The STAR

Radiating the Light of Truth on Hansen's Disease

January 2006 - June 2007

Volume 65 ♦ $2.00 per year

National Hansen's Disease Programs welcomes Voiture Nationale La Societe des 40 Hommets et 8 Chevaux

(From Left to Right)
Nationale Sous Directeur Carville Star Dave Wegener ♦ Nationale Sous Directeur Carville Star George Willis ♦ Nationale Directeur Carville Star Mike Wood ♦ National Hansen's Disease Programs Director Dr. James Krahenbuhl ♦ Chef de Chemin de Fer Terry Sims ♦ Sous Chef de Chemin de Fer Passe Bernie Sampson ♦ Correspondant Nationale David Rabius

Photograph courtest of Nationale Directeur Carville Star Mike Wood

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777 North Meridian St Suite 204
Indianapolis, IN 46204-1421

Stanley Stein
Founder - Editor, 1941 - 1967

The purpose of **The Star** is to: 1) Promote an educated public opinion of Hansen's disease, 2.) Furnish vocational rehabilitation for interested patients.

Views expressed in **The Star** are those of patients and others affected by HD, except in the case of direct quotations or signed articles.

The Star (ISSN: 0049-2116) is published by patients with Hansen's Disease..

After you have read **The Star**, please pass it on to a friend and if **The Star** reaches you at a library, please place it conveniently for readers.

Editorial Policy On Terminology

The Star stands firm in its opposition to the use of the term "leprosy." We shall never abandon our campaign to secure general acceptance of "Hansen's disease." Nevertheless, the word "Leprosy" does appear in **The Star** under circumstances which we feel are unavoidable, namely: when signed articles are authored by someone who does not agree with us or when material discusses the disease prior to the introduction of the term "Hansen's disease." We dislike the word "leprosy" intensely, but we dislike the practice of censorship even more.

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Laboratory Research Branch Activities 2007 and Beyond

by
Tom Gillis, Ph.D., Chief
Laboratory Research Branch

The Laboratory Research Branch (LRB) fulfills the National Hansen's Disease Programs' (NHDP) mission to improve public health by its activities in biomedical research related to Hansen's Disease (HD) and by training investigators for the future. LRB conducts and supports research in the causes, diagnosis, prevention and cure of HD and tuberculosis, developing and implementing many of the newer sophisticated cell and molecular biology tools used today to study human diseases. LRB couples animal modeling of HD with many of these new tools to address basic questions surrounding the underlying causes of HD. Efforts at LRB play an integral role in the quest for a more complete understanding of HD and provide a link between basic biomedical research for HD and National and International efforts designed to improve treatment and prevention of HD. LRB research efforts are focused in three primary areas: 1) Animal Models; 2) Genetics and Cultivation and 3) Pathogenesis and Vaccines.

Animal Models

Gene knockout mice as models for the leprosy spectrum. Linda Adams, Ph.D.
Clinical, histopathological, and immunological criteria identify five forms of HD: tuberculoid (TT), borderline tuberculoid (BT), mid-borderline (BB), borderline lepromatous (BL), and lepromatous (LL) HD. The development of genetically engineered knockout (KO) mice, particularly those with defects in immune pathways important in host defense, opens the possibility for additional murine models for human leprosy. Especially worthwhile would be models for the broad borderline area of the spectrum. Understanding the basic immunoregulatory mechanisms of borderline disease could lead to a means of predicting or preventing reactions and furnish a focus for vaccine improvement and the development of efficient diagnostic tests and tools for epidemiological studies. Dr. Adams has worked diligently to bring this approach into focus for studying HD and continues to lead a dynamic research team within LRB. The Armadillo: A model for translational research. Richard Truman, Ph.D.

As part of the infrastructure for leprosy research the NIAID funds a Leprosy Research Support contract to provide rare research materials to qualified investigators. This contract provides for propagation of leprosy bacilli and modeling leprosy infections using armadillos and other animal hosts at the NHDP. The undertaking also requires development of various basic microbiological procedures and reagents suitable for use with armadillos. Specific aims of Dr. Truman's program include: 1) Propagation of M. leprae infected tissues and support of qualified investigators; 2) Establishment of defined M. leprae reference strains; 3) Develop methods to differentiate M. leprae-susceptible from resistant armadillos; 4) Advance armadillos as translational models for leprosy and tuberculosis.

In addition to managing the armadillo program at LRB Dr. Truman studies aspects of control and eradication of HD using epidemiological tools seeking to understand the source of infection and modes of transmission associated with HD. Dr. Truman's studies are intended to define the relative burden of leprosy on different populations and evaluate the importance of human and non-human reservoirs in leprosy transmission.

