

RECOMBINANT FILMS, LLC PRESENTS

# BEATING SUPERBUGS



## CAN WE WIN?

RECOMBINANT FILMS, LLC PRESENTS A WILLIAM MUDGE FILM  
EXECUTIVE PRODUCERS JAMES MITTELBERGER AND ANNE MUDGE  
CO-PRODUCERS ROBERT MILLEY, JEAN MUDGE AND WILLIAM MUDGE  
KEY SCIENCE ADVISOR ROBERT MILLEY NARRATION BY FIONA HUGHES MUSIC BY CHRISTOPHER RIFE  
WRITTEN BY JEAN MUDGE DIRECTED BY WILLIAM MUDGE

Electronic Press Kit

Publicity contact: Ryan Ann Davis / 206.491.3738 / [ryan@smarthousecreative.com](mailto:ryan@smarthousecreative.com)

Film contact: [info@beatingsuperbugs.com](mailto:info@beatingsuperbugs.com)

[beatingsuperbugs.com](http://beatingsuperbugs.com)

# BEATING SUPERBUGS

## LOGLINE

Superbugs--antibiotic-resistant bacteria--often kill already weakened COVID-19 victims, but they face a growing army of global scientific, economic, and political solutions.

## SYNOPSIS

Beating Superbugs: Can We Win?, a feature-length documentary, presents an accessible, in-depth, true-to-fact message with a touch of mystery and suspense throughout: CAN we, in fact, beat superbugs--antibiotic-resistant bacteria? The film's solutions-driven emphasis underlies even the most dire of its parts. Through dramatic first-hand victim stories, this sober yet positive thread becomes even more apparent in interviews with dedicated experts in science, economics, government and the pharmaceutical industry. A well-informed narrator unites connecting facts with supporting visuals, including many original animations. This voice also periodically gives viewers clues about ways in which their personal habits and support of public efforts (government initiatives, pending legislation, independent foundations) can bring them into the superbug fight.

Superbugs share a global crisis status with COVID-19. So far, a quantity of the known patient deaths in this viral pandemic have been linked to bacterial infections. Their predictable presence as partners in coming pandemics, and on their own, cannot be ignored. But ingenious counterattacks are either in place or are emerging. International leaders in multiple fields are separately and together bringing innovative strategies and tactics to the battle. Such efforts, empowered by citizens everywhere, have a good chance to stem a dire prediction: if unchecked by mid-century, superbugs could surpass cancer as the No. 1 cause of human death worldwide.

**A documentary feature film by Bill Mudge**

**RUNNING TIME: 68 minutes**

**[WATCH THE TRAILER](#)**





## MORE ABOUT PANDEMICS AND THIS FILM

Despite the universal upset to our lives by COVID-19, only a few may grasp that its appearance has swiftly shot us into an Age of Pandemics. For years, prescient voices—immunologist Anthony Fauci, philanthropist Bill Gates and pandemic expert Laurie Garrett—have warned of the certainty of coming pandemics. Now one of these plagues has brought our usual lives to a halt—and a staggered, risky and experimental restart.

The culprits are an army of microbes that we're just getting to know. Leaders among them are not only speedy viruses but slower-growing, antibiotic-resistant bacteria, or superbugs. Unlike much tinier viruses, which are inert particles until finding a host, superbugs are living cells and may come to be even more dangerous. Our best defense lies in deeper knowledge about their nature, power, and vulnerabilities. If we fail to accommodate our lives to their ubiquity, evolution might just favor superbugs' survival over our own.

So this film deals with nothing less than existential issues: the continuing health and life of both humanity and global medicine. It presents the nature of the threat (superbugs' extensive power) and a spectrum of interrelated solutions (our counter-attacking forces). The stakes are great and the challenges huge. The film's subtitle: "Can We Win?" poses an almost desperate query. But a "can-do" mentality, rooted in a basic instinct for self-preservation, lies at the heart of this question. The film directs viewers to the world's best answers to date.

A few years ago, Bill Mudge made a short film about basketball star Grant Hill and his repeated encounters with resistant staph, or MRSA. Injuries to Hill's ankle during play led to a series of operations which spawned his recurring infection. Portraying Hill's case piqued Bill's curiosity about superbugs in general, and from that moment, the idea was born for this encompassing exploration of how to deal with them. Of the handful of other films on this subject, none known to us explores, as does this one, the global economic, political and pharmaceutical forces now aligned to help science mount a successful superbug challenge.

