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DMICE Tracks

From the Chair

Welcome to Issue 10 of DMICE Tracks, the newsletter of the Department of Medical Informatics & Clinical Epidemiology. I am in a quoting mood for this issue, and no doubt the most pertinent one is, “It was the best of times, it was the worst of times,” from Charles Dickens’ *A Tale of Two Cities*.



This quote is pertinent because the disciplines of the department, medical informatics and clinical epidemiology, are thriving at a time when the general economy as well as the university are facing considerable economic challenges. Of course, we are not immune to those challenges, having to make our share of budget cuts to help the university close a current fiscal deficit.

However, these are also good times for our work and continued accomplishments. As noted in the lead story, the newly passed economic stimulus package provides opportunities for both medical informatics (investment in electronic health record adoption and health information technology workforce development) and clinical epidemiology (investment in comparative

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A Stimulating Time for Medical Informatics and Clinical Epidemiology

The federal economic stimulus plan, officially known as the *American Recovery and Reinvestment Act of 2009*, brings good news for the struggling economy as well as the reform of health care. It also provides some new opportunities for our department. Its provisions will fund investments in medical informatics and clinical epidemiology that will not only lead to improvements in the quality and safety of health care,

but also provide jobs for the growing workforce necessary to implement the investments.

On the medical informatics (health information technology, or health IT) side, the legislation will invest \$17 billion in electronic health record (EHR) adoption, delivered mostly via incentives through the Medicare and Medicaid system of \$44,000-64,000 per physician and up
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William Hersh, M.D., DMICE professor and chair, (left) and Jody Pettit, M.D., Strategic Work Group Leader for Personal Health Records of the Certification Commission for Health IT (right), with Oregon Congressman David Wu, whose health information technology bill was incorporated into the federal economic stimulus package.



OREGON
 HEALTH & SCIENCE
 UNIVERSITY

DMICE Faculty, Students and Alumni Present at AMIA Fall Meeting in Washington, D.C.

DMICE faculty, students and alumni made their presence known at the annual American Medical Informatics Association (AMIA) meeting, held in Washington, D.C. on November 8-12, 2008

Professor and Chair Bill Hersh won the Donald A.B. Lindberg Award for Innovation in Informatics, which recognizes an individual at any stage of a career for a specific technological, research, or educational contribution that advances biomedical informatics.

Hersh was cited specifically for the “innovative and highly successful 10x10 program” that he developed at OHSU in collaboration with AMIA, which was the model for AMIA’s national 10x10 program. “10x10” refers to the program’s goal of training 10,000 health care professionals in applied health and biomedical and health informatics by the year 2010. The 10x10 program is conducted in a wide range of settings across the country with key strategic partners in the informatics education community. Hersh’s work on 10x10 “has had a substantial impact on informatics education throughout the world,” said Paul Tang, M.D., chairman of the AMIA awards executive committee.

Of the 415 paper submissions for the 2008 AMIA Symposium 180



Don Detmer, M.D., M.A., AMIA president; William Hersh, M.D., recipient of the 2008 Lindberg Award; Donald Lindberg, M.D., director of the National Library of Medicine; and David Bates, M.D., chairman, AMIA board of directors.

were selected for presentation, five of which received Distinguished Paper awards. Two of these five were papers presented by DMICE faculty. The award winning papers were:

Ash JS, Sittig DF, McMullen CK, Guappone K, Dykstra R, Carpenter J. A rapid assessment process for clinical informatics interventions. Proceedings AMIA 2008:26-30.

Cohen AM. Optimizing Feature Representation for Automated Systematic Review Work Prioritization. Proceedings AMIA 2008:121-125.

DMICE was also represented at the following scientific and poster sessions. Note: F for faculty, S for current students, alumni have degree and year of graduation listed.

Scientific Sessions

Distributed Cognition in Health-care (Panel). **B. Hazlehurst (F), P. Gorman (F), Y. Xiao, J. Zhang, M. Beuscart-Zephir.**

Survival Prediction Models for Estimating the Benefit of Post-Operative Radiation Therapy for Gallbladder Cancer and Lung Cancer. **J. Kalpathy-Cramer (S), W. Hersh (F), S. Wang (F '07), J. Kim, C. Thomas, Jr.**

What Workforce is Needed to Implement the Health Information Technology Agenda? An Analysis from the HIMSS Analytics Database. **W. Hersh (F), A. Wright (PhD '07).**

Field Evaluation of Commercial Computerized Provider Order Entry Systems in Community Hospitals. **K. Guappone (PhD '08), J. Ash (F), D. Sittig (F).**

Connecting Public Health IT Systems with Enacted Work: Report of an Ethnographic Study. **A. Turner (Fellow '06), J. Ramey, S. Lee.**

Recent Trends in Biomedical and Health Informatics Education: Implications for Practice, Research, and Policy. **W. Hersh (F).**

Web 2.0 and Clinical Decision Support. **A. Wright (PhD '07), D. Sittig (F), D. Bates, D. Middleton, S. Thomas.**



Aaron Cohen, M.D., M.S., DMICE assistant professor (second from left) and Joan Ash, Ph.D., associate professor (center) both won AMIA Distinguished Paper Awards.

