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Washington Global Health Alliance
Seattle BioMed

Stepping Into 21st Century
Global Health Careers
Seattle BioMed

- Founded in 1977 by Ken Stuart
- 350+ staff; 18 lead scientists
- 73 active research projects, focused upon diseases caused by microscopic pathogens
- 420 publications since 2000
- Serving >3K learners annually thru BioQuest
- On the cusp of a new scientific phase
  - with malaria vaccine going into trials and construction of the Malaria Clinical Trials Center
Today’s Talk

What is Global Health (GH)?

The State of the GH Sector

Educational Resources
Defining Global Health

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<tr>
<th>Public</th>
<th>International</th>
<th>Global</th>
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| "...the science and art of preventing disease, prolonging life and promoting physical health through organized community efforts..."  
- Charles Winslow | "...a subspecialty that relates more to health practices, policies, and systems and stresses more the differences between groups than the commonalities."  
- GHEC | Cooperative actions and solutions that influence worldwide health issues.  
(Both) |
Why GH? Why Now?

- Comprehensive: Local and international initiatives
- Infectious diseases such as malaria, tuberculosis, AIDS and influenza are on the rise (+14M deaths per year) due to lack of solutions
- Washington State receives approximately 900-1,100 reports of Campylobacteriosis and 600-800 cases of Salmonellosis annually
- Increased availability of funding for this area
- Increased public interest in GH – books, universities...
- Locally: Washington’s global health industry is growing!
  - 3,000 direct jobs and 30,000 related positions, generating $4.1 billion in revenue (2005)
Sample GH Employers

- University
  - UW, WSU
- Government
  - WSDA, FDA
- Non-Profit
  - Seattle BioMed, IDRI, PATH, FHCRC, PNNL
- Biotech/Pharmaceuticals
  - Amgen, Dendreon, Novo Nordisk
- WORLDWIDE!

Hiring info: Craigslist, idealist, WBBA
What are the jobs?

- Biostatistics
- Bioengineering
- Immunology
- Hazard Analysis Operations
- Agronomy
- Epidemiology
- Clinical regulations
- Marketing/Distribution
- Transportation Inspection

Biology, Chemistry, Molecular Biology, Microbiology
NURSING & MD
We Need Versatile Employees

- “an employee that has multi-talents, that is not coming from a biomedical background or a public health background or an ‘X’ background.

- We need professionals with a complex set of abilities who understand economics and the political scene and the culture and the social, as well as the scientific.”
There is a Global GAP in Preparation

- Students are taught in silos to prepare for careers that require cross training
- Students want to make a global difference, but lack the means to do so.
- Students want to apply their knowledge
- Teachers crave awareness of new careers to influence their students
Explore 21st C Careers with WGHAA
Gapminder

11th grade interdisciplinary global health curriculum

Gapminder teaches statistics, trends and the Millennium Development Goals.

www.gapminder.org
Engaging and advocating for Washington state as a nexus for global health

• The Fred Hutchinson Cancer Research Center
• Global Alliance for the Prevention of Prematurity and Stillbirth—an initiative of Seattle Children’s
• Infectious Disease Research Institute
• Institute for Systems Biology
• Battelle/Pacific Northwest National Laboratory
• PATH
• Public Health-Seattle & King County
• Seattle Biomedical Research Institute
• Seattle Children's Research Institute
• SightLife
• University of Washington Department of Global Health
• Washington State University School for Global Animal Health
• World Vision
• Bill & Melinda Gates Foundation
11th grade interdisciplinary global health curriculum

• Lessons for Advanced Algebra, Chemistry, and U.S. History.

• Focuses on cholera, influenza, malaria, and tuberculosis.

• Developed and pilot-tested by teachers.

• Aligned to national standards

• Assessment tools
Teachers:
Teachers observed they now had a better sense of what to assess, how, and when to do it, and felt they could now develop a better project assessment. One teacher noted that he/she had written rubrics for the first time; another said he/she was using the outline and format learned in the program.

Students:
While over 48% of students reported planning to complete algebra 1, algebra 2, geometry, and pre-calculus by the time they graduated, the biggest increases in plans to take math courses were for applied math (28.6%), trigonometry (11.8%) and other math classes (11.1%).
• Business structures influenced by globalization and consolidation.

• Increasing market uncertainty, risk analysis, petroleum dependence, niche business opportunities, and global food production and distribution systems.

• Driven by changes in biosecurity, the expanding global population, health concerns, shrinking natural resources, and climate change.

• Need for graduates with excellent business skills, international understanding, and leadership qualities.
• 9 draft lessons
  • Introductory lesson discussing careers and breadth of possibilities
  • Ionic/inorganic nomenclature
  • Unit conversion math lesson
  • Systems approach to feed safety
  • Bio-resistance activity
  • GMO mythbusters; direct student research into pros and cons
  • An outbreak scenario/lab component, based around BSE
  • Feed contamination lab, with melamine and cyanuric acid
  • Going Global: Business management, regulatory, biosecurity
To learn more, visit

www.wghaa.org
More about BioQuest Programs

Teacher Programs
  Internal
  SEP

Student Programs
  Site Explorations (class field trips)
  BioQuest Academy
  Internships for our 18 year old grads

Partnerships
  MESA, Black Achievers, Do-IT, NWABR

College-level Programs through the University of WA
Curriculum:  WGHAA, WSDA

Contact us:  www.seattlebioquest.org or theresa.britschgi@sbri.org
Global Health Career Resources

BioQuest Career Game
http://www.bioquestacademy.org/future/possibilities.php

Relief Web
www.reliefweb.int/

Interaction
http://careers.interaction.org

Non-profit job listing (includes GH)
www.idealist.org

World Health Organization
http://www.who.int/employment/en/

Global Health Council
https://www.globalhealth.org/

Washington Global Health Alliance
www.wghalliance.org

Global Washington
http://globalwa.org/
Contact us!
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