TRANSLATIONAL PROFILE

Frederick Meyers – tending the next generation

WHEN FRED MEYERS ARRIVED AT UC DAVIS nearly 40 years ago as an intern in hematology-oncology, few resources were available to support budding researchers. Soon immersed in the world of laboratory investigation and clinical trials, Meyers had to find his own path to gain experience and expertise in every aspect of the process – from obtaining funding for a promising new idea to submitting exciting results for publication.

It was this experience that drove Meyers’ passion to create services to smooth the path for others.

“Providing training on the nuts and bolts of the entire scientific process enables new investigators to conduct research better,” said Meyers. “We can help them become more competent so that they can turn discoveries into clinical advances more efficiently.”

Meyers was instrumental in establishing the Clinical and Translational Science Center (CTSC) at UC Davis, where he currently directs the Research Education, Training, and Career Development Program, which includes the CTSC T32, K12, and Mentored Clinical Research Training Programs. As vice dean of the School of Medicine and an experienced mentor and educator, Meyers’ support has been invaluable to the CTSC education and career development programs.

“It is quite remarkable that he has maintained such a high level of support and leadership for these programs from

(Continued on page 4)
University Library offers expanding research and data management services for investigators

THE UC DAVIS UNIVERSITY LIBRARY has evolved, eclipsing traditional stereotypes. Under the leadership of a head librarian with credentials in information technology, the library now offers an ever-broadening range of services. The Peter J. Shields, Blaisdell Medical, Carlson Health Sciences, and Physical Sciences and Engineering facilities are staffed by personnel with deep knowledge in specific fields. Many are content experts who can function as true collaborators in the research process.

University Head Librarian MacKenzie Smith views the library in dynamic terms. “Our role as librarians in a 21st century university environment is to monitor the ways in which research is changing and to shape our library services to support those research needs,” said Smith, under whose direction the library has enacted a strategic plan with a dominant information technology component. “Our new strategic plan is intended to help increase the research impact of UC Davis, prepare students for lifelong learning, and maximize access to information virtually, serving people wherever they are at any time. We are transforming the library to become an essential part of the fabric of UC Davis research.”

Smith, who took over the helm of the UC Davis Library in June 2012, is a digital knowledge management expert who has previously worked in libraries at Harvard University and the Massachusetts Institute of Technology, where she was research director. She is nationally recognized for leading development of the DSpace open source software platform for digital archives, a standard that hundreds of university libraries worldwide have adopted.

“UC Davis is a phenomenal place because it is so research-intensive and interdisciplinary in a very energizing way,” Smith said. “The CTSC is a great example of that. I see so many changes in the way research is being conducted, but also in the problems that researchers have to deal with. I believe that the library is well-positioned to help them — but I am not sure that researchers necessarily know that.”

Smith, who obtained her master’s degree in library and information science from the University of Chicago, regards the university library as the perfect incubator for “research portals” — her concept for online collections of campus-wide research products (e.g., articles, data, artifacts), organized by specific topics. “Wouldn’t it be great if there was one place where you could find all the research happening at UC Davis on a given subject, along with all the people who are conducting that research?” mused Smith. “Libraries are really good at organizing large quantities of information in a way that makes them navigable and understandable by a broad range of patrons, be it other researchers or the general public.”

The library is also integral in the rollout of the UC Davis Data Science Initiative now under development. “Our response to big data challenges is the Data Science Initiative, on which I am working closely with Nick Anderson (director of informatics research for the UC Davis Health System) and others at the UC Davis Medical Center. We are conceiving ways to link the various biomedical informatics programs with expertise that may reside elsewhere — for example, in the statistics department or in computer science,” explained Smith, adding that the project could help the CTSC make more connections across the university to support its mission.

