Dr. Keith Colburn is a professor of medicine and chief of rheumatology at Loma Linda University and the Loma Linda VA Medical Center. He did his rheumatology fellowship at UCLA under Carl Pearson and was mentored by Richard Weisbart. He has continued collaborating with Dr. Weisbart on a number of projects, the most recent being their work with showing that 'transformed' fibroblasts, responsible for the erosion of cartilage and bone in the joints of patients with rheumatoid arthritis, are driven by a variety of splice variants of the BRAF oncogene, the same oncogene that drives malignant melanomas and several other cancers.

What is your current leadership position with ACTS? Please describe your vision/goals for your ACTS committee and the association as a whole.

I am the Translational Science 2014 co-chair with Harry Shamoon for planning the meeting. I am involved in the Translational Science Meeting through my involvement with the American Federation for Medical Research (AFMR) where I am the vice president for Meetings and Programs. The AFMR has joined forces with ACTS to co-sponsor the Translational Sciences Meeting to increase the participation of young physician investigators in research careers.

Tell us about a career accomplishment and its impact on translational science.

I think our most recent work with the fibroblasts in rheumatoid arthritis (RA) has the potential of being the most important contribution to translational science that I have been involved in. It is very controversial since our work (and the work of a European group) strongly suggests that RA may be a low grade malignancy upsetting the paradigm that it is an auto immune disease. This work also suggests new targets to treat this disease including the already available anti-BRAF drugs used therapy for melanomas.

What or who influences your work in translational science?

The most important influence for me is my former mentor and present collaborator, Richard Weisbart, a physician-scientist of the highest caliber. His innovative mind and brilliant intellect are inspiring.

How do you use the Translational Science Meeting to support your career and why should others consider attending the meeting?

This meeting so closely associated with the NIH, it helps an investigator become familiar with the inside workings of the NIH and meet people partially responsible for awarding NIH grant money. The Meeting also brings together some of the most significant health care policy makers, research scientists and the top people in the NIH to speak at our conference.

About ACTS

The ACTS mission is to advance research and education in clinical and translational science to improve human health. For more information, visit actscience.org

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Translational Science News

Patients Share DNA for Cures
NIH Scientists Pursue New Therapies to Improve Rare Disease Drug Development
Montana's Two Largest Universities to Join Research Consortium With $20M Grant
Share congressional outreach and we will help connect you with your elected officials. Legislators about it. Please contact Dane Christiansen if you are interested in consequences of the government shutdown, make your voice heard and tell your investigators, but they continue to need our help. If your research or your lab felt the shutdown had an immediate impact. Nearly all internal staff at NIH was furloughed, and new clinical trials were deemed “essential”.

The programs of the Affordable Care Act, such as the state health insurance marketplaces or exchanges are almost entirely funded through mandatory government spending, which means the shutdown had little effect on their operation. The National Institutes of Health (NIH), the Food and Drug Administration (FDA), and other public health agencies are funded through discretionary spending, which means the shutdown had an immediate impact. Nearly all internal staff at NIH was furloughed, the NIH clinical center was not accepting patients, and new clinical trials were delayed. The vast majority of staff at FDA was also furloughed and the drug approval and oversight process, not to mention food inspection, was disrupted.

Congress remained in session during the shutdown and we continued to work with congressional offices to communicate the importance of federal clinical and translational research and research training programs. Agency staffs at NIH and throughout the public health service were anxious to get back to work and pick up where they left off advancing research and cultivating the next generation of investigators, but they continue to need our help. If your research or your lab felt the consequences of the government shutdown, make your voice heard and tell your legislators about it. Please contact Dane Christiansen if you are interested in congressional outreach and we will help connect you with your elected officials.
The ACTS Connection Editors Want Your Feedback

ACTS Connection Editor, Dr. Satish R. Raj, MD, MSCI, and Associate Editor, Dr. Quinn Wells, MD, PharmD, MSCI, are interested in hearing about ways that ACTS Connection could provide even more value to our readers.