Virtual Worlds, Virtual Patients and Virtual HER for Health Care Education (Panel). **T. Agresta (S)**, P. Dev, J. Brixey, T. Horan, I. Willcockson

A Rapid Assessment Process for Clinical Informatics Interventions. **J. Ash (F)**, **D. Sittig (F)**, **K. Guappone (PhD '08)**, **R. Dykstra (F)**, **J. Carpenter (MS '02)**, C. McMullen.

Complex Measures to Track the Evolution of a SNOMED Hierarchy. **K. Spackman (F)**, D. Wei, Y. Wang, Y. Perl, J. Xu, M. Halper.

Auditing Complex Concepts in Overlapping Subsets of SNOMED. **K. Spackman (F)**, Y. Wang, D. Wei, J. Xu, G. Elhanan, Y. Perl, M. Halper, Y. Chen, G. Hripcsak.

A Scientific Collaboration Tool Built on the Facebook Platform. **S. Bedrick (S)**, **D. Sittig (F)**.

A Socio-technical Model of Health Information Technology-related e-latrogenesis. **D. Sittig (F)**.

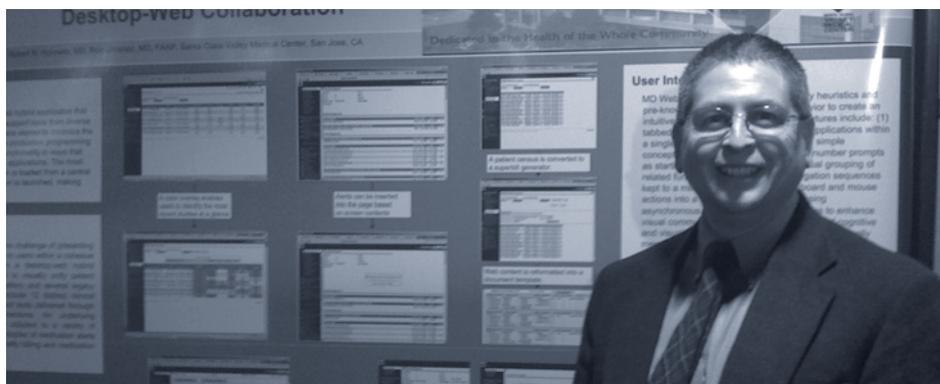
Secondary Uses of Data: Ethical and Social Considerations of Data Sharing, Quality Improvement, and Patient Internet Interaction. **D. Dorr (F)**, C. Petersen, T. Liaw, B. Kaihoi.

Towards a Rigorous Evidence Base for Health Informatics: the Issue of the Quality of Reporting. **D. Dorr (F)**, J. Talmon, P. Elkin, J. Linder, M. Goldstein.

A 360 Degree View of Translational Medicine. **P. Embi (MS '02)**, **W. Hersh (F)**, H. Cao, P. Payne, K. Strier, J. Anson.

The Effects of Hands Free Communication Devices on Clinical Communication: Balancing Communication Access Needs with User Control. **J. Richardson (MS '07)**, **J. Ash (F)**.

Evaluating the AMIA-OHSU 10x10 Program to Train Healthcare Professionals in Medical Informatics. **W. Hersh (F)**, S. Feldman.



Ron Jimenez, Cert '02, gave a poster presentation on M.D. Webstation.

Optimizing Feature Representation for Automated Systematic Review Work Prioritization. **A. Cohen (F, MS '05)**.

SYRIAC: The Systematic Review Information Automated Collection System A Data Warehouse for Facilitating Biomedical Text Mining. **J. Yang (PhD, '07)**, **A. Cohen (F, MS '05)**, **M. McDonagh (F)**.

Informaticians and the 111th Congress: ABCs of Policy Perspectives and Issues. **William Hersh (F)**, Julie J. McGowan, Doug Peddicord.

Poster Sessions

Real-time Process "defect" Collection within the Anatomic Pathology Laboratory to Facilitate Informatics Driven Workflow Optimization. **M. Riben (Fellow '01)**, M. Routbort, L. Nesbitt, S. Ninan, MD.

"Doing the Yellows" – An Analysis of Drug Review Processes Across Clinician Classes. **R. Bhupatiraju (S)**, **P. Gorman (F)**.

Expanding DISCERN to Create a Tool for Assessing the Quality of Web-based Health Information Resources. **P. Yen (MS '05)**, K. Matsoukas, S. Hyun, L. Currie, M. Joyce, J. Oliver, S. Patel, O. Velez, S. Bakken.

MyHealtheVet PHR: A Description of Users and Patient Portal Use. **S. Woods (S)**, K. Nazi.

How Well Does a Biomedical In-

formatics Curriculum Map to Health Information Management Knowledge Clusters? Analysis of a Program. **J. Valerius (F)**, **W. Hersh (F)**.

