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| AFYA BORA CONSORTIUM GLOBAL HEALTH LEADERSHIP FELLOWSHIP PROGRAM |
| HIV/AIDS as a Global Health Challenge |
| Distance Learning |

**AFYA BORA CONSORTIUM**

**HIV/AIDs as a Global Health Challenge**

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**Guide for Fellows and Instructors**

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# Course Instructions: For Fellows, Working Group Members, and Facilitators

This module is one of the Afya Bora Consortium Fellowship’s distance learning modules. This module will provide Fellows with information on several critical HIV/AIDS topics in care, prevention, and policy. It is a thought-provoking update rather than a comprehensive overview of the global HIV/AIDS epidemic.

The purpose of this module is to provide you with information on HIV/AIDS topics through lectures from experts in the field and current journal articles, and to create the opportunity for you to engage with your Afya Bora colleagues to synthesize and discuss these issues.

Fellows will view the lectures and read the assigned articles on their own and participate in a dialogue via a web-based discussion board in order to expand their understanding of issues raised by the presentations.

## Learning Objectives

1. Be able to discuss current topics in HIV/AIDS in an informed manner
2. Increase your ability to critically read journal articles

## Course Guidelines

We have selected 10 of the most relevant lectures recorded at the University of Washington Principles of HIV and STI course held in July 2014 (http://pshrcourse.org/). **These have been compiled on a CD that will FEDEX** to you and are also available on the UW Canvas website (https://canvas.uw.edu/courses/970711) to which each of you should have access using your UW NetID.

## Course Format

**The recommended format for conducting this course is as follows:**

- Fellows will access the courses online at <https://canvas.uw.edu/courses/970711>, and sign in with their UW Net ID and password.

-Fellows will be responsible to listen to recorded audio lectures, review the

PowerPoint slides, and complete the assigned readings for each session.

- Fellows will be required to participate in a discussion board and respond to the questions listed in Appendix 1 for each lecture before the end of the week (Sunday). Dates are listed in the syllabus and on the website.

-Fellows will also be required to respond to at least one comment made by another Fellow.

-We will be tracking responses.  All 10 lectures must be viewed and discussion board entries must be completed on time for course credit.

*Any problems encountered with the CDs, group meetings or discussions should be reported immediately to Angela Shelton and Dr. Farquhar at* *angshelt@uw.edu* *and* *cfarq@uw.edu**, respectively.*

Table 1. **HIV/AIDS talks, presenters, viewing dates and deadline for discussion board entries**

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|  | Presenters and Lecture Titles |
| Lecture 1 | Ruanne Barnabas “Integrating Health Economic Analyses into STI and HIV Research”  |
| Lecture 2 | Thomas Quinn “Biomedical Interventions in HIV Prevention”  |
| Lecture 3 | Sevgi Aral “Social and Behavioral Aspects of STD/HIV Epidemiology and Prevention”  |
| Lecture 4 | Grace John-Stewart " Prevention of Mother-to-Child Transmission of HIV" |
| Lecture 5 | Jane Simoni "HIV and Mental Health" |
| Lecture 6 | Jared Baeten "Pre-Exposure Prophylaxis (PrEP) for HIV Prevention" |
| Lecture 7 | Martina Morris “Sexual Networks and the Epidemiology of HIV” |
| Lecture 8 | Susan Graham “Men Who Have Sex with Men and the Global HIV Epidemic” |
| Lecture 9 | Corey Casper " HIV-Associated Cancers: Epidemiology and Pathogenesis" |
| Lecture 10 | Thomas Hawn "HIV/TB Co-infections"  |

**Speaker Biographies** (in order of presentation)

**Ruanne Barnabas, DPhil, MBChB**

Dr. Barnabas is an Infectious Disease Physician-Scientist at the University of Washington and affiliate at the Fred Hutchinson Cancer Research Center. She completed her medical training at the University of Cape Town, her doctorate in mathematical modeling at the University of Oxford, and her Infectious Diseases training at the University of Washington. Her research focuses on HIV treatment and prevention, specifically on interventions that reduce HIV viral load and, consequently, disease progression and transmission. Her projects use empiric data and mathematical models to better understand HIV clinical progression and transmission, and estimate the potential impact of HIV interventions at population level. The ultimate aim of her work is to estimate the effectiveness and cost-effectiveness of HIV treatment and prevention interventions to inform public health policy.

