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### Trustee Profile

On July 6, 1915 when George Eastman wrote to William Bausch about the possibility of a "Dental Hospital project," he insisted that in order for him to be involved in the matter a scheme would have to "... be devised (to) cover the whole field and do the work thoroughly and completely, and in the best manner."

He further asked that Bausch form "a corporation to be managed by say nine or more trustees; the trustees to be men who will be interested in carrying on the work of such an institution."

The trustee interest envisioned by Mr. Eastman has survived. Our Board members are an energetic and enthusiastic group, devoted to enhancing the institution.

The following is the first in a series of sketches of Trustees.

J. Wallace Ely is Chairman of the Capital Campaign and has been a Trustee since 1960. His tanned face on a typically gray January day in Rochester hints at a recent southern vacation.

He was born in Summit, New Jersey, in 1909. The Ely family moved to Rochester in 1919 when Wallace's father, who had been head of the New York City office of Taylor Instrument Company, was promoted to the home office as sales manager.

Wallace Ely went to #23 School, Monroe High and Princeton, where he majored in economics. At Princeton he was unexpectedly influenced by professors of literature, "particularly Shakespeare and the early English authors," and of Italian painting. "The year before I went to Princeton, we had been to Europe as a family and I was exposed to a lot of great artistic works. I took the course to see what I had missed!"

After graduating from college, he worked in New York City for National City Bank, now First National, in the commercial loan department. "It was right at the foot of the depression and no one wanted to borrow money!" he said wryly. "Coming up summers to visit my folks in Rochester, I went around to the banks and convinced Security Trust that they needed me in their investment

department."

Wallace Ely worked through the bank's various departments, went up the executive ladder and in 1960 became President and a Director of Security Trust Company. Five years later when a regional holding company was formed, he became President and a Director of Security New York State Corporation. In 1973 he was elected to his present position of Chairman of the Board of the Corporation.

His influence is extensive. In addition to being on the Center's Board, he is a trustee of the University of Rochester and the Davenport-Hatch Foundation. He also serves as a corporate director of Security Trust, Rochester Gas & Electric, Sybron, Goulds Pumps, Page Airways and Rochester Telephone.



J. Wallace Ely

In talking of his involvement on many boards, Ely said: "I had always realized that being on boards of directors was a very challenging experience with responsibility. I feel very keenly that you shouldn't serve on a board unless you're going to be interested and contribute what you're able to." He mentioned regretfully that though he spends

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## From The Director's Chair

Now that the move and the dedication of the new building are but pleasurable memories, all attention has turned to the Center's programs. Our educational activities are following recent patterns with clinical care continuing at a high level. Happily our staff has been successful in obtaining a record high number of grants and contracts from both government agencies and industry, and a great deal of research is underway. Some highlights of current projects follow.

A large chemical company is funding two studies: one on the effect of a new toothpaste on the rate of calculus formation; the second on the efficacy of a new compound on root hypersensitivity. A government grant is supporting a study on the long-term effects of orthodontic treatment on the supporting tissues of the teeth, and another federal contract is supporting a clinical study to compare the effect of daily mouthrinsing with stannous and sodium fluoride on caries, plaque, gingivitis and tooth staining. There are new studies of sealant and adhesive restorative materials. There are continuing studies of the caries-inhibiting effect of strontium and other trace elements and a variety of projects to refine methods of determining the caries-producing potential of foods and to utilize these methods to test the relative cariogenicity of various foodstuffs and candies. Other new lines of investigation deal with speech patterns in the deaf and the evaluation of quality in dental care.

There have been some significant results. Strontium acts to supplement the caries-protective effect of fluorine. It is most effective as a post-eruptive rinse and it also causes remineralization or "healing" of carious lesions in enamel. The search for foods which do not promote caries is making good progress and some relatively safe candies have been developed.

Financial issues are causing us considerable concern for, like most universities and similar institutions, our endowment income has fallen in recent years. If the concurrent inflation is taken into account, the reduction in income is quite substantial.

Our plans for financing the new building included funds from the Capital Campaign and the sale of the old

building, with the remainder to come from the endowment. The Capital Campaign has a goal of \$3.5 million and pledges have now reached \$2.5 million which represents 73% of the goal. While this is no mean achievement in the current economic climate and in light of the fact that institutions with great constituencies, like Yale University, are having trouble reaching capital goals, the future of the Center's programs will depend to a considerable degree on our ability to reach or surpass our goal.



