Welcome to the first issue of the Research Times newsletter, a new monthly publication from the A.T. Still Research Institute. Our promise is to educate and inform, as we bring you timely, interesting and relevant information each month.

The publication has been arranged by sections (i.e., Continuing Education, History, Research Cornerstones, etc.) Each section will focus on a specific area of research and will be maintained month-to-month. Additionally, we will debut our A.T. Still Research Institute Web site on January 31, 2003, look for it at http://www.kcom.research.edu.

At left is one of the first proud moments of the Research Institute, our building dedication on September 27, 2002. Gathered with us is our External Board of Scientific Counselors (see Special Focus), and other distinguished quests.

We hope you enjoy this first issue and we look forward to providing you with the information that will assist you with your research endeavors.
NIH HIGHLIGHTS ON RESEARCH

NIH REVIEW CRITERIA FOR RESEARCH PROPOSALS

- Significance: ability of the project to improve health
- Approach: feasibility of your methods and appropriateness of the budget
- Innovation: originality of your approach
- Investigator: training and experience of investigators
- Environment: suitability of facilities and adequacy of support from your institution

Although you'll want to address NIH's review criteria in your application, their relationship to your score is complex. Reviewers are told to keep the criteria in mind, yet your final priority score is more likely to reflect a judgment of overall merit. Reviewers use their experience to rate how your application stacks up against the science in the field, using a hypothetical standard of excellence for your field of science. There's not a one-to-one relationship between how your application measures up to the review criteria and your score. Further, adherence to the criteria varies by review committee. The message is: though review criteria are an important assessment tool, writing a high-quality application with a persuasive argument why NIH should fund you is the surefire route to getting funded.

Applications do not need to be strong in all criteria for a high priority score, though all criteria can affect scoring. For example, reviewers may assign a high score to a proposal that is not innovative but is essential to move a field forward. Though, innovation is one criteria, it can be harder to gain reviewer acceptance if your ideas are outside the mainstream, especially if you're a less experienced applicant.

JOURNAL FOCUS

AGE AND AGEING

Age and Ageing (http://www3.oup.co.uk/jnls/list/ageing/instauth) is an international journal which presents an eclectic view of aging and sickness, disability and health in later life.

The target readership includes clinicians, who wish to be informed about new developments in medicine and related fields; scientists; and other professionals who work in subjects related to the medicine of later life.

The journal is a forum for the dissemination/integration of knowledge. It aims to heighten understanding, highlights gaps in our knowledge—thereby promoting further research—and improve clinical care by promoting good practice and identifying needless, inappropriate and harmful activities.

Subjects covered include epidemiology, gerontology, physiology, sociological aspects of aging, psychology, clinical trials, service delivery, pharmacology and hospital as well as commu-

RESEARCH CORNERSTONES

THE YIN AND YANG OF RESEARCH

Every month, we will focus on the foundations of research knowledge using the Yin and Yang conceptual model shown at left. The left side of the figure refers to the theory of research. The right side of the figure refers to the practice of research.

The yin-yang figure in the center links the theoretical introduction to research and the practical issue of how we formulate research. The four arrows on the left describe the four types of validity in research. The idea of validity provides us with a unifying theory for understanding the criteria for good research. The four arrows on the right point to the research practice areas that correspond with each validity type. For instance, external validity is related to the theory of how we generalize research results. Its corresponding practice area is sampling methodology which is concerned with how to draw representative samples so that generalizations are possible.

Next month we will focus on external validity.

**OFFERINGS**

**SHM OFFERS CLINICAL RESEARCH COURSE ONLINE**

Kent Mulford, D.O., M.B.A., Dean of the School of Health Management recently announced the offering of an online clinical research course. The course, SHM 910: Principles of Clinical Research, will be taught by James McTigue, Ph.D. According to Mulford, “The collaborative efforts of SHM and Dr. McTigue to develop this course will provide opportunities for physicians and other health professionals to better understand the importance of clinical research and its important role in medical education and practice.” Contact Dean Mulford at 660-626-2820 or e-mail at dmulford@shm-kcom.

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**RESEARCH REFLECTIONS**

**INTREPRETING AND REPORTING PUBLIC HEALTH AND MEDICAL RESEARCH: TECHNIQUES AND 13 KEY QUESTIONS (CRITICAL APPRAISAL OF SCIENTIFIC ARTICLES)**

Lan presents 13 key questions for the readers of scientific articles. Each month, hereafter, we will explore the questions below more in-depth for critical appraisal of medical research.

