

MATTHEW A. WEED, Ph.D.

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PROFESSIONAL EXPERIENCE

An innovative mentor, leader, and “consummate networker” with 30 years’ personal experience in issues surrounding diversity in science and medicine who has been active in science policy, science communication and science administration on biomedical research, Americans With Disabilities Act compliance, physical and virtual access to data and facilities, health professions training and assisting socioeconomically diverse students, staff and faculty in achieving personal and professional goals in the United States and China. Built or managed programs budgeting up to \$10 million+, 20 -50 full or part time FTEs, and 100 volunteers. Currently working to find funding for a proven health professions education paradigm that has already improved physician empathy, patient outcomes, strengthened student training and reduced healthcare costs. Dr. Weed has found several potential university and non-profit partners.

- Developed and recruited for innovative, efficient and cost-reducing programs to support health and science education, research and healthcare at Yale, Princeton, Harvard, UW-Madison, the NIEHS, and UC-Davis in which nearly 1,000 future health professionals and biomedical students were mentored
- Leader and consultant on strategic plans, policy and resource management at five universities and the NIH to grow services for all stakeholders and ensure equal access to opportunities, biomedical data and facilities for people from all groups, particularly those underrepresented in STEM
- Energized faculty search committees at the Wisconsin Institute for Discovery, a bioengineering, biomedical and computational science center at UW-Madison, to seek candidates from underrepresented groups in STEM, with 50% of the hires from these groups. Found \$1 million in external funds for URM hiring
- An invited speaker on population health, diabetes, and personal and societal success at schools, clubs and universities in the United States and China.
- A speaker and consultant with a growing national reputation on ways to reduce implicit and explicit bias faced by patients with chronic health concerns in the US healthcare system.
- Published in the academic literature on the bioethics and policy of controversial biomedical science
- An adviser, mentor and blogger working with hundreds of students seeking to advance in the biomedical sciences, health professions and other fields

DETAILED VOCATIONAL AND OTHER EXPERIENCE

Consultant to the NIH, Higher Learning Institutions and Various Companies on improving accessibility and usability of their websites and facilities

- Consulted with a variety of colleges and universities to improve their website usability: *2017–Present*
- Contractor to the Deputy Director for Intramural Research: NIH on improving accessibility and usability for blind visitors of all NIH IC websites and that of the Office of the Director: *May 2020-May 2021*
- Advised the NIH Library on improving usability of its website for the blind while helping it find NIH-based partners to increase utilization of its steadily growing adaptive technology station: *2019*
- Consulted with a major home share company about inaccuracies on their website concerning accessibility for 90% of their properties for people with physical disabilities: *2016-2017*
- Acted as primary non-sighted scientist-beta tester for the “Accessible PubMed” team at the National Library of Medicine: *1998–2010*
- As an Intramural Research Training Awardee at the NIEHS, advised the Director and Scientific Director on ways to make NIEHS facilities and gene sequence data produced by all NIH institutes more accessible to the blind and physically handicapped: *Summer 1994*
- Advised five universities, including Yale and Princeton, on creating, and improving programs for students with disabilities: *1989-2015*

DETAILED VOCATIONAL AND OTHER EXPERIENCE (Continued)

- Co-created the Yale Text Scanning system, an early step toward e-books, which used off the shelf computer technology to convert books and other paper-based materials into electronic format that computers could “read” to blind and reading challenged students. The system proved to be 2x faster and the electronic text it produced was 10,000x more searchable than books on audio tape 1990-1997

COMMUNICATIONS EXPERIENCE

- Contributor to *The Huffington Post* on issues in disability, the process of applying to and assimilating to college: 2016-2018
- Senior contributor to drmatthewweed.com and goldmedalgrads.com on application strategies and essay writing for college and health professions school: 2015-Present
- Oversaw the development of the website of the Wisconsin Institute for Discovery: 2010-2012
- Scientific writer for the National Library of Medicine’s “Genes and Disease” project: 1998-1999

SPEAKER AND CONSULTANT ON SUCCEEDING WITH DISABILITIES, MAKING WIN-WIN SOLUTIONS, AND IMPROVING HEALTH PROFESSIONS TRAINING

