

VIEWPOINTS

Public Health Teaching and Research in the Academy

Jack E. Fincham, PhD

The University of Missouri Kansas City School of Pharmacy

Each April there are a series of events internationally, nationally, and regionally promoting Public Health. The American Public Health Association celebrates National Public Health Week the first full week in April (www.nphw.org/nphw10/home1.htm). Numerous states celebrate April as Public Health month (eg, North Carolina, Washington). Although transient, these celebrations of the importance of public health are most significant. However, these highlighting events do not adequately spotlight what else needs to be accomplished in this arena. The work of public health is a yearlong and demanding calling. The key challenges and opportunities of public health research, application, and teaching need addressing by those with whom we work, collaborate, and conduct research within and beyond the academy.

Small steps of success often herald the major cliffs yet to be surmounted. For example, the passage of health care reform legislation earlier this year was heralded by some who suggest immediate impacts upon public health as a result, while others suggest this bill is flawed and incomplete in efforts to improve the health of the public. Perhaps (and unfortunately) both of these views are correct. Regardless, the major impacts of this legislation on the health care system and patients remain to be seen and may be decades away.

Many challenges pertinent to public health surround us, and many solutions to dilemmas are being crafted by those in corridors and laboratories near and far. In an era when disciplinary focal distinctions are dissolving with collaborative efforts and funding agency requirements, can public health research — which by design and function is dependent upon many with varying credentials and degrees — be a major and crucial focal point for our academy? The answer is yes it can, it has been, and it will continue to be crucial.

Public Health Researchers Within the Pharmacy Academy

Many of those with whom we share faculty appointments conduct research that has made incredible and

innumerable impacts upon the health of the public. Table 1 provides a listing of academic researchers, institutions, and areas of research emphasis that are directly tied to public health issues. Subsequent references list representative publications that highlight the work of these individuals. This list is significant for its global representation and range of research foci directly related to public health. This list is not meant to be complete — far from it. It is simply a very small representative sample of researchers, where they teach and research, and what research they are involved with in impacting public health. Their work should make us all collectively proud of them and should serve as encouragement for others to attempt to excel as well.

Some of these individuals reach people at a time when they are at the lowest ebb of their lives, homeless, sick, and despondent (Dr. John Conry). Others seek to awaken the collective consciences of those that manufacture, distribute, and market pharmaceuticals (Drs. Matt Perri and Stephen Schondelmeyer). There are those that seek to understand how to deliver health care to the homebound through interdisciplinary cooperative efforts (Dr. Tim Chen) and those living in isolated, rural areas of the United States (Dr. Tim Stratton) or South Africa (Professor Hazel Bradley). Many among our academia and globally seek to ensure tobacco cessation (Dr. Christine Bond) or health promotion teaching and research (Dr. Claire Anderson). The regulation and provision of pharmacy benefits have been addressed throughout the careers of stellar scholars working within regulatory bodies and academia (Dr. Weng-Foung Huang). Some seek the answers to the powerful grips and grasps of additions (Dr. Carlton Erickson). Throughout their careers in the pharmaceutical industry and academia, others have nobly sought to help develop classes of drugs (tetracyclines) and other antimicrobial agents that have saved countless lives (Dr. Lester Mitscher). There are those among us who have worked tirelessly and without subsequent acclaim to identify the scourge of counterfeit medications (Dr. Marvin Shepherd). Some have led excursions to the fertile jungles of South America to identify therapeutically active substances in efforts that would rival anything Dr. Indiana Jones factitiously attempted (Dr. Alice M. Clark). Some have identified naturally occurring substances to address

Corresponding Author: Jack E. Fincham, PhD, School of Pharmacy, The University of Missouri Kansas City, 4246 Health Sciences Bldg, 2464 Charlotte Street, Kansas City, MO 64106. Tel: 815-235-5909. E-mail: finchamj@umkc.edu

Table 1. Representative Examples of Public Health Research by Pharmacy Researchers in Academia

Researcher	University	Research Foci
Claire J. Anderson, Ph. D.	University of Nottingham, UK	Health promotion, education and development in pharmacy. ¹
Christine M. Bond, Ph.D.	University of Aberdeen, UK	Drug utilization, medicines management, tobacco cessation. ²
Hazel Bradley, MPH, R. Ph	University of Western Cape, South Africa	Promoting rational medical use in the community. ³
Timothy Chen, Ph. D.	University of Sydney, Australia	Collaborative practice and community applications (e.g., Home Medicines Review), mental health. ⁴
Alice M. Clark, Ph. D.	University of Mississippi	Natural products research and applications ⁵
John M. Conry, Pharm. D.	St. John's University, US	Caring for the uninsured, Project Renewal – an organization dedicated to renewing the lives of homeless individuals. ⁶
Carlton K. Erickson, Ph. D.	University of Texas	Addiction research. ⁷
Gunda Georg, Ph. D.	University of Minnesota, US	Drug discovery, high throughput screening, combinatorial chemistry, natural products chemistry, cancer, Alzheimer's disease, male contraception. ⁸
Weng-Foung Huang	National Yang- Ming University, Taiwan	Pharmacy benefit schemes and cost-containment
Lester A. Mitscher, Ph. D.	University of Kansas, US	Antimicrobials, synthesis and applications. ⁹
Matthew Perri III, Ph. D.	University of Georgia	Direct to consumer advertising and resultant effects upon drug use, pharmaceutical marketing. ¹⁰
Stephen Schondelmeyer, Pharm. D., Ph. D.	University of Minnesota, US	Prescription drug pricing, trends affecting drug use within Medicare and Medicaid. ¹¹
Marvin D. Shepherd, Ph. D.	University of Texas	Drug regulation, counterfeit medicines. ¹²
Timothy Stratton, Ph. D.	University of Minnesota, US	Rural health care and pharmacist impact. ¹³