A Re-Examination of Performance Dimensions Using Data from the National Public Health Performance Standards Program V.1 Instrument. **J. Merrill (S)**, J. Keeling.

Balancing Entrepreneurship and Business Practices for e-Collaboration: Responsible Information Sharing in Academic Research. **B. Desai (MBI '08)**, M. Porter, D. Milley, K. Oliveti, A. Ladd, R. O'Hara, P. White.

Ability to Perform Registry Functions Among Practices With and Without Electronic Health Records. **A. Wright (PhD '07)**, E. Poon, C. Jenter, D. Bates, S. Simon.

Challenges in Creating an Enterprise Clinical Rules Service. **M. Paterno (MBI '06)**, **A. Wright (PhD '07)**, M. Schaeffer, C. Van Putten, E. Chen, H. Goldberg.

Using Expert Rules to Automate Pressure Ulcer Alerts for the Clinical Nurse Specialist. **J. Timm (10x10)**, K. Chick, J. Peterson, S. Epps, R. Bleimeyer, M. Harris.

Formulary Access Using a PDA-Based Drug Reference Tool: Does it Affect Prescribing Behavior? **J. Lyman (MS '00)**, S. Lowenhar, M. Conaway.

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Faculty Profile: Aaron M. Cohen, M.D., M.S.

By Felicity Fields

Aaron Cohen, M.D., M.S., is the latest in a growing tradition of medical informatics students turned faculty. Four years after his graduation from the biomedical informatics program, Cohen is not only a faculty member: he is also a member of the Medical and Bioinformatics Curriculum Committees and chair of the department's Web and Student Mentoring Committees. And, in his spare time, he writes iPhone applications for Apple!

Cohen's fascination with the convergence of medicine and machines began as an M.D. student at the University of Michigan. He had taken biochemistry classes as an undergraduate engineering major, and built upon this knowledge by programming computers while in medical school. He followed up his M.D. with a degree in computer engineering from Northeastern University in Boston, Massachusetts. Before entering the biomedical informatics program, Cohen applied his knowledge of medicine and machines at several companies, focusing primarily on the development of medical imaging algorithms and systems.

During his tenure at Intel as a software engineer, Cohen began researching a way to bring more of his medical background into his work. He stumbled across department chair Bill Hersh's website and set up a meeting to discuss opportunities. During his three years as an National Library of Medicine (NLM) fellow, he began writing grant proposals with the idea that he could stay on as faculty.

His diligence paid off. After earning his master of bioinformatics in 2005, Cohen joined the faculty as an assistant professor. Currently he teaches teach BMI 546 Software Engineering every spring as well as



"The EMR and Internet age has resulted in biomedicine creating more data in free text form than ever before," says Cohen. "We need to offload more of the work of managing this textual information to computers, so that people can do more of what they do best: synthesize the information and act on it."

– Aaron Cohen, M.D., M.S.

occasional special topics and guest lectures at various times of the year. He has previously taught the BMI 540 Computer Algorithms and Java programming classes as well.

Says Cohen of the software engineering class, "Unlike in traditional computer science programs, software engineering is treated as a core skill that everyone involved in biomedical informatics needs to be familiar with. Therefore, the course ... is based around the idea of a hypothetical soft-

ware development project and how you would apply the tools of software engineering to the project in order to produce a quality product that meets its requirements on time and on budget."

Joining the faculty has also given Cohen the opportunity to continue his research activities on the synthesis between medicine and computers. His main focus is in investigating how advanced text processing algorithms can aid the healthcare industry as well as clinical and biological research. "The EMR and Internet age has resulted in biomedicine creating more data in free text form than ever before," says Cohen. "We need to offload more of the work of managing this textual information to computers, so that people can do more of what they do best: synthesize the information and act on it."

Currently Cohen is the principal investigator for an NLM grant entitled Assisting Systematic Review Preparation Using Automated Document Classification. The grant studies the process of updating systematic reviews that provide recommenda-

DMICE Partners with Providence Health System on Informatics Program

tions for medical treatment, diagnosis, prognosis, and etiology based on the best available biomedical evidence. The systematic reviews are essential components in evidence-based medicine, and as new medical data become available they must be updated periodically. Currently the updating process requires a significant time commitment from highly trained human experts. It is Cohen's goal to apply automated document classification techniques early on in the updating process, specifically at the stage of identifying and screening the possibly relevant literature. "This allows the reviewers to better spend their time conducting more detailed analyses, write more complete reports, and produce a greater number of complete reviews more quickly," Cohen concludes.

In addition to his educational and research roles, Cohen also programs iPhone applications in his spare time. In order to publish an application at the iPhone application store, you have to register as an official developer, get an account for uploading iTunes content, and then compete with 1000's of other iPhone applications, many of them very well done.