Genetics and Cultivation

Gene expression, regulation and pseudogenes in *M. leprae.* Diana Williams, Ph.D.
Fundamental to understanding the pathogenicity of *M. leprae* is identifying the genes needed for survival, growth and virulence in man. The completion of the *M. leprae* genome sequence has provided information capable of supporting studies aimed at better understanding *M. leprae* and the disease it causes. The genome appears highly degraded and possesses the largest repertoire of pseudogenes compared to other bacteria as well as a large number of deleted genes. This large-scale loss of gene function has resulted in a genome that is occupied by less than 50% protein-coding genes and comparative genome analysis has identified deficits in several general cellular metabolic families. We have used the *M. leprae* genome sequence data, bioinformatics and surrogate genetics in several mycobacterial hosts to study specific *M. leprae* genes associated with drug resistance, gene regulation, virulence, and growth. We have also used this information, in collaboration with investigators at Colorado State University, to characterize the first *M. leprae* global DNA microarray, consisting of all open reading frames and pseudogenes. Dr. Williams' work continues to be at the forefront of understanding *M. leprae* genetics and has resulted in molecular tests useful for diagnosing HD and determining *M. leprae*'s susceptibility to antileprosy drugs.

Genotyping *M. leprae* using variable number tandem repeats. Tom Gillis, Ph.D and Richard Truman, Ph.D.
Understanding the mode(s) of transmission of leprosy is a major goal of leprosy research. Defining this epidemiologic parameter should help clarify risk of infection and may help direct public health intervention strategies aimed at controlling leprosy. *Mycobacterium leprae* is an obligate intracellular pathogen that is widely distributed around the globe. There are no recognized sub-types and the bacillus exhibits little genetic diversity as judged by common DNA sequence structures. The only documented highly variable sequences are associated with variable number tandem repeat (VNTR) sequences distributed throughout the genome. Our primary goal for the VNTR studies is to establish a panel of reliable markers to be used in the field to track *M. leprae* within endemic communities with the aim of determining transmission links within that community. Initial studies have been focused on establishing standards for assessing VNTR polymorphisms, integrating studies in selected field sites to validate the use of the VNTR marker panel(s) and coordinating the international consortium to implement this kind of testing in sites where leprosy remains a problem. Field studies are set for 4 field sites in India, Brazil, The Philippines and Bangladesh.

Mycobacterium leprae cultivation. James Krahenbuhl, Ph.D. and Tom Gillis, Ph.D.
Well over a century after its description by Hansen, *Mycobacterium leprae* has yet to be cultivated in vitro, making it one of the most intractable microorganisms to study. Experimentally, it can be cultivated reliably only in mouse footpads or the nine-banded armadillo, achievement of significant numbers of organisms requiring 6 months to 2 years, respectively. The recent completion of the sequence of the M. leprae genome indicates the deletion or partial deletion of multiple genes, notably those involved in respiratory chains, iron acquisition, and catabolic processes. Since these deletions would not necessarily preclude culture medium supplementation with defined growth factors, along with investigators at Colorado State University, we are designing different media formulations (e.g., different carbon, nitrogen, sulfur and phosphorous sources) taking cues from the M. leprae genome and other biochemical studies. We are then evaluating those formulations for their growth potential using radio-labeled reporter molecule as an indicator for metabolic activity. If culture supplements are not sufficient to produce enhanced metabolism leading to sustained cultivation, then newly developed genetic tools are being evaluated for introducing genes into M. leprae with the goal of enhancing metabolism with sustained cultivation potential.

Pathogenesis and Vaccines

Mechanisms of nerve injury in leprosy. David Scollard, M.D., Ph.D.
Nerve injury is the major cause of morbidity in leprosy, the major infectious cause of crippling in the world. The mechanisms of this injury are very poorly understood: human nerves are seldom biopsied so direct data are minimal, and there have been no animal models until the recent recognition of leprosy neuritis in the armadillo. In this animal, intravenous inoculation of *M. leprae* results in infection of peripheral nerves. Our studies of this model suggest that infection begins in epineurial lymphatics and blood vessels, from where it spreads to the well-protected endoneurial compartment. We hypothesize that endothelial cells of the peripheral nerve are the gatekeepers allowing entry of *M. leprae* but not other bacterial pathogens. Since reagents to study this further in the armadillo have been unavailable, we have proceeded using an in-vitro cell culture model to analyze the effects of *M. leprae* infection on the viability of endothelial cells, the permeability of monolayers created with these cells and the expression of cell surface molecules involved in cell to cell contact. Using the armadillo model of HD, we are now preparing for immuno-histochemical and molecular studies of armadillo nerves with varying degrees of *M. leprae* infection. The goal of these studies is to provide the first detailed description of the development of immunity and inflammation in infected nerves, enabling the formulation of specific hypotheses concerning the mechanisms of development and progression of lepromatous neuritis.

Endocrine Changes as Risk Factors for Leprosy Reactions. David Scollard, M.D., Ph.D.
Much of the crippling in leprosy results from acute, immunologic ”reactions”, but the factors that initiate them are unknown. Longstanding clinical observations suggest that hormonal changes may be associated with reactions and are possible precipitating factors, but no good quantitative data exist. An international, collaborative, prospective study is now underway, with a goal of enrolling approximately 2700 new patients in three endemic areas: Manaus and Goiania in Brazil, Cebu in The Philippines, and Lalgadh, Nepal. Levels of several hormones and cytokines will be measured in paired baseline and follow-up blood samples from selected patients, matched using a nested case-control design. Levels will be correlated with reaction status and nerve injury. This novel approach combines the preeminent endocrinology research capabilities of collaborators at the National Institutes of Health with established leprosy expertise in field sites and at the NHDP.

