

INNOVATIONS

MAY 2018

The Passing of a Pioneer

Remembering Dr. Mathilde Krim

Also Inside:

A Trove of Data on the Opioid Epidemic

Bioengineering Projects Advance

Why Has Asia Fallen Behind on HIV/AIDS?

amfAR, The Foundation for AIDS Research amfar.org

INNOVATIONS

MAY 2018





COVER STORY

10-11

Dr. Mathilde Krim, AIDS Research Pioneer and Human Rights Leader, 1926–2018

amfAR's Founding Chairman, who died peacefully at her home on Long Island on January 15, was "one of the real heroes in this long struggle."

POLICY

- 4 Huge Gaps in Access to Opioid Addiction Treatment
- 5 Assessing the Impact of Medicaid Expansion on the **Opioid Epidemic**
- 6 amfAR Lends Data Expertise to PEPFAR Planning Process

RESEARCH

- 7 amfAR Renews Investment in Bioengineering Approaches to **Curing HIV**
- 8 Researchers Report Progress at Cure Summit
- 9 Can "the Berlin Patient's" Cure Be Replicated?
- 12 New Findings Point to Power of Antibodies
- 12 amfAR Awards Give Boost to Promising Young **HIV/AIDS Researchers**

GLOBAL

- 13 Study Affirms Preventive Effect of HIV Treatment
- amfAR's Dr. Annette Sohn Named New Editor-in-Chief of Journal of the International AIDS Society
- 14 Stigma Fueling Asian HIV/AIDS Epidemics
- **Improving Treatment Access**

EVENTS

Benefit Event Highlights (amfAR Gala Milano, Los Angeles, and New York; TWO x TWO for AIDS and Art; and more)



Photo: Getty Images

Spreading the Light

Edith Wharton said, "There are two ways of spreading the light: to be the candle ... or the mirror that reflects it." I know I speak for all of my colleagues at amfAR when I say that Dr. Mathilde Krim was our candle, and we were but mirrors reflecting her light.

Dr. Krim died on the anniversary of the birth of Dr. Martin Luther King. Dr. King famously once said, "The arc of the moral universe is long, but it bends toward justice." Dr. Krim spent her life dedicated to bending the curve of the moral universe towards justice. She brought all of her formidable gifts to bear in her unyielding efforts to serve the cause of human rights.

And in pondering the lessons to be learned from the AIDS epidemic, Dr. Krim wrote: "First of all, AIDS is giving us a lesson in humility. For all mankind's arrogance and destructive powers, we are not yet the masters of the universe."

"AIDS has also taught us a lesson that we should have learned long ago, namely that there is a high price to be paid whenever prejudice prevails over human solidarity. And one more thing: because it makes us suffer and grieve for those we have lost, AIDS is teaching us to value life."

"If we understand the lessons taught us by AIDS in these difficult times," she concluded, "then we can not only rid the world of AIDS but make it, in many other respects as well, a much healthier, safer, and more civilized place for future generations."

That would be a fitting legacy for a most remarkable woman —a woman I am privileged to have known.

With gratitude,

Kevin Robert Frost

Huge Gaps in Access to Opioid Addiction Treatment

amfAR report highlights limited availability of medication-assisted treatment

There is a significant gap between the availability of opioid addiction treatment in the U.S. and the services required to successfully address the nation's opioid epidemic, according to a new analysis by amfAR. The analysis was first published in the blog *Health Affairs*.

amAR's Public Policy team investigated the availability of medication-assisted treatment (MAT) in substance abuse treatment facilities nationwide using data obtained from the Substance Abuse and Mental Health Services

"amfAR's map shows that America isn't truly serious about dealing with its opioid epidemic."

Administration. Currently, there are three drugs widely considered to be the gold standard in the treatment of opioid use disorder: methadone, buprenorphine, and naltrexone.

Of the more than 12,000 U.S. drug addiction treatment facilities, only 41 percent offered at least one kind of medication for opioid addiction. Only 2.7 percent offered all three. And just 3 percent of U.S. treatment facilities that accept Medicaid offered all three.

The opioid epidemic must be met with stronger federal investments to local communities. Congress needs to take bipartisan action now to support prevention and addiction recovery efforts.

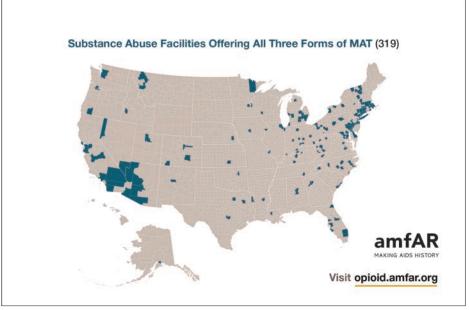
- @SenatorBaldwin

The findings were picked up by the news site *Vox*, which highlighted amfAR's Opioid & Health Indicators database, a comprehensive source of information on health statistics, available health services, and policies related to drug use and treatment in each state (see facing page). "If we don't provide even the bare minimum in evidence-based treatment, this crisis will keep getting worse," writes reporter German Lopez in

his article "To understand why America's opioid epidemic keeps getting worse, just look at this map."

