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Why Do Science?

Scientific research, even at a top-ranked center for AIDS research like ours, is 99.99% nose-to-the-grindstone. Why is anyone willing to put up with long hours and low pay for the satisfactions derived from the other .01%?

Science is a slog. The work itself is tedious, exacting and unforgiving... and the pay, well, the pay is a cruel joke. Scientific research is like a medical internship—except that it doesn’t end after a couple of years and it doesn’t involve contact with grateful patients. Moreover, when the rare “Eureka!” moment does come, there may not be anyone around to celebrate with, and in any case there are probably only a handful of people in the world who can understand that moment’s scientific significance.

So why does anyone do science? We asked that question recently of all of our junior investigators, and to our surprise not one of them complained about the demanding nature of their lab work or the paltry compensation they receive for it. Apparently the “Eureka!” moment is worth waiting for, and is its own compensation—even if it occurs late at night, after everyone else has gone home.

What our best and brightest young researchers did express was anxiety about their ability to advance up the academic ladder—and the AIDS Institute responded to this collective expression of concern by establishing a set of mutually reinforcing mentorship programs for those researchers who are making the tough transition from postdoctoral training to an academic appointment. These programs include fellowship grants for travel to scientific symposia, classes in the use of state-of-the-art software programs, assistance with grant writing and biostatistical analysis, and help with recruitment of human subjects, especially members of minorities, for both clinical and behavioral studies. The function of these interlocking forms of support for young researchers is to maximize their chances of obtaining the sort of long-term federal funding that launches independent careers in research.

We also asked our junior researchers what they do when they aren’t in one of the Institute’s many labs... and we got an intriguing array of answers. Six of those respondents are profiled on pages 24–33 of this issue, at work and at play. Another, Benhur Lee, is the subject of a profile on pages 34–35—because, among other things, he has the distinction of being the only member of the Institute’s faculty who is conducting research under a grant from the Department of Homeland Security. Dr. Lee insists that all this is the result of a “lucky guess” on his part, concerning a newly discovered virus for which there is, so far, no effective treatment—making it potentially useful to bioterrorists. Maybe luck did have something to do with it. After all, the long history of science is replete with happy accidents—the inventions of vulcanized rubber, Velcro, Superglue, safety glass, x-rays, and penicillin among them. But we have noticed that lucky breaks tend to come to those who spend the most hours in the lab, doing the most innovative research.

There is no question, however, that the UCLA AIDS Institute’s sponsorship of the North American tour of the Keiskamma Altarpiece is the result of a happy accident—a very happy accident. The altarpiece, which is now midway through that tour, was created by some 120 women from a profoundly impoverished, AIDS-ravaged village in the Eastern Cape region of South Africa. Their embroidered triptych might never have left Africa if a colleague hadn’t happened upon it at a crafts fair—and immediately contacted Professor David Gere, the director of the Center for Art|Global Health at UCLA. Normally a reserved sort, she sent Dr. Gere a report that concluded with a heroically run-on sentence conveying all of her breathless enthusiasm: “I am so excited about this and so happy that somehow I was led to it and the women are so excited about the possibility of exhibiting it as an example of healing and community work and they have unwitting produced a masterpiece so JUST WAIT!!”

We didn’t wait. We found the necessary funds and sponsorship to bring the altarpiece to this country, a story that is told in pictures and words on pages 4–17. The Keiskamma Altarpiece was assembled in less than six months, by groups of women working in teams in a literal race against death: their hope was to finish the piece before all of them perished. As they were putting the last stitches into the panels, the first shipment of antiretroviral drugs arrived in their village—and, with those drugs, new life and new hope. To celebrate their deliverance, these women are now working on a new altarpiece. Its themes are thanksgiving and resurrection.

Edwin Bayrd
Associate Director, UCLA AIDS Institute
A Message from the Associate Director

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Cover Story

The Keiskamma Altarpiece

Bringing women together—to sew, teach, and inspire

UCLA AIDS Institute at UCLA

Knowledge Is Power

Campus and community unite—through dance and demonstrations and dramatic readings—to reaffirm UCLA's commitment to ending the AIDS pandemic in our lifetimes

UCLA AIDS Institute Around the World

If only we could vote....

Neha Kapur, Miss India, visits the UCLA AIDS Institute for a mutually rewarding tutorial on the work that our researchers are doing on the Indian subcontinent

Spotlight On...

Brilliant Research, Balanced Lives

Young researchers at the UCLA AIDS Institute play as hard as they work—and that work-play balance makes them more productive in the lab

Faculty Profile

An All-New Virus Presents All-New Challenges

One of our top young researchers has turned his attention—at the federal government’s request—from AIDS research to investigating a new, deadly, and baffling virus that was discovered just a few years ago
Bringing women together — to sew, teach, and inspire

“One street. One general store, to serve the 3,500 men, women, and children of the community. One doctor, who looks after all the men, women, and children in the community who are living with HIV. One AIDS hospice. And one AIDS educator — me.” That is how Eunice Mangwane (below) describes her home town, the tiny fishing village of Hamburg, South Africa. Hamburg sits on a hook of land overlooking a small bay on South Africa’s eastern coast, roughly halfway between the larger cities of Port Alfred and East London. It is destitute, even by South African standards: only one adult in ten has a job. And even by South African standards, it is ravaged by AIDS: roughly a third of the residents of Hamburg harbor the virus, and hundreds more have succumbed to the disease and are buried on the outskirts of the village.

