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MAKING AIDS HISTORY

INNOVATIONS

NOVEMBER 2018

Sex and the HIV Reservoir The power of estrogen



Also Inside:

**Preparing for Potential
Game Changers**

**When Size Matters:
Social Media and Key
Populations**

**A “Dangerous
Complacency”
Threatens Global HIV
Response**

NOVEMBER 2018

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Sex and the HIV Reservoir

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Photo: Getty Images

The Power to Transform and Overcome

I wish you could join us when our scientific reviewers gather at amfAR's offices to discuss research grant applications and decide which ones are most worthy of funding. The science is complex, to be sure, but the animated interactions of the reviewers, their scientific expertise, and their unwavering commitment to achieving a cure for HIV are an inspiration. With their help, we're able to fund the best projects that align with our cure research strategy.

At press time, amfAR's Board of Trustees had just approved a new round of grants, which we'll report on in full in the next issue of *Innovations* (and on our website at www.amfar.org). While all hold promise for advancing our search for a cure, we're particularly excited about a gene therapy project we're calling ARCHE-GT. The aim is to completely eradicate HIV from the body.

amfAR has forged a unique collaboration among world leaders in gene therapy to create the first combination intervention that will simultaneously address the main barriers to a cure. In a three-pronged attack on the HIV reservoir, ARCHE-GT will employ broadly neutralizing antibodies, specially designed CAR stem cells (cells genetically reprogrammed to recognize and attack disease

cells), and molecular scissors targeting the virus. It's an ambitious project—with breakthrough potential.

We have also just announced a new round of Mathilde Krim Fellowships in Basic Biomedical Research. Launched a decade ago, this program has proven highly successful in nurturing bright young researchers and bringing new talent and fresh ideas to the field of HIV research.

The Krim Fellowships are profiled in a special issue of the journal *AIDS Research and Human Retroviruses* honoring Dr. Krim, our Founding Chairman, who passed away in January (see page 10). The journal showcases the work of recent Krim Fellows and leads with tributes from amfAR leadership and former Krim Fellow Dr. Nuria Izquierdo-Useros. She writes, "I truly believe that research has the power to transform society and overcome some of the biggest challenges humankind faces. Basic research holds the potential to end HIV and to finally find a cure for millions of people who are infected around the world."

We wholeheartedly agree.

Preparing for Potential Game Changers

What needs to happen before long-acting antiretrovirals come to market?



While treatment for HIV infection has become more effective and less complicated in recent years, it still involves taking a pill or pills each day for life. But innovative new products could revolutionize HIV treatment and prevention. Sometimes called long-acting agents, these products may take different forms, ranging from injections to implants to oral medications, and they would not require daily dosing. Some might require a monthly dose, while others could be administered a few times a year.

Taking an idea and turning it into a desirable, effective, affordable, and accessible product is a long and difficult process. To facilitate the analysis and policy decisions needed to

advance the process, amfAR has produced a series of reports that describe the critical issues that must be navigated to make these potentially game-changing new products available for people living with HIV or vulnerable to infection.

Policy makers must assess and navigate a variety of issues:

FDA Review and Approval: The Food and Drug Administration (FDA) must determine that new products are safe and effective. They also will need to consider unique questions related to long-acting products such as the potential to spur drug resistance. Policy makers should bring together relevant parts of the FDA to consider

the range of potential delivery mechanisms (e.g., pills, injectables, implants, intravaginal rings) and work to expeditiously review new drug applications and provide clear guidance for manufacturers and the public on key issues.

Defining the Intended Market for New Products: Innovative products that may be more expensive than existing therapies raise complex questions over how to define their role in relation to current treatment and prevention options. Related questions about the uptake of long-acting therapies and their impact on adherence also must be considered, as well as factors that will influence consumer demand and provider willingness to prescribe them. Policy makers should plan to proactively monitor and invest in necessary studies to document impact and identify unresolved issues.

Payer Coverage and Access Decisions: Medicaid, Medicare, the Ryan White HIV/AIDS Program, and private health insurance programs operate under different laws and rules regarding pharmaceutical coverage. Federal agencies should begin to consider, in advance, how they will evaluate new long-acting products and how they can provide early guidance for purchasers, prescribers, and the public on how new products will be evaluated and integrated into drug formularies.

The full reports are available at www.amfar.org/Long-Acting-ARV/

| CURRENT | | IN DEVELOPMENT | | |
|-----------------------|--|---|--|---|
| | | Injectables | Implants | Oral |
| HIV Treatment | 40 single-agent antiretroviral and combination antiretroviral products approved for use in the U.S., including 1 injectable product | At least 10 products are in development that could be injected. Dosing frequency could be approximately every 8 weeks . | At least 2 products are in development that could be implanted under the skin or in the body. Dosing frequency could be as little as once a year . | At least 1 product is in development that could be taken orally. Dosing frequency could be around once a week . |
| HIV Prevention | 1 combination antiretroviral product approved for use in the U.S. | | | |

AIDS Conference Shines Spotlight on Global Epidemic

“This movement that we are all called to be a part of is even bigger than the 30-plus-year fight to end AIDS,” said longtime HIV/AIDS activist Charlize Theron in an impassioned opening address at the biennial International AIDS Conference this past July in Amsterdam. “It is inextricably linked to the centuries-long fight for equality, dignity, and human rights.”

“amfAR Public Policy staff participated in several sessions associated with the reinstated and expanded Mexico City Policy, or “global gag rule.”

The conference brought together more than 15,000 delegates from over 160 countries to share experiences and ideas and to learn about recent developments in research, treatment, prevention, epidemiology, and public policy.

amfAR’s research, public policy, and TREAT Asia programs were well represented at the conference. Highlights included:

- amfAR-funded scientist Dr. Brad Jones of George Washington University led a plenary



amfAR grantee Dr. Brad Jones led a plenary session titled “Building bridges from scientific innovation to implementation.”

