THE ARI IN MOTION

World AIDS Day Edition

AIDS RESEARCH INSTITUTE
UNIVERSITY OF CALIFORNIA, SAN DIEGO

The UC San Diego HIV/AIDS Report
Volume 2 | Summer-Fall 2013
Message from the Director

As we come to the end of 2013, we look back at the year with gratitude. It has been a very productive year for ARI investigators, and we look forward with great hope. The UC San Diego Center for AIDS Research, established in 1994, has been renewed for 5 more years by the National Institutes of Health. The Martin Delaney Collaboratory Towards an HIV Cure is making steady progress in investigating how we can eradicate HIV. The Lead the Way program is working to expand their very successful program to provide critical testing and linkage to treatment in San Diego County, and the HIV Neurobehavioral Research Program continues to explore and understand the neurological impact of HIV infection.

In this issue of the ARI In Motion, we continue our mission to share with you the breadth of the work done by ARI investigators. One of our most important tasks is to train the next generation of HIV researchers. Examples of our dynamic mentoring program (page 3) show the depth of these efforts, and how our researchers are “paying it forward”. Our laboratories are world-renowned, and in need of new equipment to maintain their leading roles in HIV research. Tools of the Trade (page 9) takes you behind the scenes and into the laboratory, describing several critical pieces of equipment provided through philanthropic donations. The generosity of our donors truly makes our work possible. Our training and research programs are global in impact and reach. The innovative MEPI program (page 13), led by Drs. Robert Schooley and Emilia Noormahomed, shows how collaboration can reach across buildings and also across continents. The profile of Prizila Davila (page 21) is a great example of an individual’s courage, as well as the impact of the UC San Diego Mother, Child and Adolescent Program in changing young lives.

We are grateful for the work of our investigators, the support of the community, and for the opportunity to have an impact. We wish you and your families the very best as we end 2013 and enter into 2014.

Best regards,

Douglas Richman, MD
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A primary focus of the UC San Diego AIDS Research Institute and Center for AIDS Research is our mentoring program. Advances in AIDS research are happening in leaps and bounds, and it is imperative that the next generation of scientists be inspired and trained. We see this mentoring happening on a daily basis, and wanted to share a few examples.

Having the chance to interview four “generations” of investigators is a very exciting thing and truly proves the power of collaboration. We have a unique opportunity to see how this process perpetuates the growth of both mentor and mentee!

Meeting of the minds- four generations of researchers. From left to right: Dr. Davey Smith, CFAR Co-director; Jasmine Chau, UCSD undergraduate student, Dr. Douglas Richman, ARI and CFAR Director and Dr. Melissa Laird, Postdoctoral Fellow.
Dr. Douglas Richman has been at the helm of some of the seminal findings that define how we treat and continue to research HIV/AIDS on a global level, yet his eye has long been on the future of research. Recognizing the need to foster growth in new investigators, Richman keeps an eye out for talented newcomers. In 2000, he had the opportunity to meet with Dr. Davey Smith, who was interviewing for his fellowship in Infectious Diseases. While Smith may have been a novice in the lab, Richman remembers the potential Smith demonstrated while having spent a month with him on the Infectious disease service when he was a first year clinical fellow with Richman, the attending physician.

“What he brought with him was intelligence, enthusiasm and a great work ethic. I can teach study design and experimental techniques, but what Davey brought with him is what makes an outstanding physician and an outstanding scientist.” remembers Richman.

Davey chose HIV as his field of study for reasons fueled by both personal experiences and scientific fascination. His own social circles had been impacted by HIV and, in his words, “I wanted to make a difference... I want to come to work everyday and try to cure HIV.”

With this goal, Davey Smith has continued to live up to and beyond the potential that Douglas Richman saw in him. One of the stimulating aspects of science is how the field changes over time, sometimes quite rapidly. In the year 2000, when Smith told Richman that he wanted to cure HIV, there was little optimism that a cure would be found in his lifetime. Now Richman is one of the leaders in HIV eradication, and a founding member of the Martin Delaney Cure Collaboratory. Richman states, “In the last few years the primary focus of my research has been working on the challenging problem of eradicating infection altogether so that treatment will no longer be necessary.” Smith concurs, simply saying, “We can see that this once “impossible” thing is now possible, and maybe in our lifetime.”