It is hard to imagine a community less likely to produce a triumphant, life-affirming, hope-inspiring work of art than Hamburg, South Africa — until you meet the remarkable women who created the Keiskamma Altarpiece. There is Eunice, the indefatigable force of nature, affectionately known as “Mama AIDS” in her village. There is Dr. Carol Hofmeyr, a white South African physician who inspired the altarpiece project. And then there are the women of Hamburg, a close-knit group that includes a remarkable number of artist-savants whose talents no one fully appreciated until Carol put embroidery needles in their eager hands. This is their story.
The North American tour of the Keiskamma Altarpiece began in Toronto, Canada, in August 2006—where the altarpiece stood in St. James Anglican Cathedral (top) during the International AIDS Conference. For the trip to Toronto, the altarpiece, which weighs more than a ton, was disassembled and carefully nested in six huge, specially designed packing crates—a painstaking process that must be reversed every time the altarpiece is displayed (above and right).
To the accompaniment of a musical triumph improvised by the organist of St. James Cathedral in Toronto, the wings of the Keiskamma Altarpiece are slowly opened, to reveal larger-than-lifesize portraits of three of the many women in Hamburg, South Africa, who are caring for grandchildren orphaned by AIDS. Eunice Mangwane stands at center, dwarfed by her own portrait. On her right is Jackie Downs, who supervised the teams of women who created the panels of the altarpiece; on her left, Dr. Carol Hofmeyr, who conceived of the altarpiece as a way for the women of Hamburg to commemorate the losses their village suffered as the AIDS epidemic raged unchecked across their homeland. It was the Very Reverend Douglas Stoute, Anglican dean of Toronto (below), who raised the funds to bring the altarpiece—and the women who oversaw its creation—to Toronto, and act of generosity that was matched in Chicago by the Right Reverend William Persell of St. James Episcopal Cathedral in that city, and members of the congregation, chief among them Michael Leppen.
No one knows exactly when AIDS first came to Hamburg. No one knows, because no one, back then, would acknowledge that anyone in the village, anyone they knew, anyone in their family had AIDS. In their minds, AIDS was a disease of big cities, of shameful practices, of license and licentiousness. And Hamburg was a tiny village, far from the big cities, a settled, sedate hamlet of neighborly, hard-working people. AIDS could not possibly come to such a place.

But sometime in the 1980s AIDS did find its way to Hamburg—brought there, in all likelihood, by young men and women who had left the community to find work in the big cities up and down the coast. Hamburg had always depended on the sea for its livelihood, but by the latter half of the 20th century the waters off Hamburg were largely fished out, so the community’s more ambitious young men left to find work in the mines. Those jobs kept them from their families for months on end, and inevitably the young men sought out the company of women who had left their own impoverished villages and been embraced by South Africa’s flourishing sex trade. Just as inevitably, some young women from Hamburg joined this exodus to Cape Town and Durban and Johannesburg, where there was easy money to be made offering companionship to lonely men who were far from home.

When they got too sick to work, these young men and women—the pride and hope of their families, the absentee breadwinners—came home to Hamburg, to die. Their presence was acknowledged, but the cause of their suffering was not. Shut away in their parents’ houses, they wasted away to twigs, to husks, to shadows. And when they died, they were quietly interred in one of the cemeteries on the outskirts of the village. This terrible compact of silence and shame lasted until 2002—which is when Dr. Carol Hofmeyr, Hamburg’s only AIDS doctor, first began to see acknowledged victims of the viral firestorm that was sweeping across South Africa.

By the time Dr. Hofmeyr began to tend to the people of the Keiskamma River valley, as many as one adult in three was infected with HIV—and the numbers were rising unabated. There was no treatment available, beyond palliative care, until Dr. Hofmeyr, her physician-husband, Justus, and others in the community succeeded in getting life-sustaining AIDS drugs for her patients from the United States government. The help from abroad came at a price—moral instruction as well as medications—and there were costs associated with distributing the drugs, so the Hofmeyrs and their local allies raised money to meet those expenses. Then they raised still more money, and used it to buy more drugs—so that they could offer state-of-the-art treatment to everyone in Hamburg who needed it, something the government of the country was not yet doing.

Recently, the South African government has begun to offer treatment to people living with AIDS, but the waiting lists for the drugs are very long, and the nearest hospital where those drugs are dispensed is 30 miles from Hamburg—beyond the reach of the most debilitated and desperate. To meet their needs, the Hofmeyrs have built an AIDS hospice and treatment center in Hamburg. They have also launched a community-wide effort to encourage everyone to get an HIV test—to prevent new infections, and to get those who are infected into treatment. To get a sense of how much destruction AIDS had already caused in her small village, Dr. Hofmeyr conducted an informal, door to door survey earlier this year—to identify children orphaned by the epidemic. In two weeks of off again, on again canvassing, she was able to compile a preliminary, partial list of Hamburg’s AIDS orphans. There were 70 names on that list.

Carol Brown, the director of the Durban Art Gallery and the author of the description of the creation of the Keiskamma Altarpiece found on pages 11–17, calls it “an icon of how the human spirit can rise above adversity and create art of enduring strength and beauty.” Standing in front of the altarpiece itself, one rapidly realizes that even this encomium is inadequate praise for what the women of Hamburg have achieved by coming together, under Carol Hofmeyr’s beneficent stewardship, to sew, to teach, to inspire—and, in the process, to restore hope to a ravaged community and set an example for all people everywhere who have been affected by the greatest plague in human history.

How you can help:

For more information about the Keiskamma Altarpiece and its North American tour, contact Edwin Bayrd, Associate Director, UCLA AIDS Institute at ebyrd@mednet.ucla.edu or 310.825.4750.

To make a donation to support the UCLA AIDS Institute, which is currently conducting more than two dozen prevention, intervention, and treatment programs in South Africa, contact: Aly Shoji, Director of Development UCLA AIDS Institute at ashoji@support.ucla.edu or 310.267.1826.
The Keiskamma Altarpiece is an icon of how the human spirit can rise above adversity and create art of enduring strength and beauty. The altarpiece is named after its place of origin, the Keiskamma River valley in South Africa’s Eastern Cape province. This region, one of the nation’s poorest, is also one of the hardest hit by AIDS. The altarpiece was created in the scenically beautiful but economically destitute seaside village of Hamburg—named, like many of the towns in the region, after the hometowns of the German immigrants who settled there in the 19th century. Carol Hofmeyr, a more recent arrival, moved to Hamburg six years ago with her husband. Both of the Hofmeys are physicians, and in the relatively short time they have been in Hamburg they have succeeded in establishing the area’s only AIDS hospice and treatment center.

They also raised funds to provide the first-ever drug treatment for the many HIV-positive members of their adopted community. As it happens, Carol Hofmeyr holds a degree in fine arts as well as medicine, and her ministry to the people of the Keiskamma valley involves both of her professions, for in addition to providing medical care to the many AIDS patients in the region she has involved local women in a series of projects that use art as a means of commemorating the local lives lost to AIDS and a means of consoling those who remain behind.