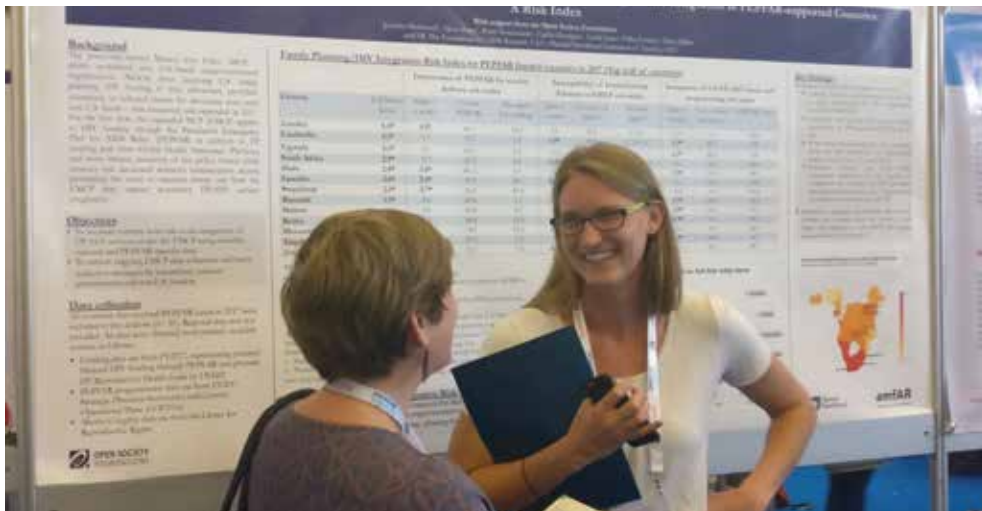
session on the search for an HIV cure and vaccine and presented his own research on harnessing the immune system’s cytotoxic T cells to eliminate the persistent reservoirs of HIV.

- amfAR Public Policy staff participated in several sessions associated with the reinstated and expanded Mexico City Policy, or “global gag rule,” signed by President Trump in 2017. The policy prohibits the provision of U.S. global health funding to any foreign nongovernmental organization that performs or promotes abortion as a method of family planning, with no exemption for

HIV/AIDS programming. Brian Honermann, amfAR’s deputy director of public policy, was among a panel of experts who shared evidence of the negative impacts of the policy. The topic was featured on NBC News.

- amfAR’s Greg Millett hosted a Facebook Live session on HIV funding along with Kaiser Family Foundation’s Dr. Jen Kates and former executive director of the Global Fund Dr. Mark Dybul. Millett also co-led a session titled “The diseases and conditions that intersect with HIV” as part of an IAS/AVAC Journalist Fellows initiative.
- Dr. Annette Sohn, director of amfAR’s TREAT Asia program, chaired a symposium that focused on emerging issues of aging with HIV.

Among those in attendance were Sir Elton John and Prince Harry, who together announced a \$1.2 billion initiative called the MenStar Coalition to target HIV transmission in young men, among whom infections are rising. The coalition includes the Elton John AIDS Foundation, PEPFAR, Unitaid, the Global Fund to Fight AIDS, Tuberculosis and Malaria, the Children’s Investment Fund Foundation, Johnson & Johnson, and Gilead Sciences. The Elizabeth Taylor Human Rights Award—cosponsored by amfAR, the International AIDS Society, and the Elizabeth Taylor AIDS Foundation—was presented to Kenyan lawyer Allan Maleche for his role in advancing human rights for people living with HIV/AIDS.



amfAR Policy Associate Jennifer Sherwood presented a poster on the impact of the Mexico City Policy.

“It is critical for activists, communities and people living with HIV to be at the forefront of the HIV response. Human rights must be upheld and respected.” - @ctaop 
Founder @charlizeafrica
#AIDS2018 #recap #hiv

@aids_conference

Impact of Mexico City Policy on PEPFAR

Shortly after assuming office in January 2017, President Trump reinstated and expanded the Mexico City Policy to apply to nearly all U.S. global health assistance, including HIV funding through the President's Emergency Plan for AIDS Relief (PEPFAR). The policy prohibits the provision of U.S. global health funding to non-U.S. nongovernmental organizations that advocate, provide, counsel, or refer patients for abortions, even if using the organization's own funds for these activities.

In a newly published study in *BMC Public Health*, amfAR Policy Associate Jennifer Sherwood, with colleagues from amfAR and Planned Parenthood Global, have mapped the potential impact of the expanded Mexico City Policy on family planning and HIV service integration in countries supported by PEPFAR funds. The earlier and more limited iterations of the policy forced clinic closures and decreased contraceptive access, prompting the urgent need to assess where and how the expanded policy may impact service delivery.

The study highlights several areas at significant risk for service disruptions due to the policy, especially in sub-Saharan Africa where the HIV pandemic is most severe. Disruptions to family



Mothers with their children at a mobile clinic in Rwanda

the impacts of the policy may be the greatest, in order to mitigate potential harms.

“Troublingly, it is often the same countries that already have the highest rates of HIV and unintended pregnancy that are also the most likely to be impacted by the expanded Mexico City Policy,” said Sherwood. “Reductions in integrated health services in these already

“Reductions in integrated health services in these already vulnerable environments is a manufactured public health emergency that runs counter to U.S. global health goals.”

– Jennifer Sherwood, Public Policy Office amfAR

planning and HIV service integration could have serious consequences for contraceptive access, HIV prevention, and unintended pregnancies among women living with HIV. The authors assert that researchers, national governments, and non-U.S. funders should consider the risk factors identified in the study to assess where

vulnerable environments pose a manufactured public health emergency that runs counter to U.S. global health goals.”

You can read amfAR's issue brief on the Mexico City Policy at www.amfar.org/pepfar-mexico-city/.

Tracking the Opioid Epidemic

amfAR's online **Opioid & Health Indicators Database** is a free resource for policymakers, advocates, journalists, academics, and anyone else interested in learning more about the opioid epidemic and its intersection with HIV, Hepatitis C, and other infectious disease consequences of the rise in injection drug use. It provides a window into the deadly opioid epidemic unfolding across every American's backyard.

Learn more at

opioid.amfar.org

When Size Matters:

How Social Media Can Help Determine Key Population Size

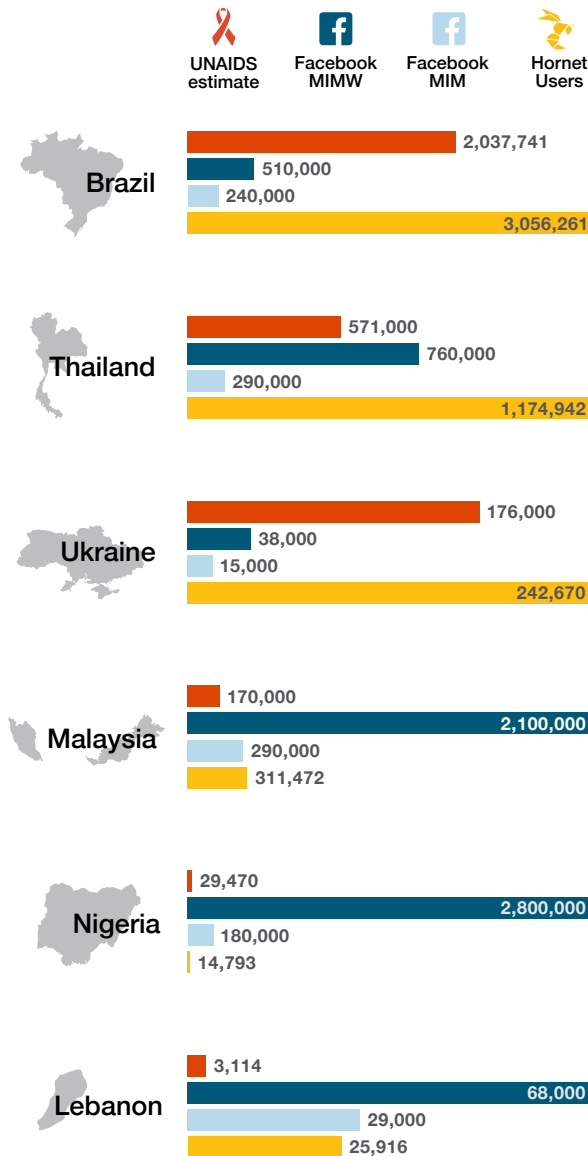
amfAR funded a study with Johns Hopkins University, gay social network Hornet, MSM-GF, and Emory University to see how the number of gay and bisexual men using Hornet or Facebook in various countries compared to UNAIDS population size estimates for gay and bisexual men.

Why is this important?

Gay and bisexual men face stigma and criminalization in many countries, leading to undercounts in UNAIDS estimates. As a result, they may receive insufficient funding for HIV programs.

Why is it necessary?

The estimated number of gay and bisexual men drives HIV programming. PEPFAR and the Global Fund set targets and budgets for HIV prevention work by aiming to reach a percentage of a given population, based on this estimate.



Facebook Ad Manager

- Facebook allows tailoring of ads to users based on “behaviors.”
- Until recently, this included men interested in men (MIM) and men interested in men and women (MIMW).
- The ad manager returned an estimated “potential reach” of Facebook users.

Hornet Gay Social Network

- Hornet shared the number of unique active users in 2015 in a number of countries.
- We used this number as the lowest number of MSM in a country.

Real World Impact

Data from the Facebook analysis were recently used to reevaluate the population size of gay and bisexual men in Tanzania. In meetings with Tanzanian civil society groups and others, the **Tanzanian government tripled the MSM population size estimate from 49,000 to 150,000.** This was viewed as a success story by many advocates on the ground and abroad.

amfAR used these data during the last round of PEPFAR country operational plan (COP) reviews. amfAR replicated the Facebook Ad Manager analyses for every PEPFAR country and incorporated the results in summary PEPFAR program fact sheets. These fact sheets are available at <http://mer.amfar.org>

Sex and the HIV Reservoir

New research points to the powerful effect of estrogen



Dr. Jonathan Karn

A newly published study reveals that the female hormone estrogen has a significant effect on the persistent HIV reservoir. It suggests that women may respond differently than men to some curative interventions that are currently under investigation or, perhaps, that an effective cure for women could differ from a cure for men.

The reservoir of HIV that is impervious to antiretroviral therapy remains the principal barrier to a cure. Following a cohort of 26 men and 26 women, the researchers, led by Dr. Jonathan Karn of Case Western Reserve University, found that women have a smaller “inducible” reservoir than men. In other words, while the total size of the reservoir appears to be the same for both sexes, women have a smaller amount of reservoir virus that can be

coaxed out of hiding by so-called latency-reversing agents (LRAs).

The finding has several important implications. First, one of the main cure strategies being pursued by researchers is “shock and kill” (or “kick and kill”). The intent is to shock HIV out of the reservoir so that it can be killed by the immune system or some other killing agent. Given their smaller inducible reservoir, would such a strategy be less effective in women?

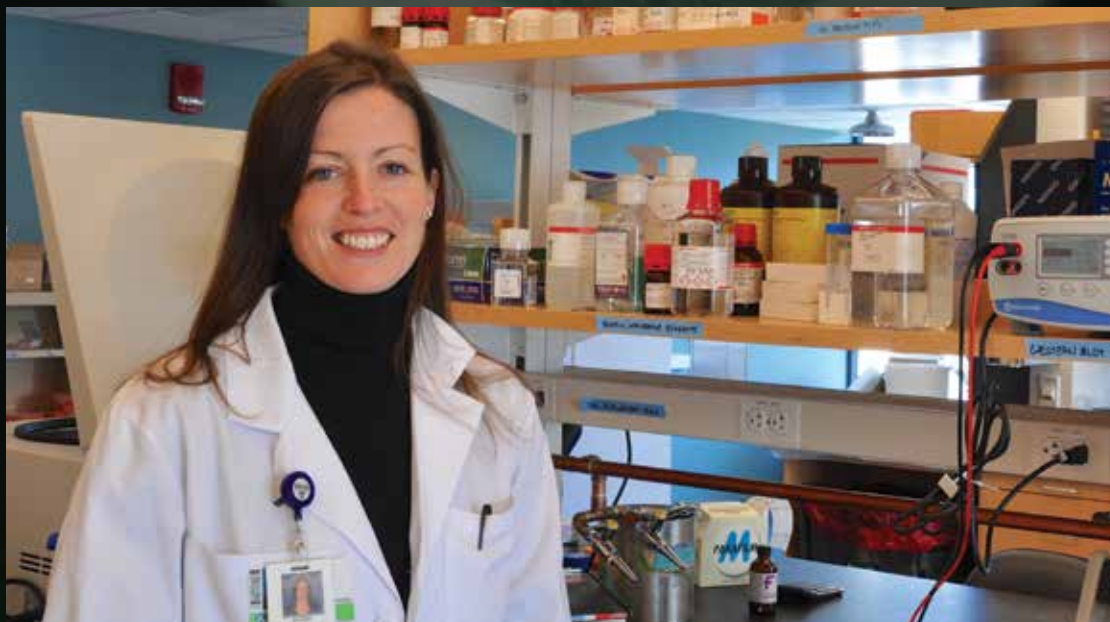
Second, since reactivation of the reservoir is inhibited by estrogen, the researchers suggest that “studies of the impact of hormonal contraception on reservoir establishment and its long-term maintenance should be undertaken.”

And, given the small size and exploratory nature of cure-focused clinical studies to date, the inclusion of women in small clinical trials may lead to skewed results if hormone exposure is not considered.

