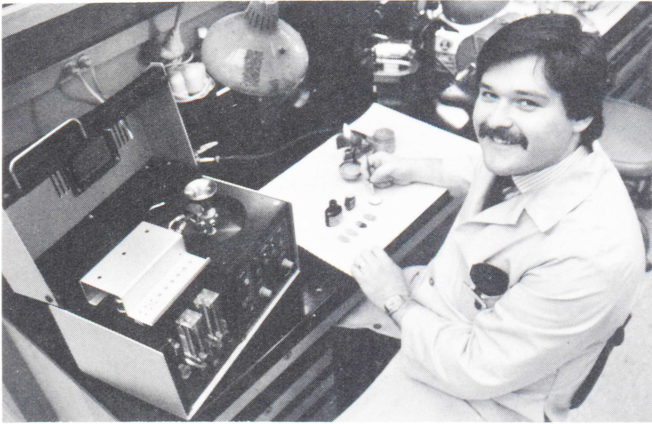


photo by George S. Morgan

Izchak Barzilay, Prosthodontics '86, recently received three prestigious awards for research undertaken at the Eastman Dental Center. In January he was notified that he had won the 1986-87 novice research award of the IADR/AADR (International Association for Dental Research/American Association for Dental Research) Prosthodontic Research Group for his paper, *Mechanical and chemical retention of laboratory cured composite resins*. February brought Barzilay news of two other awards: the Stanley Tylman Research Competition, sponsored by the American Academy of Crown and Bridge Prosthodontics, and the 1987 Michael G. Buonocore Award, sponsored by the Rochester Section of the AADR. He presented his paper at the March meeting of the IADR in Chicago.

Until some of his friends mentioned that they were going to apply to dental school, Barzilay was unsure of what he wanted to study as he was finishing high school in Canada. "I had given no thought to dentistry as a career," he said. "However, the more I thought about it, the more I liked the idea."

The Canadian educational system is different from the system in the United States and Barzilay had to complete only one year as an undergraduate at the University of Toronto, taking those courses necessary for his admission to the Faculty of Dentistry. In dental school, he found the study of prosthodontics demanding and intriguing. By the time he was a third year student, he had decided to specialize in the field.

Aaron Fenton (Prosthodontics '72, M.S. '74), who teaches prosthodontics at Toronto told Barzilay about EDC. "When I came here for my interview, I knew this was where I

Izchak Barzilay

wanted to do my postdoctoral specialty training. The other places to which I had applied no longer interested me," said Barzilay.

"The building is beautiful, it's certainly a nice place to be, and it's only a three hour drive from Toronto. But what impressed me most was the way Dr. Graser (Gerald N. Graser, chairman of the Department of Prosthodontics) talked to me," said Barzilay. "He made me feel good. He did not say — as so many people do when they're interviewing you for a position — 'What makes you think that you're good enough to be in our program?' Instead, he said, 'Here's our program,' and explained it to me. I was also pleased that the students then enrolled in the program had positive feelings about Dr. Graser and the other members of the faculty and staff."

Barzilay, his wife, Sheila, and baby daughter, Elyte, will be returning to Canada in July. He plans to establish a three-day-a-week practice in Toronto and hopes to teach as well.

However, he'll return to Rochester every month to work on his Master's thesis, *Immediate implantation of titanium implants into extraction sockets*, a research project based on Dr. Per-Ingvar Branemark's original work on the tissue integrated prosthesis. His thesis advisors are Gerald N. Graser and Bejan Iranpour, senior clinical associate in the Department of General Dentistry.

When asked about his hobbies, Barzilay laughed. "I haven't had any since I came to the Dental Center. . . but I do enjoy downhill skiing, soccer, scuba diving, and photography."

An abstract of Barzilay's award-winning paper follows.