Dr. Hofmeyr’s initial idea was to teach embroidery to local women—in part as a way of assisting them economically, in part as a way of enabling them to come to terms with their grief through this unique form of communal therapy. The project began simply: unemployed women were engaged to embroider cushion covers and other small items, which were then sold in local markets. But Dr. Hofmeyr’s vision—and the exceptional skills demonstrated by the women of Hamburg—soon led them to undertake a much more ambitious project: their own version of the famed Bayeux Tapestry. Unlike the original, which depicts events associated with the Norman Conquest of England and includes scores of historical figures and mythical creatures, the Keiskamma Tapestry is devoted to more mundane and less fanciful subject matter: the history of South Africa’s Eastern Cape, up to the end of apartheid.

It took the women of Hamburg six months to complete the tapestry, which now hangs in the South African parliament in Cape Town. More than a hundred local women worked on the tapestry, and as that project wound down the women asked Dr. Hofmeyr to set them another, equally challenging task. As it happened, Dr. Hofmeyr had recently visited Colmar in Alsace Lorraine, home to one of the greatest works of the German Renaissance, the Isenheim altarpiece (above). She was struck by the fact that the German altarpiece was created, in the early 1500s, to celebrate the region’s deliverance from a plague, one caused by ergot, a fungus in rye flour that causes hideous sores, gangrene, and gruesome death.

Colmar’s Isenheim altarpiece had been commissioned by the religious order of St. Anthony, founded in the 12th century to minister to the sick. Because the Antonine monks of Isenheim tended the victims of this plague—and because ergotism produced excruciating pain by inflaming nerve endings—those who died of the disease were said to be consumed by “St. Anthony’s Fire.” What the women of the Keiskamma needed, Dr. Hofmeyr decided, was their own altarpiece—to commemorate their determination to prevail in the face of AIDS, the worst plague in modern history.

The Antonine order’s commission went to one of the major figures of the German High Renaissance, Matthias Grünewald, and is regarded as his masterpiece. Like similar altarpieces of the period, it is constructed like a cupboard with two sets of doors, which open to reveal a second painting behind the first—and, behind it, carved wooden statues of three saints. Typically, the wing panels of such an altarpiece are closed most of the year, and opened on specific days for veneration and adoration.

The Isenheim altarpiece shows the Crucifixion at center, with St. Sebastian and St. Anthony on the
Eunice Mangwane, who, as a widow tending a daughter and grandson with AIDS, embodies the African epidemic, describes aspects of the complex iconography of the Keiskamma Altarpiece during the ceremonial unveiling of the altarpiece at UCLA on World AIDS Day 2006.
flanking panels. (Both saints were believed to hear the prayers of the sick, and St. Sebastian was thought to spare the righteous from the plague.) Grünewald’s version of the Crucifixion has been described as one of the most brutal in the history of art. Christ’s emaciated body is visibly scourged, his scalp lacerated by thorns, his torso covered in bloody, festering wounds, and his face a mask of agony and despair. The predella, or bottom section, shows the Entombment.

The intermediate panel, which was revealed only at Christmas, Easter and on feasts of the Virgin, depicts the Annunciation, the Angel Concert for the Madonna and Child, and the Resurrection—all symbols of joy and hope. The Isenheim altarpiece was opened fully only on St. Anthony’s Day—to reveal painted panels featuring scenes from the life of the Antonine order’s patron saint.

**The making of the Keiskamma Altarpiece**

Because Carol Hofmeyr could not bring the Isenheim altarpiece to Hamburg—or take the women of Hamburg to Colmar—she did the next best thing: she collected scores of images of Grünewald’s masterwork, and she showed these photographs, reprints, and tear-sheets to the group of women who would be working on Hamburg’s version of the altarpiece. After a series of wide-ranging, open-ended discussions about how to adapt Grünewald’s imagery to give it local context, one of the participants in these discussions, Nozimasile Makubalo, made a preliminary set of drawings based on these images and on decisions reached by the group.

Working from those sketches, four young art students from the village, Nokupiwe Gedze, Cebo Mvubu, Nomfusi Nkani and Kwanele Ghanto, devoted their summer holidays to translating the design onto cloth panels. When they finished, teams of women began the laborious task of transforming the stenciled designs into embroidery. One of the methods they used is known as stump work (see example at upper right). It is a form of embroidery that involves layering the thread over cotton batting to build up specific parts of the design to create three-dimensional effects. The women of Hamburg were taught stump work by two embroiderers from England, Jan Chalmers and Jackie Jezewski, who donated their services to the project.

Ten women worked on each panel, and it took these teams half a year to complete their assignments. At the end of each week the teams brought their panels to an assembly point in Hamburg, where the panels were laid out, side by side, to make sure that the styles and colors were consistent. Altogether, more than 130 women—and several men—were ultimately involved in the creation of the Keiskamma Altarpiece, whose final size is 13 feet in height by 22 feet in width—the exact dimensions of the Isenheim altarpiece. Dr. Hofmeyr’s husband constructed the wooden framework for the Keiskamma Altarpiece, which is the same shape and size as the one in Colmar.

The formal unveiling of the finished altarpiece took place in July of 2005. Members of the community, a number of AIDS patients, and virtually all of the women who worked on the altarpiece packed the nave of the Anglican cathedral in nearby Grahamstown for the event. One of those women was Jackie Downs, who not only worked full-time on the project but served as the design coordinator for the Keiskamma Altarpiece. In her words, the final product of Hamburg’s collective labors is “an accumulation of stories from our community, made by bringing women together—to sew, teach, and inspire.”

During the months that the altarpiece was being created, it gave the AIDS-ravaged village of Hamburg a sense of collective purpose, and it afforded the women who gathered together to work on the panels a chance to discuss their problems and draw support from others in similar circumstances. The altarpiece echoes that sense of community in every panel, and the opening of those panels constitutes a kind of dramatic performance, a playing out, phase by phase, of both the history and the hopes of Hamburg.