- invited speaker and consultant for numerous health professions training and continuing education programs, including at Yale University, the University of Colorado, University of Minnesota, and Oregon Health Sciences University, using patients’ lived experiences of healthcare to improve outcomes by increasing health professionals’ and health professions trainees’ awareness of implicit and explicit biases in healthcare faced by people with chronic health needs: Oct 2020-Present.
- Invited speaker at organizations in the United States and China sharing personal history of overcoming disability while achieving successes including multiple Ivy League degrees; opening a \$150 million research center at UW-Madison; mentoring nearly 1,000 students in the United States, Brazil, and China; and advising national and local leaders and political campaigns on biomedical science, healthcare and disability policy. Speaking in particular about the importance of building communities; flexible use of biomedical knowledge and technology; offering and accepting assistance and caring for self and others
- Lead speaker for the winter fundraiser for Achieve Tahoe, the largest adaptive sports program in the United States: *February 28, 2016*
- Invited speaker for various groups affiliated with the American Diabetes Association: 2014-2017
- Presented to groups at Yale, the American Medical Students Association, and the Pikes Peak Area Council of Governments on the value of exposing health professions students to how patients with chronic health needs function outside of the clinical setting: 2012-2016

MENTORING STUDENTS ON GETTING ADMITTED TO, AND SUCCEEDING IN, PROGRAMS IN HIGHER EDUCATION 1997-Present

- Intensive mentoring of more than 100 future applicants to graduate and health professions training. Approximately 98% were admitted: 1998-Present
- Mentoring of nearly a thousand students as they moved through undergraduate, graduate and professional training: 1997-Present
- Remote intensive mentoring of approximately ten students from USAedu.net, a Chinese company that helps students get admitted to United States colleges: 2018-Present
- Led seminars for and worked with up to 30 students at Colorado Springs, CO’s Coronado High School on strategies for college admission: 2019-Present

INVITED SPEAKER TO COLORADO SPRINGS, CO’S CORONADO HIGH SCHOOL FACULTY ON CURRICULAR TOPICS 2019-Present

- Presented on ways to use school and community networks to facilitate student success whether in jobs or in admission to, and completion of, college
- Invited to speak on opportunities to increase curricular flexibility in order to help students gain skills needed to build independence and achieve success and to speak on the value of flexible grading in one area to help students with gifts in other areas succeed

VISITING SCHOLAR, THE HASTINGS CENTER AND YALE INTERDISCIPLINARY CENTER FOR BIOETHICS *September 2013-2015*

- Sent survey to 1200 programs to quantify health professions student home and work healthcare training. Found students do 2.5% of training outside the clinic even though home and clinical care are of equal value. Presented results in November 2015 at the American Public Health Association conference in Chicago, IL

HONORARY FELLOW, THE DEPARTMENT OF ORTHOPEDICS AND REHABILITATION, THE UNIVERSITY OF WISCONSIN-MADISON SCHOOL OF MEDICINE AND PUBLIC HEALTH *October 2012-October 2013*

- Worked with Congressional staffers toward tax exemption on income earned by live-in health professions students aiding the chronically ill. Models show education and health cost cuts as well as better health and training

INTERIM SPECIAL ASSISTANT TO THE PROVOST, THE UNIVERSITY OF WISCONSIN-MADISON *May 2012-September 2012*

- Cost analysis and market study of demand and resource needs for a major in Public Health; phone survey of 20 peer programs
- Similar review of eight peer institutions' inter-professional education curricula
- Similar review of resources needed for a potential STEM diversity undergraduate fellowship program
- All reports to Provost who used them to facilitate development of related projects