*The meticulously crafted stairway and railing on the first and second floors of the Center recently won the local Builders' Exchange award for excellence.*

In spite of our best efforts, we have not been able to sell the old building at 800 Main Street East. While it is clearly a specialized and unique facility, it is solidly built and could provide a fine home for many types of company or organization. Any suggestions or contacts which might lead to the sale of the building will be greatly appreciated.

## Board of Trustees

Bryant W. Rossiter, Ph.D., Director, Division of Chemistry, Eastman Kodak Research Laboratories, was

elected President of EDC's Board of Trustees at January's annual meeting. Dr. Rossiter, who first joined the Board in 1974, succeeds Dr. Robert L. Berg. Also elected to the Executive Committee were Vice Presidents, Paul W. Briggs, President and Director, Rochester Gas and Electric Corporation, and G. L. D. Burnett, D.D.S., a dentist in private practice; Secretary, G. Robert Witmer, Jr., a member of the law firm of Nixon, Hargrave, Devans & Doyle; and Treasurer, Richard H. Eisenhart, Jr., Vice President, R. H. Eisenhart, Inc. Donald A. Gaudion, Director and former Chairman of the Board of Sybron Corporation, was welcomed as a new member of the Board.



## Recent Theses

Øivind Jensen was born in Moss, Norway, a town of 23,000 that lies 40 miles south of Oslo. After receiving his Cand. Odont. ("it's an old Latin title, not really a D.D.S. or D.M.D. degree") from the University of Oslo in 1974, he served as a dentist with the rank of lieutenant in the Royal Norwegian Air Force in the north of Norway for a year. He was awarded his Certificate in GenDen in 1976 and assumed his present position as that department's Assistant Chairman in 1978, the same year his Master's was granted.



While still in school, Øivind played with a rock group, "not as heavy as acid rock," he says, and gave folk music concerts "strictly as an amateur." He is a devoted ornithologist and plans to spend a couple of days "birding in Louisiana after the IADR." He also enjoys photography and has experimented in black and white with time exposures, though he now does mostly slides and color photography, "of nature, trees, fields, stones and moss."

His wife, Karen, is an electron microscopist at the Cancer Center of the University of Rochester.

### THE EFFECT OF AN AUTOPOLYMERIZING SEALANT ON THE VIABILITY OF THE MICROFLORA IN OCCLUSAL DENTAL CARIES by Øivind Ekman Jensen

One of the major concerns of the dental profession regarding the use of pit and fissure sealants has been the possibility of inadvertently sealing carious lesions which may have the potential for progressing underneath the sealant. Previous laboratory and clinical studies have indicated that ultraviolet light polymerizing sealants will significantly and progressively decrease the number of viable microorganisms when placed over a frank occlusal lesion as long as the sealant remains clinically intact. Although these studies appear to have answered one of the major concerns, a number of questions remained. The purpose of the present study was to answer the following:

1. Is an autopolymerizing sealant equally effective in decreasing the viability of the residual microflora in carious dentin as ultraviolet light polymerizing sealants?
2. At what time interval does the greatest reduction in viability take place?
3. What effect does the etching procedure have on the viability of the microflora?

4. Does the sealant material itself exert any bactericidal action on the microorganisms in isolated carious dentin?

A total of 108 maxillary and mandibular first and second molars with occlusal caries were selected for the study. The caries extended up to half way through the dentin, as judged radiographically. The study teeth had no caries or restorations on any of the other surfaces. The teeth were sealed with Delton® pit and fissure sealant according to standard clinical protocol. The sealed teeth were opened and sampled at 1, 3, 7, 14 and 28 days, and 2, 4, 6 and 12 months after sealant placement. Samples of the residual carious dentin were obtained by drilling through the sealant with a sterile fissure bur and excavating about 1 mg of dentin with a sterile spoon excavator. They were compared with samples from two non-sealant groups, one of which had the 37% phosphoric acid applied to the occlusal surface for one minute prior to sampling. The other group had no sealant application or acid preparation. The samples were cultured anaerobically for 4 days at 37°C on one wide spectrum medium and two selective streptococcus media. In addition, the individual colonies were Gram stained and examined morphologically under the light microscope.

