IU School of Dentistry NEWS-LETTER

MARCH -APRIL 1976

AGAIN THIS YEAR, the School of Dentistry Honors Program will be held before the Commencement exercises on Sunday, May 16, 1976, in the Indiana Convention-Exposition Center. Dean Ralph E. McDonald has announced that the Honors Program will begin promptly at 1 p.m. in the '500' Ballroom of the Convention Center, and will be concluded before graduating students assemble at 2:15 p.m. for the Commencement procession; which is scheduled to start at 2:45 p.m. Commencement is at 3 p.m.

ACCORDING TO JOHN MEIER, Fourth Year Student, plans are almost complete for the senior-faculty razz banquet, and a large turnout is expected by both the faculty and the students. The banquet will be held in the Crystal Ballroom of the Indianapolis Athletic Club on Friday, April 30th. The exact time will be announced later. John says:

> This year the senior class has decided to break with the traditional stag affair and have the wives and dates join in the fun. The evening will include a prime rib dinner with all the trimmings, open bar, an awards presentation, and a film. The awards will include recognition of a few lucky professors for their excellence in teaching, whereas the film will depict some humorous "look sees" into the life of a dental student through four years of training. Many of the faculty have starring roles in the film and a few have key supporting roles.
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> The price of admission for the faculty and staff is $12.50 per person and it includes the entire evening. Don't forget the refreshments will be free all evening. Where else in the city could one have such a fun-filled evening of entertainment for such a nominal price? Ticket information may be obtained from any senior. Buy your tickets soon, as they are limited. If you can't make it, have someone available to accept your award for you. See you there.

FIFTEEN FACULTY MEMBERS, one graduate student, and two former graduate students presented papers at recent meetings of the International Association for Dental Research and the American Association for Dental Research in Miami.

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The faculty members, with the topics of their papers, were: Dr. David Allmann, "Effect of Inorganic Fluoride Salts on Urine and Tissue 3'5' Cyclic-AMP Concentration In Vivo"; Dr. Malcolm Boone, II, "Pulp Reactions to a Tricalcium Phosphate Ceramic Capping Agent"; Dr. David Dickey, "Reactions to Vitreous Carbon Implants"; Dr. Abdel El-Kafrawy, "Effect of Prostaglandin E_1 on the Periodontium of Rats"; Dr. Eiji Funakoshi, "An Investigation of Supraalveolar Soft Tissue Attachment Length of Periodontally Involved Teeth"; Dr. LaForrest Garner, "Histologic Investigation of Orthodontic Tooth Movement in Hypothyroid Monkeys"; Dr. David Hennon, "Fluoride-Vitamins: Effects on Caries and Fluorosis in Sub-optimal Fluoride Areas"; Dr. Simon Katz, "Plaque Inhibition by Plant Cell Wall Fractions"; Dr. James McDonald, "Antimicrobial Agents and Plaque-Associated Diseases in the Rat"; Dr. Chris Miller, "Plaque Inhibition by Plant Cell Wall Fractions: Mechanism of Action and Related Factors"; Dr. Richard Norman, "In Vivo Comparison of a Composite Resin and Its Radiopaque Counterpart"; Dr. Byron Olson, "Adherent Plaque Formation Studies on the Sweeteners Saccharin and Cyclamate"; Dr. John Osborne, "Solubility and Disintegration of Luting Cements In Vivo"; Dr. Kichuel Park, "Plaque Inhibition by Plant Cell Wall Fractions: In Vitro Findings"; Dr. Peter Winchell, "Recrystallization of Compacted Gold Foil Specimens.

Dr. Ramon Ortiz, graduate student in Operative Dentistry, presented a paper on "Effect of Composite Bond Agent on Microleakage and Bond Strength." The former graduate students making presentations were: Dr. Paul McDavid, "Effect of Topical Calcitonin on Connective Tissue and Bone Healing" and Dr. Eugene Muth, "Evaluation of Phase Contrast Microscope."

DEAN RALPH E. MCDONALD was elected Secretary of the Administrative Board of the Council of Deans at the recent meeting of the American Association of Dental Schools in Miami.

DR. EDWARD D. SHIELDS, former faculty member in the Departments of Oral-Facial Genetics and Oral Diagnosis/Oral Medicine, is now in Papua, New Guinea, where he has been appointed Chairman of the Department of Basic Sciences in the Dental College.

