



# ACADEMY OF DENTAL MATERIALS NEWSLETTER

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Ann-Marie L. Neme, Secretary ADM

December 2002

## Message from the President

It is a pleasure and great honor to serve the Academy in the next two years, taking over from Jim Drummond, whom I would like to dearly thank for his leadership, great support and for leaving the Academy in excellent financial status. During his time as President two interesting and highly successful meetings were held (Siena, Italy 2001 and Honolulu, Hawaii 2002). This past meeting in Honolulu was the fourth international congress on dental materials jointly organized with the Japanese Society for Dental Materials (JSDM) which required a tremendous effort in coordination on both sides rewarded by the success of attendance. My special thanks go to the organizing scientific chairmen, Ron Sakaguchi (ADM) and Hiroshi Nakajima (ADM+JSDM) as well as both Presidents, Jim Drummond (ADM) and Minoru Nishiyama (JSDM) for their countless time devoted to the planning of the meeting. Last but not least and on behalf of the Academy, I would like to thank Dave Sarrett, our reliable and loyal transaction editor and his Secretary, Tammy Woolard, for collecting all the abstracts, manuscripts and editing a total of 370 pages in a record time!

As already announced in the previous newsletter, several board members have completed their terms leading to a renewal of nominees indicated in the list below. I would like to welcome the new board members, Jason Griggs (USA), Tom Hilton (USA), Marco Ferrari (Italy) and Richard Curtis (UK). Ann-Marie Neme (USA) is replacing Jack Ferracane as the new secretary. Sharukh Khajotia (USA) is taking over the position of web master from Ron Sakaguchi. Mahendra Bapna who has served valuable years as Fellowship & Student award chair is replaced by Richard Curtis. George Cowperthwaite (USA) will take over the corporate liaison position from Alan Boghosian (USA). Many thanks are expressed to all officers that have served the Academy in the past years.

This year (2002) has been impregnated by the discovery of non-delivery of issues of the journal Dental Materials to all ADM members. An e-mail

inquiry has shown the seriousness of the problem. From the 40 % of responses we received, the non-delivery was spread worldwide. Elsevier has acknowledged the distribution problem due to a new distribution management system and has promised to replace all missing issues to all the members within the next few months. From a separate mailing you received a few weeks ago the board has informed you about the latest developments. We will continue to monitor the distribution issue. The contact person at Elsevier in case of non-delivery is Mrs. Nicola Garvey (<n.garvey@elsevier.com>). I also urge every member to monitor their journal delivery and inform us in case similar problems are experienced in 2003.

The **next ADM meeting in 2003** is going to be held in Charleston, South Carolina, at the Westin Francis Hotel, Oct. 28-30, on the topic of Interfaces: models and dynamics. The purpose of this 3-day meeting is to address the important issue of interfaces in tooth structures, ceramic composites, fiber-composites, as well as at the dentin-resin junction. **Sally Marshall** will cover the structure-property relations at the dentin-enamel junction (DEJ) which are critical to tooth function and evaluate the DEJ as a biomimetic model for joining mechanical dissimilar biomaterials. **Jack Mecholsky** will outline the procedure to develop synthetic toughened biomimetic composites based on the principles of natural laminated composite structures. **Kevin Knowles** will provide an understanding of interfaces by means of transmission electron microscopy in structural ceramic composites (particulate, fiber or lamellar) and their ability to deflect cracks. **Walter McDonough** will address the glass-fiber/resin interface with the microbond test and chemical analysis. **Joe Antonucci** will explain the chemistry of silane and interface in dental polymers and composites. Finally, **Paulette Spencer** will discuss the molecular dynamics at the dentin-adhesive interface and show a chemical map of the dentin-hybrid-adhesive interface.

1. Dentin-enamel junction (DEJ)-Biomimetical model for material tissue interface: *Sally Marshall*, Univ. of



California San Francisco (USA), Dept. of Restorative Dentistry.

2. Biomimetic designed interfaces & composites: *John J. Mecholsky*, Univ. of Florida Gainesville (USA), Material Science & Engineering.

