

***Trichomonas vaginalis*, Reproductive Health, and a Minority Scientist's Experiences.**

Trichomonas vaginalis is an ancient protist responsible for the number one sexually transmitted infection (STI). Lack of immunity from disease permits repeat infections after drug treatment and elimination of the parasite. Although asymptomatic for women and men, this STI causes serious consequences to their health. Women will have adverse pregnancy outcomes, infertility, PID, increased infections by HPV and herpes, and cervical cancer. For men, a recent finding is the relationship between seropositivity and prostate cancer. Twenty-five percent to 30% of HIV seroconversions are directly related to trichomonosis. A recent recognition is that control of this STI is a means of reducing HIV transmission worldwide. Equally noteworthy is that the lack of a point-of-care (POC) diagnostic is a major reason why this STI has been ignored. Virulence factors of *T. vaginalis* that lead to persistence, a hallmark of this STI, are of interest. Our hypothesis is that trichomonad surface proteins are virulence factors preparatory for infection and pathogenesis. The identity of these proteins will facilitate development of interference strategies and/or diagnostics for POC treatment of patients. Four adhesins of *T. vaginalis* that mediate attachment to vaginal epithelial cells were characterized at the molecular level. One of the adhesins was the basis of a POC diagnostic invention commercialized by a start-up company; the diagnostic (OSOM) is now sold by Genzyme, Inc. The adhesins are members of a family of anchorless, surface-associated enzymes with functional diversity. These proteins are regulated at the transcriptional level by iron. Other members of this family are GAPDH, the receptor for fibronectin and α -enolase, the receptor for plasminogen. Basic research as an *Ivory Tower Dweller* has been augmented by being an *Intellectual Entrepreneur*, a philosophy that believes faculty can be entrepreneurial to help solve our society's problems through their scholarship and research. This minority scientist's contributions to society, because the research was found meritorious by peers at the national level, have been amplified from invited activities, some of which include government agency panels and councils, such as NRC Institute of Medicine and Boards of Scientific Counselors and Advisory Councils of NIH institutes. A minority scientist's engagement in higher education issues of communities of color becomes the rule, not the exception. Invitations to speak on these issues at the President's National Science Board, the White House Office of Science and Technology Policy, and the White House "One Nation" on Race and Health Disparities, to name a few, are transformative experiences. A minority scientist will also have poignant moments. You will grow up in science with no role models at the highest levels, knowing you are the only minority in a department and institution, in panels and councils, and in international settings. Often your perspective will have no support from colleagues. You will have to repress passion for issues in situations where such emotion may be viewed as anger. In the totality of the experience, from basic research discoveries to improve health, from participation at all levels in policy forums that deal with education, health disparities, and bioweapons, and from walking on the sidewalks that Einstein, Mozart, Picasso, and Cesar Chavez and Martin Luther King, Jr. have walked, *a minority scientist can have an inspired academic life.*