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The library’s content experts include Amy Studer, a subject specialist librarian at Blaisdell Medical Library who is a licensed nurse practitioner, experienced in hospital-based clinical practice. As a librarian, she helps researchers navigate complex NLM (National Library of Medicine) and NCBI (National Center for Biotechnology Information) biomedical databases and tools such as PubMed, GenBank, and BLAST, so that researchers can rapidly and accurately locate the information they need. She also advises researchers and staff on using tools that have been developed to support NIH funding requirements, such as MyBibliography and SciENcv. Studer offers workshops on how to use time-saving tools and technology, including EndNote citation management software, which helps automate the formatting of reference lists and in-text citations in Word documents. Studer noted that she and her colleagues enjoy helping faculty members save precious time by identifying and finding solutions for potential inefficiencies and obstacles.

Blaisdell librarian Bruce Abbott serves the research community as a sought-after search expert with advanced expertise in conducting systematic reviews. “In fact,” said Studer, “Bruce has participated in systematic reviews that have been used to inform health policy makers at the state level.”

Beth Callahan, head of research services for the UC Davis Library, remarked that a recent survey of faculty members revealed that many of them are not fully aware of the library’s evolving research support services or the existing health sciences expertise within the library. “Our librarians are steeped in their subjects of expertise, whether it’s education, social sciences, physics, computer science or health. They attend conferences within these disciplines, which helps bolster the depth of their current knowledge,” said Callahan. “By virtue of our research librarians’ content expertise, the UC Davis libraries function as a clearinghouse and triage system for investigators.”

She wants faculty members to know that their inquiries are anticipated and welcome. “At the library, we view our role as supporting the education, research and clinical aspects of all of our researchers, of all of our clinicians,” Callahan said. “Consequently, we are very interested in being active supporters, and helping to figure out the complex problems that must be addressed day after day on this campus.”

### Library Research Support Services

- **Librarian subject specialists** provide a wide range of services, such as conducting specialized literature searches and working with faculty to acquire articles, journals, and books that are essential to their work. [https://www.lib.ucdavis.edu/ul/about/directories/subjspec.php](https://www.lib.ucdavis.edu/ul/about/directories/subjspec.php)

- **Expert literature search consultations** offer expert advice on how to find relevant information to support clinical care and research projects, including systematic reviews, quality improvement projects, and evidence based practice. Don’t have time to come to the library? They make house calls! Contact: Blaisdell Medical Library: bmlref@ucdavis.edu or Carlson Health Science Library: hslref@ucdavis.edu

- **Research guides** are a great place to start searching for information on a topic. Compiled by librarian subject specialists, research guides highlight key databases and other information resources in a variety of disciplines. [https://www.lib.ucdavis.edu/ul/research/subjects/](https://www.lib.ucdavis.edu/ul/research/subjects/)

- **Library Data Service** team members provide guidance about data management, publication, citation, sharing and archiving. Find out how to manage your unique author identity. Contact: dataserv@ucdavis.edu; [http://guides.lib.ucdavis.edu/data](http://guides.lib.ucdavis.edu/data)

- **Bibliographic management software training (EndNote)** can help you organize and cite your literature sources, whether you are writing a paper for publication or collaborating on a group project. Beginning EndNote classes, office hours drop-in sessions, and individual consultations are available. [https://www.lib.ucdavis.edu/dept/instruc/research/endnote/](https://www.lib.ucdavis.edu/dept/instruc/research/endnote/)

- **Digital scholarship consultation** is available for digital project design and implementation; text mining and analysis, data design and sustainability; data analysis; and instructional support. [https://www.lib.ucdavis.edu/ul/research/subjects/](https://www.lib.ucdavis.edu/ul/research/subjects/)

- **UC Open Access Policy** applies to faculty, non-senate researchers, lecturers, post-doctoral scholars, administrative staff, librarians, and graduate students who write scholarly articles while employed at UC. Contact: OASupport@ucdavis.edu [http://osc.universityofcalifornia.edu/open-access-policy/](http://osc.universityofcalifornia.edu/open-access-policy/)