The study concludes that further investigations into sex differences in latency reversal and HIV persistence “are mandatory to extend the benefits of the HIV cure effort to all men and women impacted by the global epidemic.”

Published in the *Proceedings of the National Academy of Sciences*, these findings are the most recent outgrowth of a multi-year amfAR investigation into sex differences in HIV. “We’ve long known that women and men differ in immune

Dr. Eileen Scully



system function and response to antiretroviral therapy, but few researchers have followed up on these leads in cure research,” said amfAR Vice President and Director of Research Dr. Rowena Johnston, a co-author of the study. “It is imperative that we develop a cure that works for everyone.”

In 2012, Dr. Johnston was invited to give a talk on sex differences in HIV cure research at a conference. She soon realized, however, that there were very little available data on the topic. So she teamed up with Dr. Mary Heitzeg of the University of Michigan to undertake a systematic review of more than 150 published HIV cure research studies.

“It is imperative that we develop a cure that works for everyone.”

—Dr. Rowena Johnston

The study, published in 2015, found that while there was a strong possibility that the efficacy of a potential cure could vary by demographic variables, only 8% of the studies reported conducting efficacy analyses by sex. They concluded that, “More data are needed to determine associations between demographic characteristics and safety/efficacy of curative interventions.”

Responding to this need, in 2016 amfAR awarded a grant to two teams of researchers led by Dr. Karn and Dr. Eileen Scully of Massachusetts General Hospital to explore how sex-based differences might affect the HIV reservoir and, by extension, a potential cure. The researchers were tasked with comparing the key differences in latent virus in men and women, and exploring the immune profile, activation levels, and distribution of latent viral reservoirs in men versus women.

Their first set of findings, detailed in the *PNAS* paper, laid the groundwork for a preliminary trial to evaluate the effectiveness of the drug tamoxifen combined with the latency-reversing agent vorinostat in reactivating latent HIV in women. Supported by the National Institutes of Health’s AIDS Clinical Trials Group, the study is expected to conclude in September 2019.

2018 HIV CURE SUMMIT

**WEDNESDAY
NOVEMBER 28, 2018**

**UNIVERSITY OF CALIFORNIA,
SAN FRANCISCO**

**Join us at this free,
half-day community event
where you’ll hear the latest
from scientists at the amfAR
Institute for HIV Cure Research.**

**For more information, visit
www.curecountdown.org**

A Conversation with the Community

Second Annual São Paulo HIV Cure Research Summit



amfAR Vice President and Director of Research Dr. Rowena Johnston moderates the panel discussion

amfAR hosted its second annual HIV cure research summit at the University of São Paulo, Brazil, on April 10, bringing together more than 150 community members, medical students, healthcare professionals, and representatives from São Paulo nongovernmental organizations.

The conference, titled “HIV Cure Research: A Conversation with the Community,” was held in conjunction with the Advanced Course on HIV Pathogenesis at the university’s School of Medicine.

Speakers included: Dr. Rowena Johnston, amfAR vice president and director of research; Dr. Steven Deeks, a professor of medicine at the University of California, San Francisco; Dr. Brad Jones, an assistant professor in the School of Medicine and Health Sciences at The George Washington University in Washington, D.C.; and Dr. Lishomwa Ndhlovu, an associate professor at the John A. Burns School of Medicine at the University of Hawaii at Mānoa.

amfAR Renews Investment in European HIV Cure Consortium

Researchers to embark on decisive new phase of cure study



Dr. Annemarie Wensing

In June, amfAR's Board of Trustees approved a new round of funding to advance the crucial work of ICISTEM, the amfAR-initiated European research consortium attempting to replicate the only known case of an HIV cure. More than ten years after Timothy Brown, "the Berlin Patient," received a stem cell transplant from a donor with a rare genetic mutation conferring resistance to the virus, key scientific questions about the case remain unanswered.

Co-led by the University Medical Center Utrecht in the Netherlands and IrsiCaixa AIDS Research Institute in Barcelona, Spain, ICISTEM includes HIV cure researchers, cancer transplant doctors, and physicians working to register stem cell donors and test their cells for the genetic mutation. To date, they have identified more than two million potential stem cell donors with the CCR5-delta32 mutation, making it the world's most comprehensive study of the role of stem-cell transplants in HIV cure.

"We're delighted at the progress the ICISTEM researchers have made to date."

The team has so far enrolled a cohort of more than 30 patients with cancer and HIV who have received, or soon will receive, stem cell transplants. They have conducted exhaustive testing for persistent HIV reservoir in many of the transplanted participants, and in six cases have been unable to find evidence that HIV is present.

The new amfAR award of approximately \$1.5 million over two years will enable the researchers to embark on the next phase of this scientific journey. To determine whether any of these patients has been cured, they will withdraw antiretroviral therapy to test for evidence of viral rebound, the recurrence of persistent and detectable virus, in a strategic analytical treatment interruption trial.

During the study, both virologic outcomes, such as the size of any remaining latent HIV reservoir, and immunologic outcomes, such as T cell activation and antibody-specific responses, will also be measured to better understand the mechanisms by which a stem-cell transplant-based cure may be achieved.

"We're delighted at the progress the ICISTEM researchers have made to date," said amfAR Vice President and Director of Research Dr. Rowena Johnston. "This new round of funding will enable them to generate additional data that could yield key insights into developing a broadly applicable cure."

For more information on ICISTEM, visit www.icistem.org



Photo: Annie Leibovitz

The Mathilde Krim Effect

The September issue of the journal *AIDS Research and Human Retroviruses* pays tribute to Dr. Mathilde Krim, amfAR's Founding Chairman, who died in January. It focuses on amfAR's Mathilde Krim Fellowships in Basic Biomedical Research, awarded each year to advance the careers of promising young investigators and to invigorate the field of AIDS research, and features new findings by recent Krim Fellows.

"On January 15, 2018, the world lost Dr. Mathilde Krim, a woman who changed the life of every person who has ever worked in HIV research," write Drs. Rowena Johnston and Marcella Flores, amfAR's Director and Associate Director of Research, respectively, in an introductory essay. The authors go on to describe the extraordinary impact of the Krim Fellowships, now in their tenth year: "What is clear is that the Krim Fellowship program has been a highly successful propagator of exceptional talent."

amfAR CEO Kevin Robert Frost writes: "The cause of human rights was the thread that bound the fabric of Dr. Krim's life, a life defined by an unwavering commitment to the principle that every life was of equal value. She had neither the patience for, nor the interest in, moralizing or philosophizing on the human condition. Dr. Krim celebrated life in all its beautiful diversity, for she loved a colorful world."

