CDAAR Executive Committee member, Lynn E. Taylor, MD presented interesting data at the American Association for the Study of Liver Disease annual meeting in October 2009. Dr. Taylor’s research highlights that incident hepatitis C virus (HCV) is seen in both HIV-infected men who inject drugs and men who do not report injection drug use (IDU) history. The study evaluated HCV incidence from 1996-2008 among male participants of the AIDS Clinical Trial Group Longitudinal Linked Randomized Trials cohort, a long-term study of HIV-infected persons randomized into selected U.S.-based clinical trials. Collaborators included Marisa Holubar, Kunling Wu, Ronald Bosch, Kenneth Mayer and Karen Tashima.

Associations were evaluated with self-reported IDU, time-varying CD4+ cell count and serum HIV RNA using multivariate Poisson regression. Sexual and other non-IDU risk factor data were not available. 1,830 men had an initial negative and at least 1 subsequent HCV antibody test, contributing >7,000 person-years. At the time of initial negative HCV antibody, 94% were on HAART and 6% reported current or prior IDU. Thirty-six seroconverted, with overall incidence of 0.51 per 100 person-years (95% CI = 0.36-0.70). 75% of the participants seroconverted in the absence of IDU. Dr. Taylor’s research demonstrates that incident HCV infection is occurring in an older, well-educated U.S. HIV-infected male population despite engagement in care with HAART, primarily through non-parenteral means. In view of the accumulating evidence of HCV transmission through mucosal traumatic sex among HIV-infected men who have sex with men, sexual transmission is likely to be responsible for incident HCV cases. HCV may be under-diagnosed because upon exposure to HCV most individuals are asymptomatic, or symptoms are mild and non-specific. However diagnosis provides opportunity for preventive intervention and treatment. HIV/HCV coinfected individuals may have the most to lose with later diagnosis and the most to gain from earlier therapy and preventive intervention. These results suggest that at-risk HIV-infected persons should have access to ongoing HCV surveillance. (Continues on page 4.)
First advisory board meetings held

In March, the Community Advisory Board (CAB) comprised of former drug users from the Boston area shared personal and peer experiences and insight on current issues in drug user populations. Topics for further research were identified including prevention, mental health/depression, food access, and physical activity. CDAAR intends to hold a CAB meeting semiannually.

The Scientific Advisory Board (SAB) is comprised of 5 scientists with expertise in drug use research and who are active within the drug use community from across the United States, as well as internationally. The SAB met in November 2009 and reviewed the previous 6 years of CDAAR’s progress, provided feedback, and identified areas for future focus. SAB meetings are held annually.

CDAAR supports multiple projects

The TNC center-wide study evaluating drug users from various sites has been discontinued. However, there remains an abundance of collected data available for further analysis. The Hepatitis and Liver Function Core (Core G) is currently analyzing TNC samples for hepatitis C and vitamin D levels. Any interests in utilizing TNC data for analysis should be directed to Kimberly.Dong@tufts.edu.

The Nutrition and Metabolism Core (Core D) has funded several exciting projects in the last year. Dr. Swetal Patel, an ID fellow at Tufts Medical Center, is analyzing TNC patient data to assess the prevalence of mannose-binding lectin (MBL) deficiency based on HIV status. MBL is a calcium dependent serum protein that aids in the phagocytosis of pathogens. MBL deficiency has therefore been associated with increased risk, severity, and frequency of infections. Stay tuned for the results!

CDAAR assisted Todd Brown, MD, PhD of Johns Hopkins by analyzing AIDS Link to Intravenous Experience (ALIVE) cohort samples for Vitamin D and PTH levels. The additional analysis was requested for publication in the Journal of Bone and Mineral Research. The paper, “Prevalence of Low Bone Mineral Density in Low-Income Inner-City Population”, has been accepted and will be published soon.

Another interesting project funded by CDAAR’s Core D is that of Alexandra Mangili, MD, MPH of Tufts University, entitled, “Genetics of Smoking Behavior and Drug Addiction in HIV-Infected Patients with Cardiovascular and Metabolic Abnormalities”. Dr. Mangili will be analyzing genetic polymorphisms and variants as related to smoking behavior, nicotine dependence, drug addiction, and associated cardiovascular measures and metabolic parameters in a well-described cohort of HIV-infected patients.

Try our ACASI Demo!

A brief, interactive ACASI (Audio Computer-Assisted Self-Interview) Demo has been created to demonstrate the custom built CDAAR ACASI questionnaire systems for research. This system allows participants to privately answer sensitive questions via a laptop or netbook computer and has the potential for increased accuracy over traditional face to face interviewing. The ACASI system has been developed to offer a variety of question types including yes/no, multiple choice, scaled questions, and open ended numeric or text questions. In addition, text and audio can be provided in multiple languages including but not limited to English, Spanish, Chinese, Vietnamese, Telugu, and Hindi.