- **NIH Public Access Policy** training and one-on-one assistance is available to help researchers and their staff navigate federal requirements for grant-related publications, such as the NIH Public Access Policy. Tools include MyBibliography, NIH Manuscript Subscription System (NIHMS), NIH Public Access Compliance Monitor (PACM), and SciENcv. Contact: NIHPPAPhelp@ucdavis.edu [http://guides.lib.ucdavis.edu/nih_mandate](http://guides.lib.ucdavis.edu/nih_mandate)

- **Research Support Services**: [https://www.lib.ucdavis.edu/ul/research/](https://www.lib.ucdavis.edu/ul/research/)

- **UC Davis Data Sciences Initiative**: [http://datascience.ucdavis.edu](http://datascience.ucdavis.edu)
their inception, while serving in many other capacities in the health system,” said Nicholas Kenyon, director of the CTSC T32 program. “Many faculty members have benefited from his guidance.” James Holmes, director of the CTSC K12 program added, “I was always amazed at his commitment to research training and his understanding of the importance of the next generation of researchers. He seems to love helping and seeing the success of junior investigators.”

Meyers also played a key role in securing the UC Davis FUTURE grant – one of the first 10 BEST (Broadening Experiences in Scientific Training) grants awarded by NIH. Jennifer Greenier, director of the BEST program noted, “As a PI of the BEST grant, Dr. Meyers is a champion for broad biomedical training that supports scholars in pursuing the careers of their choice.”

Today, thanks in large part to Meyers’ spearheading efforts, the CTSC provides support on every aspect of translational research, including grant proposal preparation, study design, the Institutional Review Board process, coordination of clinical research needs, laboratory services, data analysis and manuscript preparation. According to Meyers, such services not only provide essential “how-to” guidance, but also help young scientists become critical thinkers and perform high quality work.

Among the most important services, he emphasized, are mentoring opportunities that partner junior researchers with experienced scientists. “Vital qualities of a researcher are best learned through experience and by working closely with mature scientists,” said Meyers. “There’s no substitute for that.”

He points proudly to the UC Davis Health System’s Mentoring Academy as the only one of its kind in the country. The program gives tools to scientists to become effective mentors and promotes the institutional culture to support and reward faculty to provide quality mentoring skills in research, clinical, teaching and leadership activities.

“Dr. Meyers’ vision for the Academy and his understanding of its need were instrumental in its inception and progress,” said Mentoring Academy director, Julie Schweitzer. “His leadership in national mentoring committees and endeavors with other leaders in clinical and translational science centers across the U.S. enabled us to benefit from and participate in novel mentoring activities. With his leadership we were able to implement a uniquely innovative and comprehensive Mentoring Academy at UC Davis to help us develop and sustain our outstanding junior faculty and their mentors.”

Building partnerships
Meyers’ own research focused on hematology and oncology, leading numerous clinical trials on molecular correlates of cancer progression and response to therapy. He is best known for his pioneering work in the palliative care movement, where he developed the “simultaneous care” model of care, allowing terminally ill patients to derive the benefits of hospice services while also undergoing investigational therapy.

Along the way, Meyers found that it takes a village to conduct top-notch research and provide optimum medical care. He has long focused on building partnerships through a conceptual model of interprofessional education called UC Davis Schools of Health, which includes the School of Medicine, the master’s degree programs in health informatics and public health sciences, and the Betty Irene Moore School of Nursing. He has extended the health system’s reach through collaborative partnerships with different academic departments throughout the university and between the community and university. According to Meyers, such collaborations promote translational research that best addresses real-world problems, and he has found it gratifying to see multidisciplinary teams emerge as a result of the CTSC’s efforts.

Partnerships between laboratory researchers and clinicians is one that he is especially keen to foster. “My hope is that in 10 years, researchers will routinely approach clinicians for help in translational applications, while clinicians will approach researchers to conduct investigations in the clinical problems that they see need answers,” said Meyers. “The CTSC will be at the forefront in facilitating these parallel lines of communications.”

Ultimate goal – improving public health
Beyond translating research into clinical applications, an overarching goal of the CTSC is translating the institution’s efforts into real improvements in public health, both on a global scale and close to home.