Biological Activity of Thalidomide, Edward Shannon, Ph.D.
Erythema nodosum leprosum (ENL) is a medical complication that can occur in multibacillary HD patients. The treatment of choice for ENL is thalidomide. The sequence of events, which precipitate ENL as well as the mechanism(s) by which thalidomide and/or steroids arrest ENL have not been elucidated. The diverse effects of thalidomide on TNF-á from clinical trails, and sepsis studies in rodents may be due to many variables. Consequently, interpretation of the literature regarding thalidomide's ability to regulate TNF-á in ENL and other inflammatory conditions is confusing. Dr. Shannon's current research effort is to determine thalidomide's effect on IL-6 and IL-8 as well as antibody synthesis based on recent discoveries that thalidomide, in combination with dexamethasone, has a positive therapeutic effect on patients with multiple myeloma, a condition in which immunoglobulin synthesis continues unabated. If a linkage can be established between thalidomide's ability to regulate cytokines known to be important in immunoglobulin synthesis, then this approach can be used to further our understanding of potential mechanisms active in ENL.

Antigen discovery and vaccine development. Tom Gillis, Ph.D, Jim Krahenbuhl, Ph.D. and Linda Adams, Ph.D.
Despite significant improvement in global control measures for leprosy, new cases of leprosy continue at an incidence of 500-600,000 per year. Implementation of worldwide WHO-recommended multidrug therapy (WHO-MDT) has raised the hope of reducing leprosy to manageable levels but elimination of the disease is not imminent and will require other intervention strategies and tools for improving early diagnosis, minimizing transmission to individuals at risk for infection and for vaccinating against infection. By far the intervention strategy with the greatest impact would be an effective vaccine against leprosy. Understanding resistance to leprosy and tuberculosis requires identification of antigens that stimulate cell-mediated immune responses. The fact that *M. leprae* remains one of the few bacterial pathogens of humans that has not been successfully cultivated *in vitro* poses a serious challenge to the identification and purification of protective antigens. Our strategy is to test new DNA vaccines and in mice with the aim of inducing protective immunity to challenge with live *M. leprae* and to characterize the immune response associated with protection or absence of protection. Our studies are exploring the possibility that DNA vaccination against leprosy may exhibit improved characteristics over conventional protein and whole bacterial vaccines and provide cross-protection against both leprosy and tuberculosis. We are also testing auxotrophic mutants of *M. tuberculosis* and recombinant BCG vaccines expressing *M. tuberculosis* or *M. leprae* protein antigen. We are also exploring the utility of gene knock out mice by studying their immune responses to vaccination as well as what immunological cues are necessary to produce protective immunity to *M. leprae* infection.

NHDP LABORATORY RESEARCH BRANCH STAFF

NATIONAL 40 & 8 OFFICERS VISIT NATIONAL HD PROGRAMS

Dr. James Krahenbuhl, Director, NHDP discusses concerns and answers questions about today's HD challenges. Dr. Krahenbuhl is the expert the 40 & 8 look to for leadership and knowledge about Hansen's disease. As Dr. Krahenbuhl simplifies the misunderstood complex problems in Hansen's disease, his confidence and optimism about what is being done and what can be accomplished was very well received by all of these National Directeurs of the Forty and Eight. Nationale Directeur Mike Wood has become a real HD advocate since his NHDP visit last year. He told of his experiences of people really not understanding about this disease. In the last year he has spoken to several groups and organizations about Hansen's disease. He has arranged for individuals affected by HD to visit and speak at local 40 & 8 chapter meetings in California and Texas. He would like to expand this project to other states across the country. He is on the front line in the battle against ignorance concerning the truths of Hansen's disease and how patients and families are affected when living with this disease. The Nationale Society of the Forty and Eight and the National Hansen's Disease Programs form a great team in their mission to improve public health and to improve the quality of life for people affected by Hansen's disease.

Where NHDP Laboratory Research began....

BIRD'S-EYE VIEW, U. S. MARINE HOSPITAL, CARVILLE, LA.—Aerial photo by J. P. Harris, photographer and staff artist for the patients' magazine, *The Star*, and owner of the photographic studio in the patients' community. Hospital includes buildings for housing 480 ambulant patients, an infirmary accommodating 65 bed patients, nurses' home, residences for medical and other personnel, churches, filtration and power plants, a farm where much of the food for the institution is produced, recreation facilities, indoors and out, and most features of any self-contained community.

National L

UNITED STATES MARINE HOSPI

In the popular mind no other disease is regarded with deeper horror than leprosy. No other is believed to be more contagious, or to wreak greater and more revolting physical havoc. None is more intimately associated with ancient notions of taboo. Victims of leprosy are not only feared and shunned with almost psychopathic dread, but are subjected also to the humiliation wrought by widespread belief, surviving from primitive ideas of cult-cleanliness, that the malady is somehow a shameful one. Even some physicians share the general public attitude.