Cohen has always had an interest in computer graphics, and the iPhone applications are a way to take advantage of some of his experiences. Recently he published "iKalied," a combination kaleidoscope + image processing program. "I like to think of it as an 'art toy'. It lets adults (and kids) create beautiful symmetric designs from their photos. The designs can include recognizable people or objects, or can be very abstract." At home, Aaron also enjoys building and playing ukuleles, folding origami, reading (to himself and his kids), playing board games, and watching Doctor Who (when he has the time). ■

DMICE has initiated an informatics program with Providence Health System, which addresses the need for a greater understanding of medical informatics by operational and clinical personnel. The **Providence – OHSU Informatics Program** is a unique partnership between Providence Health System and OHSU's Department of Medical Informatics and Clinical Epidemiology. The program is designed in modules, which can be studied on-line, both within the hospital setting and at home to fit the schedules of employees. Students must be pre-approved for this course by their managers. The course of study is designed to:

- Build strength in understanding clinical informatics and use of data.
- Lead to better outcomes in EMR system adoption and use.
- Develop "champions" within the organization.
- Describe global issues in the medical informatics field.
- Stimulate problem-solving within current systems.
- Facilitate change management within hospital settings.
- Provide additional retention and promotion strategies for the hospital system.

The informatics program is delivered online by William Hersh, M.D., Professor and Chair. There are several on-site sessions, led cooperatively by DMICE professors and Providence leaders, with content focusing on Providence-centric problem solving. Students who successfully complete the program will receive a Providence – OHSU Certificate, and may be eligible for entry into other DMICE programs, if certain additional requirements are met. ■



Assistant professor Nancy Carney, Ph.D., (center) poses with student taking trauma epidemiology courses at the University of Rosario in Argentina, part of Carney's NIH training grant.

Carney Awarded Grant to Study Pediatric Traumatic Brain Injury in Argentina

Assistant professor Nancy Carney, Ph.D., has been awarded an R01 grant, co-funded by NICHD, NINDS, and the Fogarty International Center of NIH, to study traumatic brain injury (TBI) in pediatric populations in Latin America. The 5-year project will take place in hospitals in Argentina, Ecuador, and Bolivia. It involves two components. The first is a randomized trial of a home-based intervention for post-discharge care of children with moderate to severe TBI. The second is a prospective observational study of pediatric TBI patients, associating outcomes with level of resources and adherence to evidence-based treatment guidelines. This project builds upon Dr. Carney's existing collaboration with the Latin American Brain Injury Consortium (LABIC), and is the sixth in a series of awards from the U.S. Department of Education, the NIH, and Integra Foundation. ■

AMIA Fall Meeting

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Heuristic Evaluation of a Communication Tool for Nurse Scheduling. **P. Yen (MS '05)**, S. Bakken.

Effectiveness of Health Maintenance Reminders Provided Directly to Patients. **A. Wright (PhD '07)**, E. Poon, J. Wald, J. Schnipper, R. Grant, T. Gandhi, L. Volk, A. Bloom, D. Williams, K. Gardner, M. Epstein, L. Nelson, A. Businger, Q. Li, D. Bates, B. Middleton.

MD Webstation: Visual Integration and Desktop-Web Collaboration. **R. Jiminez (S, Cert '02)**, R. Horowitz.

Aligning Tissue Banking Data Models for caBIG Interoperability. **M. Riben (Fellow '01)**, G. Wade, J. Kilbourne, M. Edgerton.

Enhancing Clinical Problem Lists Through Data Mining and Natural Language Processing. **A. Wright (PhD '07)**, **M. Paterno (MBI '06)**, E. Chen, P. Santos, F. Maloney, C. Van Putten, H. Goldberg.

The Impact of Clinical Information Systems in Dental Schools. **H. Hill (S)**, M. Torres-Urquidy.

Informatics and Communication in a State Public Health Department: A Case Study. **A. Turner (Fellow '06)**, R. Hills.

Discovering Synergistic Qualities of Published Authors to Enhance Translational Research. **Nathan Bahr (S)**. ■

Faculty/Staff Update

Awards and achievements

Associate professor **Roger Chou, M.D.**, has been appointed to the American College of Physicians' (ACP) Clinical Efficacy Assessment Subcommittee. This subcommittee, alongside the ACP's Clinical Programs staff and expert scientific collaborator, uses systematic data gathering and review processes to develop clinical practice guidelines.

Professor and chair **William Hersh, M.D.**, served as Co-Chair of the International Medical Informatics Association (IMIA) Education Working Group meeting in Buenos Aires, Argentina. The goals of the meeting were to provide both an exposition for identifying and harmonizing competencies and curricula for health and biomedical informatics as well as provide a working meeting for ongoing work of the IMIA Working Group on Health and Medical Informatics Education.

While in Buenos Aires, **Hersh** attended the INFOLAC 2008: Advances in Medical Informatics and Their Impact on Healthcare Systems and the IMIA Latin American Countries Conference. In particular, he served as a panel member on the Information Needs of the Healthcare Team - Medical Informatics as a Solution panel.