Continued on page two

**Mechanical and Chemical Retention
of Laboratory Cured Composite Resins
by Izchak Barzilay, D.D.S.**

Laboratory light-cured composite resins have been introduced recently as an alternative to porcelain for crown and bridge veneers. This study evaluated the shear bond strength of laboratory cured composite resin to metal. Part I of the study evaluated three mechanical and three chemical bonding techniques of resin to three different base metal alloys. The chemical techniques included: 4-META containing resins, 4-META applied to an oxidized metal surface, a fused silica surface, and GoldLink resin. The mechanical techniques included: electrolytically etched metal, large retentive beads, and small retentive beads. Dentacolor composite resin samples were bonded to three alloys (Vitallium, Ticonium, and Litecast B) using the six techniques. After thermocycling, shear bond strength was determined for 252 samples. The two-way analysis of variance indicated no differences between metals so the metals were combined and techniques were analyzed collectively using the one-way analysis of variance and grouped using the Schaffe test.

Part II evaluated three combined mechano-chemical techniques. These included: electrolytically etched metal bonded with 4-META, small beads combined with 4-META and small beads combined with a surface of fused silica. Composite resin samples were applied and tested as in Part I.

The results of this study showed that chemical retention techniques showed superior bond strength of laboratory light-cured composite resin to base metal compared with mechanical retention. Combined mechano-chemical techniques further improved retention in two of the three groups.

IADR Presentations

Many EDC researchers presented papers and posters at the IADR meeting in Chicago in March. If you would like further information on any of the work, please write to the presenting author at the Center.

Steven M. Adair, Pedo	<i>Tooth cleaning ability of dentifrice with 3-micron hydrated silica abrasive</i>
Joseph M. Behrman, Oral Biology	<i>Effect of dephosphorylated saliva on enamel demineralization in vitro</i>
Lyndon F. Cooper, Prosthodontist	<i>Characterization of hydroxyapatite adsorbates from parotid saliva</i>
David P. Durr, Pedo	<i>Evaluation of stress-relief methods on cobalt-chromium orthodontic wires</i>
Arthur D. Eisenberg, Oral Biology	<i>Arginine metabolism and arginine deiminase synthesis by oral streptococci</i>
Judy C. Fan-Hsu, GenDen	<i>Dental patients' knowledge and attitude toward caries prevention</i>
John D. B. Featherstone, Oral Biology	<i>Effect of pyrophosphate or zinc in fluoride containing dentifrices</i>
Lisa M. Gwinner, Oral Biology	<i>Dietary fluoride effect on bacterial colonization in rats</i>

J. Mitchell Kreher, GenDen	<i>Oral yeasts and drug use in an elderly edentulous population</i>
Dennis H. Leverett, CommDen	<i>Oral clearance of fluoride after brushing with a fluoridated dentifrice</i>
Richard D. Levy, Oral Biology	<i>Effects of arginine: acid and base production by oral streptococci</i>
Cyril Meyerowitz, GenDen	<i>Use of 0.05 percent NaF mouthrinse in radiation induced hyposalivation</i>
Sheila A. Mundorff, Oral Biology	<i>Dietary vehicles for enhanced cariostatic effect of fluoride</i>
Mario E. Paz, Ortho	<i>Computer tomographic evaluation of the density of the TMJ meniscus</i>
Christopher A. Roberts, Ortho	<i>Correlation of clinical findings with arthrographic diagnosis in TMJ patients</i>
Mansour Shariati, Oral Biology	<i>Inhibition of enamel demineralization by cheese components</i>
Carol P. Shields, Oral Biology	<i>Salivary fluoride levels in fluoridated and non-fluoridated communities</i>
Lynn Spitz, Oral Biology	<i>Fluoride resistance in oral streptococci: acid production</i>
Ross H. Tallents, Ortho	<i>Comparison between magnetic resonance imaging and sagittal cryosectional anatomy of the normal and abnormal temporomandibular joints</i>
John A. Zdanowicz, Oral Biology	<i>Inhibitory effect of barium on caries formation in rats</i>
Domenick T. Zero, GenDen	<i>Salivary fluoride concentration following use of F-toothpaste and rinse</i>

DEVELOPMENT

The J. Daniel Subtelny Endowment Fund, named in honor of the Eastman Dental Center's chairman of the Department of Orthodontics, was created to promote outstanding orthodontic research among faculty and students and to provide support for such endeavors.