INTERIM ASSOCIATE DIRECTOR, THE WISCONSIN INSTITUTE FOR DISCOVERY *May 2010-May 2012*

- Built first budget, led outreach and oversaw hiring of 50 staff and \$20 million in equipment buys for WI's \$150 million commitment for research in epigenetics, living environments, optimization, regenerative medicine, and systems biology; 1/3 of the \$450 million public-private Wisconsin Institutes for Discovery at UW-Madison meant to grow research and tech jobs in Wisconsin
- Allocated/distributed \$25 million for salaries and equipment. Used qualitative and quantitative data (narrative and tabular forms) to explain policy on diverse short and long term equipment and labor needs to Executive Council
- Set case to balance immediate spending for research theme start-ups with later use and 15 planned faculty start-ups in one to six years
- Had them trade \$4 million in immediate spending for long-term uses and saved \$1.5 million by coordinating short-term equipment buys or moves to start-ups
- Got campus leaders to fix an FTE deficiency to let researchers and managers hire 30+ students and staff to finish buying plans, do outreach, write grants and use new and pre-owned equipment

INTERIM ASSOCIATE DIRECTOR, THE WISCONSIN INSTITUTE FOR DISCOVERY *May 2010-May 2012 (Continued)*

- Drew in \$1 million in external funds for diversity and other hiring
- Worked with faculty search committees, UW Madison communications and senior administration to ensure end-to-end recruiting of diverse candidates for faculty positions via supporting professional networks, creation of directed advertising and other mechanisms through which diverse candidates were identified;
- Five of ten positions hired due to this activity were from groups underrepresented in STEM.
- Balanced immediate need for equipment and nine lab start-ups with long term needs including \$6 million for six deferred lab start-ups
- Coordinated research, security space, facilities, equipment, hiring and IT with faculty, staff and contractors. Received and provided reports to campus and partner center leaders, and local/national interests including NIH on \$10 million in equipment contract negotiations/installs in WID's 70,000sqft workspace and shared 300,000sqft building (opened December 2010)
- Oversaw three direct and 13 shared FTEs and 60 trainees in operations, purchasing, grant writing, safety and human/animal subjects compliance
- Oversaw development of WID's first full website and publicity materials

SCIENCE POLICY, HEALTH EDUCATION AND TECHNOLOGY INITIATIVES

- Interviewed and worked with 150 patient/science advocates, senators, members of parliament, senior scientists and administrators
- Compared national trends in law and regulation on controversial science using earlier action on RDNA, gene transfer and IVF to model scientists' responses to attempts to control cell nuclear transfer research and embryonic stem cell science
- Regularly updated the NIH's Acting Director on personal dissertation (first in the United States from the scientists' perspective) on regulatory tendencies on life sciences research and scientists' responses to regulation such as institutional or international relocation and changing funding sources: *2000-2003*
- Proposed new advisory/regulatory body modeled on the Federal Reserve Board and European Central Bank
- Proposed and helped launch UW-Madison's Morgridge Center for Public Service's "public health teams" initiative. This program is supporting hundreds of students per term in ongoing work with chronic health needs patients in Madison; joining on and off-campus organizations to inform patients and caregivers on disability safe living and connect them to resources to help patients with adls, errands and appointments
- Co-wrote a \$5 million proposal to fund scale-up in 2012. The program is anecdotally known to have improved students' understanding of real world chronic healthcare and helped patients resolve financial, housing and other crises: *2011-2014*
- Created health professions training programs. Selected, trained, and co-managed up to 50 volunteers (800+ over 25 years) to prepare med doses for chronic health needs patients and assist with adls/iadls. This innovative service learning concept is in the health education literature; positively impacted 90% of survey respondents' interactions with patients and saved \$1 million+ in health costs: *1989-Present*
- Initiating, directing, and events management for the Wisconsin Institute for Discovery's innovative "Discovering Careers in Health Care and The Life Sciences" series, managed and co-advertised with the UW-Madison Center for Pre-Health Advising. Informing 500+ local college students in 2011 and 600 in 2012 on careers in the health professions, life sciences research and health and life science education and policy. Drew in 125 practitioners and 30 graduate and professional schools to the program. Hundreds of student-practitioner meetings facilitated research, experience, training and career choices

SCIENCE POLICY, HEALTH EDUCATION AND TECHNOLOGY INITIATIVES (Continued)

- On qualitative and quantitative data, co-proposed/co-organized finances, staff and IT help for the Yale text scanning system, the 1st high-volume use of off-the-shelf technology to make printed text accessible to people with various reading challenges. Proved user training was doable in 30 minutes as opposed to hours for other technologies; any computer cluster employee could give IT help. External stakeholders said the system was a key step toward e-books and independence for the reading challenged: *1990, consultant on operations and equipment to 1997*