Meyers sees a unique opportunity for the CTSC to address the health care needs of the Central Valley’s diverse and rural population, which has some of the poorest health indices in the nation. Also serving as Executive Director of Medical Education and Academic Planning at UC Merced and director of San Joaquin Valley PRIME, a joint education program between UC Davis, UC San Francisco and UC Merced, Meyers is working to increase access to care in this underserved area.

“I believe that universities should

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NEW APPOINTMENT

MacMillan director of Regulatory Knowledge and Support

IF HE COULDN’T BE A BASEBALL PLAYER, John (Jack) MacMillan, Jr., M.D., always told his parents he wanted to be a doctor. As he grew, so did his interest in disease and its impact on the human body. He became the first in his family to attend medical school and is now a clinical professor in the Department of Internal Medicine. He finds that the personal connection he forms with patients in their time of need is the most rewarding aspect of being a physician. Even when curing an illness is not possible, he appreciates the opportunity to help improve a patient’s quality of life and make difficult moments at least a little better and more meaningful.

MacMillan’s introduction to research presented itself when he was asked to become a member of the Institutional Review Board (IRB) many years ago. That opportunity added a new facet to his career as he became aware of the research that was taking place and the next wave of potential therapies for patients. These invigorating glimpses into the future of medicine fuel his desire to fully engage with the IRB and his responsibility to facilitate the protection of human subjects.

MacMillan also cherishes the opportunities he has to mentor and train new physicians. Combining his regulatory knowledge with a love of teaching creates a platform for helping young faculty and residents understand the research and regulatory environment and to helping them move their research forward.

His role in the IRB, as a member and now a chair, led to his selection as the Director of the CTSC Regulatory Knowledge and Support program earlier this year. In this position he provides leadership and guidance to staff who support clinical research, and serves on the CTSC leadership team. The CTSC is pleased to have MacMillan’s engagement to foster program excellence in his areas of expertise.

MacMillan met his wife of 19 years at Jefferson Medical College in Philadelphia, after which they decided to move to California – her home state. A father of two teenage boys, MacMillan translates his love for baseball (which he played through college) into coaching. He also enjoys golf and road cycling when time permits.

Empowering clinicians to improve healthcare quality

ONE NOTABLE EFFORT GAINING TRACTION over the past decade is the initiative to improve healthcare quality. The UC Davis Health System has longstanding strategic priorities to support quality improvement efforts. In 2009, an initiative to focus on healthcare quality was formalized with the appointment of Ulfat Shaikh, M.D., M.P.H. as the Director for Healthcare Quality by the UC Davis School of Medicine Dean’s Office. In this role, Shaikh – an alum of the CTSC Mentored Clinical Research Training Program and a former CTSC K12 scholar – works with clinicians, educators and learners and staff to develop new interprofessional educational opportunities in Quality Improvement (QI) and patient safety. She also mentors students, trainees and faculty on implementation research and quality improvement projects.

“We implemented faculty development opportunities to allow clinicians to receive continuing education and board re-certification credits for their QI work,” said Shaikh. “The schools of medicine and nursing have closely collaborated to develop several interprofessional courses in QI and patient safety.”

Certificate Program in Healthcare Improvement

This fall, Shaikh and her colleagues launched the UC Davis Health System’s Certificate Program in Healthcare Improvement. The certificate program offers an opportunity for UC students

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“The Annual Healthcare Quality Forum is the ultimate expression across systems to promote quality improvement.”

—Fred Meyers, M.D.
Journal editors & scholars form symbiotic relationship

*ONCE UPON A TIME – 2009 TO BE EXACT* – there was a new multidisciplinary journal in desperate need of specialized editorial assistance. With only two editors at the time, it was not possible to cover every field, know what was going on in all the other journals, and keep producing *Science Translational Medicine* on deadline. Not surprisingly, there was also a pool of diverse, highly educated biomedical clinician-scientists who could benefit from the experience of working directly with senior editors of a new journal in the prestigious *Science* family. Once innovative leaders connected, a successful program was launched.