1. What was studied, and why?
2. What general type of study was conducted?
3. What, exactly, was studied?
4. How was the sample selected?
5. How were participants assigned to groups?
6. How was the sample size determined?
7. How and under what conditions were the data collected?
8. What statistical analysis or procedures were performed?
9. What were the results?
10. What else is known about the problem and its solution?
11. What do the results mean?
12. What are the possible sources of imprecision or bias in the study?
13. How will the study affect science or the practice of medicine?


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**HISTORY LESSONS**

**“RADIUM GIRLS”**

During World War I and after, young women (as many as 4,000 workers) were hired to paint glow-in-the-dark watch dials at the Radium Dial Company in Orange, New Jersey. The work was tedious and to keep the tips of their paintbrushes sharp the girls pointed them with their lips. As a result, the girls were imbibing radioactive paint. Although the Company emphasized its (radium) harmlessness, the girls found it odd when their handkerchiefs glowed in the dark.

Unbeknownst to the women, the dial painters were routinely checked for radioactivity. Although the numbers are still disputed, many of the workers died or suffered illness from the radium. Many suffered from anemia and a disease called radium necrosis (radium poisoning). Radium Dial doctors listed other causes of death and many of the women never sued. In 1924 Katherine Wiley of the Consumer League of New Jersey began investigating the suspicious deaths of four radium factory workers. Five women (the “Radium Girls”) eventually brought suit against the Radium Dial Company.

Because of media pressure, U.S. Radium reached an out-of-court settlement with the Radium Girls days before the case was to go to trial. Each woman received $10,000, a $600 per year annuity while they lived, and payment of all incurred medical and legal expenses. All five “Radium Girls” died in the 1920s and 1930s. Their deaths, however, aided in the passage of a 1949 bill that made all industrial diseases compensable and extended the time workers could discover illness.

**TIDBITS**

- The Health Information Network (HIN) of the National Heart Lung and Blood Institute (NHLBI) is NHLBI’s digital link to health professionals. It offers quick, convenient access to trustworthy information applicable to everyday practice. All public health and medical professionals with an interest in heart, lung, blood diseases or sleep disorders are encouraged to join (http://emall.nhlbihin.net/hp2010).


- The Raymon H. Mulford Library/Medical College of Ohio Instructions to Authors in the Health Sciences (http://www.mco.edu/lib/instr/libinsta.html) contains links to Web sites which provide instructions for over 3,500 journals. All links are to “primary sources.”

**SPECIAL FOCUS**

Jay Moskowitz, Ph.D., A.T. Still Research Institute External Board of Scientific Counselors (EBSC)

Dr. Moskowitz is the Associate Vice President for Health Sciences Research and Vice Dean for Research at Penn State College of Medicine. He is a recognized expert in fundamental, applied, populations-based, and clinical research, as well as biomedical, bioengineering, and behavioral research. Dr. Moskowitz is a national research policy advisor with over 27 years of experience in administration/research at NIH.

**NIH DICTIONARY**

**ACTIVITY CODE** — Three digit code identifying the type of award mechanism (e.g., R01 is a research project grant). Major series are: F — fellowship, K — research career, N — research contracts, P — research programs and centers, R — research projects, S — research-related programs, T — training U — cooperative agreements, and Y — interagency agreements (http://grants2.nih.gov/grants/funding/ac.pdf).

**CONFERENCES/MEETINGS/SEMINARS**

**CHRONIC DISEASE AND MISSOURI WOMEN**

The Missouri Department of Health and Senior Services, Office on Women’s Health, and the University of Missouri-Columbia, Centers for Gender Physiology and Environmental Adaptation are co-sponsoring this conference.

The conference will be held at the Reynolds Alumna Center at the University of Missouri-Columbia on May 12 and 13, 2003.

If you need additional information, call Stephanie Gilmore at (573) 526-0436.

**PICTURE OF THE MONTH**

1930’s Census Worker
Source: US Census Bureau

**KEEP YOUR EYE ON RESEARCH**

Beginning next month every issue of Research Times will have a hidden icon (☉). Find the icon, be the first to identify its location and win a Sacajawea gold dollar. To win, contact Lisa Small by e-mail at lsmall@kcom.edu.