The Dental College is part of the Faculty of Medicine of the University of Papua, New Guinea. Its curriculum will be oriented towards Papuan students who will dispense dental care to the population scattered over the eastern side of New Guinea.

Dr. Shields' wife, Dr. Monique Michaud, is a graduate student in Oral Diagnosis/Oral Medicine, and she will join him in New Guinea in mid-May. She will also be a faculty member at the Dental College.

ROCK ALLING, THIRD YEAR STUDENT and president of the Student Affairs Council, is one of four student representatives who are working with the American Dental Association's Council on Dental Education on an in-depth study of the curriculum in U.S. dental schools.

SENIOR CLASS PRESIDENT JEFF BLAIR served as a workshop leader during one of the sessions of the Council of Students at the recent meeting of the American Association of Dental Schools in Miami.

DR. RALPH W. PHILLIPS, Associate Dean for Research at the Indiana University School of Dentistry, has announced the award to the School of a $107,756 grant from the National Institute of Dental Research to help support the search for improved materials for use in dental fillings.

The grant will fund a four-year project which is part of a continuing laboratory and clinical investigation of dental amalgams.

Dr. Phillips has been elected an honorary member of the Academy of Crown and Bridge Prosthodontics. The award will be presented next February at the organization's annual meeting. To qualify for honorary membership, the Constitution and Bylaws of the organization specify that the nominee must have made "an unusual and outstanding contribution to the art and science of Crown and Bridge Prosthodontics or an immediately related field."

DR. DAVID AVERY, Associate Professor of Pedodontics, was elected Chairman-elect of the Council of Faculties at the American Association of Dental Schools meeting in Miami.

DR. CHRIS MILLER, Associate Professor of Microbiology, was elected Secretary of the Microbiology Section, American Association of Dental Schools, at the Miami meeting.

AND THE FOLLOWING HAS RECENTLY BEEN CONTRIBUTED at the request of the NEWSLETTER:

Troubles and Tribulations of a Research Worker

(or How to Get Potato Peelings in Indianapolis)