**The Faces of HIV/AIDS Research**

*These are just a few of the dedicated folks you might encounter doing research in the Lab:*

- Josue Perez Santiago, PhD
  - Postdoctoral Fellow
  - Davey Smith Lab

- Mary Lewinski, MD, PhD
  - Postdoctoral Fellow
  - John Guatelli Lab

- Sara Gianella, MD
  - Postdoctoral Fellow
  - Davey Smith Lab

- Gabriel Wagner, MD
  - Postdoctoral Fellow
  - Davey Smith Lab

- John Guatelli, MD
  - Primary Investigator

- Rajendra Singh, PhD
  - Postdoctoral Fellow
  - John Guatelli Lab

- Celsa Spina, PhD
  - Primary Investigator

- Tyler Day
  - Undergraduate at UC San Diego
  - Davey Smith Lab
Dr. Melissa Laird took the “long way” to the Richman Lab, but after a few years adventuring in France, she was ready to bring her research stateside again. During her PhD work in 2005, Laird first met Dr. Richman, having studied his work regarding neutralization antibody development and escape, and was encouraged by her thesis advisor to seek a postdoctoral position in the lab in 2008. France called, however, and it would be a few years before she returned and officially joined the lab in 2012.

At this point, Davey Smith had assumed much of the neutralizing antibody work in the lab, and her integration into his group seemed a perfect fit. Smith agreed that her intelligence, energy and focus would be a great fit with the existing lab members.

Dr. Smith notes, “Melissa has integrated well within the group to be a natural leader of projects. She has the creativity and work ethic to develop and implement her ideas.”

Laird also appreciates the environment in which she is encouraged to thrive as an investigator. She remarked, “Having Doug and Davey as co-mentors is an incredibly lucky and unique experience. They each have a distinctive style, but I have been struck by their shared commitment and dedication to the success of their colleagues and mentees, both personally and professionally. I have never felt so supported as I do in this group - as a scientist and as a person.”

Richman and Smith’s instincts about Laird have been proven correct, as she has already added to the methods fellow researchers now use to study the virus. Per Smith, “One specific example is how she has developed and validated a new method for deep sequencing the entire HIV envelope from viral populations circulating in people’s blood. This is a significant tool in our ability to study how HIV adapts to the host’s antibody response. Understanding how this antibody response develops and how HIV responds to it may help us in designing an HIV vaccine.”
Though newer to the Lab, because of her postdoctoral experience in France, Dr. Laird knew that expectations were high. She notes, “With a few years of postdoctoral experience under my belt prior to joining the CFAR, Davey (Smith) has really pushed me from day one to take on a lot of responsibility in the lab. I trust Davey to gauge what I can handle and I may achieve with the right amount of nudging. Giving me the opportunity to mentor Jasmine has been one of these situations.”

Jasmine Chau was initially matched with Dr. Smith as a mentor when she first started attending UCSD through a program called the Regents Scholar Research Initiative. Impressed with Jasmine’s work on the first project that he oversaw, Smith encouraged her to choose a new project and introduced her to Dr. Laird.

Jasmine recalls her first impression. “When I met Melissa, I thought that she was one of the most enthusiastic people I had ever met. Her excitement and exuberance about everything she does is contagious, and she genuinely inspires me to find that same passion. Through her, I have forged bonds with the other lab members and I really feel like a part of the team.”

The unique opportunity to do lab research as an undergraduate is something that Jasmine greatly appreciates, and Laird also sees great benefit. In regards to her own development, she observes, “Working as a mentor with Jasmine is a constant learning experience, and one that is making me a better scientist each day. Little things, such as learning to explain the details of my project in plain English, provide me with skills (and a new point of view) that will be critical for my success in writing grants and teaching others in the future. Teaching particular methods and theory reinforces them in my mind, which is always needed. Moreover, sharing my excitement for my project and our research, particularly in HIV pathogenesis, provides a great reminder that I love my job!”

**Dr. Melissa Laird and Ms. Jasmine Chau**

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**CFAR Mentor:**
**Dr. John Guatelli, MD**
**Professor of Medicine**

The Guatelli Laboratory research interests surround the function of several genes of human immunodeficiency virus (HIV-1): nef, vpu, and env; and how these genes and sequences within them affect the production and infectivity of viral particles (virions). Nef is a non-enzymatic viral protein that mediates interactions with cellular proteins that coat the cytoplasmic face of membranes involved in vesicular transport. Via these interactions, Nef increases the intrinsic infectivity of virions, and it contributes to viral evasion of the immune system by altering the trafficking of class I and class II MHC. Vpu is a transmembrane protein that enables the efficient release of virions from cells. It does this by counteracting a newly discovered component of the host’s innate immune response: BST-2/ tethering. BST-2 is an interferon-inducible protein that holds newly made virions to the cell surface, preventing their release and spread. Vpu counteracts this effect by removing BST-2 from the cell surface via endolysosomal trafficking. Env is a transmembrane protein that binds cellular receptors to mediate entry of HIV-1 virions into target cells; it contains sequences in its cytoplasmic domain that interact with vesicle coat proteins. These interests are united by the theme of viral interactions with cellular, endosomal membranes and their associated proteins and by theme of viral evasion of innate and adaptive immunity.