Yet leprosy is not a horrible disease. Half or more of those afflicted could pass unnoticed in any public gathering, while a high percentage of the remainder suffer no more disfigurement than is commonly seen in impetigo, ichthyosis, psoriasis and many other dermatological disorders. Nor is leprosy highly contagious. At worst, it is less communicable than tuberculosis; in many instances, completely noncontagious.

It is not, moreover, a disease of filth, race, social condition, moral transgression or a curse of God. It occurs among the washed and the unwashed, the saints and the sinners of every race, as well as at every social and economic level. That Biblical authority supports popular ideas concerning the shameful, sinful or highly contagious nature of the disorder is refuted by distinguished scholars; they deny that leprosy is the condition anciently stigmatized as unclean.

Estimate up to 5,000 in U. S. have Hansen's disease

As known in modern times, leprosy is no more than a chronic infectious disease having an extremely long incubation period. The etiologic agent is believed to be *M. leprae* or Hansen's bacillus. It affects some three to five million persons, of whom an estimated fifteen hundred to five thousand live in the United States. Leprosy is found in nearly every state, and is endemic in parts of Louisiana, Texas, California and Florida. It is largely a family disease, the infection being contracted most often—perhaps always—in childhood or youth. Of known cases under treatment in this country, three-fourths are native-born white Americans.

The most important fact about leprosy, however, is that many cases are now being treated successfully. Today, for the first time in history, the outlook for sufferers is one of genuine hope instead of the old disheartening prospect of slow deterioration into a helpless custodial state, with only a slender chance that the process might be stayed by chaulmoogra therapy or spontaneous remission.

This new hope is the result of research with the sulfone compounds—principally Promin, Diasone and Promizole—originally instituted at the only leprosarium within this country's continental boundaries, the Marine Hospital of the United States Public Health Service at Carville, Louisiana. Here, and more recently at other similar institutions, sulfone chemotherapy is accomplishing, in a substantial and growing number of cases, what has been achieved only in rare, rather questionable instances with other methods of treatment—complete arrest of the disease. Almost equally dramatic evidence of the value of the sulfones is provided by the remarkable objective clinical improvement occurring in many stubborn, long established cases which remain bacteriologically positive. So striking indeed are the results that some medical authorities now regard the eradication of the disease from most of the world as a goal which is well within sight.

It must not be assumed, however, that attainment of this goal is already assured. Although the International Leprosy Congress, held in Havana in April of this year, officially recognized the efficacy of the new drugs by formally recommending them as the treatment of choice for the disease, even better agents are needed, since the sulfones are slow and have other disadvantages. More education on the disease is in order in the medical profession. Mistaken diagnosis subjects many sufferers to long and dangerous delay in obtaining proper treatment.

Another need is for enlightenment of patients and the general public. The story of sulfone treatment should be widely disseminated. All who have, or suspect that they may harbor the disease, should be apprised of the danger of transmitting it to others, especially to children in the households involved. Sufferers should be encouraged to present themselves voluntarily to competent medical authority while the infection is in its earlier, more amenable stages.

The public requires education to free it from the attitude which drives many patients to hide their condition. Reason

GATES TO CARVILLE—Through these portals have passed patients rich and poor, university graduates and illiterates, Whites, Negroes, Mexicans, Chinese, Filipinos, Protestants, Catholics, Jews, Hindus and Mohammedans. Inside there live, or have lived, an Annapolis classmate of a famous admiral of World War II, the wife of a Louisiana banker, a rabbi, veterans from each of America's last four wars, a heavyweight prize-fighter who once fought Primo Carnera, the wife of a successful politician, a former headwaiter of a well-known New Orleans restaurant, the wife of an American army officer, and a W. C. Fieldsian character with a record of many French leaves spent in hawking a line of cure-alls, including a sure-fire remedy for his own disease! Although patients themselves are now attempting to discourage the practice, pseudonyms are usually adopted upon admission in order to protect families from effects of social stigma attached to the disease. Before the advent of sulfone therapy, most patients regarded entry here as the end of life in a normal world. Now, more and more patients are finding that the gates swing outward, too. Carville's death rate from the disease has been cut more than half; the number of cases released as arrested, more than doubled.

Leprosarium

TAL • CARVILLE, LOUISIANA

must replace the inordinate fear and prejudice which demand rigid isolation for every case, including those in which this is not only unnecessary, but often positively undesirable. For the present crushing burden of lifelong social and economic ostracism, there should be substituted adequate opportunity for patients to lead useful, respected and, as far as their individual conditions permit, normal lives.

One further need in educating the public is that of replacing the names leprosy and leper, words that probably never can be divorced from their connotations of stigma. Hansen's disease, hansenosis and globiosis are among those which have been proposed. Although WHAT'S NEW does not ordinarily encourage the use of eponyms, it accepts in this instance the judgment of leading leprologists, patients and others interested in the disease, and will hereinafter use the terms, Hansen's disease and hansenosis.