**Thomas Quinn MD, MS**

Dr. Thomas Quinn is Senior Investigator and Head of the Section on International HIV/AIDS Research in the Laboratory of Immunoregulation at the National Institute of Allergy and Infectious Diseases.  He also serves as Associate Director for International Research for the Division of Intramural Research at NIAID. For the past three decades he has held joint appointments as Professor of Medicine and Pathology in the Johns Hopkins School of Medicine and in the Departments of International Health, Epidemiology, and Immunology and Molecular Microbiology in The Johns Hopkins School of Public Health, and Professor of Nursing in the Johns Hopkins School of Nursing.  In 2006 he was appointed founding director of the Johns Hopkins Center for Global Health.  Dr. Quinn has been involved in HIV clinical and epidemiologic investigations in 29 countries, with current projects in Uganda, Zimbabwe, Tanzania, India, China, and Thailand. His investigations have involved the study of the epidemiologic, virologic, immunologic features of HIV infection in Africa, the Caribbean, South America and Asia.  His research interests have involved laboratory investigations that have helped define the biological factors involved in sexual and perinatal transmission, the natural history of HIV infections in developing countries, and the identification and characterization of unique strains of HIV-1 infection. He serves as advisor/consultant on HIV and STDs to the World Health Organization, Office of the Global AIDS Coordinator (PEPFAR), UNAIDS, and the FDA. He is a member of the Institute of Medicine of the National Academy of Science, and is a fellow of the American Association for the Advancement of Science. He is also a fellow of the IDSA and a member of the American Association of Physicians. He is an author of over 900 publications on HIV, STDs, and infectious diseases.

**Sevgi Aral, PhD**
Sevgi O. Aral has been the Associate Director for Science in the Division of STD Prevention, Centers for Disease Control since 1993.  She holds Professorial appointments at the University of Washington in Seattle; University of Manitoba in Winnipeg; and Emory University in Atlanta.  Dr. Aral has authored more than 230 scientific articles and edited 16 journal issues and 2 books.  She has served on many national and international work groups, boards and committees; and has consulted for the World Health Organization, the European Union and the World Bank.  She has also received the ASTDA Achievement Award and the Thomas Parran Award.  Dr. Aral’s research interests have included social and behavioral aspects of sexually transmitted disease, epidemiology and prevention; including gender, age and race effects; mixing patterns; sexual and social networks; contextual factors; social determinants and most recently, program science.

**Grace John-Stewart, MD, PhD**

Grace John-Stewart is a Professor, Departments of Medicine, Epidemiology, Global Health, and Pediatrics at the University of Washington. Dr. John-Stewart was trained as an internist and pediatrician prior to infectious diseases, and received a PhD in epidemiology. Her research is focused on international HIV-1 studies, primarily based in Kenya. These include studies of transmission, prevention, clinical epidemiology, clinical trials, and molecular epidemiology. Her interests include mother-to-child transmission of HIV-1, pediatric HIV-1 and co-infections (TB, helminths, CMV), HIV-1 acquisition and pathogenesis, and treatment and delivery of HIV-1 treatment and prevention services. She has published over 140 peer-reviewed manuscripts. Dr. John-Stewart's funding has included support from the NIH, CDC, Gates Foundation, EDCTP, and the Elizabeth Glaser Pediatric AIDS Foundation. Dr. John-Stewart received the Elizabeth Glaser Scientist Award, has mentored over 60 students/fellows, received a K24 Mentorship Award, was nominated for the UW post-doctoral mentorship award, for the Marsha Landolt Award, and received a UW School of Medicine mentorship award. She is currently the Director of the CFAR International Core, the Kenya Research Program, and the UW Global Center for Integrated Health of Women, Adolescents and Children (Global WACh).