The fund was established in 1984 through the efforts of three prominent orthodontists: Robert W. Baker, senior clinician in the Department of Orthodontics; Robert J. Bray, (Ortho '75, M.S. '76), a private practitioner in Brigantine, New Jersey; and Albert H. Guay, (Ortho '66), a practitioner in Wakefield, Massachusetts.

Bruce Goldin, (Ortho '86), research associate and clinical instructor in the Department of Orthodontics, is the first recipient of Subtelny Fund faculty support. Income generated by the fund is used as a source of partial funding for Goldin, who oversees postgraduate research efforts. He provides guidance and advice to the Center's young investigators who have the potential to attain leadership roles in the practice of orthodontics.

Since the fund was initiated in 1984, more than \$137,000 has been raised. Investment of these gifts and pledges has insured further growth, bringing the total value of the fund to nearly \$165,000.

continued on page six

BOARD OF TRUSTEES



Robert H. Hurlbut
(photo courtesy of Vari-Care, Inc.)

Robert H. Hurlbut, president, director, and founder of Vari-Care, Inc., has been elected to EDC's Board of Trustees.

"The Center is honored that Mr. Hurlbut has joined the Board and we look forward to his insights and advice concerning our goals and priorities," said EDC director William D. McHugh.

Hurlbut has long been active as an administrator and consultant to nursing homes in New York, Pennsylvania, and Hawaii. In 1964, he organized and became president of Rohm Services Corporation, which provides management and consulting services for nursing homes in Western New York. He founded and assumed the presidency of Vari-Care in 1968, a company which operates 20 healthcare facilities in Alabama, Arizona, Florida, and Texas.

Vari-Care provides a full range of recuperative and health care services, including skilled nursing and intermediate care, meals-on-wheels, and home health care.

Hurlbut attended Cornell University and is licensed as a nursing home administrator by the State of New York. He is a fellow of the American College of Health Care Administrators.

Active in a number of civic organizations, Hurlbut is a member of the board of directors of Marine Midland Bank and St. Mary's Hospital; the board of trustees of St. John Fisher College, St. Mary's Hospital Health Care Foundation, and the Rochester Area Chamber of Commerce.

He also serves on the board of directors for the Rochester Philharmonic Orchestra, the Monroe County Long Term Care Program, and the Rochester Area Foundation; and the executive advisory board of Roberts Wesleyan College.

Additionally, Hurlbut is a member of the New York State Task Force on Hospital Alternate Care; the Rochester Institute of Technology (RIT) Nursing Home Administrators' educational advisory committee, and the national advisory board for RIT's School of Food, Hotel, and Tourism Management; the New York State Health Facilities Association multi-facility committee; and the Cornell University Council.

In 1985, Hurlbut was the recipient of two prestigious awards: The Commerce and Industry Award presented by the Rochester Area Chamber of Commerce and the Herbert W. VandenBrul Entrepreneurial Award given by the RIT College of Business.

STAFF NEWS

Howard Proskin, M.S., Ph.D., has been appointed coordinator of biostatistics at EDC. He assumed his post February 9.

Proskin will work with Dental Center clinical and basis researchers to design experiments and protocols, analyze and explicate research data, and prepare reports based on statistical research findings.

A 1974 graduate of SUNY Albany with a bachelor's degree in mathematics, Proskin also earned his Master's and doctorate in statistics (1980 and 1985 respectively) at Rutgers University, New Brunswick, NJ.

Prior to joining the Dental Center, Proskin was a statistician in the Medical Research Department of the Sandoz Research Institute, Sandoz Pharmaceutical Corporation, East Hanover, NJ. He has held faculty positions at the Rochester Institute of Technology (RIT) and at Rutgers, and has served as a statistical consultant to a number of educational institutions, pharmaceutical companies, and to New Jersey State and local social service agencies.