**The altarpiece closed**

The central image of the closed altarpiece (pages 4–5) is a cross, with the body of Christ replaced by the image of a Xhosa woman dressed in the traditional attire of a recent widow. She is grieving over the loss of a spouse who has died of AIDS. While Grünewald depicted Mary Magdalene and St. John on either side of Christ, the blue-clad Keiskamma widow is surrounded by the children of Hamburg, many orphaned by AIDS, as well as the grandparents and other older members of the community who are increasingly called upon to look after those orphans.

The makers of the Keiskamma Altarpiece see the Cross as a symbol of universal suffering that leads to transformation and resurrection, and as a symbol of feminine strength and power. To reinforce that message, the figures of the two flanking panels are not saints but respected older women from the community, who lend their support to the central figure just as the Anthony and Sebastian figures do in the Isenheim altarpiece. The left panel is dominated by the figure of Susan Paliso; the right, by Leginah Mapuma, who wears the formal dress of members of the Anglican church in Hamburg. The widow in the center has chosen to remain anonymous, to serve as a symbol of the hundreds of women in the region—and the hundreds of thousands of women across Africa—who have lost spouses, children, grandchildren, and lifelong friends to AIDS.
The predella, or bottom panel, depicts the funeral of Susan Paliso’s son Dumile, who succumbed to AIDS in 2002, at the age of 35. Like the figure of Christ on the central panel of the Isenheim altarpiece, Dumile’s corpse is covered with red sores.

The altarpiece fully opened

Opening the inner set of doors (pages 16–17) reveals dramatic, larger-than-lifesize photographs, printed on canvas, of three local grandmothers and their grandchildren, some of them orphaned by AIDS. These pictures of local people, taken by Tanya Jordaan, represent an all-too-familiar social phenomenon in South Africa, which may have as many 2 million AIDS orphans under the age of 15 by the end of the decade. The care of these children has largely become the responsibility of their grandmothers—whom the Honorable Stephen Lewis, United Nations Special Envoy for HIV/AIDS in Africa, calls “the unsung heroes of the African epidemic.” Despite the demands placed on them in old age, these women meet the world with a confident, direct gaze. Disease has always been part of the African landscape, which may explain why they shoulder new burdens with such apparent equanimity. They are what they appear to be—strong, nurturing women. They are emphatically not victims of the AIDS epidemic, or of circumstance. The subjects of the panels are, from left to right: Susan Paliso, 82, shown with her arm around her eight-year-old grandson Lihle, whose father’s funeral is depicted on the predella; Eunice Mangwane, 58, pictured with her three grandchildren, nine-year-old Akona and the twins Lithemba and Thabo, who are three; and Caroline Nyongo, 47, who holds her two-year-old grandson Nomaxabiso in her arms. Arrayed at her side are Siphosetsu (4), Siphamandla (3), and Aziwe (7). It was Caroline’s group that made the beaded trees, birds, and beasts seen across the top of the central panel.

The outlying panels, which are suffused with warm reds and deep blues, represent the areas outside Hamburg where those who have died of AIDS are buried. In contrast to the busy, crowded landscapes of the other panels, these expanses are unpeopled. The Keiskamma River meanders through the left panel, and in both panels one sees the ghosts of great trees, which are both present and absent, suggesting memory and eternity, the continuity of life, and fortitude in the face of adversity.

According to Carol Hofmeyr, the Keiskamma Altarpiece “represents a turning point in our small community’s relationship with HIV and AIDS. Miraculously, this work of art—which has no single creator—embodies not just our fears and our losses but the slow restoration of hope in our community. Every time I see the altarpiece I am astounded anew by the forces within a community that can be summoned to make something so apt and so beautiful.” It is her belief that the enormous optimism contained in this powerful, unique, and spectacular work of art can serve as an inspiration to all who view it.
Campus and community unite—through dance and demonstrations and dramatic readings—to reaffirm UCLA’s commitment to ending the AIDS pandemic in our lifetimes

Over the past five years, UCLA's commemoration of World AIDS Day has evolved from a noontime rally, orchestrated by the AIDS Institute and captained by the first class of UCLA AIDS Ambassadors, into a day-long, campus-wide teach-in coordinated by an informal consortium of a dozen undergraduate groups, ranging from Students for International Change to Dance Marathon. The theme of World AIDS Day was "Kiss + Tell," a contemporary spin on an old admonition. It was chosen by the student-organizers of the day’s events as an acknowledgement and affirmation of sexuality, coupled with a reminder that all sexually active individuals have a responsibility to know—and divulge—their HIV status. In the Age of AIDS, if you kiss, you also tell.

Clad in black-and-red “Kiss + Tell” T-shirts provided by the AIDS Institute (right, below), more than a thousand students attended a kick-off rally in Bruin Plaza, at the heart of the UCLA campus, at noon on World AIDS Day, where they heard Eunice Mangwane (far right, above), clad in the traditional patchwork dress and elaborate beadwork of a Xhosa matron, describe her work as an AIDS educator and hospice attendant in rural South Africa. Dawn Averitt, one of America’s foremost advocates for women living with HIV, brought the large crowd to near-perfect silence by describing how she was infected: raped by a date when she was the very age of most of the young women in the audience. Today, Dawn is the mother...
UCLA’s campus-wide celebration of World AIDS Day began with a rousing line dance (top left) led by representatives of Dance Marathon, which raises hundreds of thousands of dollars each year for AIDS research, and ended with a performance by the Acapella Bellas (far left) — high school students who also conduct AIDS prevention programs at local schools under the aegis of the AIDS Institute.
of two healthy little girls, and the founder of The Well Project, a not-for-profit foundation that is seeking to change the course of the AIDS epidemic, here and abroad, through a comprehensive focus on the needs of women. Most of this vital information is available through the foundation’s Web portal: www.thewellproject.org.

What better way to get people to talk about the role that condoms play in preventing HIV infection than by refashioning them as haute couture? That is exactly what Brazilian activist-artist Adriana Bertini has done, creating colorful, sensual cocktail dresses and ball gowns out of thousands and thousands of male and female condoms. After touring the “Condom Couture” exhibit (right) at the Fowler Museum at UCLA, students were encouraged to try their own hands at weaving brightly colored condoms onto mesh armatures (below).