The mean total viable counts decreased approximately 1000-fold during the one year study period, from  $925.2 \times 10^4$  colony forming units (CFUs) per mg of sample to  $0.9 \times 10^4$  CFUs/mg of sample. The reduction is similar to that observed by Handelsman *et al* (1976) using an UV-light polymerized sealant. Statistically, there was a very strong linear relationship ( $p < 0.001$ ) between the reduction in bacterial counts and time, with the greatest relative reduction occurring between the 7 and the 14 days sampling interval. A similar reduction was observed for the total streptococcal count and the *S. mutans* count. The etching procedure itself also had a marked effect on the residual carious dentin, reducing the number of cultivable organisms by about 75%. The sealant itself did not appear to be bactericidal. Sealant material that was polymerized directly in culture media did not result in any inhibition of bacterial growth.

Although slight fluctuations in the relative proportion of the microflora were observed at the different sampling intervals, there were no significant changes in the distribution of bacterial types with time.

The most likely explanation for this reduction in viability of the microflora is that the bacteria are isolated from the oral cavity and thus receive an inadequate nutrient supply.

The results from the present study have demonstrated that the profession's concern about the possible progression of carious lesions isolated underneath sealant materials is unfounded. As long as the sealant is intact, there is a progressive decrease in the number of viable bacteria with time, and ultimately the lesion may become sterile. However, based on the many clinical sealant trials in the dental literature in recent years, further improvement of the sealant materials with regard to retention and wear characteristics are necessary before sealing of carious lesions can be considered an alternative to conventional restorative therapy.



Leif Washer, who was born in Hartford, Connecticut, received his B.S. from Trinity College in 1969, his D.M.D. from the University of Connecticut in 1974 and both his EDC Perio Certificate and his EDC/UR M.S. in 1977. He is presently practicing periodontics in Albany, New York, and says he is "... very happy ..." with what he is doing. He is also pleased to be able "to pursue (his) hobbies, which are reading, hunting, fishing and backpacking." He, his wife and two daughters have recently moved into their own home.



## OBJECTIVE TESTS FOR GINGIVITIS

by  
Leif E. Washer

There is evidence that bacterial plaque is the primary etiologic agent in gingivitis and that, if the inflammation of the gingiva is allowed to persist, there will be a progression to periodontitis, characterized by loss of alveolar bone and connective tissue attachment to the tooth. Therefore, it is important to diagnose accurately the presence and severity of gingivitis. Indices based on clinical changes in the gingiva have been developed to measure gingivitis, but their inherent problems include a lack of agreement about the relationship of these changes to the degree of inflammation, and their use is hampered by inter- and intra-examiner variability. Objective laboratory tests are regularly utilized for diagnosing certain diseases, but, at present, there are none for gingivitis. The purpose of this investigation was to develop such a test for gingivitis. Crevicular fluid flow and bleeding of the gingiva have been accepted as clinical

signs of gingivitis. Immunoglobulin G (IgG) and hemoglobin are major constituents of the crevicular fluid and blood, respectively. It was assumed, therefore, that the salivary concentration of these substances might provide objective tests for gingivitis.

Leukocytes have been implicated on both defense and destruction of host tissues. More than 90% of the leukocytes which migrate into the gingival crevice are neutrophils, and they appear in increasing numbers when gingivitis is present. Collection of crevicular leukocytes with minimal trauma to the cells would permit an evaluation of their concentration, viability and potential to phagocytize bacteria. These parameters for leukocytes from healthy and inflamed gingival crevices might be useful as objective laboratory tests for gingivitis, and provide some insight into the role which leukocytes play in gingival health and disease.

The results of this study led to the following conclusions:

1. Concentrations of salivary hemoglobin and IgG show a positive correlation with severity of gingivitis as measured by the Löe and Silness Gingival Index.
2. There is a greater percentage of viable leukocytes and total leukocyte concentration in washings from inflamed than from healthy gingival crevices.
3. The Phagocytic Index, Avidity Index and Phagocytic Activity are all higher in leukocytes collected in washings from inflamed compared to healthy gingival crevices.
4. Measurements of salivary hemoglobin, IgG concentration or crevicular leukocyte concentration, viability or phagocytosis do not appear to offer advantages over existing methods of clinical assessment of gingivitis. The overlap in the ranges of values observed from healthy and inflamed gingiva would not support their use as objective tests for gingivitis.
5. IgG in saliva and crevicular fluid may originate from bleeding gingival tissues.

