

amfAR[™]

MAKING AIDS HISTORY

INNOVATIONS

JULY 2015

\$100 Million Boost for HIV Cure Research

**amfAR launches
investment strategy
to accelerate search
for a cure**

Also Inside:

**Indiana HIV Epidemic
Entirely Preventable**

**Putting “Kick and Kill”
to the Test**

**Dr. Mathilde Krim to
Be Represented in the
National Portrait Gallery**

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The biannual newsletter of amfAR,
The Foundation for AIDS Research

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\$100 Million Boost for HIV Cure Research

amfAR has launched a \$100 million investment strategy that will support its Countdown to a Cure for AIDS initiative. The centerpiece of the strategy is a \$20 million grant to establish the amfAR Institute for HIV Cure Research within an academic research institution.

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Kevin Robert Frost and amfAR Vice President and Director of TREAT Asia Dr. Annette Sohn flanked by Kathy and John Tucker of New Hope for Cambodian Children (see page 13).

Protecting Our Gains

We are tremendously excited about the \$100 million cure research investment strategy we launched recently (see cover story). Though many of us are optimistic that, with investments like these, we can and will develop a cure for HIV in the foreseeable future, several other developments remind us that progress on HIV/AIDS remains fragile and achieving an 'AIDS-free generation' is far from guaranteed.

In the first few months of 2015, a rural community in Indiana saw an explosion of HIV cases that has shocked the state and rattled the public health community (see page 5). The infections resulted from the sharing of contaminated needles among people injecting prescription painkillers. In the absence of syringe exchange programs that could have facilitated the swapping of used syringes for sterile ones, it should come as no surprise that the virus spread like wildfire.

With injection drug use reaching epidemic proportions in many parts of the country, the Indiana scenario will likely be played out elsewhere. It is our hope that the national attention generated by the outbreak in Indiana will finally convince lawmakers of the need to end the ban on the use of federal funds for syringe exchange programs.

On a global level, the extraordinary progress that's been made in providing antiretroviral treatment to those who need it, particularly in developing countries, has been made possible by the availability of generic drugs. A free trade agreement currently being negotiated in secret among a dozen Pacific Rim nations, including the U.S., could put access to treatment in jeopardy (see page 6). Leaked texts of the proposed agreement reveal that it would expand intellectual property protections on pharmaceuticals, potentially limiting the availability of generics.

And back here at home, AIDS research at the National Institutes of Health is under attack once again from certain members of Congress who would redirect funding to other 'more deserving' diseases.

We've learned from 30 years of struggle that we can take nothing for granted in the response to AIDS. Progress can be undone. We must continue to fight to protect our gains, improve prevention, expand access to treatment, and make the investments necessary for bringing this epidemic to an end.

Fast Tracking an AIDS-Free Generation for Women

amfAR Capitol Hill briefing highlights progress and deficits of HIV response for women and girls

Women and girls constitute more than half of all people living with HIV globally and one in four HIV-positive Americans. Despite recent successes in treatment and prevention, a range of biological, social, cultural, and environmental factors continue to increase women's vulnerability to HIV infection. Against this backdrop and to illuminate the work that remains to be done to achieve an AIDS-free generation for women and girls in the U.S. and around the world, amfAR held a Capitol Hill briefing, March 24, 2015.

Titled "Women and HIV/AIDS: Fast Tracking the U.S. and Global Response," the briefing featured a roster of distinguished speakers—including leaders from government, academia, and the nonprofit sector—who discussed progress and deficits of the national and global responses to HIV among women and girls.

To read more about the briefing and amfAR's issue briefs on women and HIV/AIDS, visit www.amfar.org/Women-and-HIVAIDS.



House Democratic Leader Nancy Pelosi was among the speakers at the briefing.

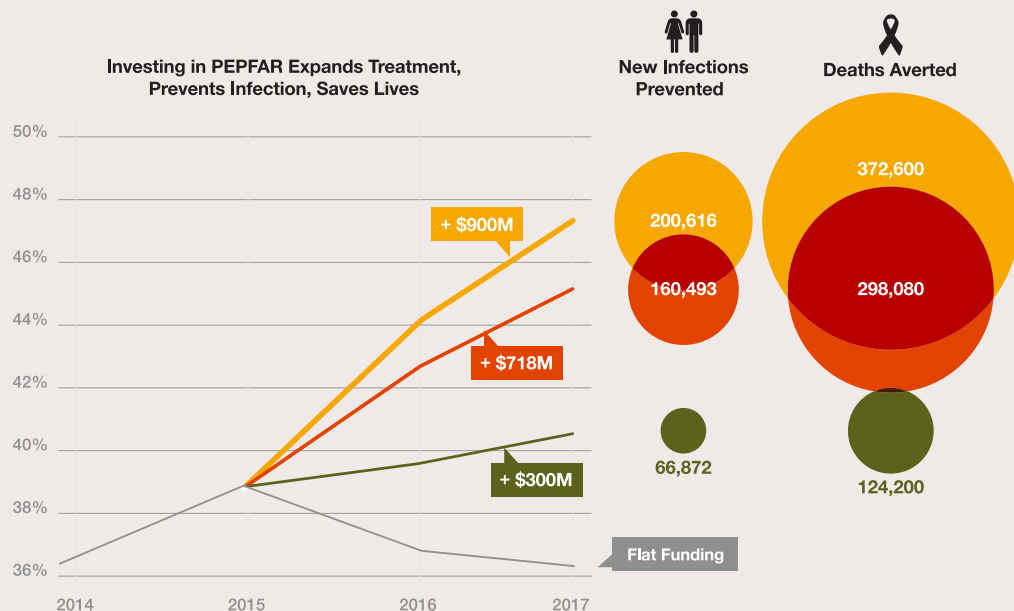


“Addressing the issue of women and HIV/AIDS...would be more effective if we took a holistic approach—one that combined laws and policies with the implementation of various programs that favor women and girls.”

Her Excellency Jeannette Kagame, First Lady of Rwanda

Investing for Impact: Accelerating the U.S. and Global AIDS Response in FY2016

Despite a decline in new HIV infections in some countries supported by the President's Emergency Plan for AIDS Relief (PEPFAR), the total number of people living with HIV and requiring treatment continues to grow each year. If PEPFAR is flat funded in 2016, it will not be able to meet the growing demand for treatment, jeopardizing progress in curbing the global epidemic. As our infographic shows, investments in PEPFAR must increase to expand access to treatment, which, in addition to saving lives, is highly effective at preventing new infections.



Indiana HIV Epidemic Entirely Preventable

Reuse of contaminated needles among injecting drug users leads to explosion of HIV in rural Scott County

A dramatic and alarming spike in HIV and hepatitis C (HCV) diagnoses among injecting drug users in Indiana and Kentucky has reignited the debate over syringe services programs (SSPs). In the first five months of 2015, Scott County, Indiana (pop. 24,000), registered more than 160 new HIV cases among people who inject drugs (PWID), compared to an average of five cases in a typical year. A hallmark of the surge is the large number of people infected with both HIV and HCV through the sharing of contaminated needles.

At least 8% of the estimated 50,000 new HIV infections in the U.S. each year occur among PWID. And according to the Centers for Disease Control and Prevention (CDC), about one quarter of all people with HIV are also infected with hepatitis C.