He is a member of the Institute of Mathematical Statistics, the American Statistical Association, and the Biometric Society.

Gerald N. Graser, chairman of the Department of Prosthodontics, has been appointed to a three-year term on the advisory committee of the American Dental Association Commission on Dental Accreditation.

The committee reviews accreditation for postdoctoral dental education programs in speciality areas and recommends accreditation status to the commission.

William D. McHugh, EDC's director, is president-elect of the International Association for Dental Research. He automatically assumed the office after completing his term as vice president.

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William D. McHugh, D.D.S., Director

Susan D. Smith, Director of Development
and Communications

Jo Helfer, Associate Director of Communications and
Community Relations, Editor



MEMBER PUBLICATION
AMERICAN ASSOCIATION OF DENTAL EDITORS

The Smilemobile

EDC's Smilemobile is probably the only moveable landmark in the city of Rochester. It is a dental office in a trailer which travels to city schools during the academic year and to day care centers in the summer to provide oral care to children who might otherwise not receive it. This is the first time in its 16 years' existence that the Smilemobile has had a full-time staff, which has improved its efficiency and allowed its young patients the psychological comfort of continuity of care.

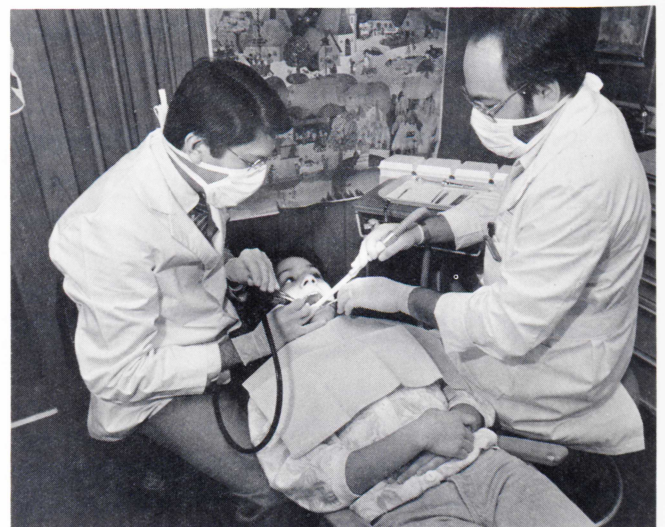
The staff is a veritable microcosm and includes pediatric dentist Manu Thakrar, who was born in Porbandar, India; hygienist Mary Montanarella, a Rochesterian of Italian ancestry; dental assistant Harry Conde, who's fluent in Spanish; program coordinator Sharetha Shapiro, who's black; and Smilemobile assistant Luz Oyola, who was born in Puerto Rico. Ronald Billings, assistant chairman of the Center's Department of Community Dentistry, is overall director of this community outreach program.



MARY MONTANARELLA finishes Jennifer's prophylaxis. "I like working with children, they're fun. And I know there's a need for the work I'm doing. As long as there is that need, I'll be here. I appreciate the diversity of the job — the assisting, the hygiene, classroom education, the paper work, the public relations work between the schools and us. It all makes it very interesting for me."



RON BILLINGS says proudly of his staff, "They're enthusiastic, progressive, and dedicated to taking the fear out of dentistry. The Smilemobile is funded by Medicaid, private insurance, patient fees, and income from the Dental Center's endowment. No child is ever denied treatment because of a family's financial constraints. We are aware that there exists a large group of working poor who have less money to spend on necessary care and fewer health benefits than many other people. We don't want those children to lack proper dental care because they fall through bureaucratic cracks."



MANU THAKRAR, Jeanette, and Harry Conde (left to right) in a typical scene in EDC's Smilemobile.



MANU THAKRAR said, "I had worked at the Smilemobile one day a week when the unit was still staffed with part-timers. When we changed to a full-time staff, I thought that was really a good idea. The kids get used to us. I enjoy going to the schools at their different locations. We're always busy. We don't have to worry about patients coming — there's a steady flow. And most important, we're fulfilling a real community need."