## Trustee Profile . . .

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a lot of time reading, he rarely has time to dip into anything literary. His reading is virtually confined to banking matters or subjects that relate to his board memberships.

He spoke then of his involvement with the Center. "As far as the Eastman Dental Center is concerned, my then boss at Security, Emmett Finucane, was on the Board and very much interested in the Center. I think the Trustees realized that the Board had become quite elderly. The average age was well up in the seventies. The Board had discussed the desirability of getting some younger people involved and Emmett asked me. He told me about the Dental Center and made it sound very interesting. But I really suppose I went on the Board because he asked me to!

"I was asked to be Treasurer the first year I was on the Board and that led to my becoming Vice President and President."

Talking about the future for the Center, Ely said: "I hope and expect the Dental Center will continue in the forefront of dentistry. I think the Center is unique in the world in its teaching and research. Most of the great universities have a major commitment in the area of health, but 99% of it is medicine as distinct from

dentistry. The dental areas are relatively neglected and it's fallen to the Center to provide an emphasis, to take the lead in developments in dentistry which have become more significant to more people as people live longer. I am thinking of the restoratives and sealants the Center has developed, the treatment of the soft tissue and the prevention of decay."

Finally he reflected on his personal philosophy. His three children are grown and raising families of their own. "I guess I should observe," he said, "that we're a very close family. My wife Edythe and I have both felt that really our major assignment in life was raising the kids and having them happily settled with their own families. We've spent a lot of time with each of our children and then in turn with the grandchildren. And nothing pleases us more than to have family gatherings. We just returned from the Florida Keys where all sixteen of us were together for a week over New Year's! We have a place on Canandaigua Lake where I love to go boating. I love to fish and I do so whenever I get an opportunity. If I don't fish I like to be out in a boat— motorboat, sailboat, canoe— anything that gives me a chance to get in the water! I guess I do enjoy getting away from the hustle and bustle of things."



## Staff News

Dr. Basil G. Bibby, Senior Scientist and EDC's second Director, was awarded the Pierre Fauchard Academy's gold medal for his "outstanding contribution to the dental profession." Dr. Bibby received the honor at the Academy's annual meeting in Chicago on February 16. In January, he received a plaque at the fellowship convocation of the American Endodontic Society in Anaheim, California, for his discoveries on the application of fluorides.

Dr. Helmut A. Zander, Senior Scientist who was Chairman of our Department of Periodontics until 1977, is now Acting Chairman of the Department of Dental Research at the University of Rochester School of Medicine and Dentistry.

Frederick R. Haslam has been appointed EDC's Business Manager. Before assuming his present position, Fred was Administrator in the Department of Obstetrics and Gynecology at the University of Rochester School of Medicine and Dentistry.

Fred, who received an M.S. in Administration from the University of Rochester last year and a B.A. from SUNY Buffalo in 1966, was commissioned a second lieutenant in the United States Air Force in 1967. He served in posts in this country and overseas until 1972, when he was



*Frederick R. Haslam*

honorably discharged with the rank of captain.

He is a native of Buffalo, is married and has two children.

## Alumni News

**ABRAHAM KOBREN**, '43, was chosen by the ADA House of Delegates as Second Trustee District trustee. After he graduated from Georgetown Dental School in 1942, Dr. Kobren interned at the Center. While in Rochester, he practiced in the evenings as well. In an interview in the January New York State Dental Journal he says, "My first association with organized dentistry was in Rochester, as a member of the Seventh District Dental Society, where I became associated with dentists in upper New York State."

**BART LEVENSON**, GenDen '60, Ortho '63, was 1978 president of the Rochester Gilead Chapter, Alpha Omega Dental Fraternity; 1978 chairman of the Dentists' Division

of the United Jewish Welfare Fund Campaign for Rochester; and will be chairman for arrangements for the 1980 Ortho Alumni meeting to be held at EDC.

**HUDSON D. FOWLER**, Ortho '69, writes from Willoughby Hills, Ohio, that he and Nancy now have three children: girls of five and four, and a boy of three.

**FRED KASTENBAUM**, GenDen '78, is in the postdoctoral prosthodontics program at the Boston University School of Graduate Dentistry.



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