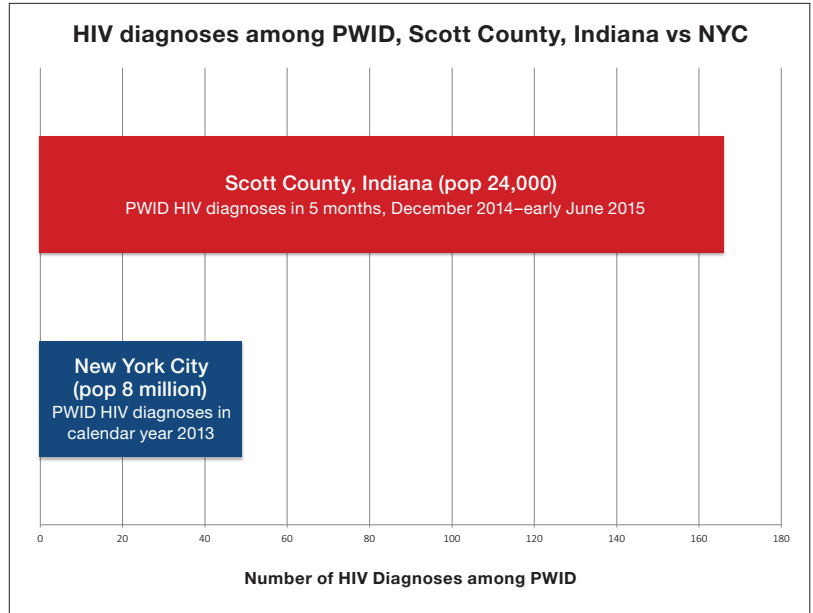
Syringe services programs help curb the spread of blood-borne diseases such as HIV and hepatitis C by providing access to sterile syringes. By facilitating the safe disposal of contaminated syringes, SSPs reduce the risk of needle-stick injuries among law enforcement and the public. They also provide preventive health services, such as HIV testing, and form vital bridges to drug treatment and overdose prevention. Yet, despite overwhelming scientific evidence demonstrating their effectiveness, the U.S. government continues to prohibit the use of federal funds for SSPs.

“For too long, government officials have refused to acknowledge the proven public health benefits of syringe services programs in spite of the scientific evidence,” said amfAR Chief Executive Officer Kevin Robert Frost.

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A recent study by researchers at Beth Israel Medical Center in New York City found that states with laws that allowed SSPs, provided public funding for them, and permitted over-the-counter sales of syringes had either declining HIV cases among drug users from 1985 through 2012 (if diagnoses were high) or never witnessed a rise in HIV infections among PWID in the first place (if diagnoses were low). The results of the study are detailed in a new amfAR issue brief titled *Preventing HIV and Hepatitis C Among People Who Inject Drugs: Public Funding for Syringe Services Programs Makes the Difference*.

SSPs have been shown not only to save lives, but also to save millions of dollars in HIV treatment costs. While a clean syringe costs less than 50 cents, the average lifetime cost of treating an HIV-positive person is



The number of new HIV diagnoses among PWID in Scott County, Indiana, in the first five months of 2015 was more than triple the number among PWID in New York City in all of 2013.

approximately \$326,000. Furthermore, estimates show that expanding the availability of SSPs to cover just 10% of injections would avert nearly 500 new HIV infections annually. An expansion of that size would cost approximately \$64 million while saving an estimated \$193 million in treatment costs averted.

This spring, after the CDC issued warnings over the spikes in HIV and HCV diagnoses among PWID in Indiana and Kentucky, state and local officials in both states implemented SSPs to help reduce any further transmission. Prior to the disease outbreaks in either state, Kentucky had no SSPs statewide, and Indiana had only one.

The increase in HIV and HCV cases in Indiana and Kentucky illustrate that the landscape of injection drug use in America is shifting from largely urban to more rural areas.

“Unless we adopt sound public health policies that have proven to work in urban areas, we may see spikes in HIV and hepatitis C diagnoses in less populated areas of the country,” said Greg Millett, amfAR vice president and director of public policy. “Following the best available science and eliminating restrictions on how states can use federal funds is imperative to advance public health practice.”

To access the new issue brief and learn more about this important issue, visit www.amfar.org/endtheban.



Free Trade Agreements: Slamming the Door on Affordable Drugs?

Proposed agreements could limit access to low-cost medicines in developing countries

Two free trade agreements (FTAs) currently being negotiated threaten the future availability of affordable generic medicines for diseases such as HIV/AIDS, cancer, tuberculosis, and hepatitis C, and could undermine the global health response in developing countries. The Regional Comprehensive Economic Partnership (RCEP) is currently being negotiated by 16 countries in the Asia-Pacific. The Trans-Pacific Partnership (TPP), being negotiated by 12 Pacific Rim countries, encompasses nearly 40% of the global economy and, if passed, would become one of the largest FTAs in history.

Secrets and Leaks

Negotiations have been conducted in secret, but leaked texts of both trade agreements reveal they will include aggressive intellectual property (IP) protections on pharmaceutical products that go beyond internationally established standards.

In a new issue brief titled *Trans-Pacific Partnership: Curbing Access to Medicines Now and in the Future*, amfAR strongly opposes the proposed terms of the TPP and warns that expanding existing IP protections could result in a decline in generic competition and an increase in drug costs, and set unacceptable precedents for future FTAs.

“While we recognize the importance of intellectual property protection in spurring innovation and incentivizing investment, the Trans-Pacific Partnership includes proposed provisions that go above and beyond what is required by international law and show a disregard for public health,” said amfAR Chief Executive Officer Kevin Robert Frost. “If the TPP moves forward, it will set a dangerous global precedent and put

lifesaving drugs beyond the reach of millions of people with HIV/AIDS, cancer, tuberculosis, and hepatitis C.”

Health vs. Profit

Developing countries and global HIV programs such as the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Fight AIDS, Tuberculosis and Malaria will continue to depend heavily on access to affordable generic drugs.

The TPP and RCEP include provisions that would make it easier for pharmaceutical companies to demand longer patent extensions and further delay the entrance of generic competition. The result would be that many newer and better-tolerated drugs will stay under patent longer and remain out of reach for many people in developing countries.

“It’s important to note that we never would have been able to take such giant leaps in fighting the global AIDS epidemic if the proposed IP provisions under the TPP were the standard a decade ago,” said Greg Millett, amfAR vice president and director of public policy. “If the door starts to close on generic production of antiretrovirals, any hope of ending the global AIDS epidemic in our lifetime will quickly evaporate.”

Hepatitis C and Drug Pricing: The Need for a Better Balance

New pharmaceutical breakthroughs have made curing hepatitis C (HCV) infection easier and more effective. Yet these new drugs have been priced at aggressively high rates that bear no relation to the cost of research and development. Given HCV’s high prevalence among marginalized populations, the exorbitant pricing of new HCV medications by drug manufacturers is raising questions of fairness and medical ethics, while exposing the stark imbalance between corporate profits and public health.

In its policy brief, *Hepatitis C and Drug Pricing: The Need for a Better Balance*, amfAR calls for structural changes that alter the pricing incentives for pharmaceutical companies in such a way that they cannot charge extortionate prices for their products, however effective they may be.