# ABOUT THE FILMMAKERS

Recombinant Films was co-founded in 2013 by Bill Mudge, Jean Mudge and Bob Milley to make accessible, cutting-edge science documentaries.



## **BILL MUDGE, DIRECTOR & CO-PRODUCER**

Bill Mudge spent over 16 years at Merrill Lynch as a financial analyst and software developer while earning an MBA at the Stern School of Business at NYU. After consulting in the business world, in 2010 Bill explored his passion for documentary filmmaking. He attended San Francisco Film School with a special focus on studying documentary films. In the past decade, Bill has produced and directed short films that cover everything from paratroopers to cancer, and sailboats to superbugs. "BEATING SUPERBUGS: CAN WE WIN?" is his first feature film.

### **FILMOGRAPHY:**

2017 CLASS R-69

2016 AIRBORNE DEMONSTRATION TEAM

2012 SEEING RED: A WOMAN'S QUEST FOR TRUTH, POWER AND THE SACRED

2011 STILL HERE: LIVING WITH INCURABLE CANCER

2011 WAR IN MY BODY

2009 HOME AFLOAT: LIVING ON A SAILBOAT



## **BOB MILLEY, CO-PRODUCER & KEY SCIENCE ADVISOR**

Bob Milley is a pharmaceutical researcher experienced in drug discovery and development in the areas of infectious diseases and cancer. He specializes in the development of novel biopharmaceutical processes and in product lead identification and characterization. Throughout his 25+ year career, Bob has worked at three Biotech companies: Cetus, Chiron and Dynavax, co-authored more than 10 peer-reviewed scientific papers, and is a co-inventor on 4 US patents. Milley has also contributed to two FDA approved drugs and one vaccine. He researched and identified most of the scientific talent featured in this film and his scientific expertise provided valuable perspective during the making of BEATING SUPERBUGS: CAN WE WIN? Education: B.A., Biology, Boston University.



## **JEAN MUDGE, CO-PRODUCER & WRITER**

Jean Mudge is an independent producer, director, and writer. For over 40 years, she has been making documentary films and videos as well as writing non-fiction books and articles. Her award-winning series on early American writers, EMILY DICKINSON, HERMAN MELVILLE, and EDGAR ALLAN POE, and other films have been screened at leading festivals and shown on PBS both locally and nationally, and in embassies abroad. Her film PLANTED IN PALESTINE was the recipient of an Award of Merit from The Accolade Global Film Festival.

### **FILMOGRAPHY:**

2008 PLANTED IN PALESTINE

1991 EDGAR ALLAN POE: ARCHITECT OF DREAMS

1989 THE WORD AT WORK

1985 SANCTUARY

1982 HERMAN MELVILLE: CONSIDER THE SEA

1978 EMILY DICKINSON: A CERTAIN SLANT OF LIGHT

### **BIBLIOGRAPHY:**

*Mr. Emerson's Revolution*, editor/contributor (Cambridge, U.K, Open Book Publishers, 2015); *We Can Make the World Economy a Sustainable Global Home* by Lewis S. Mudge, ed. Jean Mudge (Grand Rapids, MI: Eerdmans, 2014); *The Poet and the Dictator: Lauro de Bosis Resists Mussolini in Italy and America* (Greenwood, CT: Praeger, 2002); *Chinese Export Porcelain in North America* (New York: Clarkson N. Potter, 1987); paperback (New York: Riverside Press, 2001); *Emily Dickinson and the Image of Home* (Amherst, MA: University of Massachusetts Press, 1975; 2nd ed., 1977); *Chinese Export Porcelain for the American Market*, 2nd ed., revised (Cranbury, NJ: Associated University Publishers, 1981; first ed., 1962)

### **AWARDS:**

Red Ribbon, American Film Festival; Golden Eagle, CINE; Chris Plaque, Columbus Film Festival; Creativity of Treatment Award, National Educational Film and Video Festival; Silver Medal, Chicago Community Television; Taiwan Women's Film Festival, best of festival; Accolade International Online Competition; Screenings in major domestic and foreign film festivals; Non-fiction Award 1978, Prairie Schooner; Phi Beta Kappa, Stanford University



## DIRECTOR'S STATEMENT

I first started reading about antibiotic-resistant bacteria, superbugs, more than 10 years ago and realized that the same stories were emerging again and again: People were dying of untreatable bacterial infections in various parts of the world without much notice. Doctors and researchers knew something far more ominous was happening: Many kinds of bacteria were becoming resistant to the antibiotics we had taken for granted since World War II. The general public was only vaguely aware of the dangers, never mind any real fixes. I saw a need to bring these story fragments together and highlight the best scientific, economic, and political solutions available. People around the world must recognize antibiotic resistance threats and how to fight them.