**Currently Mentoring:**
Maryan Rizk
Andrey Tokarev
Mary Lewinski
Charlotte Stoneham
Rajendra Singh
San Diegans coming together to stop HIV/AIDS

Help us reach our $10,000 goal!

HIV will never cure itself...

At the UC San Diego AIDS Research Institute, we are all about one thing: fighting HIV & AIDS locally, nationally and globally. Our researchers are recognized worldwide as setting the standard for testing, treatment and prevention strategies. UC San Diego researchers and clinicians include many of the most dedicated minds in the battle against HIV.

We ask you to stand with them!

Our 100² donors are individuals who are dedicated to pledging $100 per year toward research that may one day lead to the end of HIV & AIDS. Novel approaches are being developed and implemented by UC San Diego researchers to reduce the risk of transmission and protect our population. With easy automatic once-yearly or quarterly deductions, you can be a part of the solution. To join us in this effort, please contact Ian Morton at imorton@ucsd.edu or 858-822-2321.

Your donation can change a life, or change the world!

Let’s stop HIV in our lifetime.

http://ari.ucsd.edu
“HIV will never cure itself...”™

...but with your help, we can put an end to this disease. Since the 1980’s, HIV/AIDS research at UC San Diego has been at the forefront of discoveries that shape treatment standards on a global scale. Ranked second only to Harvard as one of the highest impact institutions in HIV/AIDS research (Science 321:521, 2008), the UC San Diego AIDS Research Institute (ARI) and its affiliated programs are profoundly changing the study, treatment and prevention of HIV throughout the world. In the same Science article, ARI Director Dr. Douglas Richman was identified as the world’s most frequently cited HIV/AIDS author.

“Companies for a Cure” is a San Diego County fundraising initiative that gives local businesses an affordable way to support research for a goal that we all can get behind: an end to HIV/AIDS. This is a perfect time to support your “home team” researchers and investigators with a $500, tax deductible yearly commitment to the ARI Fund—a fund that supports both our scientists and clinicians at UCSD and community initiatives and programs that support people infected and affected by HIV/AIDS. For ease and convenience, this can be auto-deducted on an annual or quarterly basis.

For more information and to become a business that supports HIV/AIDS Research, please contact Ian Morton, Fundraising Coordinator for the AIDS Research Institute at imorton@ucsd.edu or 858-822-2321 or click use the enclosed donation form. Want to use our online donation page? Go to http://ari.ucsd.edu/donation and follow the prompts for either an annual $500 donation or a quarterly $125 donation.

Our goal is to find 50 San Diego businesses that understand the importance of supporting HIV/AIDS research. Upon receiving your pledge, we will include your company logo on the donor page of the AIDS Research Institute website, list your company in the next edition of The ARI In Motion and send you two vinyl decals for your business doors or windows to show your support for the cure! Because of your commitment, the AIDS Research Institute will be able to continue to lead efforts to find a cure. Thanks for your support!

Ian D. Morton, Outreach Liaison & Fundraising Coordinator, The AIDS Research Institute at UC San Diego

9500 Gilman Drive #0716, La Jolla, CA 92037-0716 | Ph. 858-822-2321 | Fax 858-822-1274
HIV/AIDS research has been vital to each step forward in the treatment, prevention and testing of this disease. In the more than thirty years since the discovery of HIV, we have seen amazing advances, many due to the efforts of UC San Diego researchers. The ground-breaking work done by the UC San Diego AIDS Research Institute (ARI) clinicians and investigators would not have been possible without up-to-date equipment in our labs and clinics.

In 2007, the ARI had the wonderful good fortune of beginning a relationship with the James B. Pendleton Charitable Trust, which supports equipment needed for labs and clinics specializing in HIV study and treatment. To date, the Trust has funded nearly $1 million in equipment for our laboratories. Each item has had a significant impact on the work of our researchers; leading to new discoveries that have had a global reach. We would like to take you on a journey into the world of HIV/AIDS basic science research and discuss the importance of some of the instruments provided by the James B. Pendleton Charitable Trust.