To view the full report, visit www.amfar.org.

“If the door starts to close on generic production of antiretrovirals, any hope of ending the global AIDS epidemic in our lifetime will quickly evaporate.”

Dr. Mathilde Krim to Be Represented in the National Portrait Gallery

In recognition of her leadership in the fight against HIV/AIDS, the National Portrait Gallery has accepted two photographic portraits of amfAR Founding Chairman Dr. Mathilde Krim into its permanent collection. "It is a great honor to include Dr. Mathilde Krim's portraits in our collection not only because of her invaluable contribution to this country in science, but also for her tireless work in AIDS research and awareness," said Kim Sajet, director of the National Portrait Gallery. "We are continually working to build the Portrait Gallery's collection to reflect American achievement by highlighting those who make a difference in the U.S., and Dr. Krim is an exemplar in her field."

The portraits, by leading American photographers Annie Leibovitz and Joyce Tenneson (shown here), will join those of a diverse group of individuals who have risen to prominence in their fields of endeavor. The National Portrait Gallery was established by an Act of Congress in 1962 and opened to the public in 1968. Part of the Smithsonian Institution, its charter is to collect and display portraits of "men and women who have made significant contributions to the history, development, and culture of the people of the United States."



Putting “Kick and Kill” to the Test

One of the most widely studied approaches to curing HIV is often referred to as “kick and kill.” The name refers to the two prongs of the strategy, namely “kicking” the virus out of its latent state by making infected cells produce virus, then killing the infected cells. Although spurring infected cells to produce HIV sounds counterintuitive, it is not until a cell is actively producing virus that the immune system can identify which cells are infected and initiate efforts to eliminate them.

Researchers have identified a broad array of agents that might act as latency-reversing agents, or LRAs, and several clinical trials have provided evidence that they can to some extent kick the virus. The most promising evidence that LRAs can result in virus production was reported by amfAR grantee Dr. Ole Sogaard of Aarhus University Hospital in Denmark at the 2014 International AIDS Conference. He and colleagues used the cancer drug romidepsin and reported that after each dose, there was an increase in the amount of virus in the blood.

But despite initial hopes, the “kill” part of the strategy has proven more elusive. A series of test-tube experiments conducted by ARCHE grantee Dr. Robert Siliciano and his colleagues predicted that reversing latency would not be enough to result in the death of infected cells. Unfortunately, this failure to kill has been borne out in clinical trials, including Dr. Sogaard’s.

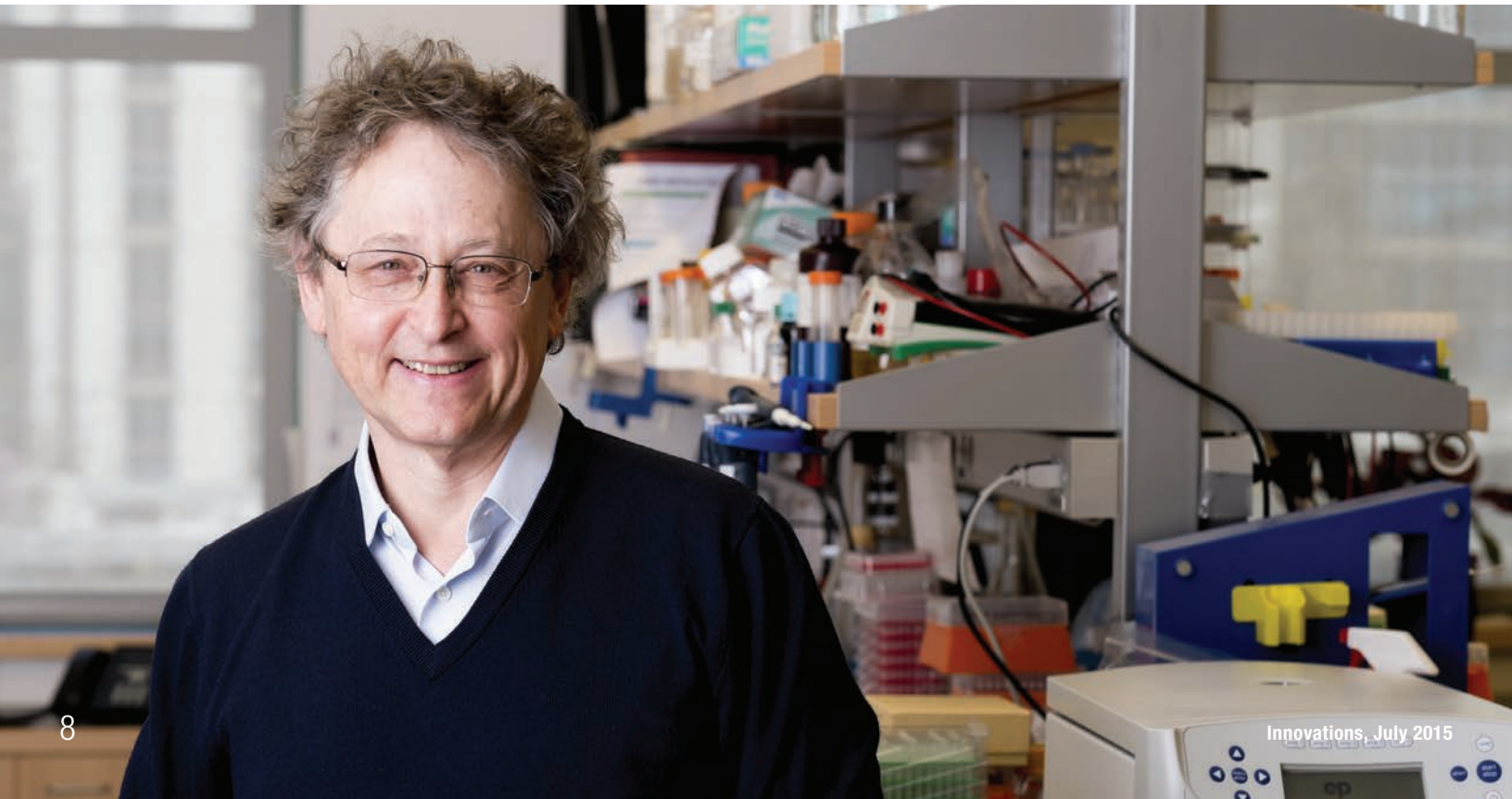
Researchers generally believe that the immune system is the most promising avenue for killing infected cells, and several different lines of investigation have been pursued, including therapeutic vaccines and boosted T cells. One of the most exciting new advances comes from the laboratory of Dr. Michel Nussenzweig at the Rockefeller University in New York City. Rather than therapeutic vaccines or T cells, Dr. Nussenzweig and his collaborators are testing monoclonal antibodies, a type of immunotherapy used to treat autoimmune diseases and cancers.

Dr. Nussenzweig and other research groups have identified particularly potent antibodies that can neutralize a broad genetic range of HIV viruses. In addition to targeting virus particles themselves, Dr. Nussenzweig’s team is also particularly interested in another function of antibodies, namely antibody-dependent cellular cytotoxicity (ADCC) that can target and kill virus-infected cells. Their work culminated in a demonstration that in mice, a combination of LRAs with an antibody called 3BNC117 can result in the apparent elimination of infected cells.