To give the medical profession a graphic record of what is being accomplished in the field of treatment today, to show something of the life of patients under treatment, and to contribute to a clearer understanding of the social and medical problems yet to be solved, Abbott Laboratories presents the documentary pictorial feature which follows. It was made with the cooperation and help of patients and the professional personnel of the Marine Hospital at Carville. Brush, crayon and pencil, rather than the camera, are used in order to conceal the identity of most patients. In all other particulars accuracy has been a primary consideration. The artists are Fredé Vidar who served as an official Army war artist in the Pacific, and Howard Baer who, as an artist war correspondent for Abbott, recorded the work of the Army Medical Department in India, Burma and China during the recent war.

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The Continuing Challenges of Leprosy

D. M. Scollard,* L. B. Adams, T. P. Gillis, J. L. Krahenbuhl, R. W. Truman, and D. L. Williams

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MICHAEL

A STAR IS BORN—Every month a staff of 35 patients—28 of them volunteers—publishes an issue of a lively magazine known as *The Star*. They are journalists with a threefold purpose: To promote an educated public opinion on Hansen's disease; to furnish occupational therapy for interested patients, and to encourage and finance social service for needy patients. *The Star* is not censored by hospital authorities, the only requirement being that editors state clearly that opinions expressed in the magazine are those of patients and not necessarily of medical staff members except in cases of direct quotation. *The Star* is typeset by hand and, until recently, printed on a handfed press. Now, however, *Star* pressmen speed through their chores on a new V50 Miehle vertical press —gift of the Forty and Eight, honor society of the American Legion. Each Voiture throughout the nation contributed. *The Star* has a circulation of about 5,000. Over 90 percent of the copies go outside Carville to subscribers in every state of the Union and nearly every country in the world. As a gesture to still the fears of the squeamish, all outgoing copies of *The Star* are sterilized by heat. *The Star* is recommended reading for anyone interested in the disease. Cost is $1.00 per year, 12 issues. Address checks to *The Star*, United States Marine Hospital, Carville, Louisiana.

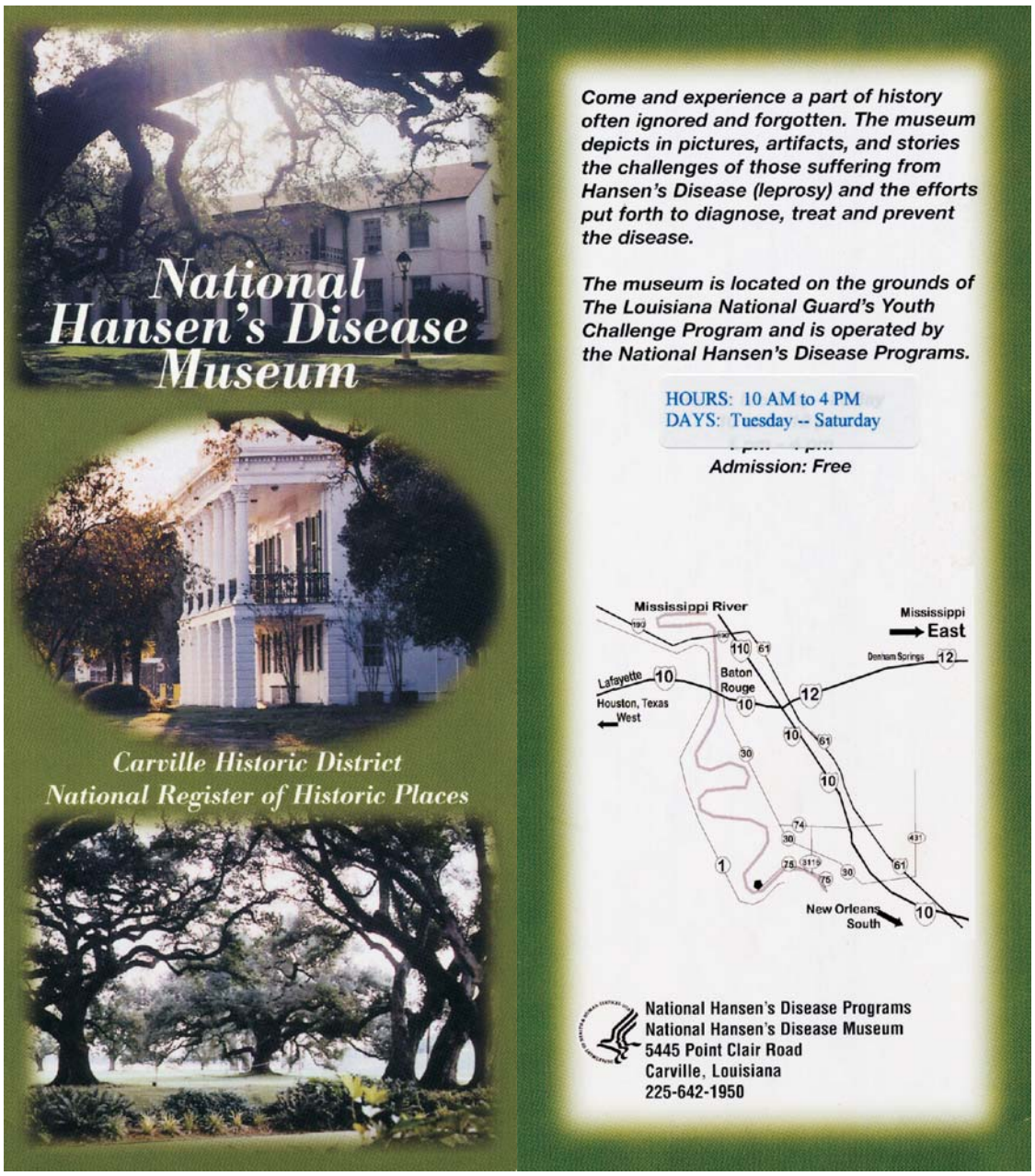
The museum is open to the public, free of charge.