The ACASI Demo is available on the CDAAR website: http://acasi.tufts.edu Try it out!

Now accepting 2011 applications for CDAAR Developmental Awards

Both junior and established drug use researchers are encouraged to apply for Developmental Awards which may provide up to $30,000 in funding. Junior faculty can use these funds to initiate research programs on nutrition and metabolic abnormalities among drug users with the benefit of senior mentor oversight and NIH grant submission support. Established drug use researchers can use this award to incorporate new nutrition or metabolism-related studies to their existing projects. CDAAR hopes funding will foster new collaborations and potentially lead to new research endeavors, including new grants, publications, laboratory techniques, and/or research methodology.

For application specifics visit:

http://cdaar.tufts.edu/funding-opportunities.htm
Multiple CDAAR abstracts accepted to the AIDS 2010 and ASAM conferences

Dr. Alice M. Tang presented her research entitled “Food Insecurity and Symptoms of Depression in a Cohort of HIV-positive and HIV-negative Drug Users in South India” at the XVIII International AIDS Conference (AIDS 2010) in Vienna. This study challenged the current belief that HIV causes major depressive illness and demonstrated that in resource-poor areas, depression may be a normal response to a stressful environment. Correlates of depressive symptoms were analyzed among 201 male clients in a drug treatment center in Chennai, India. When compared to food secure, both moderate food insecurity and severe food insecurity were significantly associated with increased depressive symptomatology. Therefore, interventions targeting food access, rather than mental health treatment, may be more effective in decreasing depression prevalence in this and similar populations.

Michael Jordan, MD, MPH from Tufts Medical Center presented his research at AIDS 2010 assessing correlates of adherence to ART in a cohort of 100 male drug users (DUs) receiving ART at a large urban clinic in Hanoi, Vietnam. Variables assessed included sociodemographics, substance use history, and clinical symptoms. Men reporting DU within 6-months prior to their visit and men reporting living alone were more likely to be non-adherent (odds ratio (OR)=2.1, 95% CI=1.4 - 3.2; and OR=3.2, 95% CI=1.0 -10.4, respectively). For each additional year on ART, subjects were more likely to have positive weight changes.

Dr. Alice Tang also developed a poster for AIDS 2010 on her research addressing predictors of weight gain in a cohort of 100 HIV-positive IDUs initiating ART therapy in Hanoi, Vietnam. Using a repeated measures regression model, clinical and nutritional correlates were identified for weight change over 2 consecutive 6-month intervals (INT1: pre-HAART to 6 months post-HAART, and INT2: 6 to 12 months post-HAART). Mean weight gain was 3.1±4.8 kg in INT1 and 0.9±3.1 kg in INT2. In INT1, those who were sicker at baseline (CD4<200 cells/µl, presence of nausea), reported Excellent/Very Good adherence to ART medications, and/or used liquid supplements (e.g. Ensure or sweetened condensed milk) were more likely to have positive weight changes.

Moderate/Heavy alcohol use was significantly associated with negative weight changes in INT1. In INT2, the only significant predictor was having a CD4<200 cells/µl, which was significantly associated with negative weight change. These results highlight several potential areas for developing interventions in this population to promote weight gain immediately after initiating ART.

Dr. Tang’s abstract entitled “Unhealthy eating patterns in current and former drug abusers living in 3 U.S. Cities” was accepted at the 41st Annual American Society of Addiction Medicine (ASAM) Conference. Dr. Tang sought to determine differences in unhealthy eating patterns among an ethnically diverse cohort of 520 drug users living in Baltimore, Boston, and Providence. Dietary recalls were reviewed to classify participants into various unhealthy eating patterns, including drinking caffeinated or calorically dense beverages throughout the day (68%), excessive late night eating (34%), skipping breakfast (23%), excessive snacking throughout the day (22%), eating ≤2 meals/day (19%), and eating the same food(s) at each meal (7%). Current drug use was associated with a lower likelihood of eating ≤2 meals/day, while insecure housing was associated with a higher likelihood. Participants with high school level education or lower were more likely to eat the same foods at each meal, potentially indicating limited food supply. Current drug users were more likely to drink high calorie or caffeinated drinks. Women and the unemployed were more likely to snack excessively.

Dr. Alexandra Mangili’s abstract “Metabolic and Cardiac Risk Factors in HIV-infected Drug Users” was also accepted at the ASAM Conference. Dr. Mangili’s research evaluated the metabolic status, inflammatory measures, and surrogate markers of atherosclerosis in a large, well-described longitudinal cohort of HIV-infected adults and compared drug users and non-drug users. Drug users were more likely to be younger, smokers, and more recently HIV-infected and started on HAART than non-drug users. CRP and homocysteine were significantly higher in drug users compared to non-drug users but there was no appreciable difference in cIMT. This evaluation showed that inflammation and lifestyle factors such as smoking in drug users pose additional risk for adverse medical outcomes but surprisingly, HIV-infected drug users do not appear to have more severe atherosclerotic disease than HIV-infected non-drug users.