Encouraged by these results, amfAR assembled a team of researchers including Drs. Sogaard and Nussenzweig to conduct a clinical trial to test whether a combination of romidepsin and 3BNC117 can eliminate infection in people with HIV, or at least reduce the number of cells harboring the virus. An amfAR grant of \$1.5 million was awarded to the team in February 2015. Patients will be enrolled in the United States, Denmark, and Germany, with results expected in 2017.

Dr. Nussenzweig and other research groups have identified particularly potent antibodies that can neutralize a broad genetic range of HIV viruses.

Dr. Michel Nussenzweig



Rising to the Challenge: Questions for the Chairman of amfAR's Scientific Advisory Committee

Daniel Douek, M.D., Ph.D., is an internationally recognized leader in the field of human immunology and chief of the Human Immunology Section of the Vaccine Research Center, National Institute of Allergy and Infectious Diseases, National Institutes of Health. Earlier this year, Douek assumed the chairmanship of amfAR's Scientific Advisory Committee, a volunteer group of experts in the field of HIV/AIDS research who help guide amfAR's research program.

You recently became chair of amfAR's Scientific Advisory Committee. What do you think you can bring to the role of chairman?

I've got almost 20 years of experience in research, most of that in HIV, all of it in immunology, mostly in human immunology. I think that's all particularly important for the future, which really looks toward translating basic research into clinical trials in people. That's what I've been doing over the last 20 years. Given that background—as a translational scientist in the truest form of the term—I think that puts me in a good position to help guide the kind of research that amfAR might want to champion.

“...the goal is to make sick people better. That's it. It's no more complicated than that.”

Has amfAR ever played a role in supporting your own research?

Well, the first grant I ever got as an independent investigator was an amfAR grant. It was to study a certain aspect of the immune response to HIV. And I'm still doing it, I'm still doing that project. It's much more advanced, using new technologies. But that's what set me off as an independent investigator. So I have a lot of thank amfAR for...I will be forever grateful.



Can you tell us more about your work?

I'm interested in HIV disease pathogenesis and prevention. I want to know why some people get infected when they're exposed, and other people don't. And why some people progress rapidly, while other people progress less rapidly. And I'm trying to understand virus factors and host factors.

In terms of my involvement in the cure field, I'm really trying to understand which cells are infected. Which cells carry latent virus; which subsets; which anatomical sites; what is it about a cell that makes it susceptible to infection, where another cell is resistant. These types of questions are important, so that we can target our cure approaches to particular cell subsets.

Let's say you're a betting man. If we divide cure research into three basic approaches—pharmacologic, immunologic, and cell therapy—where would you put your money?

Well, I never bet because, remember, betting is rigged to make money for the casino! But, if I were to say which one is the best option... it's probably going to be a combination of all three, and that's the approach we need to take. The reason there is persistence of virus in people is multifactorial. So the therapeutic approach, I bet, is going to be multifactorial. There you go, I just bet!

In your opinion, what are the biggest challenges standing in the way of a cure?

They are the reasons why HIV becomes a persistent infection. One of them is it infects CD4 T cells and kills them, so you've lost your immune system, or are severely immunocompromised. Number two, the virus escapes from the immune system rapidly, so immune therapies are at a disadvantage. And number three, the virus integrates. So basically, it becomes a host gene.

What prompted you to pursue a career in AIDS research?

I always wanted to do research. I've always been an immunologist, since before going to medical school. And I really became interested in human immunology during my Ph.D.

The advent of HIV has really helped the field of human immunology come to the fore, because we had to do something quickly. So that whole arena was very attractive. Also at the end of the day, it sounds kind of trite, but I do what I do because the goal is to make sick people better. That's it. It's no more complicated than that. We learn a lot of stuff, and that's all very nice. But the goal is to make sick people better. It's a fantastic challenge. It's difficult, but I can see the light at the end of the tunnel. It's there.

So you are optimistic we will find a cure for HIV?

I am optimistic by nature. I look at it like this: before the spring of 1922 if you had a diagnosis of diabetes, they sent you to a sanatorium to die. A few months later, that same year, enough insulin was being produced in laboratories, and then you lived. It's as simple as that. So, for me, that is the light at the end of the tunnel. We know that we're going to succeed. We just have to find a way to do it. But I have total confidence we will. It's going to be difficult, and it may take some years, but we will.

To read the entire interview with Dr. Douek, visit www.amfar.org/Douek.

amfAR'S COUNTDOWN TO A CURE FOR AIDS

GOAL

Develop the scientific basis of a cure for HIV by 2020.

OPPORTUNITY

Today, researchers have a clear sense of the scientific roadblocks that stand in the way of a cure. It is no longer a question of whether we will cure this disease, but how.

CHALLENGE

So-called viral reservoirs—pockets of HIV secreted in the DNA of infected cells—are the primary obstacle to a cure. The challenge for scientists is to pinpoint and measure these reservoirs, determine how they are formed and sustained, and figure out how to eradicate them.

METHOD

We're changing the way science is done. Instead of following a conventional "investigator-initiated" approach, we're using a research roadmap to identify high-priority areas of investigation, then designing relevant studies and finding the best scientists to carry them out.

INVESTMENT STRATEGY

In an unprecedented expansion of amfAR's grant making, we will invest \$100 million in grant making research directed at finding a cure. The centerpiece of the strategy will be the establishment of the amfAR Institute for HIV Cure Research with a \$20 million grant.

OVERSIGHT

Research supported by the Countdown is conducted under the guidance of a Cure Council—a group of distinguished scientists that includes two Nobel laureates.

PARTNERS

We will not accomplish our goal without the steadfast support of our friends and partners. We are deeply grateful to our corporate partners for standing shoulder to shoulder with us. And we invite you to join them, and us, in writing the final chapter on HIV/AIDS.



**\$100 Million
Boost for HIV
Cure Research**
**amfAR launches
investment strategy
to accelerate search
for a cure**

“This represents the greatest expansion of amfAR’s grant making in the 30-year history of the Foundation.”

amfAR has announced a \$100 million investment strategy in support of its Countdown to a Cure for AIDS initiative, launched in 2014 with the goal of developing the scientific basis of a cure by 2020. The centerpiece of the strategy is a \$20 million grant to establish the amfAR Institute for HIV Cure Research within a major academic research institution.

“This represents the greatest expansion of amfAR’s grant making in the 30-year history of the Foundation,” said Chief Executive Officer Kevin Robert Frost. “We’re very excited to be launching this strategy and establishing an institute dedicated exclusively to the pursuit of a cure for HIV. Concentrating the minds and the efforts of leading AIDS cure researchers under one roof will facilitate the rapid sharing of knowledge and ideas, and create the kind of synergy needed to accelerate the search for a cure.”

The four key challenges standing in the way of a cure for HIV each relate to viral reservoirs—pockets of latent virus that persist in the DNA of infected cells beyond the reach of the immune system and existing antiretrovirals (see box). With a projected 2016 launch date, the Institute is expected to house a team of researchers with a track record of collaboration who will work on all four of the barriers to a cure, across the research continuum—from basic science to clinical studies.