UCLA’s commemoration of World AIDS Day 2006 culminated in “48 Hours to Action,” a giddy gallimaufry of performances — by choreographers, songwriters, monologists, musicians, and actors — who were given a mere two days to produce an artistic response to some aspect of the global epidemic. The evening event, which was sponsored by the World Arts and Cultures department under the stewardship of Professor David Gere, took the form of an amiable competition — there were no losers, only winners — and ended with an Absurdist fashion show.

A more somber note was struck by Pat Payne, a Critical Studies administrator in the School of Theatre, Film, and Television, who read her haunting poem about the legacy of doubt that dogs each intimate encounter in the Age of AIDS (overleaf).

Condoms—in a rainbow of colors—are given new life, and a new role, in the atelier of activist-artist Adriana Bertini, who carefully records how many factory-reject condoms she uses to create dresses like these... and how many painstaking hours it takes her to finish each frock.
Untitled (Yes)

my life alone was a beautiful ruin of crumbling fantasies
no need for vanity in a single bed
piles of pre-washed hopes
dust balls and spider webs of unrequited longing
waiting to be washed clean
affection in single self-serve portions
that teased the appetite, but fueled the hunger
mismatched cutlery 'round chipped plates left by past loves
waiting, waiting for the arrival of distraction
I dragged my faith around like a tattered baby blanket
eyes scanning the ground for a lucky penny

then I found you
and I can’t keep from biting the coin
to make sure its real
he put some hoodoo stuff on me – yes
cut his eyes and threw my soul sideways – yes
threw up a crucifix when you said hello
bathed in salt when you asked me out
my heart, the neglected shrine
heaved a sigh, resigned to another bad repair job
he got dimples full of goofer dust – yes
blew love darts out his lips – yes
claimed me as ‘wife’ before I even knew his name – yes
let’s take the test...

…and tomorrow fell from its nest
show me how, show me where to place the parenthesis around (I LOVE YOU)

imagine…something grabbing your shoulders
snatching you out of the air
dipping you in a vat of plaster neck deep
and it is setting – fast
the white block extruding the air from your lungs
let’s take the test...

I see glimpses of an old horror movie
between my splayed fingers
I’m looking out my window in an emotional drive-by
while bullets spray the air – praying they won’t hit me
the test…YES…our results

my chest is filled with blackbirds
will ‘love’ turn to dust in our mouths
our faces turn stoic as Anastasi mysteries
do I belong among this list of the foolish and the faithful

his kiss tells me
the Angel of Death has passed by a hair’s breadth
this time
and he enters me like the gift I am
yes
live the legend of your life
peace and blessings
If only we could vote....

Neha Kapur, Miss India, visits the UCLA AIDS Institute for a mutually rewarding tutorial on the work that our researchers are doing on the Indian subcontinent

Our vote was unanimous: Neha Kapur, a 22-year-old student of traditional Indian dance, should have been chosen as Miss Universe 2006. Inexplicably, the contest’s judges chose someone else, but then they don’t know Miss Kapur the way we do. Admittedly, our take on the Miss Universe judging is biased, because last year’s Miss India is more or less a member of the family: she’s the niece a member of the UCLA medical faculty. And on top of that Miss Kapur chose, as her pageant “platform,” the promotion of AIDS awareness in her native country — a particularly praiseworthy choice, given that India will soon overtake South Africa as the country with the largest number of people living with HIV infection.

But what completely won us over was that Miss India took time from the pageant—which was held in Los Angeles—to pay a visit to the AIDS Institute. The initiative was hers; the researchers she met with included Dr. Roger Detels, the former chair of the Department of Public Health at UCLA and the man who mapped the epidemic in Indian’s North East States, and Dr. John Fahey, who has long been the Institute’s chief liaison with the Indian government’s National AIDS Control Organization and who has pioneered efforts to train the subcontinent’s healthcare workers to recognize and treat HIV infection. Miss Kapur also heard from Professor David Gere, the director of the Center for Art/Global Health at UCLA, who recently spent a Fulbright year in India setting up a national network of activist-artists—among them scroll painters, puppeteers, and itinerant theatrical troupes—who are, under his guidance, incorporating AIDS prevention messages into their art. (For a report on the first phase of Dr. Gere’s work in India, see the October 2004 issue of Insider, which is available online at www.uclaaidsinstitute.org, under PUBLICATIONS.)

The Miss Universe contest is an annual event. AIDS, on the other hand, is the defining public-health crisis of our lifetimes, and we hope Miss Kapur’s example will inspire others across her country. In India, beauty pageant winners are accorded the kind of frenzied media attention that our press reserves for rock stars and wayward heiresses. If Miss Kapur’s national réclame has outlived her brief reign as Miss India — and we hope it has — then she can continue to turn press events into opportunities to help her fellow citizens, and especially India’s tens of millions of vulnerable women, acquire the knowledge they need to avoid getting infected with HIV.
When Barbara McClintock was awarded a Nobel Prize in Physiology and Medicine in 1983, a reporter asked her to describe her work. An accurate answer would have been that Dr. McClintock, the first woman to receive an unshared Nobel Prize, had spent her whole career studying the colored spots that are found on ears of wild corn. She chose to investigate the genetics of maize at the cellular level because women of her generation were barred from studying animal genes, and her investigations led her to conclude, well in advance of her male colleagues, that certain genes are responsible for the suppression or expression of particular genetic information. She might have told the inquiring reporter that she had received her Nobel for discovering the on-off switch that is the basis for all genetic research today. Instead, she told him that she had derived a lifetime of pleasure from asking the maize plant to solve specific problems, and then observing how it responded.

It wasn’t quite that simple, of course — but Dr. McClintock’s explanation does describe both the basic nature of her work and the satisfaction she derived from it. With slight modification, her reply can be used to describe the research being conducted at the UCLA AIDS Institute by the six young researchers who are profiled here: They are posing specific challenges for HIV, and then observing how it responds — to gain insights into how to cure HIV infection, and how we may one day use inactivated HIV to cure other diseases, including many forms of cancer.