Please feel free to email Dr. Raj or Dr. Wells with your comments or suggestions.

Translational Science News

Patients Share DNA for Cures

Nonprofit patient groups are investing millions of dollars in the development of genetic databases that could help encourage clinical trials and speed drug development. These databases will collect information, including DNA, from patients with hard-to-treat diseases for analysis. Information will be made available to scholars and pharmaceutical companies, and could help patients aware of their own genetic mutations to find information about clinical trials. Many of the databases are meant to lower some costs and risks that might otherwise discourage pharmaceutical firms from investing in new therapies. The Leukemia & Lymphoma Society recently announced a three-year, $8.2 million project that combines the resources of the Oregon Health Sciences University, gene-sequencing company Illumina Inc., and Intel Corp. to create a DNA database from 900 patients with acute myeloid leukemis. This collaboration shows how powerful advocacy groups are using their influence to promote cooperation over competition in both business and academics. To make grant money go further, patient foundations are stipulating that researchers must agree to share data and expertise, even with competitors. The open access can allow the research enterprise as a whole to operate more efficiently compared to a drug company or academic group working alone.

From "Patients Share DNA for Cures"
Wall Street Journal (09/17/13) P. B1 Winslow, Ran

NIH Scientists Pursue New Therapies to Improve Rare Disease Drug Development

At the National Institutes of Health, four new pre-clinical drug development projects will focus on developing potential treatments for blindness and cardiac problems. The studies will be funded via the Therapeutics for Rare and Neglected Diseases (TRND) program at the National Center for Advancing Translational Sciences (NCATS). These projects are the first in the TRND program to use stem cells as well as the first to collaborate with a large pharmaceutical company to co-develop a treatment for a rare disease. Two of the projects use therapeutic approaches to develop a treatment for retinitis pigmentosa. A third project, a collaboration with Eli Lilly, targets a potential treatment for hypoparathyroidism, which can lead to cardiac problems and convulsions. The fourth project seeks to develop a potential therapeutic for cardiac disorder associated with LEOPARD syndrome, a rare genetic disease that affects many areas of the body. Approximately 80 percent of patients with LEOPARD syndrome have a cardiac disorder called hypertrophic cardiomyopathy, where thickened heart muscle forces the heart to work harder to pump blood. "Working in collaboration, scientists conduct pre-clinical development of new drugs and then advance them to first-in-human clinical trials," said NCATS Director Christopher P. Austin, M.D. "Like all NCATS programs, TRND seeks to develop new technologies and more efficient paradigms for translation, in the context of important unmet medical needs."

From "NIH Scientists Pursue New Therapies to Improve Rare Disease Drug Development"
Fierce Biotech (09/12/13)

Montana’s Two Largest Universities to Join Research Consortium With $20M Grant

The Clinical Translational Research Infrastructure Network has added the University of Montana and Montana State University as members. The research consortium will boost the schools’ abilities to put research into play and generate new startups. "You’ve got seed money in certain projects, and mentoring from others who have already done translational research," says Scott Whittenburg, vice president for research and creative scholarship at the University of Montana. The network now includes 13 universities from across the country. The network will expand the schools’ capabilities to put clinical research into practical use in areas such as cancer, obesity, diabetes, heart disease, and access to health care. The National Institutes of Health is funding the consortium with a five-year, $20 million grant.

From "Montana’s 2 Largest Universities to Join Research Consortium With $20M Grant"
Missoulian (MT) (09/26/13) Kidston, Martin