3. Interfaces in structural ceramics: *Kevin Knowles*, Univ. of Cambridge, Dept. Materials Science & Metallurgy, UK

4. Glass-Fiber/resin interfacial strength: the microbond test and chemical evaluation: *Walter McDonough*, NIST Polymer Div., Gaithersburg, USA

5. Chemistry of silane: interface in dental polymers and composites: *Joe Antonucci*, NIST, Polymer Div., Gaithersburg, USA

We all hope you will attend this annual meeting and use the opportunity to tie new scientific connections.

Sincerely yours,  
Susanne Scherrer, ADM President

#### **Officers/Committee Members of the ADM**

President (2003-2004): Susanne Scherrer  
([<susanne.scherrer@medecine.unige.ch>](mailto:susanne.scherrer@medecine.unige.ch))

Vice-President (2003-2004): Dorin Ruse  
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Secretary (2003-2004): Ann-Marie Neme  
([<nemeaml@udmercy.edu>](mailto:nemeaml@udmercy.edu))

Treasurer: Mike Bagby ([<mbagby@wvu.edu>](mailto:mbagby@wvu.edu))

Past President: Jim Drummond  
([<drummond@uic.edu>](mailto:drummond@uic.edu))

Board at large:

Jason Griggs (2002-2008)  
([<jgriggs@tambcd.edu>](mailto:jgriggs@tambcd.edu))

Tom Hilton (2002-2008) ([<hiltont@ohsu.edu>](mailto:hiltont@ohsu.edu))

Marco Ferrari (2002-2008) ([<md3972@mclink.it>](mailto:md3972@mclink.it))

Richard Curtis (2002-2008)

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Dave Sarrett (2001-2007) ([<dcsarrett@vcu.edu>](mailto:dcsarrett@vcu.edu))

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E-mail information distribution: Susanne Scherrer

#### **New Fellows Join Academy**

The ADM was happy to welcome 7 new Fellows this past year:

1. Tak Wah Chow, Ph.D. The University of Hong Kong, Hong Kong
2. Jeffrey Y. Thompson, Ph.D. University of North Carolina Chapel Hill, NC
3. Edward J. Swift, DMD, MS, University of North Carolina Chapel Hill, NC
4. Adrian Shortall, BDS, DDS, University of Birmingham, England
5. Salwa E. Khier, BDS, Ph.D. King Saud University Saudi Arabia
6. Christina A. Mitchell, BDS, Ph.D. Queen's University/Belfast, UK
7. Freederick C.S. Chu, Prince Philip Dental Hospital Hong Kong

#### **2002 Paffenbarger Award**

Congratulations to Dr. Reiko Kato winner of the 2002 Paffenbarger Award at the annual meeting. Dr. Reiko Kato won for her excellent presentation entitled "Demonstration of Electrical Polarization and its Bioactivity Enhancement of Hydroxyapatite Coatings for Dental Implants." The poster was co-authored by Dr. K. Yamashita of the Institute of Biomaterials and Bioengineering Tokyo Medical and Dental University Tokyo, Japan.

The judges for the 2002 Paffenbarger Award were Drs. Zhuo Cai, John Fundingsland, Jason Griggs, John Harcourt, Susumu Hirano, Sharukh Khajotia, Ann-Marie Neme, Yutaka Oda, Susanne Scherrer and Jeff Thompson.

#### **ADM annual student award:**

In 2001, 42 ADM annual student awards were presented at dental schools around the world. The ADM invites applications for the Annual Student Award 2002 (see form at the end of the newsletter). All requests should be directed to: Dr Richard V Curtis. ([richard.curtis@kcl.ac.uk](mailto:richard.curtis@kcl.ac.uk))

#### **Journal News**

The journal will be available on-line as of January 2003. Note that this will be a citable version of the journal.

#### **Future**

The annual ADM meeting for 2004 is in the planning stages. The meeting will be held in Geneva, Switzerland.

#### **Meetings**

#### **Reminders**

Please note that dues for 2003 are due January 1. The Academy is always working to bring new members into the organization. Please help by recruiting at least one new member this year.