HIV CURE ROADMAP: THE FOUR CHALLENGES

- **C**hart the precise location of the viral reservoirs
- **U**nderstand how these pockets of virus are formed and sustained
- **R**ecord how much virus they contain
- **E**liminate the virus

To complement the Institute, amfAR will award a range of grants totaling \$80 million to support the work of research teams worldwide:

Innovation Grants – Two-year awards of up to \$200,000 each for researchers testing novel ideas supported by limited preliminary data.

Impact Grants – Grants of up to \$2 million each over four years to support the in-depth development of concepts, already underpinned by preliminary data, showing genuine potential for achieving a cure.

Investment Grants – \$1 million grants awarded over a four-year period aimed at recruiting the experience and expertise of scientists from outside the field of HIV whose work in disciplines such as cancer, neuroscience, or inflammatory disease can directly inform efforts to cure HIV.

Opportunity Fund – A funding mechanism designed to allow amfAR to respond quickly to emerging and unforeseen research opportunities.

ARCHE – The amfAR Research Consortium on HIV Eradication, or ARCHE, supports collaborative teams of scientists in the U.S. and around the world working on a range of HIV cure strategies.

At a meeting on February 11, amfAR’s Board of Trustees approved the first round of 11 Innovation Grants totaling close to \$2 million and a \$1.5 million ARCHE grant to support a collaborative research project by teams working at Rockefeller University in New York, Aarhus University Hospital in Denmark, and the University Hospital of Cologne in Germany (see page 8). At a subsequent meeting in June, the Board approved the first round of three Impact grants totaling \$6 million (details to follow in next issue of *Innovations*).

In addition, amfAR continues to award several Mathilde Krim Fellowships each year aimed at nurturing the AIDS research leaders of tomorrow by supporting novel projects conducted by bright young scientists under the tutelage of seasoned investigators.

To help direct the research supported by the Countdown to a Cure, a Cure Council comprising some of the world’s leading HIV/AIDS researchers will regularly assess progress and identify key gaps and opportunities for new research.

“Our investment strategy is designed to ensure that we can support every scientific effort across the spectrum of biomedical research that has the potential to overcome one or more of the key scientific barriers to a cure for HIV,” said amfAR Vice President and Director of Research Dr. Rowena Johnston. “One of the hallmarks of amfAR’s research program is our ability to turn on a dime and rapidly funnel resources to studies that show promise and potential. Our aim is to combine that flexibility and rapid response with sufficient resources to develop the scientific basis for a cure by 2020.”

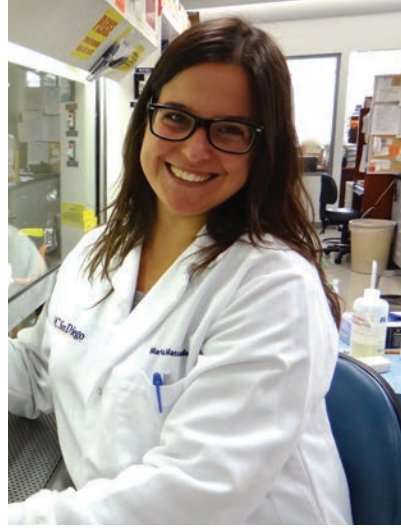
Leaving No Stone Unturned

Innovation Grants totaling \$2 million give life to promising, early-stage cure research

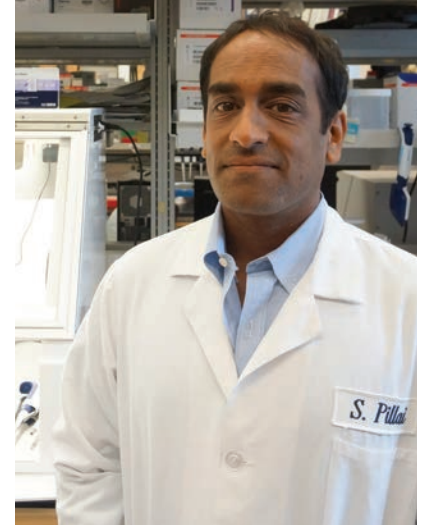
In February, amfAR awarded the first round of new Innovation Grants (see page 11) designed to spur innovation by supporting novel ideas based on limited preliminary data. Each of the 11 projects addresses one or more of the four key challenges related to persistent reservoirs of HIV that must be resolved in order to develop the scientific basis for a cure (see box, page 11).

Among the grantees is Dr. Marta Massanella of the University of California, San Diego, who is studying a recently discovered subset of memory CD4 T cells called T_{scm} . Several characteristics of these cells, including their ability to produce identical copies of themselves, have led to the hypothesis that they may contribute to an ever-increasing proportion of the reservoir over time. Understanding which cells the reservoir hides in, and how the relative contributions of each subset may change over time, will help researchers design interventions specifically targeting the reservoir cells.

The amount of virus in the reservoir differs among infected people due to a number of factors, including how soon after infection a person starts treatment. Dr. Satish Pillai of Blood Systems, Inc., San Francisco, California, and his colleagues believe they have identified another factor that influences reservoir size, namely the amount of two specific antiviral factors present inside a person's cells. Pillai and his team will study the relationship between levels of the two factors and the amount and degree of latent virus inside



Dr. Marta Massanella



Dr. Satish Pillai

infected cells. Their findings could inform methods for determining the size of the reservoir, and may constitute a pathway for the development of anti-latency drugs.

One of the challenges facing the so-called “kick and kill” (or “shock and kill”) strategy for curing HIV is the inability of “kicking” compounds to reach all infected cells. This means that even under optimal conditions, latent proviruses inside some infected cells remain dormant and cannot be attacked by antiretroviral drugs or the immune system. Dr. Vicente Planelles of the University of Utah plans to characterize the differences between viruses that can be induced and those that cannot. Understanding why some viruses resist “kicking” will help researchers hone strategies to ensure that all viruses can be activated, leading to the total elimination of the infected cells.

“This round of Innovation Grants represents amfAR’s continued commitment to looking for answers on every scientific front to spur discovery, and ensure that no potential breakthrough or advance goes unfunded,” said amfAR Vice President and Director of Research Dr. Rowena Johnston.

Alberto Diaz: A Spirited Supporter of AIDS Research



Alberto Diaz was a police officer, an artist, a military veteran, and a steadfast supporter of AIDS research. Mr. Diaz died peacefully at his home in Pacific Heights at the age of 92.

Born in 1923, Mr. Diaz lived in San Francisco his whole life. He served as a soldier during both World War II and the Korean War, and later as an officer in the San Francisco Police Department. His friends remembered his passion for life and his love of music, especially opera and Broadway. “Alberto was the life of the

party, fearless, kind, and greatly loved by those who knew him,” said Martha Naber, a close friend and executrix of his estate.

Alberto’s love of theater and adventure took him around the world with his beloved partner of 26 years, Bill Appleby. When Bill was diagnosed with HIV in 1989, after receiving a tainted blood transfusion, Alberto worked tirelessly to care for him and began contributing to AIDS organizations. Sadly, Bill passed away only a year after his diagnosis, but Alberto continued to support the fight against AIDS through regular donations. His generous gifts to amfAR and other nonprofit AIDS organizations are a testament to his compassion and enduring commitment.