A happy discussion! In November, 2013, ARI investigators had the opportunity to discuss the impact of equipment provided by the James B. Pendleton Charitable Trust on their research with Dayle Iverson, CEO. From left to right: Dr. Celsa Spina (seated), Ms. Kimberly Schafer (standing), Ms. Dayle Iverson, Dr. Douglas Richman, Dr. Davey Smith and Dr. David Looney.
Bio-Rad QX100 Droplet Digital PCR

In the quest to determine how successful HIV has been in spreading throughout an individual’s bloodstream, it is necessary to have accurate measures of the virus’ DNA. The development of highly effective medications has been successful in halting the virus from actively multiplying within CD4 cells, going so far as to render the viral load “undetectable”. This, however, is not the end of treatment and it takes an instrument as sensitive as the Bio-Rad QX100 Droplet Digital PCR to measure the latent virus.

Drs. Douglas Richman and Matt Strain are currently focusing their investigation on the identification and eradication of the reservoir of latent virus still residing in the body, even when less sensitive tests are unable to pick up the presence of the virus. They, along with their colleagues, have developed an assay to utilize the Droplet Digital PCR to do exactly that.

Abbott m200 RT-PCR

One marker of how effective a person’s HIV treatment has been is the measurement of the amount of virus in their blood. “Viral load” is one of the basic tests given regularly to HIV+ individuals in the United States who are receiving treatment. This test assists the person’s health care providers in determining whether or not their medication regimen is working.

Not all countries have access to this equipment, including Mozambique. Through the generosity of the James B. Pendleton Charitable Trust, UC San Diego investigators collaborating with the Universidade Eduardo Mondlane through the Medical Education Partnership Initiative (MEPI) were able to provide the country’s first instrument with the capacity to measure HIV viral load. This equipment is now being calibrated to also detect malaria and tuberculosis, two primary co-infections found in this region.
Ion Torrent Sequencer

Because HIV has a DNA-based replication format, it is of extreme importance to fully understand the structure of the virus. This challenge becomes greater because of issues such as “antiviral resistance”, when the virus mutates to become resistant to a particular medication. “Deep sequencing”, a process by which we can identify these mutations in viral populations, is key to better understanding each person’s virus and treatment options.

Ion torrent sequencing offers a cost-effective method to make this research tool available to investigators within UC San Diego and beyond. It is worth noting that DNA-based vaccine studies are of significant interest, and this sequencing is a crucial component of vaccine research. With costs that are a fraction of other deep sequencing methods and superior output, this instrument serves researchers well in the discovery of more effective treatments for HIV.

FACS Aria II Flow Cytometer

Flow cytometry is a laser-based technology used to count and sort cells, detect specific biomarkers and engineer proteins. This process suspends cells in fluid and, through electronic detection, can analyze the physical and chemical characteristics of thousands of particles per second. Released in 2007, the FACS Aria’s increased capacity for assessment has had a significant impact on research, especially when limited samples are available. The ability to extract more data from samples such as biopsies (which are much smaller and more difficult to collect than blood) is a notable positive example of the benefit of this machine.

The Flow Cytometry Core Lab has benefited research in disease states beyond HIV. The process of working with investigators in other fields often results in brainstorming and new approaches. Sometimes, HIV investigators get new ideas
from assisting other researchers and this leads to multidisciplinary collaboration. In this way, the FACS Aria not only provides analysis to individuals, it also helps to start new ideas that lead to new research ideas.

In the quest for continued high quality HIV treatments and, one day, the cure, it will take a balanced blend of creative scientific thinking and the tools to bring investigators’ ideas to fruition. Having support from organizations like the James B. Pendleton Trust has truly revolutionized our domestic and international laboratories and allowed the kind of scientific exchange the AIDS Research Institute dedicated to fostering.

**Definition of some of the terms used in this article:**

**Assay:** a quantitative or qualitative test of a substance to determine its components; frequently used to test for the presence or concentration of infectious agents or antibodies.

**Biomarker:** a measurable characteristic that reflects the severity or presence of some disease state.

**CD4:** the type of immune cell that is used by HIV to replicate itself and spread through the body. These also serve as “lookout cells” for the immune system which, when destroyed by the HIV replication process, impact the ability of the body to fight off other viruses and infections.