We chose our resistance survivors among successful people including a college student, professional athlete, cartographer and university professors to underscore that if people like them can get a life-threatening antibiotic resistant infection then anyone can. As one of our experts, John Rex, points out, the assumption that these problems always happen "over there" somewhere else ... is really wrong." The threats are not just "on the doorstep." The dangers of antibiotic resistance "came inside" years ago.

Our story really came together during a 2018 interview with Lord Jim O'Neill, a global economist, who shared his now widely-accepted plan to help pay for new antibiotic developments. Rather than just talk about how governments, universities, and big pharmaceutical companies should collaborate, his report has come up with a viable way to help new discoveries reach the marketplace, but only as needed. Solutions to antibiotic resistance become real only with the right economic and political support. Otherwise, they're only laboratory curiosities instead of vital public health initiatives.

--Bill Mudge



# MEET THE EXPERTS AND PATIENTS



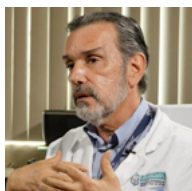
**[Grant Hill](#)**, former NBA All-Star basketball player for the Phoenix Suns, survived a serious MRSA infection in his ankle. In 2018, he was inducted into the Naismith Basketball Hall of Fame. Post-basketball, Hill became a CBS broadcaster and a co-owner of the Atlanta Hawks.



**[Tori Kinamon](#)**, a Brown University gymnastics star, endured months of successful treatment for a deep-thigh MRSA infection, afterward studying in the lab of Dr. Eleftherios Mylonakis at Brown. Currently, she is a student at Duke University School of Medicine.



**[Kari Kinamon](#)**, Peachtree City, GA, Tori's mother, was her vital hospital advocate.



**[Dr. Rafael Laniado-Laborin](#)**, MD, Head of Tuberculosis Clinic, (Clinica y Laboratorio de Tuberculosis), General Hospital, Tijuana, Mexico. His clinic treats patients throughout Mexico with antibiotic-resistant tuberculosis.



**[Dr. Ramanan Laxminarayan](#)**, PhD, MPH, Dir., Center for Disease Dynamics, Economics & Politics, Washington, DC., studies the economics and epidemiology of global health problems, including antibiotic resistance. In 2014, Laxminarayan served on Obama's Council of Advisors on Science and Technology. His CDDEP newsletter summarizes world developments concerning dangerous infectious diseases.



**[Dr. Timothy K. Lu](#)**, PhD, MD, Assoc. Prof., Departments of Electrical Engineering & Computer Science and Biological Engineering, MIT, Cambridge, MA, applies synthetic biology to major health challenges.



**[Dr. Douglas A. Mitchell](#)**, PhD, Prof., Chemistry, Univ. of Illinois-Urbana, heads a lab focusing on the interface of chemistry and biology that seeks to identify and characterize novel antibiotic compounds.



**[Dr. Eleftherios Mylonakis](#)**, MD, Prof. Medical Science, Molecular Biology and Immunology, Brown University, directs a lab researching microbial pathogenesis and host responses. He has edited five books on infectious diseases and is the founding editor-in-chief of *Virulence*.



# EXPERTS AND PATIENTS (continued)



**[Christi Nelson](#)**, a *C. diff.* survivor, suffered serial bouts with the disease post-cancer therapy, until being successfully treated with a fecal microbiota transplant (FMT). She has resumed her busy professional life as a cartographer.



**[Lord Jim O'Neill](#)**, PhD, global economist, chaired the landmark study, “The Review on Antimicrobial Resistance,” adopted by the UN in 2016. O'Neill co-authored *Superbugs: An Arms Race Against Bacteria* (Harvard University Press, 2018).