Lopez added, "More than showing the specific counties and states that don't have access to some kinds of treatment and medications, amfAR's map shows that America isn't truly serious about dealing with its opioid epidemic."







Policy

Assessing the Impact of Medicaid Expansion on the Opioid Epidemic



A new amfAR study has found that while opioid prescribing in the Medicaid population has increased in recent years, there is no statistical difference in prescription rates between states that did expand Medicaid and states that did not. The study aimed to assess the impact of the expansion of Medicaid eligibility in the United States on the opioid epidemic, which currently provides coverage for four in 10 non-elderly Americans living with opioid use disorder. Results were recently published online in the *American Journal of Public Health*.

The analysis also found that Medicaid expansion actually increased access to addiction treatment.

Using Medicaid enrollment and reimbursement data from 2011 to 2016 in all states, amfAR evaluated prescribing patterns of opioids and three Food and Drug Administration–approved medications used in treating opioid use disorders: buprenorphine, naltrexone, and methadone.

The data showed that per-enrollee rates of buprenorphine and naltrexone increased by more than 200% after states expanded Medicaid eligibility; by contrast, in the states that did not expand eligibility, prescribing rates increased by less than 50%. Prescriptions for methadone decreased in all states in this period, with larger decreases in expansion states.

In an op-ed first published in *The Hill*, amfAR Policy Associate and lead author of the paper Alana Sharp noted that the findings provide compelling evidence to refute claims made by some Members of Congress that Medicaid has fueled the opioid epidemic. The analysis also underscores that Medicaid is one of the most powerful tools in our arsenal to fight the opioid epidemic, and attempts to discredit its role in improving the lives of Americans living with substance use disorders are counterproductive and not supported by the best available evidence.



Opioid & Health Indicator Database

amfAR's Opioid & Health Indicator database is a window into the opioid epidemic unfolding in every American's backyard. Browse local and national data on new HIV and hepatitis C infections, opioid use and overdose death rates, and the availability of services like drug treatment programs and syringe exchange services.

http://opioid.amfar.org

Had a great meeting today with @amfar discussing their opioid and health indicator database. Look up and compare your local opioid stats by county, state, or congressional district opioid.amfar.org

- @Surgeon General



amfAR Lends Data Expertise to PEPFAR Planning Process

PEPFAR—the U.S. President's Emergency Plan for AIDS Relief—remains the cornerstone of the global HIV response. It is the largest commitment by any nation to address a single disease and has resulted in substantial reductions in AIDS-related mortality and HIV infection rates in hard-hit countries around the world.

In late February, teams from 23 countries gathered in Johannesburg, South Africa, for regional meetings to plan how PEPFAR funding will be spent in the fiscal year October 2018–September 2019—programming nearly \$4 billion toward the HIV response in these countries.

Over the past four years, PEPFAR has proactively opened the planning process to greater external input from both country-level and U.S.-based civil society organizations. Activists and civil society representatives from around the world, including amfAR, AVAC, CHANGE, ICWEA, HEALTH GAP, MSMGF, and others, joined the meetings, in which participants worked to assess targets and budgets, evaluate performance, and develop implementation strategies depending on each country's needs.

To help enable greater participation by civil society organizations, amfAR's Public Policy Office—in coordination with our partners—developed a series of country-specific fact sheets detailing previous funding by program area and tracking PEPFAR programmatic performance over the past several years.

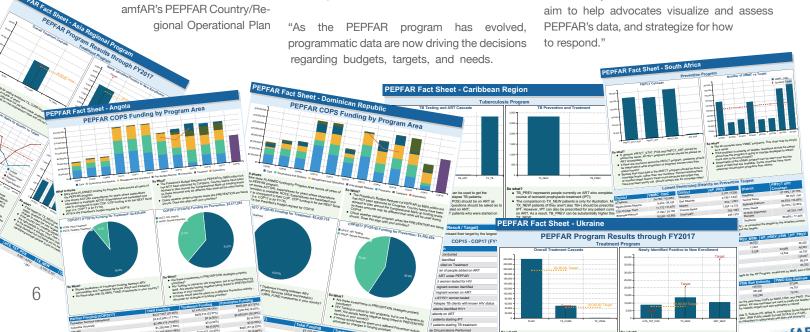
The fact sheets are an addendum to



"amfAR's PEPFAR database and fact-sheets for each country were critical in helping advocates prepare." – HEALTH GAP

database (http://copsdata.amfar.org), a comprehensive, navigable database of PEPFAR's planned funding of HIV/AIDS activities from 2007 to 2017. The database was unveiled at the International AIDS Society Conference in Vancouver, Canada, in 2015.