Fred Meyers, director of the CTSC Research Education, Training, and Career Development program, in collaboration with Cynthia Morris, of the Oregon Clinical and Translational Research Institute at Oregon Health and Science University, and Kelly LaMarco, Senior Editor at the journal, developed a plan to create an Associate Scientific Advisory board by soliciting nominations for outstanding early-career translational scientists from members of the journal’s Senior Advisory Board and the principal investigators of CTSA-awarded institutions (like UC Davis). By 2015, the number of associate scientific advisors had grown from 12 (in 2010) to 28, and the group had become international in scope.

In addition to weighing in on matters of policy and content for the journal, the scientific advisors are responsible for scanning the literature in their areas of interest weekly and identifying papers of broad translational importance. Over the course of a year, each advisor is asked to write 8 to 10 Editors’ Choice articles that highlight the publications they have selected from other journals. LaMarco noted that the weekly Editors’ Choice articles get more and more hits on the journal’s website as time goes on, as readers have learned how important they are.

LaMarco also said that the scientists learn to write on tight deadlines, to adopt a journalistic – rather than academic – style, and to be creative. As the year ensues and their writing improves, they learn to take more risks with their writing.

Five scholars from the CTSC training programs have participated in this year-long relationship with *Science Translational Medicine*. And they are thankful for the experience. All learned to write more quickly, more coherently, and with appeal to a broader audience. All improved their ability to read, distill and critically appraise articles.

Christopher Polage noted that by the end of his work with the journal, he had gained a deeper understanding of “what makes research translational.” As a result, he hopes that he will be able to make his research more relevant, translational, and fundable.

Daniel Nishijima developed a new appreciation for translational studies. He was surprised by how infrequently translational studies are published in the clinical journals he typically reads.

Amir Zeki completed the program with a strong belief that being able to write in a manner that is attention-catching and memorable, yet scientifically sound, is a vital skill for scientists, physicians, and investigators.

Andrew Bremer came away with a greater appreciation for the role of journal editors, and this insight has helped him when discussing manuscripts and journal content with other editors. He also recognized that his appointment as a scientific advisor has been viewed as an asset by promotion committees.

Michael Minzenberg believes that the program helped him develop a unique way to think about strategies for framing papers and grants. It also re-kindled his interest in the boundary disciplines of his specialty.

“Working on a leading journal provides huge experience in writing, editing and critical thinking skills,” said Meyers, who continues to work as an advisor for the program. “This directly loops back to being a good researcher.”


Visit *Science Translational Medicine* at: http://stm.sciencemag.org/

CTSC Scholar Participation
Associate Scientific Advisors

*Science Translational Medicine*

2014, Daniel Nishijima, M.D., M.A.S.
2013, Christopher Polage, M.D., M.A.S.
2012, Amir Zeki, M.D., M.A.S.
2010, Andrew Bremer, M.D., Ph.D., M.A.S.
2010, Michael Minzenberg, M.D., M.A.S.
Empowering clinicians Continued from page 5

and faculty to increase their ability to understand and apply tools and strategies to improve healthcare, actively participate in interprofessional teams to implement population-level changes, and contribute to or lead organizational change management efforts.

Student Interest Group (SIG) in Quality Improvement and Patient Safety

A grass-roots effort initiated by a network of UC Davis students from medicine, nursing, the Nurse Practitioner-Physician-Assistant program, public health, informatics and health administration worked closely with faculty on healthcare quality curriculum development, including courses that are included as part of the certificate program. This SIG is also a chapter of the Institute for Healthcare Improvement Open School, which provides a connection for networking with students and faculty around the world.

Annual Healthcare Quality Forum

Launched in 2011, the Annual Healthcare Quality Forum is a platform for students, scholars and clinicians to highlight and share their QI efforts, be it best practices or innovations, with the health system community. The forum is co-chaired by Shaikh and Fred Meyers, Vice Dean of the School of Medicine.