“Alberto Diaz’s charitable spirit is an inspiration, and his substantial bequest will help advance amfAR’s efforts to end the AIDS epidemic,” said amfAR Chief Executive Officer Kevin Robert Frost. “We’re deeply grateful to him and to all whose generous legacies make our work possible.”

An Alberto Diaz Memorial Research Grant has been named in his honor.

For more information on planned giving options, email john.logan@amfar.org or visit www.amfar.org/donate.

Empty-Nesters Give Cambodian Orphans a Home, Hope



amfAR sat down with Texan couple John and Kathy Tucker (pictured above), co-founders of the pediatric HIV/AIDS care organization New Hope for Cambodian Children, to discuss the circumstances that brought them to Cambodia 15 years ago and the exceptional work they are doing to provide a future for orphans living with HIV. New Hope, located near Phnom Penh, provides housing, medical care, and education for HIV-positive orphans living in the village and has additional support programs for HIV-positive children and youth living with family members in neighboring villages.

Why did you come to Cambodia?

Kathy Tucker: We have seven kids between us, and they had all left to go to college, and there we were alone in our big house in Texas, and we said, 'Okay, what do we do with the rest of our lives?'

John Tucker: We knew Cambodia had been devastated by war and genocide, and we knew of some groups that were working here and trying to do some good things. So we came with a missionary group out of New York, to work in a hospice with adults living with HIV. I had never personally met anyone with HIV before that.

We discovered there was very little medicine in the country at that time, and the people were dying in the hospice and their children who were infected with the virus had nowhere to go. The villages wouldn't accept them. Their extended families wouldn't accept them. So we raised some money, imported some antiretroviral therapy, and opened a clinic.

In 2006, we left to form New Hope so that we could expand to the provinces. Currently, we have approximately 210 children living here in our village, 40 children who used to live here who are attending university or vocational training in Phnom Penh, and approximately 1,400 children who live with their parents or extended families and receive home-based care from us.

Could you describe your program and what the kids' lives are like here?

John: We have eight housing clusters that include bedrooms for the kids and for their caregivers. We provide schooling from grades one through eight. We also have a clinic on site that's staffed with a nurse, and we have a doctor who visits the clinic once a week...all the kids are on medication and very healthy. Most have undetectable viral loads. They are just healthy kids running around and playing and getting scrapes and cuts.

What services do you provide to the kids living with their families in the surrounding villages?

John: We were told by a doctor at the nearby hospital that the biggest reason people don't come in for their medicine is they don't have the money for transportation, so we provide that. We provide them with food if they need it. And if they're not in school, we get them back in school.

We have staff that do weekly home visits. They check their grades and attendance at the local school, count their pills to make sure they're taking their medication, and provide counseling.

Could you describe your transitional program for the young adults living in Phnom Penh?

John: We pay all their fees and house them until they graduate from university or vocational training. We also give them a lot of social support

to help them transition from living here, where everything's provided for you, to living on their own.

We are also learning things about helping them deal with stigma. Should you tell people you have HIV? How do you disclose to your friends? Our kids have lived in a bubble here, where everybody has HIV and everybody accepts HIV. Now they're in the real world, and the bubble has burst. But the children know if everything goes wrong and they're unemployed and hungry, they have a place to come to.

What's next for New Hope?

John: Well, we are working more and more on helping the kids transition into vocations, so we're probably going to open a bakery because we have a couple of boys who have learned to be bakers. Other than that, it's hard to say.



Kathy: We don't know what the next challenge will be yet.

John: But hopefully, 10 years from now we won't need this place. Our youngest is in first grade, so maybe...

To read the entire interview with John and Kathy Tucker, visit www.amfar.org/New-Hope-for-Cambodian-Children.

Expanding Pre-Exposure Prophylaxis (PrEP) for HIV in Thailand



Adam's Love celebrity ambassador Tack Pharunyoo poses outside the Anonymous Clinic after receiving an HIV test.

HIV rates are rising among men who have sex with men (MSM) and transgender individuals across the Asia-Pacific. In Thailand, MSM will soon account for more than 50% of new HIV

infections, and in Bangkok, approximately one-third of MSM are already living with the virus.

In an effort to enhance national HIV prevention efforts, the Thai Red Cross AIDS Research Centre and Adam's Love, Thailand's leading Internet and social media-based HIV outreach initiative, are working to bring oral pre-exposure prophylaxis (PrEP) to MSM at higher risk of HIV infection in Thailand. Both projects are supported in part by amfAR.

Adam's Love's PrEP-30 campaign is Thailand's first major effort to spread awareness about PrEP and how it works, and encourage MSM to consider using it. The initiative also directs MSM and transgender individuals to the Thai Red Cross Anonymous Clinic, where PrEP can be obtained for 30 Baht (about \$1) per day. This is currently the only location in Thailand where it can be accessed at this low cost.

"Before we launched this campaign, we had received a total of two PrEP-related inquiries from MSM," says Tarandeep Anand, director of Adam's Love. "Now, PrEP awareness among MSM and transgender individuals in Thailand is increasing rapidly, and we receive at least one PrEP-related inquiry daily through Adam's Love's online counseling and support channels."

Dr. Nittaya Phanuphak is leading a Thai Red Cross study that will look at PrEP uptake among up to 600 MSM in Bangkok, Pattaya, and Pathumthani, and evaluate which delivery models most effectively encourage adherence to HIV prevention regimens. Dr. Phanuphak hopes the findings from her research will persuade the Thai government to cover the cost of PrEP under Thailand's National Health Insurance, noting "it is time for us to really take PrEP seriously as part of the combination prevention package needed for MSM and transgender individuals."

Strengthening the Global HIV Response Starts at the Community Level

For the third consecutive year, the GMT Initiative has teamed up with the Center for LGBT Health Research at the University of Pittsburgh's Graduate School of Public Health to offer scholarships to four researchers from low- or middle-income countries as part of the amfAR HIV Scholars program. The program aims to strengthen responses to HIV by offering leading GMT community-based researchers five months of graduate-level study on LGBT health research, study design, and grant writing.

"The strategies that work best for addressing HIV are those developed by community-based scholars and activists, and they have to have solid research skills and data or their brilliant strategies won't get funding," says Dr. Ron Stall, chair of the Department of Behavioral and Community Health Sciences at Pitt Public Health, who oversees the program. "The scholars are local heroes often doing this work at great risk to themselves, and we invest in them to help them get their programs off the ground."



Left to right: Sheryar Kazi with the Naz Male Health Alliance, Pakistan; Liesl Theron, supported by Gender DynamiX, South Africa; Erika Castellanos from the Collaborative Network of Persons Living with HIV (C-NET+), Belize; and Weibin Cheng from the Chinese Center for Disease Control and Prevention and GZTZ.org.

To hear the 2015 amfAR HIV Scholars discuss their work and the program, visit www.amfar.org/amfar-scholars-2015.

Improving HIV Care for Transgender Women in Peru



Leyla Castillo (second from right) during a visit to the Fenway Institute in Boston

legal and societal discrimination that deter them from seeking HIV and other health services.