Hersh also recently served as co-editor of a special issue of *Information Retrieval* on the TREC Genomics Track (vol. 12, no. 2). Under his leadership, the TREC Genomics Track ran from 2003-2007 and was funded by the National Science Foundation Information Technology Research program.

Care Management Plus and its director, associate professor **David Dorr, M.D., M.S.**, made headlines late in 2008. The program, funded by the John A. Hartford Foundation, uses a nurse-managed, computerized system to track of seniors' health. On December 15, 2008, *The Portland Tribune* published an article entitled "OHSU study: nurse tracking of elderly patients saves lives." A few weeks later, in January 2009, *The Salt Lake Tribune* published its own article entitled "Geriatric study finds team-based care saves lives, money: Prevention » Hospitalizations and mortality lower with focused care."

Professor Heidi Nelson, M.D., M.P.H., was quoted in the January 7th Oregonian article "Latest medical advance often a miracle that misfires."

Funding received

The term of assistant professor **Roger Chou's, M.D.**, as Director of the American Pain Society Clinical Practice Guidelines Program has been extended through 2011, based on the success of the program under his direction since 2005. Dr. Chou and his staff work with multidisciplinary expert panels to define guideline scope and key questions, develop evidence reviews and recommendations, conduct peer review and finalize guideline recommendations for publication. More topics in the area of pain management are planned for development and publication.

CAHIIM Approves OHSU Informatics Degree for HIM Students

The DMICE medical informatics master's track has been awarded program approval status by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). This approval status is listed on the website of CAHIIM at www.cahim.org.

The American Health Information Management Association develops the standards for the approval process. The medical informatics master's track is an excellent program for health information management professionals who are seeking advanced degrees in health technology. ■

Presentations and posters

Aaron Cohen, M.S., M.S., presented “Error-Correcting Output Codes with Automatic Hot-Spot Filtering for Identifying Disease Comorbidity Status” at the i2b2 2008 NLP Obesity Challenge Task in Washington, D.C., on November 7, 2008.

Assistant professor **Roger Chou, M.D.**, presented “Eugene: APS-ACP Low Back Pain Clinical Guidelines Presentation” at the American College of Physicians 2008 Oregon Chapter Scientific Meeting on October 24, 2008.

Chou also gave a APS-AAPM Opioids Guidelines presentation for an OHSU Pain CME course on December 6, 2008.

Publications

Altman RB, Bergman CM, Blake J, Blaschke C, **Cohen A**, Gannon F, et al. Text mining for biology - the way forward: opinions from leading scientists. *Genome Biology*. 2008; 9(Suppl 2):S9.

Chou R, Fu R, Carrino JA, Deyo RA. Imaging strategies for low-back pain: systematic review and meta-analysis. *The Lancet*. 2009; 373(9662):463-72.

Chou R, Fanciullo GJ, Fine PG, Adler JA, Ballantyne JC, Davies P, Donovan MI, Fishbain DA, Foley KM, Fudin J, Gilson AM, Kelter A, Mauskop A, O'Connor PG, Passik SD, Pasternak GW, Portenoy RK, Rich BA, Roberts RG, Todd KH, Miaskowski C. Clinical guidelines for the use of chronic opioid therapy in chronic noncancer pain. American Pain Society-American Academy of Pain Medicine Opioids Guidelines Panel. *The Journal of Pain*. 2009; 10(2):113-30.

Chou R, Ballantyne JC, Fanciullo GJ, Fine PG, Miaskowski C. Research gaps on use of opioids for chronic

noncancer pain: findings from a review of the evidence for an American Pain Society and American Academy of Pain Medicine clinical practice guideline. *Journal of Pain*. 2009; (2):147-59.

Chou R, Fanciullo GJ, Fine PG, Miaskowski C, Passik SD, Portenoy RK. Opioids for chronic noncancer pain: prediction and identification of aberrant drug-related behaviors: a review of the evidence for an American Pain Society and American Academy of Pain Medicine clinical practice guideline. *Journal of Pain*. 2009; 10(2):131-46.

Chou R, Carson S, Chan BK. Gabapentin versus tricyclic antidepressants for diabetic neuropathy and post-herpetic neuralgia: discrepancies between direct and indirect meta-analyses of randomized controlled trials. *Journal of General Internal Medicine*. 2009; 24(2):178-88. Epub 2008 Dec 17.

Chou R. Generating evidence on spinal cord stimulation for failed back surgery syndrome: not yet fully charged. *Clinical Journal of Pain*. 2008; 24(9):757-8.

Chou R, Aronson N, Atkins D, Ismaila AS, Santaguida P, Smith DH, Whitlock E, Wilt TJ, Moher D. Assessing harms when comparing medical interventions: AHRQ and the Effective Health-Care Program. *Journal of Clinical Epidemiology*. 2008. [Epub ahead of print]

Hersh W. Ubiquitous but unfinished: grand challenges for information retrieval. *Health Information and Libraries Journal*. 2008; 25(S1): 90-93.