These six junior investigators were among dozens who participated in a survey that the AIDS Institute conducted last year, to determine how best to help the next generation of AIDS researchers make the increasingly fraught transition from postdoctoral work to a faculty position. They were asked to list the aspects of their work that they liked best, and liked least — and then to rank each listed item in terms of the impact it has on their ability to do first-rate research in the labs of the UCLA AIDS Institute.

To our surprise, not a single respondent listed “exhausting work load” or “inadequate compensation” as disincentives to continue to do research science. Maybe that is because 18-hour days and laughably modest compensation are regarded as Eternal Verities in academe. Like the unending succession of cloudless, 75-degree days that is the most salient aspect of life in Southern California, long hours and low pay are simply facts of life at the AIDS Institute — and not just for junior investigators.

What these young researchers did cite, first and foremost, was anxiety about advancing up the academic ladder — and, more specifically, they all expressed apprehension about clearing the highest of early academic hurdles — which is securing a large, multiyear grant from the National Institutes of Health. The AIDS Institute responded to this collective expression of concern by establishing a mutually reinforcing set of mentorship programs — which include assistance with biostatistical analysis and grant writing — to help our best and brightest find a secure berth in academic research. The overall purpose of these interlocking forms of support for young researchers is to maximize their chances of obtaining major federal research grants by minimizing the likelihood that their applications will be rejected on purely technical grounds, or because a grant candidate failed to secure all necessary approvals, or because the study design contained correctable flaws.
Dong Sung An (below) has less need than most of mentoring—because for the past 12 years he worked in the lab of Irvin S.Y. Chen, the director of the AIDS Institute. Dr. An, who was recently named an adjunct assistant professor at UCLA, is currently working with Dr. Chen on a novel approach to treating HIV infection, one that effectively blocks the portal through which the virus enters cells. The weapon that An and Chen are using against HIV is something called short interfering RNAs—which are exactly what their name suggests: small bits of genetic material that are capable of “knocking out” certain genes, thereby inactivating them. In the study that An and Chen conducted, RNA interference was used to knock out the receptor that enables HIV to invade the cellular components of the immune system and turn those cells into incubators for new generations of the virus.

When Dr. An joined UCLA, one of his lab mates proposed that An join him for a weekend hike. That “hike,” as it turned out, was up Half-Dome Mountain in Yosemite National Park. Technically, it was a hike—because Half-Dome can be scaled without pitons, crampons, or other mountaineering equipment. An survived... and he was hooked. Hiking soon gave way to mountain-climbing, and to all the gear—and guts—that
are required to hang off rock faces, hundreds of feet above terra firma. With characteristic understatement, An simply says that mountaineering offers "more excitement" than hiking. No argument there, even when a mountain face is approached with the same meticulous attention to detail that An brings to his lab work.

Erica Sloan’s work at the AIDS Institute can fairly be called stressful in all respects, because it is not only demanding in the way that all junior research positions are, it specifically involves subjecting rhesus monkeys to stress. Her scientific objective is to assess how stress acts through the sympathetic nervous system to influence the simian form of HIV. There is evidence that stress increases the rate at which the virus replicates, and the question that Sloan and her mentor, Dr. Steve Cole, are trying to answer is: Can we manipulate the pathways of the nervous system to reduce viral replication and help patients living with HIV?

To decompress from the demands of the lab, Sloan has taken up Argentine tango—which, she says, “uses the other half of my brain.” Indeed, she notes that if you really think about what you are doing when you are on the dance floor, “you immediately put a foot wrong.” George Santayana, the eminent Harvard philosopher, once remarked that the ideal occupation for a serious writer is “taking umbrellas in a museum”—because that activity in no way saps a writer’s intellectual energy. In light of Sloan’s observations, we wonder if maybe tango dancing isn’t the ideal after-hours activity for young researchers in highly demanding jobs.

“The UCLA AIDS Institute has established a mutually reinforcing set of mentorship programs to help our best and brightest young investigators find a secure berth in academic research. The overall purpose of these interlocking forms of support is to maximize their chances of obtaining major federal research grants.”
Helen Brown might argue otherwise, but then she spends her off hours with a violin under her chin, playing with a group known as the Los Angeles Doctors Symphony Orchestra. When it was founded in the 1950s, the orchestra was indeed made up exclusively of MDs, veterinarians, and dentists, but as medical training became ever more protracted, expensive, and all-consuming, the number of Angelinos trained in both medicine and music began to fall... and these days, as the orchestra's conductor is fond of saying, “If you have ever been to a doctor, you qualify for membership.” Dr. Brown says that this witticism loses some of its charm after one has heard it as often as the members of the orchestra have, because it is a staple of every concert.

Brown, who grew up in the northeast of England, learned to play the violin in middle school, because in her enlightened community music lessons—and the instruments themselves—were provided by the school system. She gave up the instrument in college, and might never have taken it up again but for the fact that one of her first lab mates, when she came to UCLA, happened to play in the Doctors Symphony Orchestra. These days, she says, playing is “as much fun or more than it ever was,” in large part because, while the drive for perfection is still there, it now comes from inside her, not from her teachers and family. She is also a perfectionist in the lab, where she is working with Dr. Jerome Zack, the head of the basic science facilities at the AIDS Institute. Their

It is often said that classical music is simply mathematics in a more appealing guise. If that is indeed the case, then why is researcher Helen Brown so accomplished on the violin and in the lab but, by her own report, maladroit at math?
investigations focus on the so-called latent reservoir of HIV infection—a designation for virus that is immune to anti-HIV drugs because it does not replicate. This is HIV’s last redoubt, and Brown is determined to storm it—and finally rid infected individuals of the last elusive particles of virus in their bodies.