LUZ OYOLA, upper left, prepares to walk (clockwise) Harry, Jeanette, and Jennifer back to their classrooms. The children have just finished having their dental check-ups. Oyola said, "I come from a big family, but I'd never worked with kids before I came to the Smilemobile. I'm fascinated with the children. When they see me they say, 'This is the lady from the Smilemobile!' Kids are beautiful. We do a lot of psychological work and they feel like they know us forever. We hold them, kiss them, talk to them."



JENNIFER, with a pleased smile, reaches into Mary's surprise bag for a new toothbrush.



HARRY CONDE said, "I'm proud to provide a necessary service to the students and really like dealing with the children. I think I'm good at helping little people relax. I always have a smile. I guess I'm a child myself."



"WORKING at the Smilemobile is a challenge," said Sharetha Shapiro. "Going to the various schools and meeting all the children is certainly different from anything I ever did before! It makes my job worthwhile and is personally very rewarding."

Development, cont.

“The Center is grateful for the commitment made by its orthodontic alumni and other interested individuals as evidenced by participation in the J. Daniel Subtelny Fund,” said William D. McHugh, director.

The names of contributors to the J. Daniel Subtelny Endowment Fund since April 30, 1985 include the following:

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Dr. Paul Gualtieri	Dr. Howard Peterson, Jr.	
Dr. Albert H. Guay	Dr. Anne Parade-Polson	*deceased
	Dr. Jack Posen	

ALUMNI NEWS

Peter Laband, Intern '51, who practices in Northampton, MA, and teaches part-time at Harvard, writes that he's "managing the life of a general practitioner as well as the approaching status of grandfather."

Ernest Newbrun, M.S. '57, professor of oral biology at the University of California School of Dentistry at San Francisco, won the election for vice president of the International Association for Dental Research. He succeeds William D. McHugh, EDC's director, in this position.

John P. Brown, Pedo '67, M.S., '68, chairman of the Department of Community Dentistry at the University of Texas Health Science Center at San Antonio, is on the editorial board of the *Journal of the International Association of Dentistry for Children*.

David C. Vandersall, Perio '67, was recently elected vice president of the Midwest Society of Periodontology. He limits his Indianapolis-based practice to periodontics and is also an associate professor in the Department of Periodontics at Indiana University. He serves as a periodontal consultant for the Connecticut Insurance Company.

Bart Haggard, Ortho '76, visited the Center recently to say hello. Bart, who has been with Aramco in Saudi Arabia for the past 23 years ("Though I did spend two of them here in Rochester studying orthodontics!") has taken early

retirement and is "coming back to learn the language." Aramco will retain him as an orthodontic consultant, so he does expect to visit Saudi Arabia from time to time. He plans to return to the Near East for another four months to tie up loose ends and then will be "heading to the hills of Tennessee, where God's people really are!" Bart's wife returned to Tennessee a few years ago and established a boarding school there. The Haggards also have a home in Andorra, a small country that lies between France and Spain in the Pyrenees mountains. They've gone there to ski for many years and now plan to spend four to five months a year there.

Bart took the long way around from Saudi Arabia to the United States. He went to Australia to see the America's Cup race "something I've wanted to do since I was a boy" and went on to see the world of the South Pacific, including Fiji, Tahiti, and Bora Bora. Bart says, "I've seen all I will of the rest of the world. Now I plan to see the United States!"

Dan Glowinsky, Pedo '86, has won a 1987 graduate pediatric research award from the American Academy of Pediatric Dentistry for his project, *Fluoridated sucrose effect on rat caries*. (The important finding was that frequent daily pulses of very small amounts of fluoride — 2 ppm — significantly reduced caries.) Dan will present the paper at the academy's annual meeting in New Orleans in May.

Alumni Notables:

Tell us what's new with you, professionally and/or personally, and let us know if there are any features you'd enjoy seeing in **MOMENTUM** . . . by June 15, please!

Name _____ Dept. _____ Year _____

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