Former Krim Fellow Dr. Nuria Izquierdo-Useros describes Dr. Krim's legacy in advancing the role of women in science. She writes: "The Matilda effect illustrates how the contributions of women to science have been historically attributed to their male colleagues in some circumstances. As a way to overcome the Matilda effect ... I propose to embrace the Mathilde Krim effect, and commemorate how the will of a woman had such a profound impact on the fight against HIV and AIDS."

Research Highlights from AIDS 2018

Cautious optimism marks a year of advances and setbacks

In July, researchers at the 22nd International AIDS Conference in Amsterdam reported a range of findings with implications for the prevention, treatment, and cure of HIV. Presentations included the following:

- **Promising news for “treatment-as-prevention”** Results from the PARTNER2 study added to existing evidence that when people living with HIV take antiretroviral treatment (ART) as directed to suppress virus, there is essentially no risk of transmitting HIV to HIV-negative partners. This new study, building on findings from PARTNER1, enrolled 972 gay male serodiscordant couples in 14 European countries and reported zero cases of HIV transmission despite nearly 75,000 condomless sex acts.
- **Disappointing results from the RIVER study** This was the first randomized clinical trial to test the “shock-and-kill” strategy to awaken latently infected cells to face the immune system with the aim of depleting the viral reservoir, the key barrier to a cure. In the study,

recently diagnosed men controlling their viral load using ART received a therapeutic vaccine to train the immune system to recognize and kill HIV, and the cancer drug, vorinostat, to awaken the reservoir cells. The half of participants on the experimental regimen showed no reduction in the HIV reservoir, a finding that has sent researchers back to the drawing board to conceive and test new drug combinations.

- **New evidence that on-demand PrEP is effective in men who have sex with men (MSM)** The observational study, Prevenir, which involves taking a pill before and after sex, rather than daily, provided further evidence that on-demand PrEP is an effective prevention strategy for at-risk MSM.
- **Promising long-term data presented from APPROACH HIV vaccine study** Researchers presented new data from a Phase 1/2a study evaluating safety and immunogenicity—ability of vaccine to invoke an immune response against the virus—of several different HIV vaccine regimens.

The CHAMP Study

Clues to Natural Control of HIV Infection

By Jeffrey Laurence, M.D.

In the search for an HIV cure—eradication of virus without ongoing antiretroviral therapy (ART)—one interim strategy involves identifying treatments that can induce sustained suppression of the virus, even if present at very low levels.

The feasibility of such an approach is strengthened by the existence of post-treatment controllers, the rare individuals who maintain control of HIV growth after discontinuing ART. Writing in *The Journal of Infectious Diseases*, amfAR-funded scientist Dr. Steven Deeks from the University of California, San Francisco, with colleagues from eight AIDS Clinical Trials Groups (ACTGs), identified such individuals and provided insights into their viral control.

In the CHAMP (Control of HIV after Antiretroviral Medication Pause) study, Deeks and colleagues sought to define the frequency of these post-treatment controllers. Reviewing participants in 14 ACTG studies enrolling over 700 individuals,

they identified 67 people, of whom 38 were treated during early HIV infection and 25 during its chronic phase. These individuals maintained viral loads less than or equal to 400 copies at least two-thirds of the time after stopping ART, for a minimum of six months of follow-up.

Post-treatment controllers were over three times more prevalent among those who had started ART early in the course of their infection. Most impressive was durability of HIV control. After one year, 75% still controlled their virus off ART. After five years, 22% still did. Deeks and colleagues also found that the level of virus at which participants in ART interruption trials restarted ART had a dramatic effect on the frequency of post-treatment controllers. Restarting ART at a threshold of 1,000 viral copies would have failed to identify about half of those individuals.



Dr. Steven Deeks

The investigators also noted an unusual pattern: one of the 14 ACTG studies reported a surprisingly high number of post-treatment controllers. That study included cycles of ART treatment interruption, suggesting that the concept of “autovaccination,” by which bursts of virus following ART interruption stimulate effective immune responses, should be explored further in HIV cure research.

The authors concluded that “The presence of individuals who can maintain HIV suppression after discontinuing ART provides hope that the goal of sustained HIV remission is possible.”

Dr. Laurence is amfAR's senior scientific consultant.

Funding Gaps Could Put Asia Further Behind on HIV/AIDS

The South and Southeast Asia region has the second largest HIV epidemic in the world and is home to 3.5 million people living with HIV.¹ Reductions in HIV incidence and mortality have varied by country and population group.² At this critical time when the world has the chance to achieve sustained and successful epidemic control, donor investments in the region are falling.

Donor investments for HIV/AIDS in Asia are declining

Annual PEPFAR and Global Fund investments in South and Southeast Asia have **declined by \$150M** (32%) in the past five years.³

As more countries progress to middle-income status, additional donor support will be even more limited. For example, by 2025, Malaysia is expected to no longer be eligible for Global Fund HIV financing.⁴

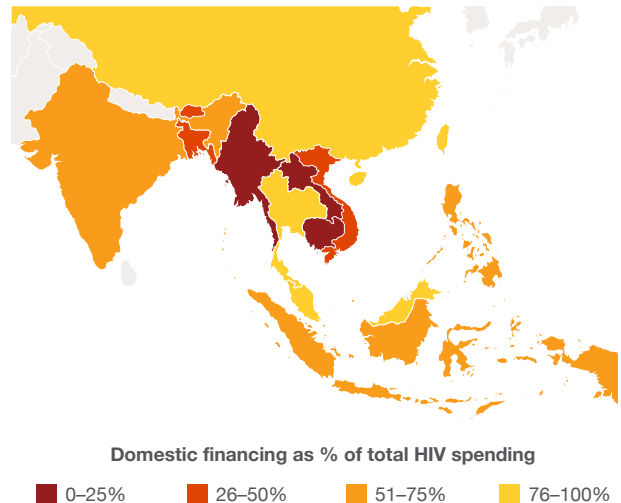
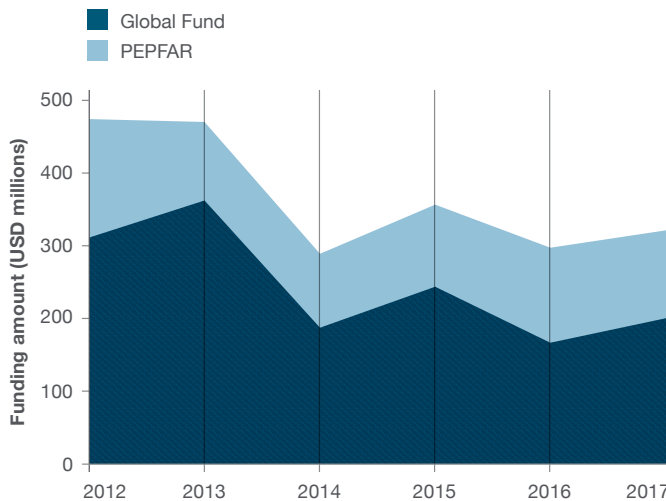
Reaching the targets for HIV control in the region set by UNAIDS will require a **more than 20% increase in funding**.²