**Jane Simoni, PhD**

Jane M. Simoni, Ph.D. is a clinical psychologist and a professor in the Department of Psychology, with adjunct appointments in Global Health and Gender, Women, and Sexuality Studies. She is a faculty member in the CFAR’s Socio-behavioral and Prevention Research Core. Her research has focused on behavioral aspects of HIV treatment, with several NIMH-funded intervention studies in NYC, Seattle, the U.S.-Mexico border, and China. She is also interested in health disparities among sexual and ethnic/racial minority groups. Recently, she received a Mid-Career Development Award to support her mentoring activities of graduate students and junior investigators and to expand her expertise in computer technology to enhance intervention impact and dissemination.

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**Jared Baeten, MD, PhD**

Dr. Baeten is a professor in the Departments of Global Health and Medicine and an adjunct professor in the Department of Epidemiology at the University of Washington.  His research focuses on epidemiologic and biologic risk factors for HIV-1 and other sexually transmitted diseases, and clinical trials of novel interventions for prevention of HIV-1 transmission.  He co-chaired the Partners PrEP Study, a phase III, randomized clinical trial among ~4700 HIV-1 uninfected heterosexual men and women in Kenya and Uganda that demonstrated pre-exposure prophylaxis (PrEP) provided protection against HIV-1 acquisition.  Linked projects included a large observational study of PrEP adherence and laboratory analyses of innate and adaptive immune responses related to PrEP use.  Other current projects include a) a multinational phase III trial of dapivirine vaginal ring for HIV-1 prevention in women (MTN-020/ASPIRE, through the NIH Microbicides Trials Network, for which he serves as protocol chair), b) implementation studies of combination HIV-1 prevention in South Africa and Uganda, c) epidemiologic studies exploring use of hormonal contraception as a risk factor for HIV-1, and d) demonstration projects to deliver antiretroviral treatment and PrEP for HIV-1 prevention in African HIV-1 serodiscordant couples.

**Martina Morris MA, PhD**

Martina is a sociologist with interests in the analysis of social structure and population dynamics. Her research is interdisciplinary, intersecting with demography, economics, epidemiology and public health, and statistics. Examples from her current projects include the study of partnership networks in the spread of HIV/AIDS, the impact of economic restructuring on inequality and mobility, and the development of Relative Distribution methods for statistical analysis. Martina joined the faculty at the University of Washington in September 2000.

**Susan Graham MD, MPH, PhD**

Dr. Susan M. Graham is a member of the Kenya Research Group at the University of Washington. She began working with the UoN/UW Mombasa Field Site in August 2003 as an Infectious Diseases Fellow at the University of Washington. She began the antiretroviral therapy program offered at the clinic and worked as a research clinician until 2006 on a study of Antiretroviral Therapy and HIV-1 Infectivity in Women with Dr. Scott McClelland. When she completed her fellowship, she became an Acting Instructor at the University of Washington, and is currently an Assistant Professor. Dr. Graham recently led and completed two studies of HIV-1 infectivity in Kenya, including Genital HIV-1 Shedding among Women Starting Second-Line Antiretroviral Therapy and Initiating Studies of Genitourinary HIV-1 Shedding in Kenyan Men. She also led and completed a CFAR New Investigator Award study titled, The Role of Angiopoietins 1 and 2 in HIV-1 Disease Progression. In addition, she has developed a new research cohort of HIV-1-seropositive adults in Kilifi and Mtwapa, north of Mombasa, in collaboration with Dr. Eduard Sanders of the Kenya Medical Research Institute. With Dr. Sanders, she is developing a program of research on HIV prevention and care for Kenya men who have sex with men. She has a pending grant titled, "Provider and Peer Support Intervention to Improve ART Adherence among Kenyan Men" for work at this site.

**Corey Casper, MD, MPH**

Dr. Corey Casper is the head of the Program in Global Oncology at the Fred Hutchinson Cancer Research Center in Seattle and a Professor of Medicine, Epidemiology and Global Health at the University of Washington. He is also the Associate Director of the UW/FHCRC Center for AIDS Research.