and provide cures for the scourges of cancer (Dr. Gunda Georg).

The efforts highlighted here are noteworthy and worthy of our praise. Those who also conduct public health-related research in our academia are widely dispersed. This research, teaching, scholarship, and outreach is conducted across disciplines with colleagues and close associates in schools and colleges of law, dentistry, nursing, allied health, medicine, business, social work, public health, and education. The work impacting public health is never finished, expansive in scope, and provides stressors during incredibly challenging times for academia. This work always is important, yet is often accomplished with few resources—a fact that is stressed early and often in the curricula of schools and colleges of public health. This is not a hindrance but rather a reality that helps focus efforts and resources on the greater good.

More Is Needed From Many

The efforts by these who are our colleagues within divisions, departments, schools, and/or universities need to be joined by many more of us. In an academic era that demands more teamwork than ever before, with expectations of interdisciplinary cooperation, what better milieu of collaborative research exists beyond that of public health?

There is much yet to be examined. Solutions need to be found for pesky problems. The most vulnerable segments of society are dependent upon our collective efforts and need our best work and collaboration. Public health is hard work and the results only intermittently rewarding, but lives and health are desperately dependent upon this. Let us share in the noble work of our colleagues in public health within our academy and beyond. There is so much more that we can and need to accomplish and there will never be a better time to do so.

REFERENCES

- Anderson C, Bates I, Beck D, et al. The WHO UNESCO FIP Pharmacy Education Taskforce. *Hum Res Health*. 2009;7:Article 45.
- Sinclair HK, Bond CM, Stead LF. Community pharmacy personnel interventions for smoking cessation. *Cochrane Database of Systematic Reviews*. 2004, Issue 1. <http://www2.cochrane.org/reviews/en/ab003698.html> Accessed May 27, 2010.
- Bradley HA, Puoane T. Prevention of hypertension and diabetes in an urban setting in South Africa: participatory action research with community health workers. *Ethnicity Dis*. 2007;17(1):49-54.
- Chen TF, Gisev N, O'Reilly C, et al. Mind games: pharmacists and mental health. *Austr J Pharm*. 2009;90(1069):70-72.
- Li XC, Jacob MR, Ding Y, et al. Capisterones A and B, which enhance fluconazole activity in *Saccharomyces cerevisiae*, from the marine green alga *Penicillus capitatus*. *J Nat Prod*. 2006;69(4):542-546.

American Journal of Pharmaceutical Education 2010; 74 (5) Article 93.

6. Conry JM. Caring and learning with the homeless: a service-learning pilot project program. *Am J Pharm Educ.* 2004;68(2):Article.
7. Erickson CK. *Science of Addiction: From Neurobiology to Treatment.* New York, NY: W.W. Norton; 2007.
8. Huang Weng-Foung, Hsiao FY, Tsai YW, et al. Cardiovascular events associated with long-term use of celecoxib, rofecoxib and meloxicam in Taiwan: an observational study. *Drug Safety.* 2006;29(3):261-272.
9. Hutt OE, Reddy BS, Nair SK, et al. Total synthesis and evaluation of C25-Benzylxyepothilone C for tubulin assembly and cytotoxicity against MCF-7 breast cancer cells. *Bioorg Med Chem Lett.* 2008;18:4904-4906.
10. Mitscher LA. Coevolution: mankind and microbes. *J Nat Prod.* 2008;71(3):497-509.
11. Perri M, Shinde S, Banavali R. The past, present, and future of direct-to-consumer prescription drug advertising. *Clinical Therapeutics.* 1999;21(10):1798-1811.
12. Gross DJ, Schondelmeyer SW, Raetzman SO. Trends in manufacturer prices of brand name prescription drugs used by older Americans: first quarter 2004 update. Issue Brief. Public Policy Institute, American Association of Retired Persons. Issue IB69, June 2004:1-12, 1.
13. Shepherd MD, Curtiss FR. Prescription drugs marketed in the United States should be approved by the FDA. *J Manag Care Pharm.* 2003;9(4):366-367.
14. Stratton TP, Worley MM, Schmidt M, et al. Implementing after-hours pharmacy coverage for critical access hospitals in northeast Minnesota. *Am J Health-Syst Pharm.* 2008;65(18):1727-1734.