**Latent Virus:** this refers to virus that is in a “resting state” and has not begun replicating itself in the CD4 cell. Because current HIV medications are only designed to stop HIV during the replication process, as long as this reservoir of latent HIV remains, a person cannot be fully “cured” of the disease.

**Viral Load:** a measurement of the amount of HIV that can be found in a person’s blood. While HIV cannot be cured, having an “undetectable” viral load is the current goal of treatment. Reaching this point both protects the HIV+ individual’s immune system and lowers the risk of transmission by 97%, when combined with additional protective measures.
In 2007, UC San Diego entered into partnership with Mozambique’s flagship medical school, Universidade Eduardo Mondlane (UEM) to increase the capacity of UEM’s Medical Education program. This opportunity for scientific exchange and collaboration fit perfectly with the AIDS Research Institute’s goal to bolster research on a global scale, and we were thrilled that Dr. Robert Schooley, Professor of medicine and chief of UCSD’s Division of Infectious Diseases, initiated this program with his colleagues in Maputo, receiving a grant to fund HIV/AIDS training and projects in Mozambique. In 2010, the partnership received $12.5 million in funding from the Medical Education Partnership Initiative (MEPI) collaboration between the Office of the Global AIDS Coordinator, the National Institutes of Health (NIH), and the Health Resources and Services Administration (HRSA).

Mozambique is a country severely impacted by HIV/AIDS, with challenges stemming from lack of resources, low literacy rates and returning refugees after the ending of a civil war in 1992. Additional epidemics, such as tuberculosis and malaria, as well as seasonal cholera outbreaks only exacerbate the spread of HIV. Between 2000 and 2010, UNAIDS studies show between 100-200,000 new infections each year, with less than 50% of the HIV+ population having access to antiretroviral therapy treatment. Additionally, it is estimated that there are only 3 physicians per 100,000 citizens, making access to healthcare nearly impossible.
This partnership has impacted the overall access to quality healthcare through synergistic mentoring including a four week rotation available for second and third year residents at the “partner institution”. To date, over 70 UC San Diego internal medicine residents have completed the Maputo rotation and over 20 Mozambican internal medicine residents have completed rotations at UC San Diego. This opportunity to experience and solve the inherent challenges to patient care in both countries makes for an enriched experience for the residents.

The benefit of partnership is inherent on all levels, with this sense of collaboration taking place with UEM’s Dr. Emilia Virginia Noormahomed, the primary investigator on the MEPI project. She envisions the infrastructure and tools available to increase access to training through telemedicine and the eventual raising of Mozambique’s standard of healthcare. Dr. Noormahomed is all too aware of the barriers to clinical and research careers in her country, but sees great hope in this partnership.

In her words, “The national director of the hospitals of Mozambique, the Minister of Health, knows the impact that MEPI is having on the internal medicine department. When we improve the teaching activities, we improve the health care to patients.”

Dr. Robert T. Schooley began his research career studying the immunopathogenesis of herpesvirus infections in immunocompromised patients but shifted his focus to AIDS in 1981 when the first cases of this syndrome began to appear in Boston. His research group was among the first to delineate the humoral and cellular immune responses to HIV infection. Over the next 15 years he became increasingly involved in the discovery and development of antiretroviral chemotherapeutic agents including reverse transcriptase inhibitors, protease inhibitors and entry inhibitors. He was recruited to the University of Colorado Health Sciences Center in 1990 to serve as Head of the Division of Infectious Diseases. While at Colorado he was elected to serve as Chair of the NIAID’s AIDS Clinical Trials Group (ACTG) which he headed from 1995 – 2002. During his tenure as Group Chair the ACTG expanded to include research sites in Latin America, the Caribbean, South Asia and Africa and is now the largest and most productive multinational clinical and translational research organization focusing on the pathogenesis and therapy of HIV and its complications.

He was recruited to the University of California, San Diego in 2005 where he now serves as Head of the Division of Infectious Diseases. His relocation to UCSD was stimulated by the breadth and depth of the science at UCSD, the opportunity to shift his research focus to global health and to develop a multidisciplinary HCV research program. His current research interests include HIV and HCV pathogenesis and therapy and infections that cause morbidity and mortality in resource limited settings.
ARI Sponsors and Donors

The UC San Diego AIDS Research Institute is supported entirely through contributions. Our sponsors and donors support our ongoing activities, including:

- We promote the exchange of scientific and clinical knowledge among our researchers and the San Diego community.
- We help our scientists raise funds to purchase essential equipment and supplies.
- We publish newsletters, resource guides and sponsor educational seminars.