**[Dr. Kevin Outterson](#)**, JD, Prof., Public Health Law, Boston University, MA, with an expertise in business models for antibiotic development and use, is the executive director and principal investigator of CARB-X.



**[Dr. Ina Park](#)**, MD, Assoc. Prof., Family Community Medicine, UCSF, is engaged in community health for STIs through research, teaching, and patient care. Her first book for the lay public is *Strange Bedfellows* (Flatiron Books, February 2021).



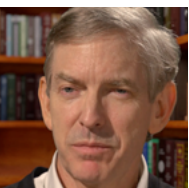
**[Dr. Thomas Patterson](#)**, PhD, Prof. of Psychiatry, UCSD, an expert in disease-related psychological effects, survived one of the world's most lethal superbugs, *Acinetobacter baumannii*. With his wife Steffanie Strathdee, he co-authored a memoir of his ordeal in *The Perfect Predator* (Hachette, 2019).



**[Dr. David Payne](#)**, PhD, VP, Infectious Diseases, GlaxoSmithKline, is GSK's Senior Site Leader for its US R&D Hub. GSK, a British international pharmaceutical company, is among the few large companies dedicated to developing new antibiotics.



**[Dr. Lance Price](#)**, PhD, Prof., Milken Institute School of Public Health, George Washington University, founded and directs the Antibiotic Resistance Action Center. He also contributes to government antibiotic stewardship policies.



**[Dr. John H. Rex](#)**, MD, Chief Medical Officer & Director, F2G, Ltd; Editor-in-Chief, AMR solutions. For thirty years, Rex, a physician and drug developer, has focused on the economics of antibiotic R&D and policy aspects of anti-microbial agents.

# EXPERTS AND PATIENTS (continued)



**Dr. Robert ("Chip") Schooley**, MD, Chief, Division of Infectious Diseases, UC San Diego School of Medicine, treated Tom Paterson with bacteriophage cocktails combined with antibiotics. Schooley co-directs UCSD's new center for Innovative Phage Applications and Therapeutics (IPATH) with Steffanie Strathdee.



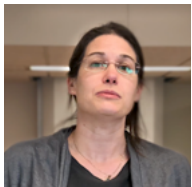
**Dr. Neil Stollman**, MD, Gastroenterology Specialist, Alta Bates Summit Medical Center, Oakland, CA, and a C. diff. expert, helped revive an ancient Chinese fecal transplant therapy to treat C. diff. patients, like Christi Nelson.



**Dr. Steffanie Strathdee**, PhD, Prof., Global Health, Department of Medicine, UCSD and an infectious disease epidemiologist, introduced bacteriophages to Schooley's treatment of her husband, Tom Patterson. With Schooley, she co-directs the IPATH center. With Patterson, she co-authored *The Perfect Predator* (Hachette, 2019).



**Dr. Fred C. Tenover**, PhD, VP, Cepheid, Sunnyvale, CA, and also a consulting pathology professor at Stanford, has had a long-standing interest in antimicrobial resistance and the development of rapid diagnostic methods for infectious diseases.



**Dr. Rosa van Mansfeld**, PhD, MD, Medical Microbiology Specialist at Vrije University Medical Centre and Infection Control, Amsterdam, heads its infection prevention program globally recognized for its high-tech hospital methods for containing superbugs.



**Dr. Gerald Wright**, PhD, Dir., the Michael G. DeGroote Institute for Infectious Disease Research, McMaster University, Hamilton, Ontario, focuses on restoring antibiotics' potency via key adjuvants.



# Q&A WITH DIRECTOR BILL MUDGE

## **How has the current COVID-19 pandemic crisis affected the work being done to fight superbugs?**

COVID-19 has focused attention on superbug risks -- especially since bacteria often kill people in the wake of COVID-19 infections. What's happening now also underscores the lead time for viable, safe solutions. Everyone wants new vaccines and medicines right away but it takes time, energy, and money instead of politics to make them work safely.

## **What new research and policies are you most hopeful about?**

No single thing will work. We need a combination of prevention, careful use of existing drugs, new and renewed antibiotics, as well as phage and other therapies.

## **How important is government funding in the fight against superbugs?**

Vital. Modern capitalism, in spite of all its good qualities, has been struggling to justify paying for new drugs and has mostly failed. Governments are the only public organizations that have enough money to coordinate the best features of university research and drug companies to find solutions.

