A research article by lead author Dr. Satheesh Elangovan has received press reviews from several news sources. The collaborative study between the Colleges of Dentistry and Pharmacy recently resulted in their research being accepted for the journal Biomaterials.

The article, “The enhancement of bone regeneration by gene activated matrix encoding for platelet derived growth factor,” will be available in the January 2014 issue of Biomaterials (35(2); Jan 2014; 737-747. It was ranked in the top five of all articles ranked for attention in November 2013.

The article describes a non-viral gene delivery system called gene activated matrix (GAM) to enhance bone regeneration. The active ingredient is the DNA encoding growth factor called “platelet derived growth factor (PDGF).” When GAM encoding PDGF-B was implanted into bony defects in rats, enhanced bone regeneration was observed. Dr. Elangovan (Periodontics), the lead author of this study, reports that there is huge clinical potential for this non-viral gene delivery strategy, both in dentistry and orthopedics, because of its potential cost-effectiveness compared to protein therapeutics.

Ms. Sheetal D’Mellow, a doctoral candidate in the College of Pharmacy, performed the experiments. Co-investigators include Drs. Alias K. Salem (Pharmacy), Liu Hong (Dows and Prosthodontics), Deborah Dawson (Biostatistics and Pediatric Dentistry), D. Rick Sumner and Ryan Ross (Rush Medical, IL), Clark Stanford (Dows and Prosthodontics), and Georgia Johnson (DEO, Periodontics).

As president of the local AADR, Dr. Gustavo Avila Ortiz, welcomed Dr. William Giannobile as the keynote speaker for the 61st Annual Meeting of the Iowa Section of the American Association for Dental Research (AADR) on February 11, 2014. There were 88 presenters (faculty, students, and staff) for this year's Local Research Day.

Dr. William Giannobile, Najjar Endowed Professor of Dentistry & Biomedical Engineering at the University of Michigan School of Dentistry and College of engineering. His presentation was "Oral and Periodontal Regenerative Medicine: Prospects for the Future."

Dr. Giannobile has published and lectured about periodontal regenerative medicine and tissue engineering and has also authored several textbooks in clinical research and periodontal research methodologies. He is editor-in-chief of the Journal of Dental Research and a consultant to the Food and Drug Administration, the National Institutes of Health, and several biotechnology companies focused on regenerative medicine. Dr. Giannobile is a diplomate of the American Board of Periodontology and maintains a private practice in Ann Arbor, Michigan, that is limited to periodontics and implantology.

We would like to congratulate the following students and faculty mentors for their awards received during research day:

* Iowa Society of Periodontology Postdoctoral Award: Chris Poulsen (Mentor: Kim Brogden)
In mid-December the college held their annual Emeriti Reception and we spotted a familiar face, Bob and Mary Ellen Edwards attended the recent Emeriti Reception. Mary Ellen was an assistant nurse manager in the Department of Periodontics from 1972-1997.

Over the MLK, Jr. weekend, the department celebrated the holiday season with faculty, residents, staff, adjunct faculty, emeriti faculty and spouses. We had a wonderful evening of food, laughter and catching up after the winter break.

Departmental Publications:


Barwacz CA, *Brogden KA, Stanford CM, Dawson DV, Recker EN, Blanchette D*. Comparison of pro-inflammatory cytokines and bone metabolism mediators around titanium and