Increased domestic financing urgently needed

Overall across South and Southeast Asia, more than three-quarters of HIV spending is from governments, according to a recent model.⁵

However, this varies considerably by country. For example, domestic funding in Cambodia, Lao PDR, and Myanmar accounted for **less than 25%** of their HIV program costs in 2015.

Domestic financing will be especially important to fill gaps in **key population programs** previously supported by international donors.



¹ UNAIDS 2016 estimates.

² WHO, Fast Tracking the HIV Response in the South-East Asia Region. 2016 http://apps.searo.who.int/PDS_DOCS/B5274.pdf

³ The Global Fund. Data Web API. <https://www.theglobalfund.org/en/data/data-sets/>. amfAR. PEPFAR Country/Regional Operational Plans (COPs/ROPs) Database. <https://copsdata.amfar.org/>. Global Fund spending is disbursements; PEPFAR is planned spending adjusted for pipeline.

⁴ The Global Fund. Projected transitions from Global Fund support by 2025 – transitions by component. 2018. https://www.theglobalfund.org/media/5641/core_projectedtransitionsby2025_list_en.pdf?u=636589651130000000

⁵ Spending on health and HIV/AIDS: domestic health spending and development assistance in 188 countries, 1995-2015. Lancet 2018; 391: 1799-829. [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(18\)30698-6.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(18)30698-6.pdf)

A “Dangerous Complacency” Is Threatening the Global HIV Response

Reports from UNAIDS and *Lancet* Commission are a “stark wake-up call”

Both UNAIDS and a *Lancet* Commission led by the International AIDS Society (IAS) report that the current global HIV response is insufficient to meet critical targets and that immediate corrective action is necessary. The 2020 “90-90-90” targets set by UNAIDS call for 90% of all people living with HIV to know their status, 90% of all diagnosed individuals to be on treatment, and 90% of those on treatment to be virally suppressed. These targets have been identified as an essential milestone toward the ultimate goal of ending the HIV pandemic by 2030.

The UNAIDS report warns that new HIV infections are increasing in some 50 countries, AIDS-related deaths are not falling fast enough, and resources are not keeping pace with what is needed to sustain progress.

“Entire regions are falling behind, the huge gains we made for children are not being sustained, women are still most affected and key populations continue to be ignored,” said Michel Sidibé, executive director of UNAIDS. “All these

elements are halting progress and urgently need to be addressed head on.”

Among the findings are that only half of all children living with HIV are getting treatment (compared to almost 60% of people overall), about 58% of new infections in adults over 15 years of age

“Entire regions are falling behind, the huge gains we made for children are not being sustained, women are still most affected and key populations continue to be ignored.”

–Michel Sidibé, UNAIDS Executive Director

occur in women, and key populations and their sexual partners account for nearly half of new HIV infections. Discrimination by health-care workers, law enforcement, teachers, employers, parents, religious leaders, and community members often prevents young people, people living with HIV, and key populations from accessing HIV prevention, treatment, and other sexual and reproductive health services.

The *Lancet* report also shows that the HIV pandemic is not on track to end by 2030 and current approaches are not enough to control it. The Commission combines the expertise of more than 40 international leaders in HIV research, policy, and public health, including amfAR Vice President and Director of Public Policy Greg Millett. The authors propose that HIV researchers and health care professionals need to work more closely with their counterparts in global health, HIV services need to be included in wider health services, and global health policies need to incorporate HIV.

See:

UNAIDS Global Update 2018: *Miles to go—closing gaps, breaking barriers, righting injustices* www.unaids.org/en/20180718_GR2018

The International AIDS Society—*Lancet* Commission: *Advancing global health and strengthening the HIV response in the era of the Sustainable Development Goals* www.thelancet.com/commissions/global-health-HIV



From left, Nicole Tsague, AIDES (France); Yves Yomb, Global Network Alliance of Communities for Health and Rights (Cameroon); Michel Sidibé, executive director, UNAIDS; Stéphanie Seydoux, French ambassador for global health; Aurélien Beaucamp, president, AIDES, and administrator, Coalition PLUS; Revanta Dharmarajah, International HIV/AIDS Alliance

Resources to Support Transition of Adolescents from Pediatric to Adult HIV Care

In collaboration with young people living with HIV, social workers, and pediatricians in the Asia-Pacific region, TREAT Asia has developed tools to help providers manage the transition of adolescents from pediatric to adult HIV clinics.

Among the tools is a flipchart for use during provider-patient discussions around transition, which is available in English, Bahasa Indonesia, Khmer, Malay, Thai, and Vietnamese.

The flipchart includes information on:

1. Differences between pediatric and adult HIV clinics;
2. When to make the transition in care;

3. What to expect at an adult HIV clinic;
4. General information about HIV treatment and prevention.

Production of these tools was made possible with the support of the Children and Youth Program of the Thai Red Cross AIDS Research Centre, and ViiV Healthcare's Positive Action for Adolescents program.

The flipcharts can be downloaded at www.amfar.org/Resources-Support-Transition-of-Adolescents/

For more information, please contact info@treatasia.org



Hepatitis C: Policy Recommendations for Addressing a Growing Epidemic

With the introduction of direct acting antiviral medications, hepatitis C virus (HCV) is now curable. Yet these drugs remain out of reach for many of the approximately 71 million people across the world living with the disease. HCV is also a common co-infection of HIV: 6.2% of the 36.7 million people living with HIV (PLHIV) show evidence of prior HCV infection. As part of its advocacy campaign for HCV, TREAT Asia has produced a policy brief outlining the current epidemic and urging political commitment and investment toward its elimination.

If left untreated, HCV can cause chronic and debilitating liver disease, including fibrosis, cirrhosis, and cancer. In 2015, HCV infection contributed to 30% of viral hepatitis-related deaths, amounting to about 400,000 lives lost. Recognizing the seriousness of this public health problem, governments, through the

World Health Assembly, have adopted the global health sector strategy on viral hepatitis, which aims to eliminate HCV by 2030.