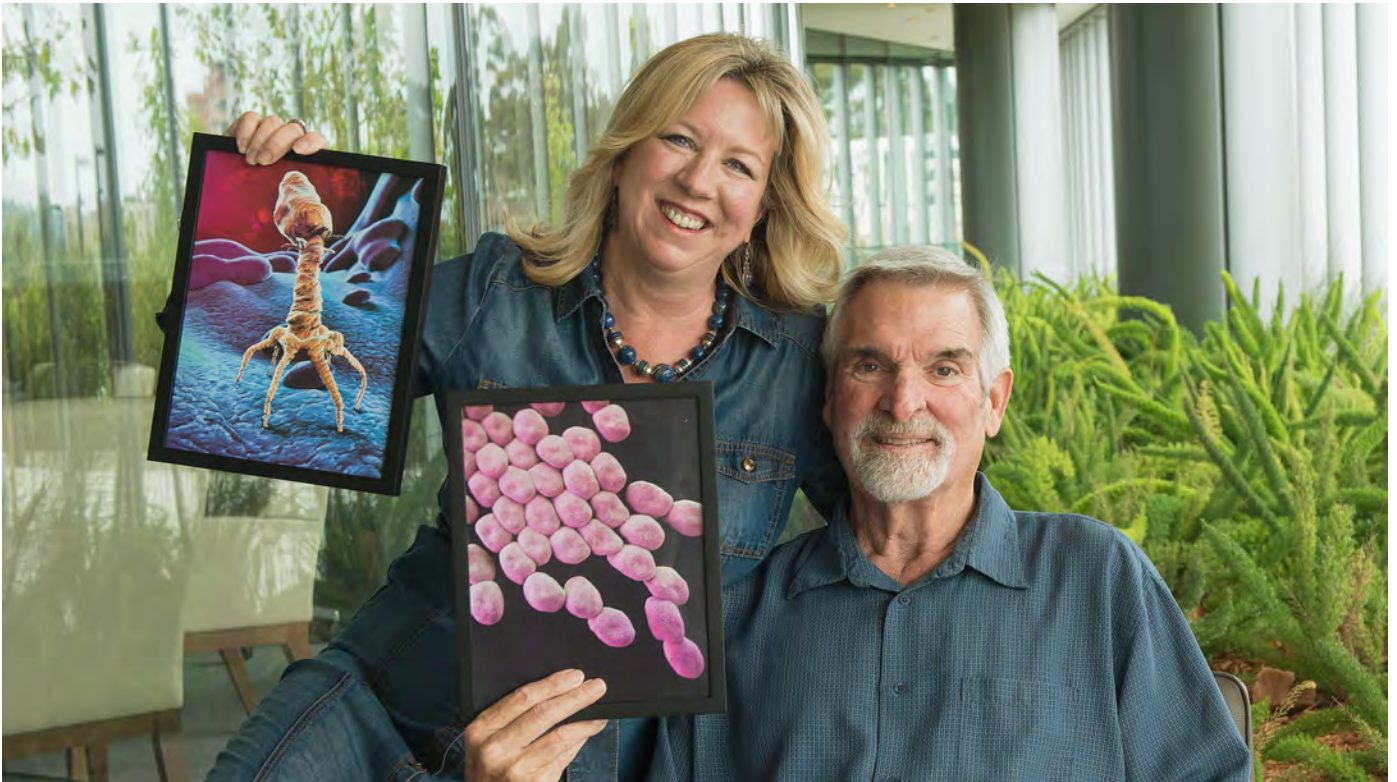
## **What can everyday people do to prevent infections and help prevent the spread of superbugs?**

Simple hand-washing and basic sanitation avoid the need for antibiotics in the first place. Also, read labels to avoid antibiotics in the products you buy like soaps, toothpaste, and meats. Be prepared to accept your doctor's judgement that you don't need antibiotics for viral illnesses like the flu or the common cold. If your doctor prescribes antibiotics, be sure to follow all the directions so they'll work well. Finally, vote for candidates who understand science and how much it costs. It takes billions of dollars to move a new antibiotic from initial discovery to the pharmacy shelf.

## **Do you think we can win this fight?**

We will never completely win this battle. Instead, we should use what we have only when we need it and develop new antibiotics and treatments to stay ahead of nature's constant adaptations.