PROGRAM BUILDING AND LEADERSHIP AT FOUR UNIVERSITIES 1989-PRESENT

- Managed 125+ people making one of the first e-text libraries: 275,000+ pages: *1989-2013*
- Recruited for, and sat on, the UW-Madison Accessibility and Usability Committee. Using work flow metrics and qualitative arguments, proposed changes in the functional structure of the committee. These changes meant that task-focused sub-committees would receive work and report to a streamlined central body. The restructuring was agreed to and the committee's efficiency has increased: *2010-2012*
- Worked with Deans in Yale College on educational and pre-professional programs: *1997-2010*
- Actively contributed to policy that shaped Yale University's Resource Office on Disabilities: *1989-90*
- Proposed changes in operational oversight: *1991*
- In 2000, Yale put a structure in place similar to personal 1991 proposal. Helped Princeton improve campus planning and services for disabled students in 1994, preparing the way for its program for disabled students: *1990-1993, 1993-1995 and 1997-2010*

Postdoctoral Associate; Yale University Departments of Genetics and Molecular, Cellular and Developmental Biology: *June 2004-May 2010*

- Mentored students; studied stem cell and cloning science/policy; population genetics work; statistical and qualitative survey based research on 400+ potential (and 206 responding) human subjects found via social networking and automatic databases showing flaws in how health professionals are trained to work with patients on managing chronic illnesses of all types; papers published on ES cell policy in 2004 and 2005, and statistics, charts, and papers on health training in 2010 and 2012

MENTORING OF STUDENTS AND STAFF AT FOUR UNIVERSITIES 1989-PRESENT

- Over the equivalent of six years, mentored 750+ undergraduate, graduate/professional students, fellows and staff on professionalism and responsibility in numerous professions; balancing academics and extracurriculars; applying for jobs, grants and fellowships; doing research; managing pressures of collegiate, graduate and professional life; and considering options and placements after degree completion: *1993-Present* (Note: this semi-formalized work performed 2 to 3 hours a day while doing research, building career exposure, disabled student service and service learning programs and consulting for the NIH)
- 95%/100+ undergrad applicants became interns, 60+%/20+ Fulbright, Truman or Yale in China fellows
- 98.5% of 80+ undergraduate job seekers were employed within three months of graduation
- 99% of 150+ undergrads applying to medical, public health and other professional schools were taken
- 99.75% of 300+ graduate/professional mentees completed degrees; 90+% are in their area of training

MEDIA EXPERIENCE AND NETWORKING/COMMUNICATIONS CAPABILITIES

- Experience working with national and local media. Interviews with National Public Radio, magazines, local television, radio and newspapers in Colorado, Connecticut, Massachusetts, New Jersey, North Carolina and Wisconsin relating to research in genetics, advocacy for the disabled and health education
- A personal network of more than 600 administrators, biomedical researchers, health professionals, philanthropists, activists and policy makers in the United States, Canada, India, China, East Africa, France, Germany, Iceland, Russia and Ukraine. Particularly close ties to physicians, scientists and policy makers in Washington D.C., Philadelphia, New York City, Boston, New Haven, the San Francisco Bay Area, and Madison as a result of personal status as a student, administrator, mentor and colleague

TEACHING AND PRESENTATION EXPERIENCE

- Invited presenter: “*Are we adequately exposing health professions students to the management of disability and chronic illness in the home and work environment?*” A scheduled presentation to the Disability Section of the American Public Health Association meeting in Chicago, IL: *November 2015*
- Presenter to groups of 20-250 people of all ages on paths to growth and success: *1989-Present*
- Lecturer to health professions students on chronic health management outside the clinic: *2010-Present*
- Invited presenter: “*Curing the Empathy Gap: The Experience and Perspective of a Chronically Ill and Disabled Medical Educator*” The National Convention of the American Medical Student Association in Houston, TX: *March 2012*
- Teaching Assistant, Yale Department of Genetics: Presented concepts, led ethical debates, taught genetic data analysis, and helped students improve clinical communication skills: *Fall 1999*
- Guest Lecturer, Yale University, Graduate Teaching Center: Presented methods of instruction to prospective graduate teaching fellows in sciences at Yale: *Spring 1999*

