

“I think [One Health] is completely relevant to what we have been discussing. I have been indirectly working on it for years, but you have alerted me to a name for it...”

My parasitology professor, Dr. Michelow, said these words in introduction, before he turned over the last 5 minutes of his lecture to *me*, a first-year medical student—to talk about One Health.

This was, without doubt, one of the most exhilarating moments of my year. I felt I was taking a concrete step towards raising awareness of One Health. In fact, after I had introduced my classmates to One Health, and its relevance to our future clinical practice, Dr. Michelow assured me that he would add slides about One Health to his lecture next year.

Many physicians and medical students have not considered how human health is intricately linked to a larger ecosystem, which includes animals and environmental factors. Or, like my professor, they do not have a framework to contextualize those interconnections. Therefore, I believe there is ample opportunity for human health professionals to be educated about One Health issues. I am strongly compelled by my experiences both in public health and human medicine to advocate for One Health.

As a medical student representative to the One Health Commission (OHC) Board of Directors, I would propose a three-pronged strategy of education, professional development and legislative advocacy to achieve our goal of promoting One Health and ultimately have a positive impact on animal, human and environmental health.

I. Education

To my knowledge, there are no medical school One Health interest groups. I was inspired at the Students for One Health meeting, and plan to start one at Brown. There will be many opportunities to open chapters at other medical schools.

Medical students can take electives during their third and fourth years. The OHC could compile a list of medical and veterinary clinicians, environmental scientists, other One Health allies, and organizations such as EcoHealth that are willing to precept rotations for medical and/or veterinary students, so students can gain insight into the work of One Health practitioners early on in their career.

Joint med/vet clinics or med/vet/ecology health mission trips (local or domestic) would be a concrete way to live out the mission of promoting interdisciplinary work.

II. Professional Development

The OHC Board could keep an updated list of One Health-relevant conferences –One Health Congress, pertinent AMA, AVMA or environmental health conferences or talks, to cultivate a collegial environment, promote interdisciplinary collaborations and break down some of the discipline-specific walls.

Students would benefit greatly from receiving mentorship from health professionals and academics who are One Health practitioners and leaders. The OHC could spearhead a mentor-matching program that would connect students with current leaders in the One Health field, which could also yield fruitful research collaborations.

The OHC Board could compile a list of grants that would support One Health work (research, clinical) both for students and professionals, which would further advance the evidence-based science of One Health. Increasing funding to One Health research may eventually lead to the creation of positions for faculty at universities, medical and veterinary schools to engage in One Health.

III. Legislative advocacy

I understand that this is a proposed OHC action team, and I strongly believe that identifying and advocating for legislative initiatives that impact One Health issues is one of the most powerful ways to publicize the importance of One Health to all communities and have great impact on environment conservation efforts, antibiotic resistance and many other issues.

I am thrilled by the immense opportunities to promote One Health. As a student representative to the OHC Board of Directors, I would be empowered to leverage even more resources to build interdisciplinary coalitions to improve the health of our environment, animal and human populations.

ALICE HUI FAY TIN, MPH

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EDUCATION

Warren Alpert Medical School at Brown University

Doctor of Medicine

Providence, RI

Expected May 2018

New York University

Post Baccalaureate Pre-Health Certificate Program (GPA: 3.88/4.00)

New York, NY

May 2013

Tufts University School of Medicine

Master of Public Health (GPA: 3.94/4.00)

Concentration: Epidemiology/Biostatistics

Coursework Highlights: One Health Seminar, Infectious Disease Epidemiology

Boston, MA

August 2011

Tufts University

Bachelor of Arts, *cum laude*, *Honos Civicus* (GPA: 3.55/4.00)

Double Major: Community Health (GPA: 3.97/4.00) and History (GPA: 3.63/4.00)

Coursework Highlights: Intro to GIS

Medford, MA

May 2010

ONE HEALTH ACTIVITIES

American Medical Association – Medical Student Section Region 7 Meeting

Presenter

Invited 3 Tufts veterinary students to co-host an interactive workshop to introduce One Health to 18 medical student conference participants. This marked the first time that veterinary students attended an AMA student meeting.

Providence, RI

February 2015

Tufts University, Initiative for the Forecasting & Modeling of Infectious Diseases

Boston, MA/Managua, Nicaragua

Co-investigator

April 2011 – October 2012

Collaborated with the Nicaragua Research Center for Aquatic Resources at the National Autonomous University of Nicaragua (CIRA/UNAN) on a pilot study on basic sanitation and the bioremediation of wastes to improve water quality and health

- Designed research methodology; created, pilot tested and evaluated an IRB-approved survey in 5 communities (55 surveys)
- Conducted data entry and evaluated 60 health census records (188 people) from the community of Ciudadela San Martín
- Used ArcGIS and Surfer to create maps with GPS-referenced community infrastructure and pumps
- Authored a technical report and developed materials for community health education.

Relevant Conferences & Meetings and Courses:

Students for One Health Meeting Mar 2015; **One Health Day**. Nov 2014. Grafton, MA; **ESRI Health GIS Conference**. Oct 2013. Boston, MA; One Health Seminar (2011), Infectious Disease Epidemiology (2011)

RESEARCH EXPERIENCE

Charles B. Wang Community Health Center

Research intern

Conducted data analysis, designed and presented posters on antiviral therapy for pregnant women with chronic hepatitis B and CBWCHC's hepatitis B care management program at two conferences

Wrote five vaccine-failure care studies among infants with mothers infected with hepatitis B

New York, NY

October 2011 – May 2013

Tufts University School of Medicine, Department of Public Health and Community Medicine

Student Researcher

Examined the validity of the hygiene hypothesis to the incidence of pediatric asthma among Boston's Chinese population

Administered study survey to patients in English, Mandarin and Cantonese

Managed and entered data and coordinated other student researchers; wrote sections of papers for publication

Boston, MA

December 2008 – May 2011

Tufts University School of Medicine in Collaboration with the Taipei Medical University (TMU)

Researcher

Evaluated the best practices of the 1997 Taiwan health reform and distilled lessons for the US healthcare reform

Designed interview protocol, developed an IRB-approved research methodology & conducted key informant interviews in English and Mandarin

Taiwan, R.O.C.