HCV infection rates are especially high among people who inject drugs (PWID) who are HIV positive, with more than 80% of this population in some surveys having both infections. Co-infection is an urgent public health issue that could jeopardize the progress made in addressing the HIV epidemic.

The policy brief spells out essential steps that national governments must take to improve access to care and treatment. Below is a summary:

- Establish national surveillance systems for HCV so that country programs understand their own local HCV epidemics in order to design effective strategies to address them.

- Establish national viral hepatitis programs with clear plans for achieving targets for prevention, screening, diagnosis, and treatment of HCV, as well as for increasing awareness of the disease among general and key populations.
- Integrate HIV and harm reduction programs with HCV programs, prioritizing PWID.
- Build skills of non-specialist providers to enable task sharing to facilitate expansion of HCV treatment.
- Approve fast-track registration of pan-genotypic DAA regimens, which have made the diagnosis and treatment of HCV much easier to manage.

TREAT Asia's policy brief can be downloaded at www.amfar.org/Hepatitis-C-Policy-Recommendations/

“Don’t Limit Your Dreams”

Faith Peterson has been a regular and generous contributor to amfAR for several years. We asked Faith about her reasons for giving and her belief in the power of research to deliver a cure for HIV.

“HIV-positive people need the love and support of a community, not just medicine.”

How did you learn about amfAR and when did you become a supporter?

I learned about amfAR from my son Ethan. A few people close to us had shared their new diagnosis with me and I had no idea how to respond. I asked Ethan and he suggested I make an ongoing contribution to an organization that focused on a cure for HIV. He suggested amfAR. It is amfAR’s cure-focused research

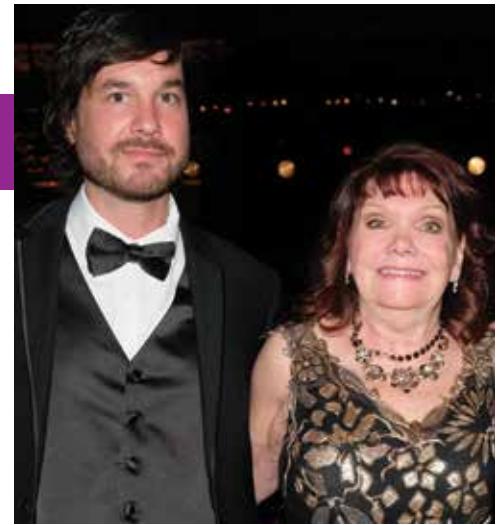
that initially drew me to it, and its model of “open-source” research continues to be very appealing. I love that research that amfAR funds must be available widely for other scientists to build on.

You visited amfAR’s offices and met with our research staff. How did you feel when you came away from that meeting?

The scope and intensity of amfAR’s research is very exciting. Again, it’s the cure focus that really appeals to us. That amfAR is supporting cure research that approaches the problem from many different angles is exciting. I know that in scientific research there are sometimes dead ends. amfAR is pursuing multiple roads to the cure.

You’ve attended the amfAR New York Gala a couple of times. Can you tell us a little about that experience?

Attending the gala at the beginning of fashion week is a bit of a dazzling experience. We are from western New York and now Florida, and the



Faith Peterson and her son Ethan Cole attend the amfAR Gala New York (Photo: Kevin Tachman)

glitz and fame of that world is so foreign to us. The staff of amfAR have always made us feel so welcome and special even when so many on the guest list are household names of fashion and film.

What would having a cure for HIV mean to you and your family?

Aside from the personal joy that a cure would bring to several people close to us, we have become broadly interested in how the disease affects people in this country and the developing world, particularly Africa, where we have made several visits.

Are you optimistic that we could achieve a cure in the foreseeable future?

We know that HIV is a sneaky virus and it has evaded many attempts by brilliant researchers to defeat it. But we also believe that amfAR is helping to fund the most promising research out there, and the strategies that the research staff at amfAR have discussed with us are the most exciting we’ve ever seen.

Is there a message of hope you’d like to convey to other families contending with HIV?

HIV impacts not just the infected person, but everyone around them. HIV-positive people need the love and support of a community to thrive, not just medicine. HIV status ought not define a person, or limit their dreams. The work of amfAR has helped people be able to live amazing lives without having to have the virus be the most important thing they think or worry about.

Disease progression of hepatitis C virus





amfAR Gala Cannes

Carine Roitfeld's stunning fashion show collection fetched \$1.7 million at the 25th annual amfAR Gala Cannes in Antibes, France, on May 18, during the Cannes Film Festival. The event's live auction surpassed last year's total, with Pierce Brosnan's painted portrait of Bob Dylan garnering \$1.4 million and a fully restored 1964 S3 Bentley convertible selling for \$800,000. Roitfeld's collection of one-of-a-kind looks from the most celebrated fashion houses was modeled by 30 of the world's top models, including Alessandra Ambrosio, Karolína Kurková, Sara Sampaio, and Izabel Goulart. The evening featured unforgettable performances by Sting and Shaggy, Grace Jones, Ellie Goulding, and Jason Derulo. Other guests included Heidi Klum, Kristen Stewart, Milla Jovovich, Lewis Hamilton, Ava DuVernay, Chris Tucker, Adrien Brody, and Benicio Del Toro.

Special thanks: *Bold Films, Chopard, Pernod Ricard, and Delta Air Lines*





amfAR Gala Hong Kong

Michelle Yeoh, Liam Hemsworth, Alessandra Ambrosio, and Jeff Koons were among those who gathered at the fourth annual amfAR Gala Hong Kong on March 26 to honor world-renowned artist KAWS and philanthropist Cathy Lee. Businesswoman Pansy Ho, a leading supporter of the gala since its inception in 2015, served as Honorary Chair of the event. Hemsworth presented the amfAR Award of Courage to Lee while auctioneer Simon de Pury bestowed the award on KAWS. The evening featured spectacular performances by Grammy-winning pop sensation and longtime amfAR supporter Kylie Minogue and Grammy-nominated singer and songwriter Tove Lo. The gala raised nearly \$3 million for amfAR.