Dr. Casper divides his time among research, teaching and patient care. He focuses on infection-related cancers, particularly those caused by the human gamma herpes viruses (Kaposi sarcoma caused by, human herpesvirus-8, or HHV-8, and lymphoma related to the Epstein Barr Virus, or EBV). In 2004, Dr. Casper founded a novel collaboration with the Uganda Cancer Institute to study infection related cancers and develop strategies to reduce the cancer burden in low- and middle-income countries. This collaboration has resulted in the training of local healthcare workers and researchers, the development of new treatment strategies for the most common pediatric and adult cancers, and more than two dozen research projects. Dr. Casper’s scientific achievements have been published in more than 60 peer-reviewed publications and several books.

**Thomas Hawn, MD, PhD**

Thomas Hawn obtained his M.D. and Ph.D. degrees at Johns Hopkins University School of Medicine. He then moved to the University of Washington, where he trained in an Internal Medicine residency and then specialized further with a fellowship in Infectious Diseases. Dr. Hawn is currently an Associate Professor in the Division of Allergy and Infectious Diseases in the Department of Medicine at the University of Washington School of Medicine. His laboratory investigates molecular, cellular, and immunologic mechanisms of disease pathogenesis with an emphasis on genetic studies of the innate immune response. These studies include investigations of why individuals have variable susceptibility to tuberculosis and the BCG vaccine to prevent it. The overall goal is to understand why individuals have different susceptibility to infections and whether these insights can lead to novel treatment and vaccine strategies.

**Appendix 1: Discussion Board Questions**

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| Lecture 1 | Ruanne Barnabas “Integrating Health Economic Analyses into STI and HIV Research” What are examples of how economic analyses may be included in HIV and STI studies at the stages of study planning, data collection, and analysis? |
| Lecture 2 | Thomas Quinn “Biomedical Interventions in HIV Prevention” From what you have learned about HIV prevention efforts, what should be the main focus of translating research findings to routine practice? What are the major barriers? |
| Lecture 3 | Sevgi Aral “Social and Behavioral Aspects of STD/HIV Epidemiology and Prevention” From your experience, can you think of an STD/HIV prevention method that has not been successful due to social and behavioral-related implementation challenges? How did the program address these issues?  |
| Lecture 4 | Grace John-Stewart "Vertical Transmission of HIV"If a country decides to adopt Option B+, what hurdles need to be overcome? Is this the best approach for all sub-Saharan African countries? Why or why not?  |
| Lecture 5 | Jane Simoni "HIV and Mental Health"What did you learn from this presentation that surprised you? How would you rate knowledge and understanding of the importance of mental health in in HIV/AIDS care and prevention among your supervisors and peers? |
| Lecture 6 | Jared Baeten "Pre-Exposure Prophylaxis (PrEP) for HIV Prevention"When is it ethical to provide life-saving HIV drugs to a person who does not have HIV? Discuss some of the ethical dilemmas that may be faced by care providers in resource-limited settings when providing PrEP. |
| Lecture 7 | Martina Morris “Sexual Networks and the Epidemiology of HIV”After listening to this talk, what do you think is the relative importance of concurrency? Are you convinced its important or would you need more evidence? What else would you want to see? |
| Lecture 8 | Susan Graham “Men Who Have Sex with Men and the Global HIV Epidemic”Discuss the MSM epidemic in your country and comment on how it is being addressed by programs and research. Is the response adequate and appropriate? Do you see this changing over the next few years? How?  |
| Lecture 9 | Corey Casper "Malignancies in HIV"Were you aware of the cancer burden in low and middle income countries? Why do you think cancer is often called a “hidden epidemic” in Africa? |
| Lecture 10 | Thomas Hawn "HIV/TB Co-infections" Why has it been difficult to integrate TB and HIV care? What have been the major barriers to doing this in the Africa, the US and other parts of the world? In your opinion, is integration a good idea? |