Jimison H, Gorman P, Woods S, Nygren P, Walker M, Norris S, Hersh W. Barriers and Drivers of Health Information Technology Use for the Elderly, Chronically Ill, and Underserved. Evidence Report/Technology Assessment No. 175

(Prepared by the Oregon Evidence-based Practice Center under Contract No. 290-02-0024). *AHRQ Publication No. 09-E004*. Rockville, MD: Agency for Healthcare Research and Quality. 2008.

Morgan AA, Lu Z, Wang X, **Cohen AM**, Fluck J, Ruch P, et al. Overview of BioCreative II gene normalization. *Genome Biology* 2008; 9(Suppl 2):S3.

Roberts PM, **Cohen AM, Hersh WR**. Tasks, topics and relevance judging for the TREC Genomics Track: five years of experience evaluating biomedical text information retrieval systems. *Information Retrieval*. 2009; 12: 81-97.

Yang J, **Cohen AM, Hersh WR**. Evaluation of a gene information summarization system by users during the analysis process of microarray datasets. *BMC Bioinformatics*. 2009; 10(Suppl 2):S5.

Recent additions

Several babies have been born to the department in recent months. On January 9, Sara Thakurta, daughter of **Sujata Thakurta**, research assistant, was born. Less than 2 weeks later, department director **Anne Marshall**, M.B.A., welcomed Isaac Allen Marshall into the world. Senior research associate **Susan Carson** had baby Anthony on February 23. Professor **Holly Jimison**, Ph.D., is a proud grandparent to Mikah Thomas Williams, born on February 17. Research assistant **Bill Hatt** became father of a baby boy, Joseph Michael Hatt, on March 11. Congratulations to all! ■

Student/Alumni News

Jobs/career changes/promotions

Anna Ritko, current distance student, has been accepted into the Ph.D. program for biomedical informatics at Columbia University, beginning in the fall of 2009. She specifically wants to do research in public health and consumer health informatics while attending Columbia.

Michael Ames, current M.B.I. student, was promoted to Senior Manager of Clinical Information Systems at Boston Scientific, a major medical device manufacturer. His organization is responsible for development, implementation and management of all software systems used to support their clinical trials.

Edward VanBaak has been hired by Asylum Hill Family Medicine, in Hartford, CT. He'll be working as an informatics specialist at this family medicine clinic associated with St. Francis Hospital and the University of Connecticut's Health Center, working primarily with the clinics' electronic medical records system.

Patrick Hess, M.S., R.N., R.R.T., (**Certificate '07**) is currently finishing his work on the ClinDoc build for Cedars-Sinai Medical Center's Epic (CS-Link) install.

Jay Cullen, a current student in the distance master's program, received his CIIP (Certified Imaging Informatics Professional) certification from the American Board of Imaging Informatics and also his CPHIMS (Certified Professional in Healthcare Information and Management Systems) certification from HIMSS. He is the first to receive these certifications within the Wuesthoff Health System (WHS), based in Rockledge FL. He adds, "I am a good contact for program alumni looking for Shuttle Launch tickets, if they are in the area



National Library of Medicine-funded fellows take a break from the fall AMIA meeting in Washington, D.C.: (left to right) Joshua Richardson (M.S., '07), Emily Campbell, M.S., R.N., Ken Guappone, M.D., (Ph.D. '08), Steve Bedrick, James "Zephy" McKanna.

during a launch...usually it requires about a month or so pre-notice to get passes to the VIP area!"

John Cooper, (M.B.I. '05), started working for Legacy Health Systems in Portland in the fall as a Senior Technical Analyst, building an HL7 architecture and interfaces. He has also joined the Oregon Institute of Technology as an adjunct instructor in their undergraduate health informatics program.

Current student **David Gibbs** is pleased to announce the arrival of his first child. Beatrix Tamaribuchi Gibbs was born on November 11, 2008.

Roy Gill is a current M.B.I. student and has completed the Certificate program. He started a new position with NextGen in March as a physician consultant.

Rob Posteraro, M.D., (M.B.I. '05), began his full time teaching career as an assistant professor. Based in Lubbock, Texas, Posteraro is a member of the TTUHSC School of Allied Health Sciences faculty in the

Department of Clinic Administration and Rehabilitation Counseling.

Funding received

Senior medical informatics specialist **Marilyn D. Paterno**, (M.B.I. '06) was awarded a grant for a prospective, randomized controlled trial to study the effects of presenting drug to drug interaction alerts according to severity level in a single inpatient hospital. The grant is funded via an internal Partners-Siemens research council.

Presentations and posters

Current post-doctoral fellow **Jayashree Kalpathy-Cramer, Ph.D.**, presented a paper and a poster in February 2009 at the SPIE Medical Imaging Conference in Orlando, Florida. The paper was entitled "Comparing the quality of accessing the medical literature using content-based visual and textual information retrieval." Fellow authors include Henning Muller, Charles E. Kahn Jr., and professor and chair William Hersh, M.D. She also presented a poster: Jayashree Kalpathy-Cramer, Ph.D., Umut Oz-

ertem, William Hersh M.D., Martin Fuss, Deniz Erdogmus. “Robust segmentation using non-parametric snakes with multiple cues for applications in radiation oncology.”