“The Annual Healthcare Quality Forum is the ultimate expression across systems to promote quality improvement,” said Meyers. “It is a place to share and show off our good work, and the result is that it amplifies all our efforts.”

As in the past, the CTSC is proud to help sponsor the 2016 Healthcare Quality Forum, which is scheduled for March 16, 2016. Email Larry Jacinth at ljacinth@ucdavis.edu to be added to the announcement list for the Forum. §


Fred Meyers, M.D.

DIRECTOR’S MESSAGE continued from page 1

director of the Research Education and Career Development program, including the Mentored Clinical Research Training Program (MCRTP), K12 Mentored Career Development Program for junior faculty, T32 pre-doctoral program in team science, Howard Hughes Medical Institute (HHMI) program, Stem Cell Training Program, and as one of the PIs of the BEST grant. He instructs our MCRTP and T32 scholars in the Introduction to Clinical Research and Team Science courses. His previous background as director of the Cancer Center clinical trials unit positioned him to be an advocate for advancing the clinical research infrastructure that has enhanced the CTSC portfolio. Dr. Meyers has also been a strong advocate in the area of entrepreneurship. His enthusiastic support for the development of program resources to encourage links between academic research and business are notable and forward thinking. His investment in the acquisition of staff with business expertise has better poised UC Davis to develop opportunities that link discovery and intellectual property with the market and ultimately improvement in patient care technologies.

By engaging with leaders across the UC Davis Health System and Davis campus on our behalf, and making himself available for strategic planning sessions and presentations, Dr. Meyers has demonstrated his support time and time again. Support, without which, this program could not flourish as it has. For example, in the difficult year of federal sequestration, his generosity allowed us to continue providing our services to assist faculty without making severe cuts. His efforts to weave the CTSC into other initiatives around the Health System abound – such as, the Healthcare Quality Forum and California Center for Behavioral Health. These interactions serve to sustain and grow our program, and help position us in a competitive environment.

I am very pleased to recognize him for his ingenuity, support, and collaborative spirit in general, and specifically with respect to the CTSC.
Meyers Continued from page 4

be strong partners with our communi-
ties for reducing health inequities," said
Meyers. "I envision the CTSC as provid-
ing a leadership role to improve health
care delivery in this area of great need."

Still an active investigator with
multiple active grants and a lifetime
achievement of more than 200
publications, book chapters, editorials
and reviews spanning cancer treatment
research, pain management, hospice
care and medical education, Meyers
enjoys the energy and excitement of
working with young scientists. These
personal engagements provide the
motivating force of Meyers’ work on a
daily basis.

“My passion comes from a
combination of not having formal
training to become a scientist and
subsequently having the opportunity
to develop support services in a major
institute in conjunction with others,”
said Meyers. “There is nothing more
rewarding than fostering your life’s
work to the next generation.” §

ANNOUNCEMENTS AND EVENTS

Important details and registration information about CTSC events are provided on
the CTSC Event Calendar

www.trumba.com/calendars/uc-davis-health-system-clinical-translational-science-center

Providing Evidence of Scientific Rigor and Reproducibility in NIH Grant Applications
Speakers: Ted Wun, M.D., Sandra Taylor, Ph.D., Jeff Elias, Ph.D., Joseph Tuscano, M.D.
Jan. 11, Noon – 1 PM; Center for Health and Technology, Room 1341

NIH Public Access Policy – the basics and beyond
Jan. 27, Noon – 1:30 PM; Clinical and Translational Science Center, Room 1444

Using NCBI’s My Bibliography tool to manage your publications and monitor
NIH Public Access Policy – Hands-on Workshop
Feb. 10, Noon – 1 PM, Clinical and Translational Science Center, Room 1444

Exploring the new NIH biosketch format and using SciENcv – Hands-on Workshop
Feb. 10, 1:00 – 2:00 PM, Clinical and Translational Science Center, Room 1444

Registration is required for all listed events.

Find us on Facebook
https://www.facebook.com/UcDavisClinicalAndTranslationalScienceCenter

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National Institutes of Health's National Center for Advancing Translational Sciences.