POSTER SESSION 1
Commons West, Easel 6
11:00 AM to 1:00 PM

Capture Efficiency of Various Species and Sizes of Drift Macrophytes by Red Urchins (*Strongylocentrotus franciscanus*)
Joseph Terrill (Joe) Donohoe, Senior, Biology (General)
Mary Gates Scholar
Mentor: Megan Dethier, Biology
Mentor: Alexander Lowe, Biology

In the San Juan Islands, drift macrophytes from shallow waters represent a significant spatial subsidy provided to the subtidal zone. This organic matter is a potential food source for deep dwelling herbivores like the red urchin *Strongylocentrotus franciscanus*. Little is known about how urchins capture and use drift material. A racetrack flume was used to examine the capture of drift macrophytes of various species and size by *S. franciscanus*. No species-specific selectivity was found, but urchins caught 100% of small macrophyte pieces. A significant decrease in capture efficiency was noted as drift algal size was increased, probably due to the urchins’ inability to fight current drag acting on pieces with larger surface area. This suggests that drift macrophytes could be the main food source for deep dwellingurchins where available, potentially explaining how herbivores subsist at dysphotic depths.

SESSION 2A

OUTBREAK! REIMAGINING DEATH AND LIFE, DISEASE AND HEALTH
Session Moderator: Luke Bergmann, Department of Geography
171 MGH
3:30 PM to 5:00 PM

*Note: Titles in order of presentation.

Clearing the Air: Examining Tobacco-Related Health Narratives and the Legitimacy of Smoke-Free College Campus Initiatives
Meredith (Rosie) Morrow Okon, Senior, International Studies
Mary Gates Scholar
Mentor: Luke Bergmann, Department of Geography
Mentor: Maria Elena Garcia, Comparative History of Ideas, International Studies
Mentor: Matthew Sparke, Geography, UCSC
Mentor: Celia Lowe, Anthropology and International Studies

The purpose of this research is to investigate hidden health narratives on campus regarding the use of tobacco products to contextualize the legitimacy of smoke-free and tobacco-free university initiatives. This academic endeavor will also reveal the structural and institutionalized violence of the tobacco industry which targets marginalized communities to entice the uptake of regular smoking habits. An analysis of biopolitical power, structural violence, and social theory will help to reveal the hidden narratives of these populations, twice-targeted by the social stigmatization of tobacco use and the manipulative advertising of the tobacco industry. By exposing, analyzing, and deconstructing patterns of profit-driven tobacco marketing directed at student demographics, it is possible to examine geographies of blame regarding tobacco use, impact of tobacco use on non-smoking populations, and the misleading agendas behind the dominant narratives of tobacco industry advertising. By identifying and bringing to light these messages, it is possible to legitimate the anti-smoking and anti-tobacco movements happening at the University of Washington, and U.S. universities at large, with a critical analysis of the health risks involved.

SESSION 2B

GENETIC EVOLUTION ACROSS THE LIFESPAN
Session Moderator: Joachim Voss, Biobehavioral Nursing & Health Systems
228 MGH
3:30 PM to 5:00 PM

*Note: Titles in order of presentation.
Stability of a Large Amplification in *Saccharomyces cerevisiae*

Jamie Pogachar, Senior, Anthropology: Medical Anth & Global Hlth, Biochemistry  
Mary Gates Scholar

Mentor: Celia Payen, Genome Sciences  
Mentor: Maitreya Dunham, Genome Sciences

Large chromosomal amplicons and deletions or copy number variation (CNV) are found in many different cancers. However, the inheritance, stability, and fixation of these amplicons and deletions within a population are widely debated and poorly understood. In an effort to better understand how the stability of this large chromosomal rearrangement, I analyzed the stability of a large segmental amplification in the yeast *S. cerevisiae*. This amplification is commonly observed in clones evolved under sulfate-limited conditions and contains the sulfate transporter *SUL1*. This amplification is an important adaptive strategy used by the cells to improve their ability to extract the limited supply of sulfate available in the media. High copy number of this gene confers a competitive fitness advantage over other clones that have only one copy of the gene. We used a GFP marker integrated next to *SUL1* to differentiate green clones, which contain a single copy of the *SUL1* gene, from “super green” clones that have multiple copies of the gene. A super green evolved clone was grown in steady state growth vessels for ~30 generations in media that is non-selective for adaptation and our selective media as a control. I monitored the population using flow cytometry and quantitative PCR to find clones that have lost the amplification. These green clones were isolated using flow sorting and then had their genome sequenced to look at the scar that was left behind. This tells us how efficiently the cells can remove amplifications without causing detrimental effects to their fitness.

**POSTER SESSION 3**  
Commons West, Easel 7  
2:30 PM to 4:00 PM

Invisible Risks to HIV/AIDS Shaped by Gender Inequality  
Sharon Pan, Junior, Public Health-Global Health  
Mary Gates Scholar

Mentor: Luke Bergmann, Department of Geography  
Mentor: Maria Elena Garcia, Comparative History of Ideas, International Studies

Mentor: Celia Lowe, Anthropology and International Studies  
Mentor: Matthew Sparke, Geography, UCSC

This project examines the role of gender inequality in HIV/AIDS and how this inequality perpetuates the susceptibility of women to contract the virus. Focusing on Ghana and Brazil, I explore how culture and society shape an imbalance that potentially increases risks to women in becoming sick through analysis of the relationship between social determinants of health, risk factors and vulnerability. I argue that preventative measures intended to fight against HIV/AIDS have failed to consider the social circumstances that place women at greater risk than men. In my analysis, I draw on and interpret Michel Foucault’s concept of biopolitics using feminist critique and gendered perspectives. I reference anecdotes from Stephanie Nolen’s “28: Stories of AIDS in Africa” to present personalized perspectives of the painfully multifaceted reality of the HIV/AIDS outbreak, while Silvana Paternostro’s personal accounts of sexual culture in Brazil in “In the Land of God and Man: Confronting Sexual Culture in Latin America,” serve as a framework for my examination of gendered social constructs in Brazil. I examine gender relations and the dynamic of marital relationships that often disproportionately allow the male greater power over the female, and how a male dominant ideology is reinforced by politics, culture and social norm. Distinguishing between gender and sex, I look at how gender inequality, the inequality of opportunities and power that follow being a certain sex, may expose mothers, daughters, sisters, and other women at risk in ways we may not have imagined.