Yet data are always incomplete and can't always explain why certain programs or regions may be underperforming. That's a role that civil society helps fill," said Brian Honermann, amfAR's Deputy Director of Public Policy and lead developer of the database. "Our fact sheets aim to help advocates visualize and assess PEPFAR's data, and strategize for how to respond."



amfAR Renews Investment in Bioengineering Approaches to Curing HIV

In February, amfAR announced a pair of research grants that renew its support for innovative approaches to HIV cure research. Totaling nearly \$1 million, the Investment grants will allow two collaborative teams of HIV scientists and bioengineers to embark on a second phase of research initiated with amfAR funding awarded last year.

"The field of bioengineering opens up exciting new frontiers for HIV cure research."

"The field of bioengineering opens up exciting new frontiers for HIV cure research," said amfAR CEO Kevin Robert Frost. "Nanotechnology, for example, is at the forefront of biomedical research since it has been effective at delivering highly targeted therapies that benefit a wide range of conditions and diseases. We hope it could offer the same benefits for HIV."

The Investment awards are milestone-based grants that provide up to \$1.5 million to each research team in three phases over four years.

In phase I of their Investment grant, Dr. Kim Woodrow partnered with HIV cure scientist Dr. Keith Jerome, both of the University of Washington in Seattle, to formulate new drug combinations loaded onto nanoparticles targeting the latent HIV reservoir. Nanoparticles are microscopic particles that can carry and deliver drugs, lipids, and other substances.

The nanoparticles preferentially delivered latency-reversing agents to CD4 T cells, which reawakened the reservoir in a "shock and kill" approach to curing HIV.

In phase II, Jerome and Woodrow will move beyond petri dish experiments to test the loaded nanoparticles in non-human primates and to measure their effects on the reservoir.

In Phase I of the second Investment grant, Dr. Hui Zhang and HIV scientist Dr. Weiming Yang, both of Johns Hopkins University in Baltimore, applied a protein "fingerprinting" technique



Dr. Keith Ierome

called glycoproteomics to differentiate HIV-infected reservoir cells from uninfected cells.

In Phase II, Zhang and Yang will determine whether these newly identified proteins are able to distinguish the reservoir in patient samples, a significant step toward a cure.

"These Investment grants are a mechanism to enlist expertise from the growing nanomedicine and molecular fingerprinting fields to design smart, efficient, targeted approaches to cure HIV," said Rowena Johnston, vice president and director of research at amfAR. "These truly innovative projects underscore the importance of synergy and collaborative relationships in expanding the boundaries of HIV cure research."

For more, go to www.amfar.org/ Bioengineering-curing-HIV/



Dr. Weiming Yang

Researchers Report Progress at Cure Summit



An upcoming clinical study and a new generation of latency-reversing agents to "shock" HIV out of hiding were among the topics discussed at amfAR's 2017 HIV Cure Summit at the University of California, San Francisco (UCSF) on November 28. UCSF is home to the amfAR Institute for HIV Cure Research, established in 2015 with a five-year \$20 million grant.

Speakers and panelists, ranging from clinicians and biomedical scientists to patients and community leaders, offered their perspectives on cure. Both Clark Hawley and Luis Canales shared their personal experiences participating in HIV cure research.

The summit was organized around three panel discussions. The first two, moderated by Dr. Paul Volberding, director of the amfAR Institute, focused on some of the potentially curative agents and strategies that are being developed and tested.

amfAR Vice President and Director of Research Dr. Rowena Johnston outlined the three potential outcomes of cure-focused research: post-treatment control (the small number of HIV-positive individuals who stay on treatment for a period of years and are then able to maintain control of the virus when they stop taking drugs);

remission (absence of disease for a prolonged period of time with no treatment); and a cure (all virus is eradicated).

Dr. Warner Greene, a biomedical researcher and member of the amfAR Institute's board, summarized progress on the "shock and kill" strategy, in which reservoir cells are forced to produce virus that can then be attacked by the immune system or some other killing agent.

"Now we're talking about a cure, which most of us thought we'd never live to see."

After some early setbacks, "we're looking at new generations of latency-reversing agents that I think are more effective and less toxic," Greene said.

Institute researchers are beginning to move forward with a number of clinical studies. One will combine a therapeutic vaccine with broadly neutralizing antibodies. Participants will then undergo an antiretroviral treatment interruption to assess the combination's effectiveness.

In the second panel, Drs. Satish Pillai, a biomedical researcher, and Peter Hunt, a clinician, both Institute board members, were joined by Dr. Nadia Roan, another biomedical researcher. They discussed efforts that are under way to pinpoint the types of cells that harbor the viral reservoir and to measure the amount of virus that is capable of replicating.

The final panel served as a debate over the relative merits of cure, i.e., total eradication of the virus, versus post-treatment control. "What we've learned from asking a lot of people living with HIV how they feel about cure itself ... is that people want eradication," said social researcher Dr. Judith Auerbach, a professor in the Department of Medicine at UCSF and former director of public policy at amfAR.

For people who have been living with HIV for a long time, talk of a cure offered hope. "I've been living with HIV for about 35 years now. ... and now we're talking about a cure, which most of us thought we'd never live to see," said Jeff Taylor of the amfAR Institute Community Advisory Board. "It's really gratifying to be here."