Kalpathy-Cramer co-authored two additional presentations in the fall of 2008, one at the IEEE MLSP conference in October and the other at the annual RSNA meeting in December. The IEEE presentation was based on a paper titled “Semi-supervised segmentation using non-parametric snakes for 3D-CT applications in Radiation Oncology” by Kalpathy-Cramer J, Ozertem U, Hersh W, Fuss M, Erdogmus D. Along with co-authors Charles Kahn and William Hersh, M.D., she gave a talk on “Image Retrieval in Medicine: The ImageCLEF Challenge” at the RSNA meeting in December.

Last October, **John Norris (Certificate '08)** was honored as a panelist for the Stepping into Virtual Worlds Conference – Health, held in the virtual world of Second Life. He helped to represent the variety of health care issues being addressed in Second Life as well as the numerous healthcare support groups that meet there.

Publications

Marilyn Paterno (M.B.I '06) was first author of a paper: Paterno M, Maviglia S, Gorman P, Seger D, Yoshida E, Seger A, Bates D, and Gandhi T. Tiering Drug-Drug Interaction Alerts by Severity Increases Compliance Rates. *Journal of the American Medical Informatics Association*. 2009; 16: 40-46.

Pejman Azarmina, M.D., M.Sc., (Certificate '08), who currently works for UK Pfizer Health Solutions, recently published an article: Azarmina P, Prestwich G, Rosenquist J, Singh D. Transferring disease management

New Faces

Welcome to staff and fellows who have recently joined DMICE.

Tomiye Akagi is an administrative assistant working for the Oregon Evidence-based Practice Center, working for Nicole Floyd.

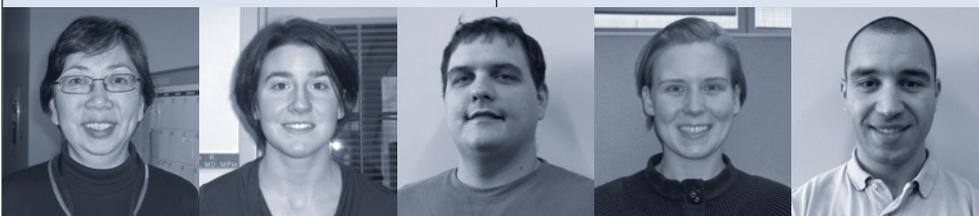
Judy Cabanban, R.H.I.T., is working with assistant professor Joanne Valerius as a research assistant to prepare health information management distance courses.

Bill Hatt is a research assistant working with associate professor

Holly Jimison, Ph.D. while research assistant **Veronica Ivey** is working with assistant professor Susan Norris, M.D., M.P.H., M.Sc.

Research assistant **Gwenivere Olsen** has joined the Care Management Plus team, under the leadership of David Doror, M.D., M.S.

Said Radhouani, Ph.D., comes to DMICE from Tunisia via Switzerland to work with professor William Hersh, M.D., as a post-doctoral research fellow. ■



Tomiye Akagi

Veronica Ivey

Bill Hatt

Gwenivere Olsen

Said Radhouani, Ph.D.

and health promotion programs to other countries: critical success factors. *Health Promotion International*. 2008; 23(4):372-379

Current student **Allen J. Flynn, Pharm.D., C.P.H.I.M.S., C.H.S.**, is the Medication Lead for the Clinical Design Team in the University of Michigan Health System. He co-authored a paper: Brent I. Fox, Rachel Bongiorno Karcher, Allen Flynn, and Sandi Mitchell. Pharmacy Informatics Syllabi in Doctor of Pharmacy Programs in the US. *American Journal of Pharmaceutical Education*. 2008; 72 (4) Article 89.

Timothy Hartzog, M.D., F.A.A.P., (Certificate '08) is the Medical Director for Information Technology at the Medical University of South Carolina. He was recently a contributing author to a paper entitled Pediatric Aspects of Inpatient Health Information Technology System. *Pediatrics*. 2008; 122(6):e1287-1296. ■

Stimulating Time

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to \$11 million per hospital. Another \$2 billion will be invested in the Office of the National Coordinator for Health IT for specific projects that promote adoption and other activities required to attain it, such as further development of standards, health information exchange, and certification of systems. There is also language, though no specific dollar amount, for efforts to promote development of the health IT workforce. DMICE Chair, William Hersh, M.D., had the opportunity to work with the staffs of Oregon Congressman David Wu and Senator Ron Wyden to craft that language in Section 3016 of the legislation that addressing development of the health IT workforce.

Congressman Wu has been an advocate of informatics education and training from several years. A couple years ago, he introduced his *10,000 Trained by 2010 Act*, which passed in the last session of the House of Representatives but, like much health IT legislation, failed to make it through the Senate. The bill has been re-introduced in the new Congress as HR 461.