TECHNOLOGY SKILLS AND EXPERIENCE

- Macintosh, UNIX and Windows operating systems; social networking; biomedical databases; MS Word, Excel, and PowerPoint; optical character recognition software; web design and WWW interfaces
- Beta tested outSPOKEN™, the talking Macintosh interface, making recommendations to improve quality and ensure compatibility with Macintosh operating system: *1989-1998*

HONORS, AWARDS AND MEMBERSHIPS

- Yale/Hastings Fellow in Bioethics and Health Policy: *Sept 2013-2015*
- Invitee, the UW-Madison’s Joseph F. Kauffman Administrative Development Seminar: *2010-2011*
- National Research Service Award for pursuit of Ph.D. degree in Genetics: *2000-2004*
- Invitee, The National Institute for General Medical Science’s First Community Consultation on the Responsible Collection and Use of Samples for Genetic Research, Bethesda, MD: *Sept 25-6, 2000*
- National Science Foundation Graduate Fellowship for pre-doctoral research in Genetics: *1996-2000*
- Karl E. Prickett Fellowship, Princeton University, for Master’s degree in Public Affairs: *1993-1995*
- David Everett Chantler Award, “to the senior who best exemplifies the qualities of courage, strength of character and high moral purpose characteristic of the life of Mr. Chantler.” Yale University: *1993*
- Letter of Commendation, Yale Department of Biology: *1993*
- Member: the Downtown Madison Rotary: *November 2010-July 2012*
- Member: the American Association for the Advancement of Science: *2004-Present*

EDUCATION

YALE UNIVERSITY, New Haven, CT - *May 2004*

Doctor of Philosophy (Ph.D.) in Genetics, (using rDNA, IVF, and gene transfer as cases to describe trends in regulation of “controversial science” and predict policy on adult, embryonic, and nuclear transfer stem cells)

YALE UNIVERSITY, New Haven, CT - *May 2001*

Master of Philosophy (M.Phil.) in Genetics

HARVARD UNIVERSITY, Boston, MA - *June 1996*

Master of Arts (M.A.) in Genetics

PRINCETON UNIVERSITY, Princeton, NJ - *May 1995*

Princeton School of Public and International Affairs Master in Public Affairs (M.P.A.) in Domestic Policy

YALE UNIVERSITY, New Haven, CT- *May 1993*

Bachelor of Arts (B.A.) in Political Science

BIBLIOGRAPHY

- “Curing the Empathy Gap: The Experience and Perspective of a Chronically Ill and Disabled Medical Educator” The Archives of Ophthalmology; Feb 2012 Vol. 130(2) 263-264.
- “Volunteer Care Givers and The Management of a Total Blind/Brittle Type I Diabetic Student-Researcher at Yale.” Diabetes Care, 2010 Aug; 33(8):e113.
- “Discourse on Embryo Science and Human Cloning in the United States and Great Britain: 1984-2002.” Journal of Medicine Law and Ethics, 2005, Winter, 33(4): 802-10.
- “Ethics, Regulation and Biomedical Research.” Kennedy Inst of Ethics Journal, Dec. 2004 14(4): 361-8.
- “Embryos, Cloning and Controversy: A Comparative Analysis of Research Policy in the United States and Great Britain”, a dissertation in Genetics published by Yale University in May 2004.
- “Factors Affecting Social and Political Legitimacy of rDNA Research and Embryo Science in America and Britain.” American Journal of Human Genetics (2003) 73 (Suppl): 416 [Abstract 1444] (poster presented on 11-08-03 at the 2003 meeting of the American Society of Human Genetics).
- Weed MA, and Mundlos, S. “The Role of Sonic Hedgehog in Vertebrate Development.” Matrix Biology, 1997, 16: 53-58.

REFERENCES

See other parts of this website and/or contact Dr. Weed for them as needed.