Can "the Berlin Patient's" Cure Be Replicated?

amfAR-funded European research consortium aims to find out By Rowena Johnston, Ph.D.

When the scientific community learned in a 2009 article in The New England Journal of Medicine that a man known as "the Berlin patient" had been cured of HIV. the news ushered in a new era of HIV research, one underpinned by the knowledge that curing HIV is possible.

But a single person represents an anecdote, and many questions remained unanswered. What are the best ways to measure a vanishingly small amount of virus to confirm that none remains? What were the key elements of his treatment that led to the cure? And most importantly, could this case be replicated?

amfAR addressed the first question by bringing together a team of researchers to intensively study the blood and tissues of Timothy Brown,

Co-Principal Investigators Drs. Javier Martinez-Picado (front right) and Annemarie Wensing (center right) pictured with ICISTEM members $including \ Dr. \ Gero \ H\"utter, \ "the \ Berlin \ patient's" \ physician, \ and \ Dr. \ Maria$ Salgado (see sidebar). Also pictured are Dr. Rowena Johnston (front, second from right) and Dr. Jeffrey Laurence (back row, right) of amfAR.

the Berlin patient, who has been remarkably generous with his body and his time in the service of science. We also brought together another team of researchers to compare every available assay that could quantify low levels of persistent viral reservoir.

amfAR subsequently funded three separate teams to more closely interrogate the circumstances and procedures that led to Timothy Brown's cure. One of those researchers, Dr. Timothy Henrich, followed the two so-called "Boston patients" who, after unusually long delays, experienced viral rebound, confirming that their transplants did not cure their HIV infection.

As ever in science, even disappointing results are an opportunity to learn new facts.

> Scientific findings were increasingly suggesting that the genetic mutation in the donor stem cells that Timothy Brown received were a vital, perhaps even foundational, element of his cure. Another grantee, Dr. Jonah Sacha, concluded that the rejection reaction of the transplanted cells against the recipient's immune system (known as graft versus host disease) plays a central role in success against cancer and probably also HIV.

> In 2012, amfAR began discussions with a group of European researchers with the goal of establishing a research consortium, now known as ICISTEM (www.icistem.org), that could take these questions even further. We chose Europe because it has the highest proportion of people living with the CCR5-delta32 genetic mutation that appears to have been central to Timothy Brown's cure. The consortium is co-led by the IrsiCaixa AIDS Research Institute in Barcelona, Spain, and the University Medical Center Utrecht in the Netherlands. It includes HIV cure researchers.

The groundbreaking work conducted by amfAR's ICISTEM consortium has been recognized by two prestigious awards. Dr. Maria Salgado (see photo), a researcher from the IrsiCaixa AIDS Research Institute in Barcelona, Spain, was presented with the inaugural **Dominique Dormont Award during the International ADIS Society Conference** on HIV Science in Paris in July 2017. And Dr. Jon Badiola of the Virgen de las Nieves University Hospital in Granada, Spain, was presented with a Best Young Abstract Award at the Annual Meeting of the European Society for **Blood and Marrow Transplantation in** March 2018.

cancer transplant doctors, and doctors working to register stem cell donors and test their cells for the genetic mutation.

In January, amfAR met with the ICISTEM team in Berlin for an annual progress update and planning session. They have so far enrolled more than 30 patients with cancer and HIV who have received or soon will receive stem cell transplants. And they have identified over two million potential stem cell donors with the CCR5-delta32 mutation.

Most exciting, the group has conducted exhaustive testing for persistent reservoir in many of the transplanted participants, and in several cases are unable to find evidence that any HIV remains. They are preparing to embark on the next phase of this scientific journey, the definitive test of a cure, namely the withdrawal of antiretroviral therapy. Results will take at least a year, and while we cannot promise that any of these people will be shown to be cured, we can guarantee that amfAR is pursuing every promising avenue to discover what it will take to finally cure HIV.

Dr. Johnston is an amfAR Vice President and Director of Research.



She was a model of what it means to fight the good fight.

– Mary Ann, St. Louis, MO

Dr. Mathilde Krim, AIDS Research Pioneer and Human Rights Leader 1926–2018

amfAR's Founding Chairman Mathilde Krim, Ph.D., a widely respected pioneer in AIDS research and activism, died peacefully at her home on Long Island on January 15. She was 91.

Dr. Krim was at the forefront of philanthropic and scientific responses to HIV/AIDS long before the world fully understood its catastrophic global reach. In April 1983, along with Dr. Joseph Sonnabend and a small group of associates, Dr. Krim founded the AIDS Medical Foundation (AMF), the first private organization concerned with fostering and supporting AIDS research.



In the beginning she seemed to be the only one fighting for us. She gave us hope. – Joe, New York, NY



"One can only be filled with overpowering awe and gratitude that such a person has lived among us." – Larry Kramer

Dr. Krim was a blessing for humanity. – Jean, Elm Grove, WI

"AIDS has taught us a lesson that we should have learned long ago, namely that there is a high price to be paid whenever prejudice prevails over human solidarity." – Mathilde Krim, Ph.D.