This legislation is named after the on-line course that DMICE developed at OHSU in partnership with our professional association, the American Medical Informatics Association. The course gets its name by its ambitious goal to train 10,000 people in basic medical informatics by the year 2010, with the number derived from the aim of training at least one physician and one nurse from each of America's 6000 hospitals. Through the end of 2008, the course has been taken over 600 people from a variety of backgrounds, not only physicians and nurses but also other health care, IT, and other professionals. About 15% of individuals who complete the course have gone on to enroll in OHSU's biomedical informatics graduate program.

From the Chair

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effectiveness research). I had an opportunity to play a role in the former, working with the staffs of Oregon Congressman David Wu and Oregon Senator Ron Wyden to contribute to crafting the language dealing with health information technology workforce development.

This leads to another quote, which is, "Be careful what you wish for, lest it become true" (source not clear to me). The onus will be up to fields such as ours to make sure the money invested is spent efficiently and wisely.

Fortunately, there is other good news to report from the department. Our informatics education program continues to thrive, with no drop-off in enrollment due to the economy whatsoever. It is well-known academic programs often see their enrollments increase in lean times, as people re-tool their skills while the economy is recovering, so we are nervously optimistic.

Another bit of good news on the academic program is that our master's degree in biomedical informatics has

been "approved" by the Commission on the Accreditation of Health Informatics and Information Management (CAHIIM), an organization that historically has accredited health information management (HIM) programs but is now turning its attention to accreditation of graduate programs in health informatics. We are also in the process of seeking accreditation for a track in our Graduate Certificate program that will allow individuals to sit for the Registered Health Information Administrator (RHIA) credential.

Our faculty also remain busy and accomplished on the research. This issue features a Faculty Focus on Aaron Cohen, M.D., M.S., who is becoming quite established as a researcher and leader in the area of biomedical text mining. I have been gratified to see him achieve success since joining our postdoc fellowship several years ago and evolving into one of our several promising young faculty.

Another up and coming faculty member is Nancy Carney, Ph.D., who continues to provide leadership in the area of brain trauma epidemiology, especially as it is manifested in developing countries. Dr. Carney's

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Another provision of the legislation invests \$1.1 billion in comparative effectiveness research, an important new area of research that helps the health care system decide on the best tests and treatments in head-to-head research. It is not enough to just compare treatments to placebos or look at just one study on a test, drug, or device when many have been done. To this end, the Agency for Healthcare Research and Quality has funded its Evidence-Based Practice Center program, which funds centers to produce evidence reports, sometimes called systematic reviews, that summarize all of the research on a given test or treatment, especially when

they can be compared against others. DMICE is already a leader in this area, with the AHRQ-funded Oregon EPC, under the direction of faculty member Mark Helfand, M.D., M.P.H., M.S., serving as one of the flagship centers of the program. Dr. Helfand is also a thought leader in comparative effectiveness research and the larger field in which it sits, which is clinical epidemiology.

Medical informatics and clinical epidemiology are thus key areas for advancing health care and biomedical research. Stay tuned for more details about the department's role as the stimulus package is implemented and moves forward. ■

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From the Chair

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research network extends across Latin America.

In the pages of this issue, you will also see other accomplishments of faculty, students, and staff of our department. We can also report on a new member of the DMICE family, as Department Director Anne Marshall gave birth on January 22, 2009 to Isaac Marshall. Congratulations to Anne!

Despite the achievements of our department, we continue to face challenging economic times due to financial challenges at OHSU and with the economy in general. Although we have been very successful in obtaining grant revenue and tuition, these monies are earmarked for specific expenses of the research projects and educational programs, respectively. These revenues are very restrictive in how the money can be spent and provide little money for investment in the future. For example, faculty occasionally wish to pursue new areas of research,

which usually requires learning new techniques or generating preliminary data. Or the department may wish to invest in new educational programs.

Another use for gift funds will be for our students. Having money for student travel to scientific meetings and career development activities will improve their education and increase their competitiveness in the job market, which will in turn attract more students. We also hope to raise funds for student scholarships that will allow us to attract more high-achieving students.

I hope you will consider investing in DMICE. A form for giving is printed in this newsletter, or you can make your gift online at www.ohsu.edu/dmice/giving.

In closing, I want to express my gratitude for the support DMICE has received from faculty, staff, students, OHSU leadership, and the community. I hope we can continue our mutually beneficial relationship with all of you, providing leadership and value in our respective fields. ■

DMICE Tracks

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Department chair:

William R. Hersh, M.D.

Editor: Kathryn Pyle Krages,
A.M.L.S., M.A.

Layout: Charlotte Woodward

Contributors to this issue:

William Hersh
Kathryn Pyle Krages
Nancy Carney
Felicity Fields
Aaron Cohen

Photographs supplied by:

Steve Bedrick, Nancy Carney,
Bill Hersh, Ron Jimenez,
Lynne Schwabe

Questions? Please contact the editor at 504 494-6058.