The Promise of Community-Partnered Participatory Research

As part of the Patient-Centered Outcomes Research Institute’s (PCORI’s) third anniversary, researcher Dr. Kenneth Wells and community advocate Loretta Jones submitted guest blogs about their experiences with patient-centered outcomes research and their expectations for this field. Wells explains how he became an investigator at RAND, which led to a trial called Partners in Care, which compared enhanced usual care with the use of evidence-based, quality-improvement programs to improve recognition of depression. Upon finding that the intervention improved health and employment outcomes, especially among minorities, Wells and Jones, CEO of Heart & Hands American Families II, met to discuss how to involve the community in addressing the problem of depression. Out of this, Witness for Wellness became a multiyear effort that engaged South Los Angeles residents and helped them address depression as a community. With current PCORI funding, Wells and Jones, working with researchers and community groups, are examining the long-term outcomes of clients who received services for depression with a community-engagement approach. One key PCORI question being asked is, "How can community engagement be adapted to promote patient co-leadership in partnered research and improve responsiveness of services to patients’ outcome priorities?" Academic-research partnerships have been found to improve health and address serious, stubborn social problems. The PCORI-funded work will provide information to healthcare systems and community agencies on how they can cooperate to support clients in under-resourced areas and transform communities.
NIH Awards $6.9 Million to NDRI For Recovery of Human Tissues and Organs for Research

The National Institutes of Health will continue to support the National Disease Research Interchange (NDRI) and the recovery and distribution of human organs and tissues for medical research. NIH has awarded $6.9 million over five years to fund the Research Resource for Human Tissues and Organs Cooperative Agreement. A core grant from the NIH Office of the Director Office of Research Infrastructure Programs will be supplemented with additional funding from the National Center for Advancing Translational Sciences (NCATS), among several other institutes. The Office of Rare Diseases Research within NCATS provides funds for outreach to rare disease patients and advocates and to their medical and research communities for the collection and distribution of rare disease biospecimens. “Support from the NIH affirms the strong value of our mission and work and the importance of the use of human tissue organs and cells in advancing medical research,” said NDRI President and CEO Bill Leinweber.

From “NIH Awards $6.9 Million to NDRI For Recovery of Human Tissues and Organs for Research”
Pharmiweb (09/18/13)

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PCORI Board Approves $114 Million for Patient-Centered Outcomes Research

The Patient-Centered Outcomes Research Institute (PCORI) Board of Governors has approved 71 awards, totaling $114 million over three years, for comparative clinical effectiveness research. The latest awards will include studies of heart disease, chronic pain, several cancer types, obesity, diabetes, kidney disease, autism, respiratory disorders, and several mental-health conditions. Some research will focus on ways to support patient and caregiver decision-making, reduce health disparities, and improve healthcare delivery. One group of studies will look at improving the applicability of data collected through new sources, such as electronic health records and social media sites for clinical research, and will examine methods to engage minority patients and caregivers as active partners in health research. “Each of these projects will engage patients and other stakeholders in meaningful ways with researchers to tackle critical health problems that affect tens of millions of people nationwide,” said PCORI Executive Director Dr. Joe Selby. “We are confident these studies will lead to meaningful improvement in the quality and efficiency of care and to improvements in outcomes that are important to patients.”

From “PCORI Board Approves $114 Million for Patient-Centered Outcomes Research”
Patient-Centered Outcomes Research Institute (09/10/2013)

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NHGRI’s $17M DNA Sequencing Program to Focus on Nanopores

The National Human Genome Research Institute has awarded approximately $17 million to eight research groups working to develop technology that will lower the cost of DNA sequencing. Five of the projects will focus on methods and technology related to nanopore-based sequencing, a promising new area of science that involves threading a single molecule of DNA through a pore less than 2 nanometers in diameter. “Nanopore technology shows great promise but it is still a new area of science,” said Jeffery Schloss, program director of the Advanced DNA Sequencing Technology program and director of NHGRI’s Division of Genome Sciences. “We have much to learn about how nanopores can work effectively as a DNA sequencing technology, which is why five of the program’s eight grants are exploring this approach.”