**POSTER SESSION 4**  
Commons West, Easel 42  
4:00 PM to 6:00 PM

Playing Chicken with Big Ag: Advocating for Regionally Sensitive Food Sovereignty to Counter Pandemic Influenza

Natsuki Yoshioka, Senior, International Studies  
Jennifer Ann (Jenn) Charoni, Junior, International Studies  
UW Honors Program

Katherine Evelyn (Katherine) Schroeder, Senior, International Studies  
Mary Gates Scholar, UW Honors Program  
Tarra Young (Tarra) Theisen, Senior, International Studies, History  
UW Honors Program

Mentor: Celia Lowe, Anthropology and International Studies

H5N1 Avian Influenza is a global threat. Given the globalized nature of our world as well as the universal human susceptibility to disease, an influenza outbreak in Southeast Asia poses a concern for the rest of the world. Although there are no major transmission cases reported among human populations, the virus might evolve to become lethal over time. Despite it being a global threat, only the West was well situated for preparedness during the 2005 outbreak in Asian poultry farms. Vaccines created were targeted towards developed countries, and few drug companies were willing to work with Indonesia and Thailand because of lower profit
potential. This policy report is designed to accommodate the needs of high-risk countries. Due to the potential destruction of what the avian influenza carries, this report outlines the fundamental causes of avian influenza. We question how the avian influenza virus is evolving to become infectious to humans, and investigate necessary changes to avoid future outbreaks. From our research through news articles, public health journals, microbiology textbooks, and a telephone conference with Dr. Suraya Afiff of the University of Indonesia, it is apparent that food sovereignty is the most crucial issue in preventing future outbreaks. We address our policy-recommendation report to La Via Campesina (LVC) an Indonesian Non-governmental Organization attempting to regulate the poultry industry and working to minimize the negative consequences of large agriculture. Through this report to LVC, we hope to convey a specific set of strategies that will mitigate future pandemics. Above all, we show LVC the importance of considering future outbreaks in the fight for food sovereignty.

**POSTER SESSION 4**
**Commons West, Easel 4**
**4:00 PM to 6:00 PM**

**Tuberculosis in India: Examining Social Constructs in the Face of Outbreak**
*Jennifer Look, Junior, Biology (General), Comparative History of Ideas*
*Mary Gates Scholar*
**Mentor: Matthew Sparke, Geography, UCSC**
**Mentor: Luke Bergmann, Department of Geography**
**Mentor: Maria Elena Garcia, Comparative History of Ideas, International Studies**
**Mentor: Celia Lowe, Anthropology and International Studies**

This project examines the ethical and social frames which facilitate environmental conditions that fuel the rampage of tuberculosis in India. Three key components of the basic biomedical outbreak narrative that are often overlooked will be brought forth to attention: the tuberculosis outbreak as more than just a bacterial spread, social constructs which shape the bacteria’s accessibility to victims, and socioeconomic determinants of treatment (and lack thereof). Indira accounts for approximately one-fifth of global tuberculosis occurrences, and with over 2 million cases in the country, tuberculosis is a continuously growing health concern, posing a major threat to the well-being of the population. Due to India’s developing health care system, pollution, and poverty, these conditions amplify the ease of transmissibility and rate of infection. As treatment regimens are abandoned due to social stigma, medical side effects, and overwhelming price tags, the bacterium which causes TB (mycobacterium tuberculosis), tends to mutate and become drug-resistant to vary-

**POSTER SESSION 4**
**Commons West, Easel 43**
**4:00 PM to 6:00 PM**

**HIV/AIDS in Russia: The Role of Narratives of Blame**
*Katherine Evelyn (Katherine) Schroeder, Senior, International Studies*
*Mentor: Celia Lowe, Anthropology and International Studies*

The following project examined the ways in which HIV/AIDS treatment in St. Petersburg, Russia has been shaped by geographical narratives of blame centered on stereotypes of the United States. Currently the majority of HIV/AIDS in St. Petersburg is spread by intravenous drug use (IDU). When compared to countries with a similar GDP per capita, Russian HIV/AIDS mortality rates rank significantly higher. With Foucault’s concept of biopower as theoretical framework, my thesis focused on the ways in which the United States is negatively associated with heroin and the disease of HIV/AIDS itself. Heroin use greatly increased after the fall of the Soviet Union when heroin was considered to be fashionably new and ‘American’ by youth in St. Petersburg, and the United States invasion of Afghanistan in 2001 was perceived as exacerbating levels of heroin abuse. HIV/AIDS itself seemingly originated in the United States, and only later traveled to Russia. These associations have been used instrumentally by Russians to avoid having to address the epidemic and to minimize treatment for affected Russians. Through an exploration of biopolitics, media, and personal ethnographic research of Russian culture and political policy, it is apparent that the United States is perceived as the origin of blame for the spread of HIV/AIDS. Drawing on the concept of biopolitics, explorations of media representations, and research (including ethnographic interviews) about Russian politics and health policies, I argued that the United States is perceived by the Russian government and people as the origin of blame for the spread of HIV/AIDS.