# GALLERY



Steffanie Strathdee exhibits a phage like the ones that her husband Tom Patterson received along with antibiotics, rescuing him from the superbug he is showing.



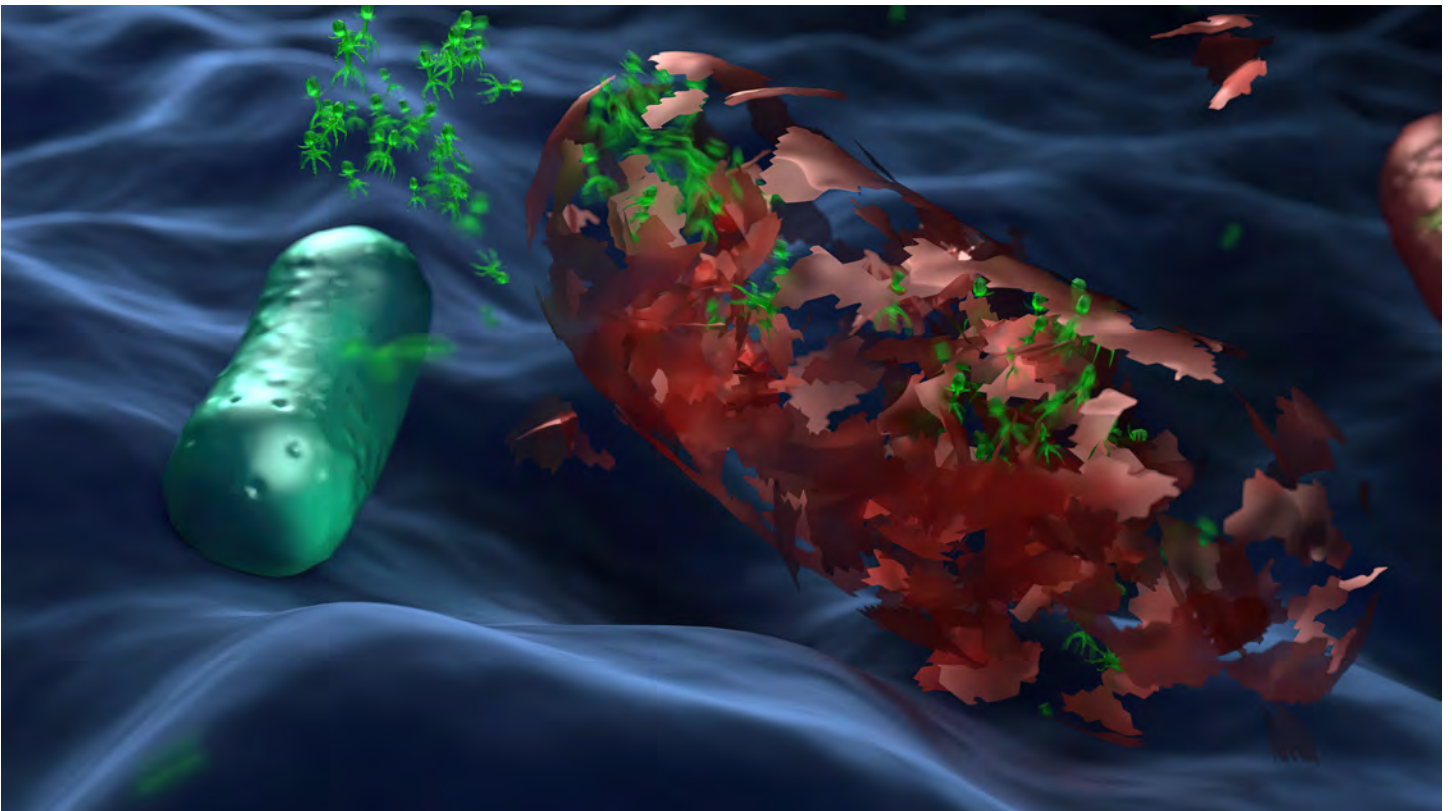
Biomedical researcher examines bacterial specimen.



# GALLERY



Superbugs will always evolve, but we can contain their damaging effects.



Phages multiply inside bacteria, burst its walls, and seek out more bacteria to kill.



# GALLERY



Dr. Raphael Laniado-Laborin explains the resistant tuberculosis threat in Mexico and the US.



Grant Hill, a MRSA survivor, tells his life-and-death story.