In 1985, AMF merged with a like-minded group based in California to form the American Foundation for AIDS Research (amfAR), which soon became the preeminent national nonprofit organization devoted to mobilizing the public's generosity in support of trailblazing laboratory and clinical AIDS research, HIV prevention, and advocacy.

Dr. Krim received her Ph.D. from the University of Geneva in 1953. From 1953 to 1959, she pursued research in cytogenetics and cancercausing viruses at the Weizmann Institute of

Science in Israel, where she was a member of the team that first developed a method for the prenatal determination of sex.

With Ted Kenned

She moved to New York and joined the research staff of Cornell University Medical School following her marriage, in 1958, to the late Arthur B. Krim, a New York attorney, then head of United Artists Motion Picture Company and later founder of Orion Pictures. Starting in 1962, Dr. Krim worked as a research scientist at the Sloan-Kettering Institute for Cancer Research and, from 1981 to 1985, she was the director of its Interferon Laboratory.

Dr. Krim testified on Capitol Hill on several occasions and, with the help of allies such as Senator Edward M. Kennedy, was a driving force behind legislation that expanded access to lifesaving treatment and behind efforts to scale up federal funding for AIDS research. In August 2000, she was awarded the Presidential Medal of Freedom—the highest civilian honor in the United States.

Visit our tribute page at www.amfar.org/krim/

New Findings Point to Power of Antibodies

New research by amfAR grantee Dr. Dan Barouch and colleagues at Beth Israel Deaconess Medical Center in Boston further supports the idea that an HIV cure is likely to require a combination of agents rather than just one. It also offers further evidence of the potential role of antibodies in curing HIV.

Barouch's study involved a group of macaque monkeys infected with SHIV, a combination of HIV and SIV (the simian form of the virus). The researchers found that those monkeys that had been given a broadly neutralizing antibody called

along with colleagues from the Ragon Institute of MGH, MIT, and Harvard in Cambridge, MA, the National Institutes of Health in Bethesda, MD, and Leidos Biomedical Research and Frederick National Laboratory Center for Cancer Research in Frederick, MD, used a "passive immunization" approach to explore the potential role of antibodies in curing HIV infection.

This study also involved monkeys infected with SHIV. The monkeys were treated with either PGT121 or another antibody know to have anti-HIV properties called N6, a combination of both,



Dr. Dan Barouch

PGT121 combined with an immunotherapeutic drug that may act as a latency-reversing agent experienced a significant delay to viral rebound after being taken off antiretroviral treatment. They also rebounded to lower levels of virus.

While the findings are extremely encouraging, the researchers cautioned that the results are very preliminary in relation to a cure for HIV. Dr. Barouch reported on his findings at the 2018 Conference on Retroviruses and Opportunistic Infections in Boston in February.

In a previous study reported in the August 2017 issue of the $\it Journal$ of $\it Virology$, Dr. Barouch,

or a placebo. The antibodies reduced the viral load in the monkeys.

The researchers then measured SHIV DNA in the blood and lymph nodes to see if the antibodies had any effect on infected cells. They found significantly reduced levels of SHIV DNA in the blood two weeks after the antibodies were administered; in the lymph nodes, SHIV DNA dropped markedly after 10 weeks.

These results suggest that passive immunization using these antibodies might, under the right conditions, kill cells of the persistent viral reservoir and thus play a role in curing HIV.

amfAR Awards Give Boost to Promising Young HIV/AIDS Researchers

In October, amfAR announced the 2017 recipients of the Mathilde Krim Fellowships in Basic Biomedical Research, an annual program that supports bright young researchers seeking innovative solutions to HIV/AIDS.

The three Krim fellows—Daniela Monaco, Ph.D., of Emory University in Atlanta; Gabriel



Dr. Daniela Monaco

Ozorowski, Ph.D., of The Scripps Research Institute in San Diego; and Jonathan Richard, Ph.D., of the Université de Montréal, Centre de Recherche du CHUM in Montreal—were each awarded \$150,000 over two years.



Dr. Gabriel Ozorowski

"We are proud to continue the tradition of investing in promising young scientists as a means of securing and strengthening the future of HIV/AIDS research," said amfAR CEO Kevin Robert Frost. "The caliber of this year's Krim fellows reassures

us that that future is in very capable hands."

Since 2008, the Krim Fellowships, named in honor of amfAR Founding Chairman Dr. Mathilde Krim, have provided more than \$7.8 million to outstanding young investigators who have demonstrated a commitment to preventing, treating, and curing HIV/AIDS.

Read more about the 2017 Krim Fellows at www.amfar.org/Krim-Grants-BBR-2017/.

