

I. College Research Mission and 2007-2008 Highlights

Program Highlights

- **CRHRE:** The Center for Rural Health Research and Education (CRHRE) promotes the use of computer and telecommunications technology to support the quality of, and access to, health care in rural communities. Among the projects supported through the CRHRE are the development of a statewide telehealth/telemedicine system for behavioral health services; distribution of medical education using telecommunications; biomedical informatics research support; and education of practitioners in Wyoming on the benefits of health information technology. The CRHRE had more than \$1.75 million in external funding during 2007-08 to support these projects.

II. Faculty Research Descriptions (Primary and joint)

Center for Rural Health Research and Education (CRHRE)

Rex Gantenbein, Ph.D. (www.uwyo.edu/rex), Director & Professor, Medical Education and Public Health; Main Research Interests: Health Information Technology, including telehealth/telemedicine, health information exchange, and electronic health records; Biomedical and Health Informatics, including cluster computing and information management for biomedical research support; Security and Privacy in Computers and Telecommunications, including education and policy development to ensure the protection of private health information.

III. PEER-REVIEWED PUBLICATIONS

CRHRE:

- R.E. Gantenbein**, "The Cowboy State Corrals Providers into a Telehealth Network," *Behavioral Healthcare* 28,4 (2008).
- R.E. Gantenbein** and B.J. Robinson, "Decoding CODECs," *J. Telemedicine and Telecare* 14 (2008), 59-61.
- R.E. Gantenbein** and B.J. Robinson, "An Evaluation of Providing Mental Health Services through Telemedicine in Wyoming," American Telemedicine Association Annual Symposium (2008).
- A.W. Wallace and **R.E. Gantenbein**, "A Lightweight Approach to Interoperable Health Information Exchange," *Proc. 22nd Int. Conf. on Computers and Their Applications* (2007).

IV. MEETING PRESENTATIONS AND ABSTRACTS

CRHRE:

- R.H. Sandefer** (2008). "Surveying Wyoming's Health Workforce: Developing a Database for Health Policy Planning," poster presented at the Association of American Medical Colleges 2008 Physician Workforce Research Conference, Crystal City VA.
- Wilson W.C., O'Hearn E.S., **Roth C.**, Lenhoff R. (2007). "Genetic analysis of the NS1 and NS3 genes from the prototype serotype of Bluetongue and Epizootic Hemorrhagic Disease Viruses," American Society for Virology Meeting, Corvallis OR.

R.E. Gantenbein (2007). "Western Regional Biomedical Collaboratory," poster presented at the American Medical Informatics Association Biomedical and Health Informatics meeting, Chicago IL.

R.E. Gantenbein (2007). "Southeast Wyoming Telehealth Network," poster presented at the Office of Rural Health Policy All Programs meeting, Washington DC.

V. INVITED SEMINARS

CRHRE:

R.E. Gantenbein (2008). "History of Telehealth in Wyoming," Wyoming Statewide Telehealth Symposium, Cheyenne WY (and 14 remote sites in Wyoming).

R.E. Gantenbein (2008). "Telehealth in Wyoming," Wyoming Health Information Organization Health IT Summit, Casper WY.

R.E. Gantenbein (2008). "A Lightweight Approach to Federated Health Information Exchange," Wyoming Health Information Organization meeting, Cheyenne WY.

R.E. Gantenbein (2007). "Health Information Exchange: Why Centralized Data Banks Won't Work," Wyoming Health Information Organization meeting, Cheyenne WY.

R.E. Gantenbein (2007). "Why Health Information Exchanges Need a Federated Implementation," CMS Regional Health IT Summit, Denver CO.

R.E. Gantenbein (2007). "Promoting Private and Secure HIE Through an Online Information Portal," National Health Information Security and Privacy Collaboration meeting, Washington DC.

R.E. Gantenbein (2007). "Wyoming Health Information Security and Privacy Collaboration," American Health Information Community Meeting, Mountain View, California.

R.E. Gantenbein (2007). "Establishing the Wyoming HIE Policy Center," Privacy and Security Solutions for Interoperable Health Information Exchange National Conference, Bethesda, Maryland.

VI. RESEARCH GRANTS AND CONTRACTS SUBMITTED

CRHRE:

(2007) Wyoming Network for Telehealth, Rural Health Network Development Grant, Office of Rural Health Policy, Health Resources and Services Agency, \$540,000

(2007) Wyoming Network for Telehealth, Federal Communications Commission Rural Health Care Pilot Program, \$778,765

(2007) Extending Applicability of Web-Based Tools for Detecting and Displaying Adaptive Evolution, National Institutes of Health, \$750,000 (not funded)

(2007) Wyoming Network for Telehealth Matching Funds, Office of Rural Health, Wyoming Department of Health, \$15,000

(2007) Wyoming Network for Telehealth Matching Funds, Office of Public Health Emergency Preparedness, Wyoming Department of Health, \$100,000

(2007) Wyoming HISPC Provider Education Toolkit, RTI International, \$177,921

(2007) Wyoming Health Information Privacy and Security Resource, RTI International, \$149,956

VII. RESEARCH GRANTS AND CONTRACTS IN FORCE

CRHRE:

- (2008-11) Wyoming Network for Telehealth, Rural Health Network Development Grant, Office of Rural Health Policy, Health Resources and Services Agency, \$540,000
- (2008-11) Wyoming Network for Telehealth, Federal Communications Commission Rural Health Care Pilot Program, \$778,765
- (2008-09) Wyoming HISPC Provider Education Toolkit, RTI International, \$177,921
- (2008-09) Wyoming Network for Telehealth Matching Funds, Office of Rural Health, Wyoming Department of Health, \$15,000
- (2008-09) Wyoming Network for Telehealth Matching Funds, Office of Public Health Emergency Preparedness, Wyoming Department of Health, \$100,000
- (2007-09) Western Regional Biomedical Collaboratory, Integrated Advanced Information Management Systems Planning Grant, National Library of Medicine, \$299,990
- (2007-08) Southeast Wyoming Telehealth Network, Rural Health Network Development Planning Grant, Office of Rural Health Policy, Health Resources and Services Agency, \$84,990
- (2007) Wyoming Health Information Privacy and Security Resource, RTI International, \$149,956
- (2006-07) Wyoming Health Information Security and Privacy Collaboration, RTI International/National Governors Association, \$317,055

IX: OTHER PROFESSIONAL ACTIVITIES

- ✓ Dr. Robert Wolverton, a research scientist in the CRHRE, is a member of the board of the Northwest Regional Telehealth Resource Center, a Federally funded center supporting the development of telehealth services in the northwestern US.
- ✓ Ryan Sandefer MS, a research scientist in the CRHRE, is working for the Wyoming Health Care Commission on a survey and data analysis project regarding health care workforce issues in the state.
- ✓ Dr. Rex Gantenbein, director of the CRHRE, supervised the dissertation of Dr. John Kim, who received his PhD in Computer Science from Wyoming in May 2008. Dr. Kim is the fifth student receiving a PhD in Computer Science from UW under the direction of Dr. Gantenbein, who has maintained an adjunct appointment in UW's COSC department since joining the Health Sciences faculty in 2004. Dr. Gantenbein also is an affiliate faculty

member in the Division of Biomedical and Health Informatics at the University of Washington School of Medicine.

- ✓ Dr. Christian Tellgren-Roth, a research scientist in the CRHRE supported by the INBRE Bioinformatics Core, attended two major conferences in 2007: the American Genetics Association Annual Symposium in Bloomington IN, and the Rocky Mountain Bioinformatics Conference in Snowmass/Aspen CO.