We would like to thank some of the foundations and companies that have generously supported the work of the AIDS Research Institute in 2013:

The James B. Pendleton Charitable Trust
The Campbell Foundation
The McCarthy Family Foundation
The Human Dignity Foundation
Sempra Employee Giving Network
Janssen Therapeutics
The Charles and Mildred Schnurmacher Foundation
San Diego LGBT Pride
AT&T Foundation
Yes! I want to support the research, seminars and scientific programs of the UC San Diego AIDS Research Institute, a non-profit 501(c)(3) organization, Tax ID 95-2872494.

100² Pledge – I am committed to fighting HIV/AIDS with my personal yearly pledge of $100 to the ARI Fund. Please choose one payment option:

☐ Once yearly $100 donation (to be renewed the same date each calendar year)
☐ Quarterly $25 payments (first payment to be processed immediately with subsequent payments every three months)

Companies for a Cure Pledge – I am committing my business to fighting HIV/AIDS with a yearly pledge of $500 to the ARI Fund. Please choose one payment option:

☐ Once yearly $500 donation (to be renewed the same date each calendar year)
☐ Quarterly $125 payments (first payment to be processed immediately with subsequent payments every three months)

Make a one time, yearly or quarterly donation:

☐ I have enclosed a check for $__________ as a tax-deductible donation.
☐ I would like to make a one-time donation of $__________ to be charged to my CC below.
☐ I would like to make a yearly donation of $__________ to be charged to my CC below.
☐ I would like to make a quarterly donation of $__________ to be charged to my CC below.
☐ Please call me at ____________________ and I will give you my credit card information.

Credit Card Type (circle one): Visa / MasterCard / American Express

CC#____________________________________________ Expiration Date___/______

Signature:_______________________________________ Date:___/___/______

Checks should be made out to “UC San Diego Foundation” and mailed to:

AIDS Research Institute | 9500 Gilman Drive #0716 | La Jolla, CA 92093

While 100% of this gift is tax deductible and will benefit UC San Diego; 94% of your support will be directed to the purpose specified herein, and 6% will be directed to assist the campus with necessary and critical administrative cost partially recovered from all sources of funds on the campus.
2013 Donor Recognition

Our individual and local business donors are very special to us. As we continue to work toward ending HIV and AIDS, we recognize our San Diego Allies:

Companies for a Cure Donors

With a special “Thank You” to Doug McPherson of the McPherson Ridgeway Group and spouse, Ron Comparato

100\(^2\) Donors

Dr. David Looney
Dr. Walter Schafer
Mr. Ian Morton
Mr. Paul Tagliaferri
Ms. Debra Kain
Mr. Jeffrey Alexander
Mr. Michael Friedberg
Community Partnerships:

CFAR Renewal

As the UC San Diego Center for AIDS Research (CFAR) enters into its 20th year, we were delighted to be chosen by National Institutes of Health (NIH) to receive continued funding. This highly competitive granting process identifies nineteen centers in the United States with high research productivity and effective collaborations. The participating institutions of the UC San Diego CFAR include: UC San Diego, the San Diego Veterans Affairs Healthcare System, The Salk Institute, The Scripps Research Institute and the La Jolla Institute for Allergy and Immunology and the Sanford Burnham Medical Research Institute.

Under the direction of Dr. Douglas Richman, the CFAR contains nine “Cores” which serve all aspects of research, from basic, clinical and translational scientific investigation to international partnerships. CFAR members have conducted clinical and laboratory research that led to important changes in the management of HIV infection and are currently pioneering research in eradication, vaccine development, dual infection, super-infection, and the effects of social networking on HIV transmission.

The UCSD Center for AIDS Research is living proof that outstanding science and training does not happen in a vacuum. Our CFAR is a collaborative effort of the UCSD School of Medicine, the directors and co-directors of our nine cores, the faculty and research staff at our five member institutions, and the thousands of patients and research subjects who have, since 1994, benefited from and contributed to our efforts to understand and treat HIV infection, with the mission of preventing infection and eradicating the human immunodeficiency virus in those already infected.

USCA 2014

UC San Diego AIDS Research Institute (ARI) is thrilled that, for the first time, the U.S. Conference on AIDS (USCA) is coming to San Diego! This was an action item that came out of the 2012 ARI-coordinated HIV Summit, so it is very gratifying to see it come to reality. UC San Diego staff members will be helping to coordinate the opening reception, youth lounge, abstracts review and marketing/media for the event. Additionally, we will be using this opportunity to highlight the amazing research and services taking place throughout our labs and programs.