From “NHGRI’s $17M DNA Sequencing Program to Focus on Nanopores”
GenomeWeb News (09/09/2013)

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Federal Lab Helps Clients Move Prospective Nanomedicines Into Clinical Trials

The federal government’s Nanotechnology Characterization Laboratory (NCL) was created in 2004 to facilitate the process of getting nanomedicines into clinical trials targeting cancer. NCL accepts approximately 12 nanomedicine candidates annually from corporations, academic teams, and government labs nationwide for preclinical evaluation at no cost. NCL conducts several tests on submitted particles to examine their shape, size, and stability as well as find out if the materials may lead to toxicity or immune reactions in healthy cells. The lab also assesses how robust tests process the candidates in their bodies. After nine years of conducting studies on roughly 280 nanomaterial formulations, NCL has helped put six medicines into clinical trials. “The lessons that we learn in developing these different kinds of technologies is something we share with the community,” says Anil K. Patri, NCL’s deputy director.

From “Federal Lab Helps Clients Move Prospective Nanomedicines Into Clinical Trials”
Chemical & Engineering News (09/02/13) Vol. 91, No. 35, P. 44 Wolf, Lauren K.

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Scientists Discover ‘Crowdfunding’ as a Way of Replacing Research Grants

As public grants and investments for research become increasingly scarce, some researchers are turning to alternative sources of funding via the web, social media, and “crowdfunding.” A recent poll of more than 3,700 front-line scientists by the American Society for Biochemistry and Molecular Biology found that just 2 percent of respondents say private money has been able to replace the decline in federal grants. Nearly half of respondents said they have had to lay off researchers in the current funding climate, and more than two-thirds of those surveyed have had to postpone or cancel research work. Brian Meece, CEO of Rockethub, one crowdfunding website, says raising money for scientific research addresses an acute need, and he predicts that in the next five to 10 years, more and more scientists will get their seed capital in this manner. Jai Ranganathan, co-founder of SciFund Challenge, another crowdfunding site, says that factors which impact crowdfunding include the size of the crowd and the relevancy of the project to people. “All projects that go through SciFund go through a peer review, to make sure that it is real science,” Ranganathan adds. At another website called Microroya, co-founders Cindy Wu and Denny Luan provide a platform for researchers and projects that allow anyone to contribute. Researchers are
required to set a goal for how much money they need and a time limit to reach their goal; each project gets funding only if that funding goal is met.

From "Scientists Discover 'Crowdfunding' as a Way of Replacing Research Grants" Washington Times (09/03/13) Mutchler, Casey
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Comprehensive Guide for Translational, Basic Research Scientists Fills Gap in Thyroid Research Field

Although there is a wide variety of available research on the thyroid gland and related disease, there is also a lack of standardization in study design. This makes it difficult to compare results and apply them to improvements in diagnosis and treatment. A new report from the American Thyroid Association’s (ATA) Taskforce includes 70 specific recommendations that are available in the journal Thyroid. A team of specialists reviewed thyroid research to identify which experimental practices would most benefit from standardization. They then defined recommendations for standardizing study design and experimental approaches to achieve more reproducible results. “This is an outstanding and comprehensive guide for translational and basic research scientists that has filled an important gap in our thyroid research field,” said Dr. Bryan R. Haugen, president of the ATA.

From "Comprehensive Guide for Translational, Basic Research Scientists Fills Gap in Thyroid Research Field" News-Medical.net (09/06/2013)
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Grant Opportunities

Opportunities for Collaborative Research at the NIH Clinical Center (U01)

The National Institutes of Health (NIH) has issued a Funding Opportunity Announcement (FOA) for collaborative translational research projects aligned with NIH efforts to enhance the translation of basic biological discoveries into clinical applications that improve health. The program is designed to promote partnerships between basic and clinical investigators both within and outside of NIH, helping extramural investigators take advantage of the research opportunities available at the NIH Clinical Center by conducting research projects in collaboration with NIH intramural investigators. To be eligible for the program, the application must include at least one intramural scientist as Program Director/Principal Investigator or collaborator, and at least some of the research must be conducted at the NIH Clinical Center. Applications are due by March 20, 2014, with letters of intent due 30 days earlier. A companion FOA encourages X02 pre-applications for Opportunities for Collaborative Research at the NIH Clinical Center and can be found here.