When John Miller was seven, his mother enrolled him in karate classes at the dojo in his hometown, a desert community a hundred miles east of Los Angeles. She hoped the classes would give him physical confidence; she didn’t anticipate that karate would become a lifelong discipline for her son. Neither did he, at seven, but Miller will test for a black belt this year—and as he observes, to reach that level “you study karate throughout life.” So profoundly have the martial arts influenced Miller’s life that he made a trip to Japan, the birthplace of karate, specifically to reach a deeper understanding of Japanese culture. Miller (right) brings the same intellectual curiosity and the same taut discipline, if not the same level of athleticism, to his work in Dr. Paul Krogstad’s lab, where he is using a virus like the one that causes the common cold, a virus he has genetically modified to contain bits of HIV, in hopes of developing a way of

John Miller says that when you study karate seriously, you study for life—an observation that applies with equal force to his approach to AIDS research.
Koki Morizono and his mentor, Dr. Irvin Chen, have effectively turned the tables on HIV, by using the harmless husk of the virus as a guided missile to target cancerous cells with pinpoint precision. This novel vector could potentially be used to transport cancer-killing agents directly to tumors—an approach to therapy that might well eliminate many of the onerous side effects associated with standard chemotherapy.
priming the immune system against HIV infection.

Okiki Morizono (left) is pursuing the same notion—that the cell-penetrating properties of viruses can be used to deliver life-saving therapies—but the virus he is studying is HIV itself. Like Dong Sung An, he works in Dr. Irvin Chen’s lab, where he and Chen have effectively turned the tables on HIV, by using the harmless husk of the virus as a guided missile to target cancer cells with pinpoint precision. (For a full report on their innovative cell-piercing carrier mechanism, see page 35 of the April 2005 issue of Insider, which is available online at www.uclaaidsinstitute.org under PUBLICATIONS.)

Back home in Japan, Morizono was a nationally ranked kendo champion, but when he joined Dr. Chen’s lab in 1998, he traded in his fighting sticks for a bathing suit—because, he says, “In the pool, you don’t have to fight anybody.” He now swims three times a week—to clear his head, and to get into top shape. The latter is important to him because, after a decade devoted almost wholly to scientific research, he is, he says, “looking for a spouse,” a search he is conducting in characteristic fashion: “Like my experiments, I will keep trying and trying, until it works.” Morizono postponed this important step for a decade, to concentrate on his career—thinking that success in that arena would make him less anxious about his future. He now realizes that low-level anxiety is a permanent condition among research scientists. He hopes his future wife will understand that.

Like many of the Institute’s foreign-born researchers, Morizono is also studying English as a second language (left, below), because while facts are immutable, language itself is endlessly allusive, and he knows that without adequate command of English his chances of advancing in his chosen field will be compromised. Thanks to these classes, Morizono has been able to read The Old Man and the Sea in English, and he says that he finally understands why that haunting novella won the Nobel Prize for Literature.

Like Helen Brown, Scott Kitchen (below) works in Dr. Jerome Zack’s busy lab, where his research contributed to the development of a line of continuously-renewable human stem cells that have the potential to mature into T lymphocytes, the building blocks of the immune system. This finding suggests that it may one day be possible to use gene therapy to “immunize” T lymphocytes against HIV, an approach that has potential application as both a treatment for HIV disease and a form of vaccination against infection.

Kitchen describes his favorite leisure-time activity, horseback riding, as “a different form of exhilaration”—which suggests, among other things, how much pleasure he gets out of his research at the AIDS Institute. The time he spends with Buster Brown (overleaf) is “a necessary disconnect from my lab work—which I wouldn’t be able to do half as well if I didn’t get away from it from time to time.” As it happens, Kitchen’s wife...
“I wouldn’t be able to do lab work half as well if I didn’t get away from it from time to time,” says Scott Kitchen. When he gets away, he gets well away, atop champion show jumper Buster Brown.
also works at the Institute, and she also rides—and rides well: last year she and Buster won the California state competition for show jumpers. When the Kitchens were courting, she announced that she planned to spend a fortnight riding around Irish forests and jumping over anything in her path. She suggested he might want to join her—and he did, enough to learn to sit an English saddle and stay aboard when his mount went over fences. The Kitchens have a 10-month old son, Matthew Alastair. He’s not quite old enough to sit in a saddle yet, but his parents already have a pony picked out for him.

We think that Barbara McClintock, who died in 1992, would be gratified to know the uses that her pioneering genetic research is being put to at UCLA, and we are quite sure that she would be secretly pleased to note that many of our young researchers are women, women whose careers are as limitless as hers was circumscribed. It is a different world today, and she helped to make it that way.
One of our top young researchers has turned his attention—at the federal government’s request—from AIDS research to investigating a new, deadly, and baffling virus that was discovered just a few years ago.

In broad outline, the story of Nipah, a virulent new member of a family of viruses that infect, and kill, both animals and humans, reads like a macabre fairytale: Two men check into a hospital in Singapore, suffering from an ill-defined constellation of symptoms that includes fever followed by chills, deep-seated pain, drowsiness and disorientation—all of which eventually give way to convulsions, coma and, in half of all the early cases, death. These symptoms suggest a wide range of possible causes, from encephalitis to, among other things, the earliest stages of HIV infection. One of these patients dies; the other survives. No one can figure out what caused their acute illness… but an alert young intern notes that both men were pig farmers.

This, it turns out, is no coincidence. As researchers soon discover, Nipah virus is endemic not in pigs but in the large bats that are found in Singapore and throughout Malaysia, Indonesia, Australia, the Philippines, and the Indian subcontinent. The locals often refer to these fruit-eating bats, notable for their four-foot wingspan, as flying foxes. Anyone who has ever seen a horror movie knows them as vampire bats, because they routinely, and erroneously, receive such billing in Hollywood. The virus doesn’t seem to harm the bats, who roost in large trees, sometimes as many as 800 bats to a colony. During the day, the bats sleep. At night, they twitter and chirrup, jostle for space, make forays looking for food, return to the communal roost and, inevitably, urinate and defecate on whatever is below them.

What is below them, all too often, is a herd of pigs, who take shelter from rain and sun under the vast, cool canopy of tree limbs. The splatter from above infects the pigs, but it doesn’t kill them, either—although they do develop a distinctive cough, a rebarbative bark so loud that it can reportedly be heard a mile away. Human beings are not so lucky; they do get infected, through contact with pigs and their excrement—which explains why pig farmers, and hog-butcherers who work in abattoirs, account for 93% of the known victims of this new virus. The only good news in all this bad news, at least initially, was that it did not appear that Nipah could be passed from one person to the next, only from animals to humans.