The Peruvian study is investigating how the integration of HIV care with “gender-affirmative” services—such as cross-sex hormone therapy, body transition services, and gender-affirming psychosocial support—will affect access to HIV testing and services among all transgender women and adherence to antiretroviral therapy among those living with HIV.

“Currently, most trans women in Peru and throughout Latin American do not have access to quality health or gender-affirming services,” said Castillo. “And because of that a lot of people are dying and there is a lot of disfigurement caused by women self-injecting hormones and oils that can be very dangerous if they are not used correctly.”

The project is a collaboration between two nongovernmental organizations based in Lima, IMPACTA and EPICENTRO, and the Boston-based Fenway Institute. It was awarded a three-year grant as part of amfAR’s Implementation Science program aimed at documenting the impact of innovative HIV service delivery models for gay men, other men who have sex with men (MSM), and transgender individuals (collectively, GMT).

“The Lima-based study was one of the most impressive implementation science proposals amfAR received,” said Kent Klindera, director of amfAR’s GMT Initiative. “It blended the right amount of community engagement with science, and proposed to evaluate a model program based on the lived realities of trans women living with HIV that has the potential to be scaled up in other settings.”

Despite the need for improved services for transgender individuals, most HIV programming and research in Peru—and worldwide—targeting GMT individuals categorizes transgender women as MSM, instead of treating them as a distinct group. “This leads people to believe that we do not face different issues than MSM, and the lack of recognition of our existence increases the discrimination we experience in healthcare settings,” said Castillo. “It also means there is very little data about trans women.”

“Most trans women in Peru do not ask themselves the question, ‘will I get HIV,’ but ‘when,’” said Leyla Castillo, a longtime transgender advocate and the coordinator of a new amfAR-funded study researching healthcare services for transgender women in Peru. Around the world, transgender individuals often face violence and both le-

In July the research team plans to open a new community center for transgender women—the first of its kind in Peru—that will provide health and support services designed to meet specific needs identified in focus groups in early 2015. The team hopes to generate data demonstrating that combining discrimination-free HIV care with trans-specific services improves transgender women’s retention in the HIV continuum of care—and to provide a model for what those services should be that can be replicated worldwide.

“We need this study so that we can really prove that the lack of sensitivity among healthcare workers is fueling our lack of access to HIV testing and care, and we need the health center where we can access care created just for us,” said Castillo. “Also, we know best what is going on with trans women...and this study will increase the number of trans women who will be able to do this work.”

New from the GMT Initiative

In a pair of new reports, amfAR’s GMT Initiative examines the effectiveness of various strategies aimed at improving and expanding access to HIV/AIDS services for gay men, other men who have sex with men, and transgender individuals (collectively, GMT) in low- and middle-income countries.

The amfAR GMT Initiative Mentoring Model: Strengthening Organizational Capacity and Impact Through Local Expertise

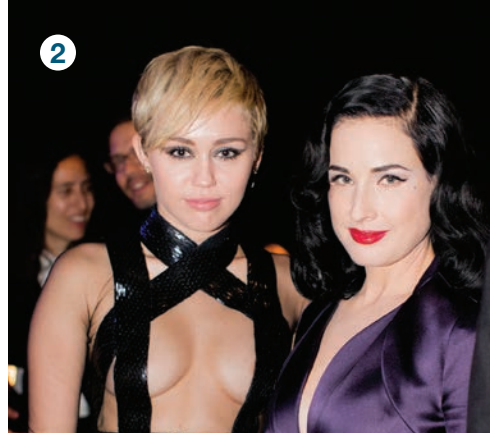
This report, made possible with generous support from Johnson & Johnson, provides examples of the capacity-strengthening activities employed by local mentors and their impact on five of amfAR’s former grantee partner organizations.



Evidence in Action: Measuring the Impact of Community-Led HIV Interventions by and for Gay Men, Other MSM, and Transgender Individuals

This report profiles the successes and challenges experienced by nine GMT Initiative grantee partners during their participation in amfAR’s Evidence in Action program and offers recommendations for scaling up effective, community-based HIV/AIDS services targeting GMT populations throughout the world.

Both reports are available at www.amfar.org/GMT.

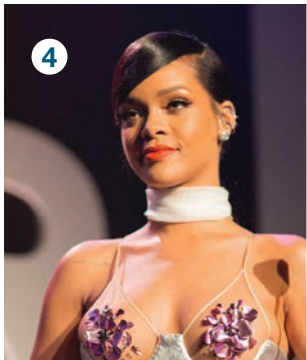


Inspiration Gala Los Angeles and São Paulo


A surprise performance by Coldplay's Chris Martin and Jonny Buckland set the tone for a spectacular fifth annual Inspiration Gala Los Angeles, October 29, 2014. Among many highlights, Rihanna presented the Award of Inspiration to Tom Ford, amfAR Global Campaign Chair Sharon Stone led a spirited auction with bidders including Miley Cyrus and Justin Timberlake, and Diana Ross closed the evening with a stunning performance. Then in Brazil on April 10, 2015, amfAR honored the legendary Cher, Jean Paul Gaultier, and Felipe Diniz at the fifth annual Inspiration Gala São Paulo, which featured stellar performances by pop superstar Kylie Minogue and samba great Alcione. The events raised a combined total of close to \$5 million.



Special thanks: Harry Winston, M•A•C Viva Glam, Wells Fargo, Microsoft, Fiji Water, Belvedere Vodka, Gloria Ferrer, Iguatemi São Paulo, Karavelle, MoëtHennessey, Sky, Fasano, Mercedes-Benz, and Delta Air Lines (Photos: Kevin Tachman)



What a special evening being a part of #amfAR last night. Honoring the incredible #TomFord.
—@MsLeaMichele




1. Inspiration Los Angeles honoree Tom Ford with amfAR Global Campaign Chair Sharon Stone and Justin Timberlake. 2. Miley Cyrus and Dita Von Teese in Los Angeles. 3. Coldplay's Chris Martin and Jonny Buckland treated the Los Angeles crowd to a surprise performance. 4. Rihanna presented the Award of Inspiration to Tom Ford. 5. amfAR CEO Kevin Robert Frost delivered a heartfelt tribute to Inspiration São Paulo honoree Cher. 6. Pop superstar Kylie Minogue dazzled the São Paulo crowd. 7. Kylie Minogue and São Paulo honorees Felipe Diniz and Jean Paul Gaultier 8. Kate Moss and Riccardo Tisci



amfAR New York Gala

Harry Belafonte, Rosario Dawson, and Patrick Demarchelier were honored at the sold-out black-tie amfAR New York Gala at Cipriani Wall Street, February 11. Awards were presented by Whoopi Goldberg, Chris Rock, and Anna Wintour, respectively. The gala, which kicked off New York Fashion Week and drew many leaders of the fashion community, featured a high-octane performance by legendary singer Dame Shirley Bassey. It raised more than \$2 million for amfAR's AIDS research programs.