Tuesday through Saturday from 10:00 a.m. until 4:00 p.m.

Telephone:
(225) 642-1950

Curator:
Elizabeth Schexnyder

Website:
http://bphc.hrsa.gov/nhdp/NHD_Museum_History.htm



"Mother's Day"

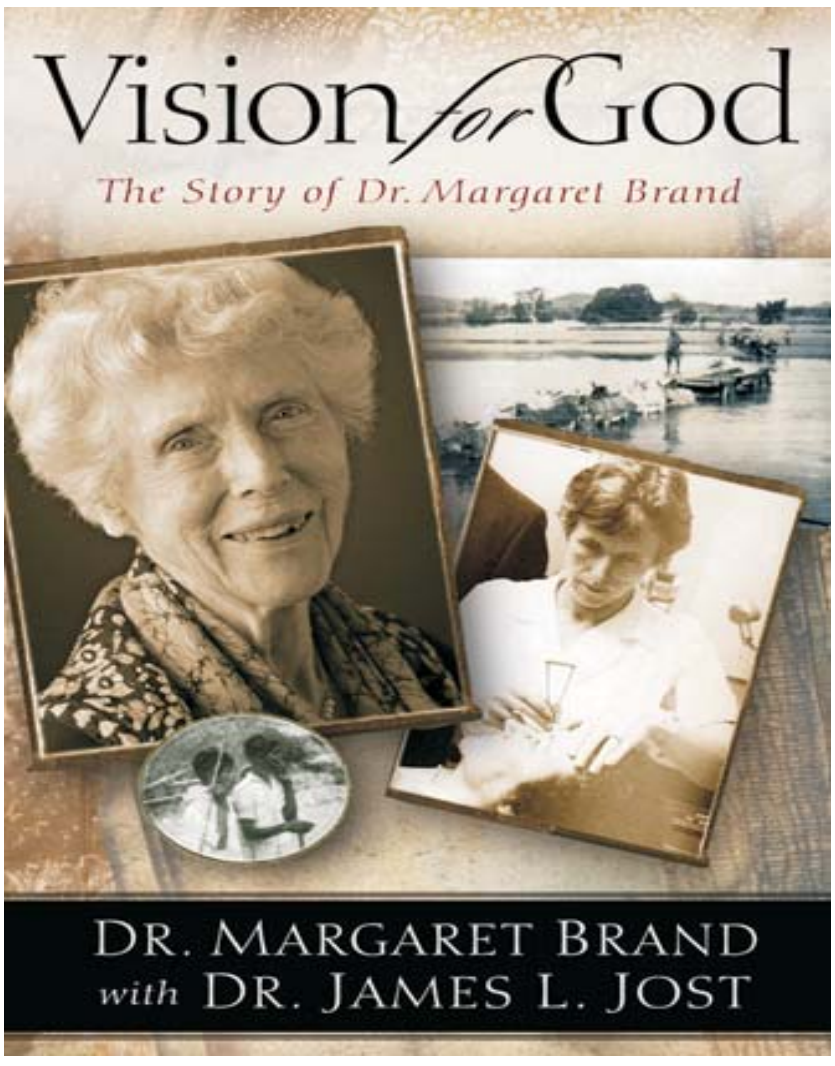
Was originally created as one in a series of 70 paintings commissioned by Abbott Laboratories, the manufacturer of sulphone drugs used in HD treatment. In the summer of 1947, Carville patients welcomed two artists, Frede Vidar and Howard Baer, whom Abbott's had commissioned to "paint from fence to fence".

> They put in a couple of weeks here, sketching, and popping up anywhere and everywhere to catch the patients under treatment, at work and at play. The artisits admitted that they were quite unprepared for the energetic life led by the patients were done in oil, pastel, ink and watercolor, and represented scenes of this hospital and various phases of local patient life.[1]

In 2002, Richard Riseberg, an attorney for the National Institute of Health in Washington, D.C., was in the process of retiring after 35 years of service. "Mother's Day" had been hanging in his office for most of that time. This painting and "Bundling the Star" now hang in the National Hansen's Disease Programs Museum.

[1] "Thank you, Abbott Laboratories." Stanley Stein. The Star, Vol. 8, No. 4. December 1948

Recent restoration of this painting funded by the Forty and Eight.