From "Opportunities for Collaborative Research at the NIH Clinical Center (U01)" NIH Grants (09/26/13)
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AAMC Innovation Challenges

The Association of American Medical Colleges (AAMC) has launched two new challenge programs that seek to recognize innovations in medical education, care delivery, research, and diversity and inclusion. AAMC-member medical schools and teaching hospitals are encouraged to apply to the Learning Health System Challenge and Planning Awards, and to the Clinical Care Innovation Challenge. Awards range from $5,000 to $10,000. Applications for the Learning Health System Challenge and Planning Awards are due by Oct. 30, 2013, while applications for the Clinical Care Challenge Awards are due by Dec. 5, 2013.

From "AAMC Innovation Challenges" Association of American Medical Colleges (09/26/13)
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NSF Major Research Instrumentation Program

The National Science Foundation (NSF) is offering funding to help with the acquisition or development of shared research instrumentation that is too expensive and/or not appropriate for support through other NSF programs. Under the Major Research Instrumentation program, an estimated 175 awards will be made, with amounts ranging from 100,000 to $4 million. Cost-sharing at the level of 30 percent of the total project cost is required for Ph.D.-granting institutions. The full proposal is due by Jan. 23, 2014.

From "NSF Major Research Instrumentation Program" National Science Foundation (09/26/13)
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Adaptation of Scalable Technologies to Illuminate the Druggable Genome (U01)

A new Funding Opportunity Announcement (FOA) from the National Institutes of Health seeks to encourage the development of technologies and information management to facilitate the unveiling of the functions of the poorly characterized and/or un-annotated members in four protein classes of the Druggable Genome. The announcement calls for adaptation of an ensemble of scalable technology platforms to characterize functions of proteins as a large group at molecular and cellular levels in medium- to high-throughput fashion, instead of repeating a “one at a time” approach. Applications should address the limitations and gaps of prior technologies/technology platforms as a benchmark against which the improvements or competitive advantages of the proposed ones are measured. In addition, these transformative technology platforms should provide sensitivity, selectivity, scalability, spatiotemporal resolution, and reproducibility in analyses of protein functions in complex biological tissues, living organisms, or another physiologically relevant system. Letters of intent are due by Nov. 11, 2013.

From "Adaptation of Scalable Technologies to Illuminate the Druggable Genome (U01)" NIH Grants (09/26/13)
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NIH Announces Awards to Strengthen the Biomedical Research Workforce
The National Institutes of Health (NIH) is awarding about $3.7 million to improve training opportunities for graduate students and postdoctoral scholars seeking careers in biomedical research. The NIH Director’s Broadening Experience in Scientific Training (BEST) awards will support innovative approaches to increase student and trainee exposure to research and research-related career options. Approaches may include coursework, rotations, workshops, and hands-on training. Each BEST awardee must evaluate whether or not the novel approaches are successful, share lessons learned with other BEST awardees, and work with other awardees to share information about successful approaches within the biomedical research training community. Dr. James Anderson, director of the Division of Program Coordination, Planning, and Strategic Initiatives, which oversees the NIH Common Fund, noted that the awards will help trainees understand their career options in biomedical research and help the field retain talent. Each award will cover up to $250,000 in direct costs per year for up to five years, pending fund availability. There will be a call for applications for the second round of BEST awardees in late 2013.

From "NIH Announces Awards to Strengthen the Biomedical Research Workforce"
NIH News (09/23/13)

NIH Medical Research Scholars Program
The National Institutes of Health’s Medical Research Scholars Program (MRSP) is a year-long research enrichment program designed to attract the most creative, research-oriented medical, dental, and veterinary students to the intramural campus of the NIH in Bethesda, Md. Student scholars engage in a mentored basic, clinical, or translational research project on the main NIH campus in Bethesda, or at nearby NIH facilities, that matches their professional interests and career goals. Applications for the 2014-2015 cycle are due by Jan. 15, 2014.

From "NIH Medical Research Scholars Program"
National Institutes of Health (09/19/13)