Study Affirms Preventive Effect of HIV Treatment

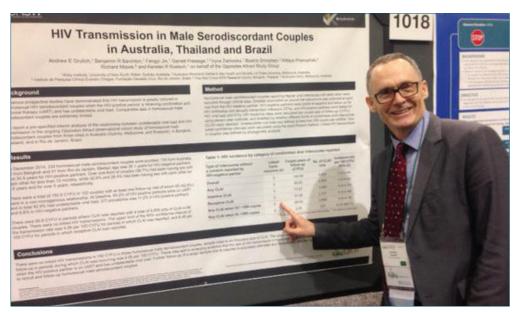
The largest study to date of HIV transmission risk in gay male couples of differing HIV status (one is HIV positive and the other is negative) has shown that HIV-positive men whose viral load is undetectable do not transmit HIV to their partners. The results of the study, called Opposites Attract, were reported at the IAS Conference on HIV Science in Paris, July 2017.

Opposites Attract followed a cohort of 358 gay couples of differing HIV status in Thailand, Brazil, and Australia from 2012 to 2016.

"Our data add to previous studies which show that there has never been a recorded case of HIV transmission from an HIV-positive person to their HIV-negative sexual partner when the HIV-positive partner had undetectable viral load," said Chief Investigator Professor Andrew Grulich of the Kirby Institute in Sydney, Australia.

The study was primarily funded by the National Health and Medical Research Council in Australia, with additional funding from amfAR, ViiV Healthcare, and Gilead Sciences.

In addition to the Kirby Institute, investigators were from the Evandro Chagas Clinical



Dr. Andrew Grulich, a professor at the Kirby Institute in Sydney, presents his poster on the Opposites Attract study at the 2015 Conference on Retroviruses and Opportunistic Infections (CROI) in Seattle. (Photo courtesy of the Kirby Institute)

Research Institute, Fiocruz, in Brazil, and the Thai Red Cross in Thailand.

"As HIV continues to disproportionately affect gay men and other men who have sex with men worldwide, the results of this study are extremely encouraging and underscore the need to get people tested and onto treatment immediately if they are HIV positive," said amfAR CEO Kevin Robert Frost. "This important breakthrough underscores yet again how investments in HIV research yield invaluable dividends in the global response to HIV."

amfAR's Dr. Annette Sohn Named New Editor-in-Chief of JIAS



amfAR Vice President and Director of TREAT Asia, Annette Sohn, M.D., has been named an Editor-in-Chief of the *Journal of the International AIDS Society (JIAS)*, an open-access, peer-reviewed medical journal. She will be joining a team of two highly regarded *JIAS* co-Editors-in-Chief, Professors Kenneth Mayer and Susan Kippax.

Since 2008 Dr. Sohn has led amfAR's TREAT Asia (Therapeutics Research, Education, and AIDS Training in Asia) program, a collaborative network of clinics, hospitals, and research institutions working with civil society to ensure the safe and effective delivery of HIV/AIDS

treatments to adults and children across the Asia-Pacific through research, education, community advocacy, and policy. Under her leadership, TREAT Asia has become a model for regional collaboration in combating the epidemic.

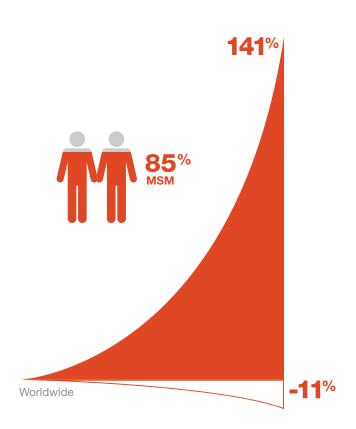
"Dr. Sohn is a highly esteemed clinician and researcher whose work in pediatric HIV is incredibly vital to the field," IAS President Linda-Gail Bekker said. "She also brings expertise in bridging research with clinical training, community outreach, and advocacy that will no doubt reflect upon and strengthen future JIAS scholarship. This is a greatly welcomed addition to the team."

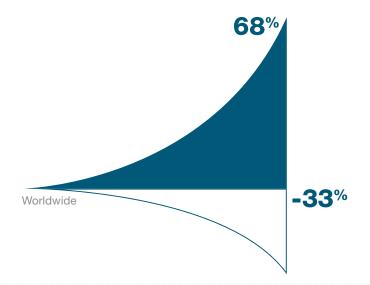
Why Has Asia Fallen Behind on HIV/AIDS?

Stigma Fueling Asian HIV/AIDS Epidemics

In communities around the world, stigma and HIV are dual burdens that reinforce one another and fan the flames of the HIV/AIDS epidemic. HIV/AIDS is generally concentrated among heavily stigmatized populations such as men who have sex with men (MSM), transgender individuals, people who inject drugs, and sex workers.

The Philippines has one of the fastest growing HIV/AIDS epidemics in the world. The country experienced a 141% increase in new infections between 2010 and 2016, while new infections worldwide declined 11% in the same period. Almost all of these new infections (85%) were among MSM.





In **Indonesia**, where 620,000 people are living with HIV, more than a quarter of both MSM and people who inject drugs are HIV positive. And poor access to treatment fueled a **68% increase in AIDS-related deaths** from 2010 to 2016, compared to a **33% global decline**.

To bring the epidemic under control in Asia, much more needs to be done to address the stigma and discrimination that deter people from **getting tested for HIV**, **seeking care**, and **staying on lifesaving treatment**.