From our book shelf...

Dr. Margaret Brand along with her husband, the late Dr. Paul Brand (d. 2003), were invited by the U.S. Federal Government to work at Carville, Louisiana. There, Margaret served for 22 years as Chief of Ophthalmology at the National Hansen's Disease Center, and Paul as Chief of Rehabilitation and Orthopaedics, specializing in hands and feet.
Paul and Margaret served on the staff of the Christian Medical College and Hospital in Vellore, S. India, for 18 years. During their time in India the Brands became interested in and challenged by the problems of people suffering from Hansen's disease more commonly known as leprosy.
Readers will be encouraged and inspired by the remarkable impact of this medical pioneer in the field of leprosy and by her vision of God.

David Rabius
Correspondant Nationale

FROM DAVE'S DESK
"CARVILLE STAR"
UPDATE

La Societe got involved with The Star about 61 years ago. It was set up as a patient-only enterprise, to help "Radiate the Light of Truth about Hansen's Disease," as Stanley Stein envisioned it. With our support it has continued to do exactly that, and will continue to do so in the future.

In my last article I advised there were major changes taking place at Carville. The changes have been made, and want to inform you of the current status of "The Star."

We all know about changes at The Star during the past couple of years, and we have all stood shoulder to shoulder to make the changes good for everyone. You should know there are no longer any patients in Carville to do the work it takes to publish The Star. For the last year or so we have contracted outside help to get the Star out. That was not the idea that Stanley Stein envisioned. He did however envision The Star being around for a long time, and the changes that have been made will help us achieve that goal. For the first time everyone affected by HD can serve. We are following Stanley's dream by changing with the times. We now have x-patients, outpatients, and patient advocates serving on the Star Board. The Star has moved into the electronic age and now can be published outside the Gates of Carville. The Star is online at www.fortyandeight.org. Anyone with a subscription will receiving a letter giving you all the information about how to get The Star online. The Star will still be printed by Franklin Press in Baton Rouge, LA, and will be distributed the same as the Fortyand Eighter Magazine.

Voiture Nationale will maintain the subscription list in Indianapolis, IN. For those of you that have not been receiving your Star, we have found the problem and are correcting it at Voiture Nationale.

The Star continues to be the voice of the people affected by HD and still needs your support. So I ask that you continue your subscriptions, keep buying the Countries, and keep sending donations to the "Maintenance Fund."

NOTICE
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DAVID LUCIEN PELTIER

March 3, 1961 - May 17, 2007 David, a giving, kind, loving friend by all who met him. He was known worldwide for his unselfish deeds, David epitomized true Christianity. He was a Eucharist minister, lector and usher and also taught the National Guard Youth Challenge Program Cadets religious education, his exemplary love of life was their best teacher. He volunteered as an English second language teacher at Broadmoor United Methodist Church. David is survived by his wife, Mien Pham Peltier, his mother, 3 brothers and their families, aunts and uncles. He was preceded in death by his father and grandparents. Native of Baton Rouge and resident of St. Gabriel. He was a very talented caring humanitarian. Services at Carville Sacred Heart Catholic Church Chapel with graveside services at St. Gabriel Catholic Church. David adopted and loved all animals, in lieu of flowers, donations to EBR Parish Animal Control Center. David will be remembered for his warm smile, his teddy bear hugs, and his compassion for all life around him. David and his wife have traveled around the world to visit and raise the spirits of all who met them. David and Mien were a very talented caring humanitarian team. The world is a better place for his short time with us. David's memory puts a smile on our faces and our hearts. He will be truly missed.

Thank God for the time we had with David

David sharing hugs and smiles with his friend Mary

SOURCES OF HD TREATMENT IN THE UNITED STATES

THE NATIONAL HANSEN'S DISEASE PROGRAMS (NHDP) provides HD care to persons in the United States at 1770 Physicians Park Drive, Baton Rouge, LA 70816 and through the Ambulatory Care Program, which includes the following Outpatient HD Clinics