Special thanks: Harry Winston, M·A·C Viva Glam, MoëtHennessy, and Mandarin Oriental, New York (Photos: Kevin Tachman)



Life Ball

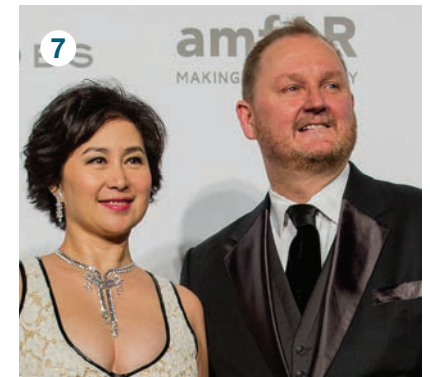
Mary J. Blige represented amfAR at the 23rd annual Life Ball in Vienna. A portion of the proceeds from this exuberant event support the pediatric programs of amfAR's TREAT Asia initiative. (Photo: Celebmafia)



amfAR Hong Kong

Michelle Yeoh was recognized for her longstanding commitment to the fight against AIDS at the inaugural amfAR Hong Kong gala on March 14. Gwyneth Paltrow, Victoria Beckham, Kate Moss, and Naomi Campbell were among those in attendance at the Foundation's first-ever fundraising benefit in East Asia. Robin Thicke got the audience on their feet with a rousing performance of his chart-topping hits "Blurred Lines" and "Give It 2 U," and a special cover of Michael Jackson's "Rock with You."

Special thanks: Harry Winston, Marc Jacobs, MoëtHennessey, Microsoft, MGM China Holdings, Delta Air Lines, and Island Shangri-La, Hong Kong



1. amfAR Hong Kong (Photo: Ryan Emberley) 2. amfAR Chairman Kenneth Cole and Victoria Beckham (Photo: Ryan Emberley) 3. Robin Thicke (Photo: Ryan Emberley) 4. Michelle Yeoh addressed the crowd. (Photo: Ryan Emberley) 5. Naomi Campbell and Kate Moss (Photo: Ryan Emberley) 6. Gwyneth Paltrow helped auction off a stunning Harry Winston Forget-Me-Not diamond lariat-style necklace, which sold for \$140,000. (Photo: Getty Images) 7. Event Chair Pansy Ho and amfAR CEO Kevin Robert Frost (Photo: Getty Images)



generationCURE Los Angeles After Party

Young Hollywood stars Jay Ellis and Troian Bellisario chaired the L.A. After Party. (Photo: amfAR)

generationCURE Holiday Party

DJing duo The Dolls at the Holiday Party in New York City on December 2, 2014. The festive event raised nearly \$68,000. (Photo: Getty Images)

1



Cinema Against AIDS

The 22nd annual Cinema Against AIDS gala in Cap d'Antibes, France, May 21, raised more than \$30 million for amfAR's AIDS research programs and the search for a cure. The undisputed highlight of the evening's live auction was a stunning 18½-foot-tall sculpture by Jeff Koons, titled *Coloring Book*, which sold for over \$13 million. The star-studded event, held during the Cannes Film Festival, also featured a striking Black and White fashion show curated by Carine Roitfeld and performances by Charli XCX, Mary J. Blige, Andrea Bocelli, and Imagine Dragons.

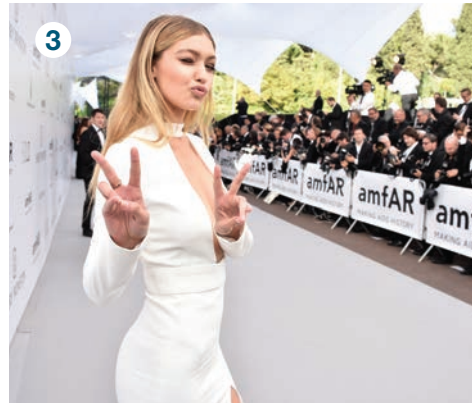
Special thanks: Harry Winston, Bold Films, MoëtHennessey, Montcler, The Weinstein Company, and Delta Air Lines

1. *Coloring Book* by Jeff Koons 2. Tom Ford and Eva Longoria auction off the *Black and White* collection for nearly \$1 million. 3. Gigi Hadid 4. Andrea Bocelli gave an impromptu performance of "Por Ti Volare." 5. Leonardo DiCaprio 6. Zoe Kravitz and Jake Gyllenhaal 7. Aishwarya Rai Bachchan modeling an exquisite bespoke diamond necklace, designed exclusively for amfAR and Cinema Against AIDS by Harry Winston. Titled "Epic Cluster," it was purchased at the auction for \$500,000. (Photo: Getty Images, amfAR, Kevin Tachman)

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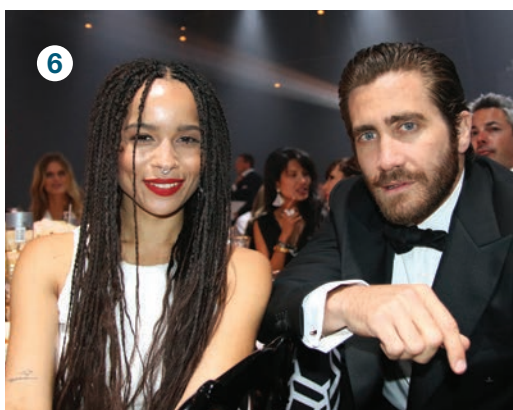
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amfAR Partners with MoëtHennessey

Building on its past support, MoëtHennessey has joined with amfAR as a milestone partner and will serve as Official Wine and Spirits Partner. Moët & Chandon champagne and Belvedere vodka, among other MoëtHennessey brands, will be featured at all amfAR fundraising events worldwide over the next three years. The generous support of MoëtHennessey will help advance amfAR's efforts to find a cure for HIV through innovative research.



BE EPIC. CURE AIDS.

We teamed up with famed British visual artist Shantell Martin to bring you a limited edition beach towel, designed exclusively for amfAR to help raise awareness and funds to help find a cure for HIV/AIDS. The towel features one of Martin's trademark black-and-white illustrations, and includes the inscription "Be Epic, Cure AIDS," a nod to amfAR's Countdown to a Cure for AIDS initiative, which aims to develop the scientific basis of a cure by 2020.



The towel, and a wide range of amfAR-branded merchandise, is available at amfAR's online store!

shop.amfar.org

Upcoming Events

- | | |
|--------------|---|
| September 26 | amfAR Milano
Milan, Italy |
| October 24 | TWO x TWO for AIDS and Art
Dallas, Texas |
| October 29 | Inspiration Gala Los Angeles
Los Angeles, California |
| December | generationCURE Holiday Party
New York City |



The Kiehl's LifeRide for amfAR is an annual motorcycle ride through major U.S. cities that includes multiple high-profile events at Kiehl's stores along the way to raise consumer and media awareness about amfAR and the fight against AIDS. Starting in Denver, the 2015 LifeRide, August 3–15, will cross the Rockies en route to Salt Lake City; then it's a downhill burn through the deserts of Arizona and Nevada before heading west to the Pacific, ending in San Diego.

The sixth annual LifeRide for amfAR will make the following stops:

TUESDAY, AUG. 4

Denver, CO

THURSDAY, AUG. 6

Murray, UT

MONDAY, AUG. 10–11

Las Vegas, NV

WEDNESDAY, AUG. 12

Santa Monica, CA

THURSDAY, AUG. 13

Cerritos, CA
Costa Mesa, CA

FRIDAY, AUG. 14–15

San Diego, CA

To find out more about LifeRide and how you can participate along the way, visit www.amfar.org/liferide.