A key theme for the event will be the unique challenges and opportunities presented by being so close to the most highly travelled land crossing border in the world (San Diego-Tijuana crossing at San Ysidro). With more than 300,000 people crossing this California-Mexico border daily, tracking HIV transmission patterns is an increasingly tricky challenge. Our Global Public Health department has multiple projects investigating the barriers to testing, linkage to care and effective risk reduction programs in this environment.
**Community Partnerships:**

**HIV University**

“HIV University”, a community education initiative coordinated by the UC San Diego AIDS Research Institute, has taken off in a big way in 2013. The building of the official website by the UC San Diego AntiViral Research Center’s Joshua Romero and programming that spans San Diego County has made education about HIV/AIDS transmission, prevention, and treatment available to both HIV+ individuals and new employees in the field. HIV University provides the following education modules:

- **HIV 101:** Covers HIV basics, general overview of HIV statistics (nationally & globally), how the virus is passed on, the virus life cycle and an introduction to HIV treatment.
- **Pizza and the Basics (HIV 102):** HIV 102 class with an HIV certified educator and medical professional as well as a person living with HIV to discuss their experience from diagnosis to treatment.
- **Antivirals for Starters (HIV 103):** HIV specialist from UC San Diego explains the types of medications, the importance of adherence and how the medications work in the body. Ideal for those preparing to start antiviral therapy.

**AIDS Walk San Diego 2013**

The 24th Annual AIDS Walk was a great success for the united “UC San Diego” AIDS Walk Team! Featuring over 60 fundraising members and raising over $9,000, UC San Diego placed as a Top 20 “Overall” fundraising team and took first place in the category of “College/University” team. This year was especially significant to our programs offering client services because of 225% matching funding for eligible teams. Funds raised by our enthusiastic team will be split between:

- **The Owen Clinic:** San Diego County’s largest HIV/AIDS clinic, seeing over 3000 clients per year.
- **Mother, Child and Adolescent Program (MCAP):** Social and pre-natal services for women, children and families infected and affected by HIV/AIDS.
- **AntiViral Research Center (AVRC):** Providing clinical trials, linkage to care and testing services to the community.
- **HIV Neurobehavioral Research Program (HNRP):** Investigating how HIV/AIDS and treatment affect the brain and central nervous system.

We are very proud of our 2013 team and the great job they did and very grateful to The Center and AIDS Walk for this great funding opportunity!

http://hivuniversity.org/

http://ari.ucsd.edu/aidswalk

September 29, 2013
Prizila Davila—Inspired and Inspiring

Prizila Vidal was not always the open and honest person with whom I shared mint-chamomile tea at the lovely North Park Café Calabria. Born “Jose Vargas” to a mother of Puerto Rican descent and a strong Catholic faith background, her journey has taken her through many trials that have shaped the young woman I had the pleasure of interviewing.

Jose’s challenges started at an early age. As the second oldest of seven children born within a 12 year period, the need to just survive a childhood defined by a mother’s neglect and shame over his non-gender conforming behavior was paramount. Still “Jose” to family and friends, his gravitation toward clothing and actions that were characterized as “female” came as a natural aspect of his development at the age of six. His mother went so far as to employ faith-based exorcism tactics to “heal” Jose of the behavior.

With no success at familial reconciliation and an increasingly untenable family structure, at the age of 12, Jose entered the foster care system. For three years, he was shuffled between twelve different group homes, bearing the burden of being “different”. Self-characterized as quiet, emotional and prone to violent outbursts, he found that staff responded to his attempts to “come out” by denying that being LGBT was the issue. His strategy was to be just resistant enough to authority that he would be sent to his room. There he dove into writing poetry and the prose that would grow into his autobiography.
In 2002, at the age of 15, Jose received his first foster placement with a gay couple in the Kensington area of San Diego. This was a hopeful moment for Jose, but unfortunately it was only a moment. After only a week, it was determined that a gay couple could not have a foster child and he was removed and sent to a Chula Vista family. Again, faced with religious surroundings similar to those of his early childhood, he withdrew once more, bargaining to just stay in a converted garage and not cause any problems. During this time, he began sneaking out and travelling to Hillcrest to experience the LGBT life.