NATIONAL HANSEN'S DISEASE PROGRAM

AREA	FACILITY	ADDRESS	PHYSICIANS / NURSE	APPOINTMENT S
BOSTON	Lahey Medical Center	41 Mall Road Burlington, MA 01805	Samuel Moschella, MD Stephanie Burns, RN	781-744-5670
CALIFORNIA (Los Angeles)	LAC.USC Medical Ctr Attn: Section of Dermatology Room 8440	1200 North State St Los Angeles, CA 90033	Thomas Rea, MD Helen Mora, RN	323-226-5240
(**Martinez)**	Contra Costa Regional Medical Center Outpatient Clinic	2500 Alhambra Dr Martinez, CA. 94553	Sutherland/Saffier, MD's Eliso Judy, RN	925-370-5270 1-800-495-8885 (In State only)
(San Diego)	North San Diego Health Center	2400 Grand Ave San Diego, CA 92109	D A Lopez, MD Carmen Rodriquez, RN	358-490-4400
CHICAGO	University of Illinois College of Medicine Dept. of Dermatology	803 South Wood St Room 376 CME Chicago, IL 60612	Carlotta Hill, MD Ann Przepiora, RN	312-996-0734
MIAMI	Jackson Memorial Hospital	Ambulatory Care Ctr 1611 N. W. 12th Ave. Miami, FL 33136	Anne Burdick, MD Gloria Ingle, RN	305-585-2600
NEW YORK	Bellevue Hospital Ctr Dept of Dermatology Room 17-7	462 First Ave New York, NY 10016	William Levis, MD Aloys Cabrera, RN Louis Iannuzzi, PT, C.Ped	212-562-6096
PHOENIX	Maricopa County Health Dept	1825 E. Roosevelt St Phoenix, AZ 85006	Ronald Pusi, MD Bill Cooper, RN	602-372-6661
PUERTO RICO	University of Puerto Rico Medical School	Dept of Dermatology P.O.Box 365067 San Juan, PR 00936 5067	Pablo Almodovar, MD Sonia Santos -Exposito, RN	787-765-7950
SEATTLE	Harborview Medical Center	2 West Clinic - 359930 325 9th Ave. Seattle, WA 98104	James P Harnisch, MD Virginia Ouellet, RN	206-731-5100
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FACTS ABOUT HANSEN'S DISEASE

What is HD?

Hansen's disease, erroneously associated with biblical leprosy, is a complex infectious disease which, although recognized for more than two thousand years and found to be caused by a bacterium over a century ago, is not completely understood. Dr Gerhard Amauer Hansen, Norwegian scientist, first discovered the HD bacillus in 1873. Considerable progress has been made during the last 40 years, so that today we can treat the majority of cases without undue difficulty and counteract most of the fears generated by the folklore surrounding this disease.

HD is essentially a disease of the peripheral nerves, but it also affects the skin and sometimes other tissues, notably the eye, the mucosa of the upper respiratory tract, muscles, bones and testes.

There are both localized and disseminated forms of HD. If left untreated, HD causes nerve damage, which can result in loss of muscle control and crippling of hands and feet. Eye involvement can result in blindness.

Where is HD Found?

In 1994 the World Health Organization estimated that there were 2.4 million cases of HD worldwide with 1.7 million cases registered on treatment. The estimates for 1985 were 10 - 12 million and 5.4 million respectively. According to these estimates, in 1994, 70% of those who should be on treatment are now being treated. In 1992 there were 690,000 new cases reported and in 1993, 591,000 cases. There are also an estimated 2 - 3 million cases who have completed treatment but who still have residual disabilities who are not included in the above 1994 totals. The largest numbers of Hansen's disease patients continue to be in Southeast Asia and Central Africa with smaller numbers in South and Central America. The largest number of patients in the Western Hemisphere are in Brazil.
In the United States there are approximately 6,500 cases on the registry which includes all cases reported since the registry began and still living. The number of cases with active disease and requiring drug treatment is approximately 600. There are 200 - 250 new cases reported to the registry annually with about 175 of these being new cases diagnosed for the first time. The largest number of cases in the US are in California, Texas, Hawaii, Louisiana, Florida New York, and Puerto Rico. There are still approximately 23 cases at the Gillis W Long Center at Carville, LA. Most patients in the US are treated under US Public Health Service grants at clinics in major cities or by private physicians.

(See listing of clinics.)

How Does HD Spread?

While this aspect of the disease remains a medical mystery, the most commonly accepted theory is that it is transmitted by way of the respiratory tract, and abraded skin. The degree of susceptibility of the person, the extent of exposure, and environmental conditions are among factors probably of great importance in transmission. Most specialists agree that 90% or more of the world's population have a natural immunity to the disease. Persons working with HD contract the disease only rarely. Cases of HD which respond satisfactorily to treatment become noninfectious within a short time.

How is HD Treated?

Although the sulfone drugs, introduced at Carville in 1941, continue to be an important weapon against the Hansen bacillus the rising incidence of sulfone resistant disease necessitates treating all patients with more than one drug. Usually rifampin and sometimes clofazimine or ethionamide are given in addition to dapsone. Treatment rapidly renders the disease noncommunicable by killing nearly all the bacilli and these dead bacilli are then cleared from the body within a variable number of years.

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The Star
RADIATING THE LIGHT OF TRUTH ON HANSEN'S DISEASE

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GET TO KNOW THE FORTY & EIGHT

The **Forty & Eight**, an honor society of legionnaires created in 1920 and **The STAR** 's primary funding organization, draws its origin from World War I. Millions of American soldiers in France were transported to the front in narrow French box -cars, called "Voitures," which would only hold 40 men or 8 horses. Remembering the close brotherhood of those box -car days, **La Societe des Quarante Hommes et Huit Chevaux** (**The Society of 40 men and 8 Horses**) was formed and local Voitures began organizing as outstanding Legionnaires were invited into membership.
Membership is still by invitation only.

Dedicated to the needs of their fellowman, the **Forty & Eight** raises funds and support not only **The STAR**, but funds a national nursing scholarship program, various child welfare programs, provides aid to veterans and continues to promote Americanism at both local and national levels.