February 2010 – November 2010

CARE International

Intern – Office of the National Coordinator of Health

Organized a 6-day conference on emergency response planning for Ministry of Health authorities and NGO personnel in collaboration with the U.S. Center for Disease Control

Provided administrative support and used GIS to create community risk and resource maps for the Cross-border Influenza Epidemiological Surveillance Project in Guatemala, El Salvador, Honduras and Nicaragua

Compiled an 8-month progress report of two CARE projects in Spanish for internal review and funders.

Esteli, Nicaragua

July – September 2009

Harvard Medical School, Department of Cell Biology

Basic Science Partnership Fellow

Used immunofluorescence and cultured monoclonal antibodies to study the Hedgehog Signaling Pathway

Boston, MA

June – August 2006

PUBLICATIONS & POSTER PRESENTATIONS

- Wang, S., **Tin, AH.**, Sze, A., Yu, C., Lau, J., Huang, S. and Pan, C., Comprehensive Management of Hepatitis B Pregnancies in a Community Health Setting: The Hepatitis B Moms Program. Poster at: The Liver Meeting 2012 of the American Association for the Study of Liver Diseases (AASLD). 2012 Nov 10. Boston, MA
- Woodin, M., **Tin, AH.**, Moy, S, Palella, M. and Brugge, D. Lessons for Primary Prevention of Asthma: Foreign-Born Children Have Less Association of SES and Pests with Asthma Diagnosis. *J Immigr Minor Health*. 2011; 13:462-469.
- Yu, C., **Tin, AH.**, Sze, A. and Wang, S. Prevention of Hepatitis B Perinatal Transmission: use of Antiviral Therapy During Pregnancy. Poster presented at: Chinese American Medical Society 48th Annual Scientific Meeting: A Symposium on Preventive Care. 2011 Nov 5. New York, NY

ENTREPRENEURIAL AND SOCIAL RESPONSIBILITY EXPERIENCE

Open Style Lab**Boston, MA***Co-founder & Director*

April 2013 - present

Open Style Lab (OSL, www.openstylelab.org) is a non-profit dedicated to making beauty accessible for people of all abilities. Our flagship summer program is hosted at MIT, where over 10 weeks, we team up engineering, design and occupational therapy students to create functional and stylish apparel for and with clients with disabilities, including paraplegia, amputations and those diagnosed with autism and arthritis. OSL commercialized their first retail product, a rain jacket with a waterproof lap flap inspired by wheelchair users but designed for use by all.

Stan Tran for Congress**Providence, RI***Campaign Manager*

May – September 2014

Helped strategize, managed volunteers, edited op-eds, organized a fundraiser, ran social media campaigns for Stanford Tran's bid for Congress in the 2014 mid-term elections in Rhode Island.

Immigrant Service Providers Group, Tufts University Tisch Scholars Program**Somerville, MA***Intern*

September 2007 – August 2011

- Assisted in the creation of an interpreter training program for bilingual high school students (LIPS)
- Supervised and coordinated a flu vaccine clinic and immigrant health fair (300 participants); engaged other organizations to expand the breadth of services offered at the health fair (dental and eye screening, physical therapy)

The Welcome Project, the Liaison Interpreters Program of Somerville (LIPS)**Somerville, MA***Boston Schweitzer Fellow*

May 2010 – May 2011

- Created and ran monthly discussion group to aid immigrant teens maintain fluency in their ethnic language

CLINICAL & TEACHING EXPERIENCE

Karen Kuo, MD, CWS**New York, NY***Medical Transcriptionist*

September 2012 – May 2013

- Documented weekly progress of wounds and treatment plans for 50 nursing home patients, served as Spanish interpreter

New York University – University Learning Center**New York, NY***Learning Assistant - College Reading & Learning Association certified tutor*

September 2012 – May 2013

- Led a weekly 1-hour lecture-style review session for the introductory biology class
- Prepared problem sets and lead working group sessions for the general chemistry course

Tufts University Community Health Program**Medford, MA***Graduate Teaching Assistant*

September 2010 – May 2011

- Taught two recitations per semester (total 138 students) to supplement lectures; graded papers and exams

Las Salinas Government Health Clinic**Las Salinas, Nicaragua***Clinical Intern*

May – July 2009

- Organized and ran health education workshops for pregnant women and created an emergency transportation fund in five rural communities. Worked with the Ministry of Health to bring gynecologists to the community every two months
- Served as Spanish-English interpreter for the Ministry of Health during a local A H1N1 outbreak

SKILLS

Languages: Chinese (Mandarin, Cantonese; Native speaking, writing, reading); Spanish (Advanced)

Statistical/mapping programs: SPSS, SAS, GIS, Surfer

SELECTED HONORS AND LEADERSHIP

- Organizing Committee for the Alpert Medical School Ceremony of Gratitude for Anatomical Gift Donors
- Elected to Delta Omega, Public Health Honorary Society (2011)
- Albert Schweitzer Foundation Boston Fellow (2010-2011)
- Presidential Award for Citizenship and Public Service (2010)
- Tufts University Alumni Association Senior Award (2010)
- Community Health Department Seymour S. Bellin Research Fund Award (2010)
- Anne E. Borghesani Memorial Prize (2009)
- The Empower Program for Social Entrepreneurship Fellow (2009)