Because there is as yet no known treatment for Nipah virus infection, beyond providing intensive supportive care to its victims, this new pathogen is regarded, by the Department of Homeland Security, as being of considerable potential interest to bioterrorists. One target of a bioterrorist attack might be this country’s huge multibillion-dollar hog industry—because the most effective way to contain an outbreak of Nipah is to kill every pig in a herd suspected of harboring the virus. When this containment approach, known as culling, was used to halt the spread of Mad Cow Disease in Great Britain, the estimated cost to the island nation’s farmers was measured in the billions of dollars. When Malaysia reported Nipah among pig farmers in 1999, close to a million pigs were culled in efforts to contain a potential epidemic, sending a tremor through that country’s economy. This experience led government officials in the United States to worry that bioterrorists might be able to devastate American agribusiness by infecting a few hundred pigs in the few states where the vast majority of hogs are reared—and where, in the last five years alone, $11 billion worth of pork was produced.

In January of 2001, an outbreak of Nipah in a hospital in India suggested, ominously, that infection may in fact be transmissible from human to human. Three years later, Bangladesh reported a similar phenomenon, and a similar mortality rate, 75%. These mortality rates prompted the U.S. government to classify Nipah as a Biosecurity Level 4 pathogen—the same classification accorded Ebola virus. Soon after the first of these cases was reported, Dr. Benhur Lee (above, right), a highly regarded junior member of the AIDS Institute’s faculty, turned his attention from HIV to Nipah. He did so not because he grew up in Singapore—that is simply an uncanny coincidence—but because he is an expert on viral entry, the process by which certain pathogens, HIV and Nipah among them, evade the immune system and cause infection.
Under normal circumstances, the sentinels of the immune system, which are known as dendritic cells, respond to any viral threat by activating so-called T cells, which are the body's primary defense against infection. During this process, dendritic cells sit on mucosal surfaces, waiting to intercept hostile pathogens and transport them to the lymph nodes—where they are dismembered and destroyed. The human immunodeficiency virus manages to avoid detection by these sentries because its outer layer, or envelope, is encased in sugar molecules. The biological equivalent of sheep’s clothing, these sugar molecules enable HIV to approach dendritic cells undetected, attach itself to a receptor on the surface of these cells, and slip inside the lymph system, where it begins to systematically destroy the very cells that exist to protect the body from deadly viruses. This sugar coating also protects the virus from antibodies, the guided missiles the immune system produces to destroy invading pathogens.

The receptor on the surface of dendritic cells that binds to HIV was discovered in 2001, just as Dr. Lee joined the faculty of the UCLA AIDS Institute. “This was a crucial breakthrough,” Lee observes, “because once we understood the process, we could begin to develop ways to prevent attachment from happening. If HIV doesn’t attach to dendritic cells, it doesn’t get carried to the lymph nodes and passed on to the T cells—and infection should not take place.”

As Dr. Lee was preparing to start his research on viral entry at UCLA, the terrorist attacks of 9/11 occurred. These events motivated the government to identify, and release to the scientific community, a list of pathogens that could be used as bioterror agents. High on their list was Nipah. Like HIV, the outer layer of Nipah virus is heavily cloaked in sugar molecules, and their presence allows Nipah to evade the immune system in much the way that HIV does. Indeed, when Dr. Lee removed bits and pieces of the sugar coating, the Nipah virus became much more susceptible to attack by these antibodies.

More importantly, Dr. Lee wanted to know what receptor Nipah uses to gain entry into cells. In the field of HIV research, the discovery of entry receptors has had a profound impact on our understanding of HIV disease, and has led to the development of brand-new classes of drugs that inhibit HIV entry. These drugs are powerful enough to work on HIV strains that are resistant to older anti-HIV drugs. To find that particular port of entry, Lee and his colleagues spent endless hours studying the types of cells that Nipah attacks, which are nerve cells and the cells that line blood vessels. To locate the crucial receptor, Lee’s team created a dummy version of Nipah using only the sugar-coated envelope of the virus. When they brought the dummy virus into contact with cells susceptible to Nipah infection, the mock virus attached itself to a specific receptor protein on the surface of those cells.

In order to identify that receptor, Lee used an instrument that sorts molecules by weight—which told him that a receptor known as Ephrin-B2 is the means by which Nipah gains entry to cells. “Now that we know how Nipah enters cells,” Lee declares, “we can begin to develop vaccines and drugs to block this process. This will help prevent infection and halt outbreaks before they reach epidemic proportions.”

The significance of this discovery has implications for how we may one day be able to prevent HIV infection, as Lee is quick to note. “Like HIV, Nipah virus uses a decoy coating of sugars to evade detection by the body’s immune system. By learning more about how Nipah works, we are gaining a better understanding of how HIV works as well.”
Come ride with us!

Two extraordinary all-volunteer organizations are organizing rides to raise money for AIDS research, and it is not too late to register to participate in one, or both, of these events. The organizers of these rides take justifiable pride in the fact that they pass along 100% of the monies they raise to their beneficiaries—a select list that in both cases includes the UCLA AIDS Institute.

The grandaddy of all such rides is the Minnesota AIDS Trek, which celebrates its 21st anniversary this year with a two-day ride, on September 8th and 9th, from the Twin Cities to Duluth. Further information about the Trek can be found on their continuously updated Web site, www.aids-trek.org.

Charity Treks, by contrast, is still wet behind the ears. It has been in existence only six years, but in that relatively short space of time this East Coast organization has raised more than $500,000 for AIDS vaccine research at Emory and UCLA. This year the group will be riding from Montreal to Portland—leaving Canada on August 14th and reaching coastal Maine four days later. Additional information is available at www.CharityTreks.org.

Both groups have picked scenic back roads for their rides, and both provide a full range of support services, from bottled water and energy bars to bike transport and first aid. You don’t have to be a professional cyclist to participate. All you need is motivation; the organizers of the rides will help you with the rest: how to train, where to assemble, what to expect and, last but not least, how you can help these worthy organizations if you don’t feel you are fit enough to ride. For reports on previous rides, go to www.uclaaidsinstitute.org, open PUBLICATIONS, and find “What a Party! Bikers, Bloggers, and Barbies” on pages 24-26 of the October 2004 issue of Insider, and “The Long and Winding Road” on page 19 of the February 2004 issue.