Source: UNAIDS. Ending AIDS: Progress Towards the 90-90-90 Targets. Global AIDS Update, 2017.

Improving Treatment Access

Advocates aim to develop "essential standards" for voluntary licenses



Participants at the consultation on voluntary licenses in Bangkok, Thailand, October 16–17, 2017. Left to right: Kenneth Mwehonge, Coalition for Health Promotion and Social Development (HEPS Uganda); Safiatou Simpore, YOLSE, Public Health & Innovation, Uganda; Tapiwa Kujinga, PAN-AFRICAN Treatment Access Movement, Zimbabwe; Zhenyan Zhu, Third World Network, China; Priyam Cherian, Lawyers Collective, India

In October 2017, advocates and intellectual property experts who work toward improving access to essential medicines for HIV, hepatitis C, and tuberculosis gathered in Bangkok to discuss "essential standards" for voluntary licenses. A voluntary license is an arrangement whereby a patent holder allows others to manufacture, import, and/or distribute its patented drug.

Organized by amfAR's Public Policy Office and TREAT Asia, the consultation brought together participants from 11 countries in Asia, Europe, Africa, and North America, representing 15 local, national, regional, and international organizations.

"Voluntary licenses can be an important tool in expanding access to medicines when implemented well," said Brian Honermann, Deputy Director, amfAR Public Policy Office. "However, they can also prove worthless if the terms are insufficient to genuinely guarantee greater access."

"While voluntary licenses should improve access to essential medicines, in some cases they can actually impede access," said Chalermsak Kittitrakul of AIDS Access Foundation in Thailand. "Some voluntary licenses exclude certain countries from the agreement. Some have clauses such as royalty rates that require generic licensees to pay a high fee to the

originator company, and tiered pricing, which lets license providers fix a certain price for countries depending on their income level. Voluntary licenses can also be abused to control the generic pharmaceutical industry and the active pharmaceutical ingredient supply sources. This keeps generic drug prices artificially high."

Participants also agreed that mechanisms are necessary to inform countries if they are being included in voluntary licenses, and that patent-holding entities have a responsibility to

"We need to make sure that everyone can get the drugs they need for HIV and all diseases for which there is a treatment."

ensure genuine access that goes beyond the establishment of a voluntary license. A final document of essential standards for voluntary license agreements is in development.

"We need to make sure that everyone can get the drugs they need for HIV and all diseases for which there is a treatment," said Mr. Honermann.



Brian Honermann of amfAR (left) and Esteban Burrone of Medicines Patent Pool

Events



amfAR Gala Milano

Alessandra Ambrosio, Jourdan Dunn, Karolina Kurkova, Kat Graham, and many others joined the Italian fashion community to honor designer Angela Missoni at the ninth annual amfAR Gala Milano on September 21. Held in conjunction with Milan Fashion Week, the black-tie dinner featured spectacular live performances by Andrea Bocelli and Lion Babe. Carlo Capasa, president of the Italian Chamber of Fashion, presented Missoni with the Award of Courage in recognition of her outstanding commitment to ending the AIDS epidemic and her generous support of amfAR. The gala raised \$1.4 million for the Foundation.

Special thanks: Harry Winston, Moët Hennessy, Delta Air Lines

- ${\bf 1.}\ {\it Kisses\ from\ Karolina\ Kurkova\ and\ her\ fellow\ supermodels}.$
- 2. Andrea Bocelli 3. Kat Graham 4. Angela Missoni
- 5. Margherita Missoni (Photos: Getty İmages, Kevin Tachman, amfAR)









Bloomingdale's Fashionable Fundraiser

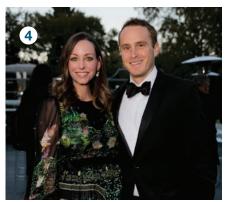
Bloomingdale's made a \$75,000 donation to amfAR as part of its five-day annual Fashionable Fundraiser, February 28–March 4, a national campaign celebrating fashion and fitness. Bloomingdale's has been a loyal and generous supporter of amfAR since 1986.







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TWO X TWO for AIDS and Art

Cindy and Howard Rachofsky hosted the 19th annual TWO x TWO for AIDS and Art benefit dinner and contemporary art auction on October 28, raising over \$7.3 million for amfAR and the Dallas Museum of Art. Actor Armie Hammer emceed the soldout gala, which was held at the Rachofskys' Richard Meier-designed home in Dallas. The night included a cocktail reception, an art and luxury item silent auction, a multicourse dinner, and a special performance by OneRepublic's Ryan Tedder. During the live auction, "Pink Plant Patio Landscape Pot" by Jonas Wood, recipient of amfAR's 2017 Award of Excellence for Artistic Contributions to the Fight Against AIDS, sold for \$1.2 million.