By Dr. Simon Katz

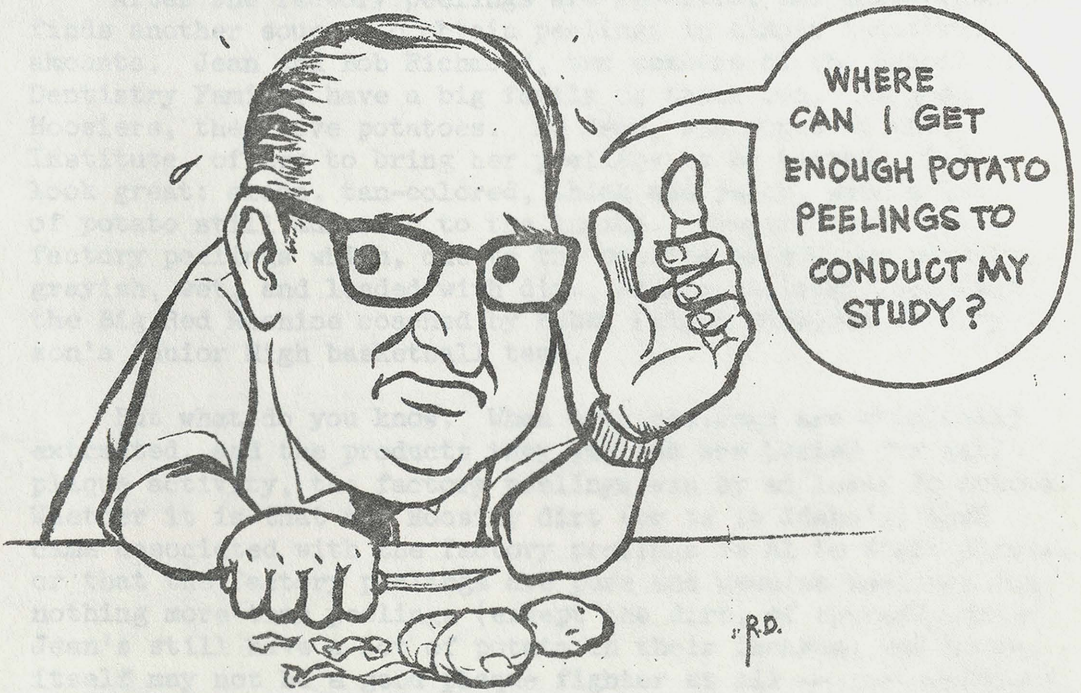
Professor of Preventive Dentistry

For many people the concept of scientific research carries the connotation of a highly sophisticated, scholarly and quasi-romantic endeavor associated with Nobel prizes and other renowned awards. It also conveys the idea of almost unsolvable problems which require ceaseless efforts to be overcome. And if one looks at the works of the alchemists, who literally wasted their brains in their unsuccessful search for the "philosophical stone" which would convert all metals into gold (which incidentally would not be bad for dental students), or at the also unsuccessful efforts of their more scientific successors, the chemists, who are still looking (to no avail) for the fountain of youth (vitamin E included), one would have to agree that the problems associated with research are tremendous and that a lot of brain power is required if they are to be finally conquered.

Well, often this is not the case. The problems and tribulations of a research worker are frequently of a more prosaic nature and require more leg power than brain power to solve.

At the Oral Health Research Institute, for example, we have found after tremendous effort (or so we want the Dean to believe) that chemical fractions extracted from plant cell walls have a fantastic capacity to inhibit in vitro plaque accumulation. We have tested so far a number of plant materials, and obtained active antiplaque substances from every single one of them and, since we are talking of plant materials, and since the research is conducted in Indiana, what could be more appropriate than to extract the antiplaque chemicals from that fundamental staple of the Hoosier diet, Her Majesty THE POTATO? Or, since we are dealing with plant cell walls, from potato peelings?

Believe it or not, here is where the troubles and tribulations of the poor research worker start. For where in Indianapolis are you going to get enough potato peelings to conduct a project like this? Of course, the researcher is looking for pure, genuine, uncontaminated (other than by dirt) and, most important in these ecological times, "natural" potato peelings. Obviously "instant" peelings won't do (or so the researcher thinks). Nor would synthetic, rubberish peelings or ersatz ones of any sort.



The research worker thinks of restaurants. They use a lot of potatoes indeed. But most of these potatoes are baked, and the investigator doesn't want heat-treated peelings (although they may work and he plans to test them in the future). As far as restaurant mashed potatoes are concerned, they are prepared with instant potatoes, and the researcher finds that instant

potatoes have no peelings. Hospital kitchens pose the same problems as restaurants, so they are out. And there are no instant potatoes factories nearby. Suddenly the light turns on in the investigator's head. Eureka! Why doesn't he try potato chip factories? Does the reader know that there are no such factories in Indianapolis? The investigator learns this through the fruits of the research of a great American, Alexander Graham Bell, and Bell's mother (at least he thinks it is his mother because they call her Ma Bell), who saves him quite a lot of shoe leather, not to mention sweat, lactic acid, assorted enzymes and other biochemicals of this sort. But if there are no factories in Indianapolis, there is in the industry the good old Hoosier spirit, so that when the researcher calls Chesty Potato Chips they immediately give him the phone number of their Terre Haute factory, from which, through the courtesy of the plant manager, Mr. Leonard Peek, he gets enough peelings to conduct the initial phases of his research. Now these were first class, pure peelings, because they are obtained by scratching the outermost surface of the potato with a scraper attached to a "peeling" machine. You will soon see the importance of this detail.

After the factory peelings are received, the investigator finds another source to obtain peelings in almost industrial amounts. Jean and Bob Richmond, two members of the School of Dentistry Family, have a big family of their own. As good Hoosiers, they love potatoes. So Jean, who works at the Institute, offers to bring her peelings to be tested. They look great: clean, tan-colored, thick and juicy, with a lot of potato still adhering to the inside. Compared with the factory peelings which, due to the peeling method are powdery, grayish, wet, and loaded with dirt, Jean's peelings look like the Big Red Machine coached by Bobby Knight compared with my son's Junior High basketball team.

But what do you know. When both peelings are chemically extracted, and the products they yielded are tested for anti-plaque activity, the factory peelings win by at least 20 points. Whether it is that the Hoosier dirt (or is it Idaho's) that came associated with the factory peelings is Al to fight plaque, or that the factory peelings are pure and genuine peelings and nothing more than peelings (except the dirt, of course), while Jean's still have a lot of potato in their innards, and potato itself may not be a good plaque fighter at all -- the researcher still does not know. When he finds out he will let you know.

In the meantime, let's move to another complicated, almost unsolvable and leg-consuming -- pardon me, I meant to say brain-consuming -- research problem, but not without first expressing our thanks to the nice folks at Chesty Potato Chips for supplying the peelings used in this project.

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