CDAAR members present at HIV/drug use conference in Thailand

Dr. Alice Tang and Kim Dong, MS, RD of Tufts University attended the 2nd Asian Consultation on the Prevention of HIV related to Drug Use conference in Bangkok, Thailand in January. The TNC representatives presented a discussion on “Nutrition Assessment and Nutrition Interventions in Drug Users”. The conference is organized by Response Beyond Borders (RBB), an organization that fosters collaboration across Asian borders over issues of poverty, drug use, and HIV/AIDS. RBB specifically supports effective, sustainable policy development that is sensitive to the needs and rights of affected populations. Visit www.responsebeyondborders.com to learn more.
There are many benefits for CDAAR Members:

- Apply for developmental award funds and/or support fellows in an application for developmental award funds;
- Use core services and receive training;
- Consult with CDAAR Core Directors about projects, research techniques and methodology;
- Participate in professional development and educational activities.

Although questions remain regarding biology, precise modes of transmission and predictors of incident HCV, Dr. Taylor endorses a more aggressive approach to HCV surveillance amongst HIV-infected individuals as per the European AIDS Clinical Society’s recent Coinfection Guidelines. Specific recommendations include serological testing for HCV on initial physician visit and then annually thereafter, plus HCV RNA for patients with risk factors (e.g., IDU, mucosal traumatic sex) who have unexplained increase in transaminases and negative HCV antibody.

A little about the Doctor behind the research

Dr. Lynn Taylor has extensive expertise in HIV and viral hepatitis coinfection, and HCV treatment for persons with HIV and co-existing psychiatric and substance use disorders. She is an invaluable resource for the CDAAR Hepatitis and Liver Function Core. Dr. Taylor’s initial interests in HIV, viral hepatitis, and substance use began with academic and work experiences in counseling and public health in urban communities prior to medical school. Experiences with patient education and advocacy surrounding contraception, sexually transmitted infection, domestic violence, rape and child abuse piqued an interest in primary care and prevention. She became engrossed in the field of HIV/AIDS and took a strong interest in viruses acquired through drug injection. She worked with Dr. Josiah Rich’s RI AIDS Prevention (RAP) Study, the nation’s first physician prescription syringe program for people who injected heroin, which inspired her to pursue a research career to improve access to resources and quality of care for persons with addiction and related infectious complications.

As far as Dr. Taylor is concerned, patient care is paramount, and she views herself first as a clinician caring for individuals living with HIV/AIDS. It is fitting then that Dr. Taylor is the Founder and Director of the HIV/Viral Hepatitis Coinfection Program at The Miriam Hospital that provides care to HIV/HCV and HIV/HBV coinfected persons. The program was initiated in 2001 and has developed into the most rewarding aspect of Dr. Taylor’s career, caring for liver disease in patients living with HIV. As HCV tends to be defined by disenfranchised populations, underinsurance, and lack of resources, Dr. Taylor is passionate about initiating viral hepatitis/HIV programs in the context of limited resources and inspiring others to sustain and further develop these programs. In 2006, she developed the program “Make it HAPPEN in Rhode Island: Hepatitis Awareness, Prevention, Policy and Education Network,” establishing Rhode Island’s first free HCV testing, counseling, referral and hepatitis A/B vaccination sites. In recognition of her help, support and commitment to HIV/AIDS work in Rhode Island, Dr. Taylor was awarded the Red Ribbon Community Service Award and the Dr. Alvan Fisher Medical Service Award in 2008.

Dr. Taylor balances her passion for clinical care and research with a passion for her family. Outside of her busy career she spends as much time as possible with her husband, metal artist Boris Bally, and her children ages 8 and 10. She credits Tufts Medical Center HIV and viral hepatitis expert Barbara McGovern, M.D. as an irreplaceable mentor who encouraged her and helps her to balance career and family. In an effort to pass on the invaluable knowledge and support Dr. McGovern provided, Dr. Taylor Co-Founded and Co-Directs, Mom-DocFamily at Brown Medical School which provides mentorship and support for women physicians facing the challenges and rewards of combining a medical career with motherhood. Visit the MomDoc Family website for more information:http://biomed.brown.edu/owims/MomDocFamilyUpcoming Liver Symposium

Save the date for a Liver Symposium on Wednesday, April 27, 2011 in Providence, RI. This symposium is currently in the planning stages. Any suggestions concerning guest speakers and topics of interest can be emailed to Kimberly.Dong@tufts.edu.