Special thanks: Harry Winston, Cadillac, TODD Events, Dom Pérignon, Belvedere Vodka

The Fabulous Fund Fair

Natalia Vodianova's Naked Heart Foundation and amfAR joined forces for the first time to hold a magnificent Halloween edition of the Fabulous Fund Fair in New York City on October 28. The classic funfair, which was art directed by Jeff Koons, featured designer-sponsored carnival games, Louis Vuitton bumper cars, and performances by Nas and Charli XCX. The event raised nearly \$2 million for both charities.

Special thanks: *Moët Hennessy, Laboratory ABC*

Karlie Kloss (Photo: Getty Images)



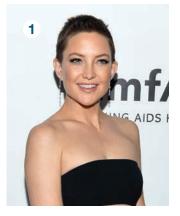






1. TWO x TWO for AIDS and Art 2. Cindy Rachofsky and amfAR CEO Kevin Robert Frost 3. Quinn Tivvey, Cyrus Hadjesmaili, and Dr. Gary Tigges 4. Melissa Meeks Ireland and Drew Ireland 5. Ryan Tedder 6. Armie Hammer with Nasiba and Thomas Hartland Mackie 7. Jonas Wood and Howard Rachofsky (Photos: Kevin Tachman)

Events





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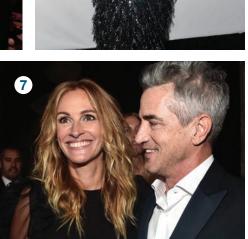
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amfAR Gala Los Angeles

Julia Roberts was honored at the eighth annual amfAR Gala Los Angeles on October 13 for her profound commitment to the fight against AIDS. Tom Hanks presented the Award of Courage to Roberts with a heartfelt and entertaining tribute, while Chris Martin sang an acoustic rendition of "Pretty Woman" and later a captivating duet of "Nothing Compares 2U" with host James Corden. Diane Sawyer, Heidi Klum, Goldie Hawn, Kate Hudson, Sean Penn, Sophia Bush, Dermot Mulroney, and Dita Von Teese were among those in attendance at the gala, which raised more than \$2 million for amfAR. The night culminated with a show-stopping performance by Fergie.

Special thanks: Harry Winston, M•A•C Viva Glam, AMTD Group, Cadillac, Moët Hennessy, PatBO, FIJI Water, Delta Air Lines



Proud to be supporting @amfar at tonight's #amfARLosAngeles Gala to raise vital funds for HIV cure research. - @heidiklum



1. Kate Hudson 2. Chris Martin 3. Tom Hanks and Diane Sawyer 4. Heidi Klum 5. Goldie Hawn, James Corden, and Melanie Griffith 6. Ongina and Viktor Luna of amfAR's Epic Voices campaign 7. Julia Roberts and Dermot Mulroney 8. Fergie (Photos: Getty Images, Kevin Tachman, amfAR)















amfAR Gala New York

Lee Daniels and *W Magazine's* Editor-in-Chief Stefano Tonchi were honored at the 20th annual amfAR Gala New York on February 7 for their longstanding commitment to ending the HIV/AIDS epidemic, an event that raised \$1.6 million for amfAR. Queen Latifah presented the Award of Courage to Daniels while Alexander Vreeland and Lisa Immordino Vreeland bestowed the award on Tonchi. Taraji P. Henson hosted the black-tie gala, which featured an electrifying performance by Grammy-nominated singer Halsey. Guests included Sienna Miller, Heidi Klum, Adrien Brody, Rachel Brosnahan, Sara Sampaio, and Hailey Baldwin.

Special thanks: Bloomingdale's; Delta Air Lines; Mandarin Oriental, New York; MP Management; Perrier-Jouët; and Kiehl's Since 1851

1. Queen Latifah and Taraji P. Henson 2. Honorees Lee Daniels and Stefano Tonchi 3. Sienna Miller 4. amfAR CEO Kevin Robert Frost 5. Halsey, Taraji P. Henson, Maxwell, Heidi Klum, and Adrien Brody 6. Buzz Aldrin 7. Halsey (Photos: Getty Images, Kevin Tachman, amfAR)



DJ May Kwok (Photo: Getty Images)

generationCURE Holiday Party

More than 300 young professionals joined amfAR CEO Kevin Robert Frost and amfAR Chairman Kenneth Cole for the fourth annual generationCURE holiday party on World AIDS Day, December 1, at the Cadillac House in New York City. Elle Dee and May Kwok DJed the event, which raised nearly \$120,000 for HIV cure research.

Special thanks: Cadillac, Gerber Group, Moët Hennessy, and The Roxy Hotel Tribeca



amfAR gratefully acknowledges Bloomingdale's role as a retail leader at the forefront in the fight against AIDS.

Since 1986, Bloomingdale's has supported amfAR through event programs, designer collaborations on special items, and gifts to the foundation that have made a significant impact on the advancement of research.

bloomingdales

Upcoming Events

May 17 amfAR Gala Cannes

Cap d'Antibes, France

June 21 generation CURE Solstice

New York City

September amfAR Gala Milano

Milan, Italy

October 18 amfAR Gala Los Angeles

Los Angeles, California

October 27 TWO x TWO for AIDS and Art

Dallas, Texas