Special thanks: AMTD Group and AMTD Foundation, American Express, Lorraine Schwartz Fine Jewelry, MGM China Holdings Limited, Champagne Perrier-Jouët, and Delta Air Lines



1. Jeff Koons and amfAR Ambassador Michelle Yeoh
2. Tove Lo 3. Honorary Chair Pansy Ho 4. Honoree Cathy Lee and award presenter Liam Hemsworth
5. Kylie Minogue

I'm so honored to be performing at tonight's #amfARHongKong gala to raise HIV/AIDS awareness and funds for research. #BeEpic & support @ amfAR's fight for a cure ♥ 

@tovelo

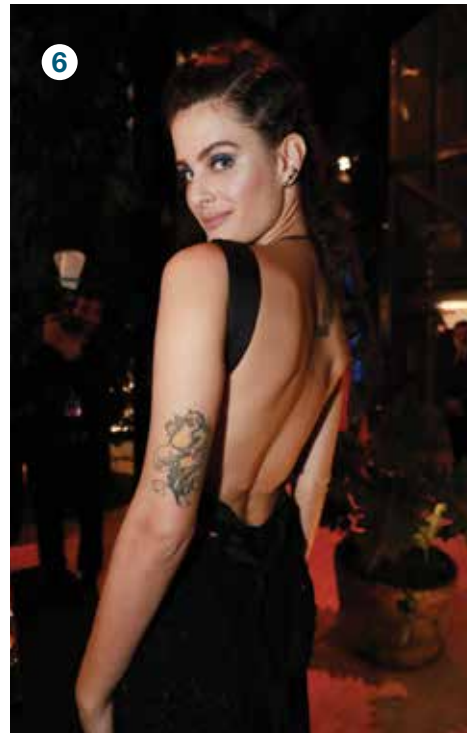


amfAR Paris


amfAR supporters enjoyed an intimate benefit dinner and auction on July 5 at The Peninsula Paris. The night featured a special musical performance by Grammy-nominated musician Aloe Blacc, who closed the evening and had guests dancing on their seats with his chart-topping hits "I Need a Dollar," "The Man," "Wake Me Up," and "Can You Do This."

Special thanks: Chopard, Perrier-Jouët, The Peninsula Paris, Delta Air Lines

Carine Roitfeld and Peter Dundas



Such a great night supporting @amfar São Paulo raising 1 million dollars for a great cause ♥ #BeEpic



@ninaagdal

1. Adrien Brody and event co-host Felipe Diniz 2. Event co-host Dinho Diniz and Marian Moreno 3. Isabeli Fontana 4. Seu Jorge 5. Honoree Brazilian soccer superstar Neymar Jr. 6. Donata Meirelles of Vogue Brasil presented the amfAR Award of Courage to Sabrina Sato.

amfAR Gala São Paulo

Brazilian soccer star Neymar Jr. and television personality Sabrina Sato received amfAR's Award of Courage at the eighth annual amfAR Gala São Paulo on April 13 for their contributions to the fight against AIDS. Dinho and Felipe Diniz hosted the event at the São Paulo home of Dinho Diniz. Neymar Jr. accepted the award from his mother, Nadine Gonçalves, while Donata Meirelles, style director of *Vogue Brasil*, bestowed the honor on Sato. Guests—including Adrien Brody, Isabeli Fontana, Barbara Fialho, Nina Agdal, and Bruna Marquezine—enjoyed a special performance by Seu Jorge, who captivated the audience with a memorable tribute to David Bowie. The event raised \$1 million for amfAR.

Special thanks: *Iguatemi São Paulo, Karavelle, Champagne Perrier-Jouët, Vogue Brasil, Tivoli Mofarrej-São Paulo, Mercedes-Benz, Ara Vartanian, and Delta Air Lines*



Parson James gave a rousing performance.

generationCURE Solstice

Nearly 300 young professionals joined amfAR CEO Kevin Robert Frost, generationCURE Event Chairs Kiersey Clemons, Henry Golding, Jessica Hart, EJ Johnson, Victoria Justice, Pom Klementieff, Caroline Vreeland and many others for the seventh annual generationCURE Solstice fundraiser on June 21 at SECOND in New York City. The event, which raised nearly \$50,000, featured a live performance by Parson James and sounds by DJ Samantha Ronson.

Special thanks: *Avion Tequila, Tesla, The Roxy Hotel, and Bonsai*

Kiehl's and amfAR Ride for Research



amfAR's Epic Ride to Life Ball

The Life Ball in Vienna, Austria, has long been Europe's largest and most spectacular HIV/AIDS fundraiser. To mark its 25th anniversary this year, amfAR teamed up with event organizer LIFE + for a four-day awareness-raising motorcycle ride, "amfAR's Epic Ride to Life Ball," from Zürich, Switzerland, to the June 2 Life Ball opening ceremony. amfAR CEO Kevin Robert Frost led the ride and was joined by Adrien Brody, Ian Bochen, JR Bourne, Michiel Huisman, Gilles Marini, Katee Sackhoff, and Chris Salgado.

The Life Ball has been a longtime supporter of amfAR's TREAT Asia Pediatric HIV Program, which focuses on improving the health and lives of children and adolescents living with HIV across the Asia-Pacific region. LIFE+ has donated more than \$6 million to the initiative through Life Ball.

Kiehl's 9th Annual LifeRide for amfAR

Kiehl's Brand Ambassador Chris Salgado and amfAR CEO Kevin Robert Frost were joined by Gilles Marini, Luke Wessman, Blake Scott, and Travis Shinn for the ninth annual Kiehl's LifeRide for amfAR, beginning August 6 in Los Angeles and concluding August 10 in San Diego. The motorcycle charity ride made eight stops at Kiehl's stores across Southern California, where the public was encouraged to meet the riders, learn more about amfAR, and contribute to the Foundation. Kiehl's donated a total of \$150,000 over the course of the ride. Since 2010, the event has covered more than 12,000 miles and raised more than \$1.9 million, funding 10 cure-related research projects.



NYC Pride 2018

As part of LGBTQ Pride Month, amfAR partnered with AmazonSmile and Audible to celebrate NYC Pride 2018 on Sunday, June 24, with amfAR staff and supporters marching down Fifth Avenue alongside amfAR's custom-designed float.

Special thanks: AmazonSmile, Audible



Chopard at amfAR Gala Cannes 2018.
Photo courtesy of Getty Images

amfAR is delighted to partner with Chopard, the world's last independent, family-owned watch and jewelry company. Chopard has supported amfAR for nearly two decades and has contributed more than 4 million dollars to amfAR's life-saving research.

Upcoming Events

- | | |
|-------------|--|
| November 17 | All in for a Cure: amfAR Charity Poker Tournament San Francisco |
| Dec 1 | Dance2Cure Los Angeles |
| December | generationCURE Holiday Party New York City |
| February | amfAR Gala New York New York City |