During this time, at the age of 16, he began working as a contributor to the “Trauma Inform” project through Grossmont College. These panels were meant to give voice to the reality of “group home” experience. At 18, Jose left his foster home and took to the streets, where he was homeless until the age of 20. On his 19th birthday, he was diagnosed the HIV, but chose to deny it. It wasn’t until he hit his personal “rock bottom” that Jose began making some changes. He discovered and was accepted into Sunburst House and had an opportunity to “reset” his life.

It was 3 months after this transition that he met and began living with his first partner. Jose speaks fondly of how this man helped to build his sense of self-worth and, during this time, Jose came out as a Transgender person.

Once Jose began his journey toward “Prizila”, a name chosen as homage to “Priscilla, Queen of the Desert”, he questioned how this would affect other aspects of his life. One through-line of his adult life has been working at the San Diego Public Library. Two years into the transition, at the time that he would begin living as a woman, he inquired about the protocol for resigning from the library. When he expressed his fears about workplace stigma toward his transition, he found not only tacit acceptance, but support from his supervisor and remains at the library to this day. This validation proved to be key in his steps toward advocacy.

The Prizila who sits with me today is a poised young woman with a mission to give hope to those who can relate to facets of her story. She continues to advocate for foster youth at the New Alternatives Gay-Straight Alliance (GSA), both working with youth during the coming out process and, during the transitional age of 18-24, linking young adults to housing, education and employment resources. She has plans to begin an outreach program to link homeless youth to foster care, stating, “Being homeless is not a life. I was there (homeless) and thought things were good, but there is so much more to be linked to in the foster care system.”

Prizila’s journey with HIV brought her to the Mother, Child and Adolescent Program (MCAP) at UC San Diego, where she received services to help her on her journey living with HIV. She gives back by volunteering her time and telling her story as a speaker for MCAP and UC San Diego events and workshops. She could be found giving her testimonial at the 2012 World AIDS Day events on campus and this year at the National Latino HIV/AIDS Awareness Health Fair. She also is starting a support group at Christie’s Place, focusing on the 18-24 year old population, once they “age out” of the MCAP program.

We spoke a little to A.J. Johnson at the Mother, Child and Adolescent program about his time working with Prizila.

“What can I say about Prizila? She is such a hard worker! When she sets her mind to something she makes it happen. I have known her since 2006 and to see her working in the community and sharing her story is such a pleasure. She is a true advocate for the transgendersed community, young adult HIV positive community, and for the LGBT foster youth community. I expect many great things from her in the future!”

At the library, she is part of the “Check Out a Living Book” series, and will be telling her story to audiences around the county. If that wasn’t enough, Prizila’s story was the inspiration for playwright Olivia Espinosa’s “Diva Piece Theatre”, a project that highlights the stories of foster youth and presented at Diversionary Theatre in 2012.

Prizila is defined by her experiences, but chooses what that definition will be. Finding her place as a role model, mentor and advocate has been a twenty-six year journey that will continue. She has received her Associates of Arts degree and is working toward her degree in Social Work so that she can seek more opportunities to change lives. In her words, “Follow your dreams and don’t let anyone stop you. I have no regrets and I am happily living my truth.”
The UC San Diego AIDS Research Institute is an Organized Research Unit that unites and serves all HIV/AIDS programs and investigators at the University. In addition to supporting multiple UC San Diego HIV research programs, our mission is to help our members provide effective HIV treatment, testing, education and prevention services throughout San Diego County. Our programs assist all individuals infected and affected by HIV, including infants and children. These programs include, but are not limited to the following:

**Clinical Trials:**
AIDS Clinical Trial Unit (ACTU), International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPAACT), California Collaborative Treatment Group (CCTG), and Studies of the Ocular Complications of AIDS (SOCA).

**Basic/Translational Research:**
Center For AIDS Research (CFAR), Neutralizing Antibody Consortium (NAC), AntiViral Research Center (AVRC), Martin Delaney Collaborative: Towards an HIV Cure, HIV Neurobehavioral Research Program (HNRP), Determinants of HIV Infection, and CFAR Network of Integrated Clinical Systems (CNICS).

**Clinical Care and Training**
The Owen Clinic, Early Intervention and Bridge Programs, The Special Infectious Disease (SPID) Clinic of the VA San Diego Healthcare System, The Early Test Program, and The San Diego AIDS Education and Training Center (AETC).

**International**
Medical Education Partnership Initiatives (MEPI) and the Mexico-U.S. border region HIV/AIDS Training and Research Program.