

We ship to Australia and back.

One of over 220 countries and territories we serve.



See how we make it easy

BusinessWeek online

SEARCH SITE

Advanced Search

- TOP NEWS
- BW MAGAZINE
- INVESTING
- ASIA
- EUROPE
- TECHNOLOGY
- AUTOS
- INNOVATION
- SMALL BIZ
- B-SCHOOLS
- CAREERS

MAY 29, 2000 ISSUE

Get Four Free Issues

Register

Subscribe to BW

Customer Service

Asian News
European News

S&P Global Funds
Screener

War in Iraq
Special Reports

Newsletter Sign-Up

charles SCHWAB

Tap into advanced trading tools.

SCHWAB ACTIVE TRADER GO

BUSINESS DIRECTORY

Stop searching, start finding!

- Accounting
- Advertising & Marketing
- Air Charter
- Annuities
- Antivirus / Antispar Solutions
- Architects

PREMIUM CONTENT

MBA Insider

BW MAGAZINE

Get Four Free Issues

Register

Subscribe

Customer Service

ONLINE FEATURES

- Book Reviews
- BW Video
- Columnists
- Interactive Gallery
- Newsletters
- Past Covers
- Philanthropy
- Podcasts

MAY 29, 2000

INTERNATIONAL -- LETTER FROM VENEZUELA

By: CHRISTINA HOAG

A Tale of Pain and Hope on Lake Maracaibo (int'l edition)

Barranquitas looks like any of the hundreds of sunbaked, working-class towns in Venezuela's vast interior. The central square is dominated by a statue of liberator Simon Bolivar.

Nearby is the blue-and-white public school. Signs displaying an arctic bear--the mascot of Venezuela's ubiquitous Polar beer--are everywhere.



ADVERTISEMENT

THE W LAS VEGAS RESIDENCES

Fully-furnished, luxury condo-hotel residences from \$650,000

OWN NOW

GO

But there's something odd about the inhabitants of this fishing village at the southern end of western Venezuela's Lake Maracaibo. As a man walks down the street, his arms and legs suddenly flail out in a sort of a leaping dance. In a flash, he resumes a normal gait and goes on his way. Nobody pays attention. A skeletal woman approaches with a wild-eyed stare, unsteady on her feet, as if drunk. But

Sponsored by

Bring your trading to Schwab and tap into:

- Advanced trading platforms
- In-depth proprietary research
- Priority access to trading specialists

SCHWAB ACTIVE TRADER TALK TO CHUCK

GO

charlie SCHWAB

RELATED ITEMS

A Tale of Pain and Hope on Lake Maracaibo (int'l edition)

MAP: Venezuela

MAY 29, 2000 ISSUE

- Special Reports
- Get Four**
- Free Issues**
- Auto Beat
- Register
- Blogspotting
- Subscribe to BW**
- Brand New Day
- Customer Service**
- Byte of the Apple
- Deal Flow
- European News
- Economics Unbound
- S&P Global Funds
- Fine On Media
- Screeners
- Hot Property
- War in Iraq
- Investing Insights
- Special Reports
- New Tech in Asia**
- Newsletter Sign-Up
- Nussbaum On Design
- Tech Beat

Tap into advanced TECHNOLOGY trading tools.

J.D. Power Ratings
Schwab Active Trader 60+
Product Ratings

- Tech Stats
- BUSINESS DIRECTORY**
- Wildstrom: Tech
- Map searching,
- Auto finding!

- Home Page
- Advertising & Media
- Auto
- Classifieds
- Annuities
- Car Care & Safety
- Antivirus / Antispar
- Hot Links

INNOVATION & DESIGN

Home Page

POWERED BY ARCHITECTURE

- Brand Equity
- PREMIUM CONTENT**
- Auto Design
- MBA Insider
- Game Room

- BW MAGAZINE**
- Get Four Free Issues
- Register
- Stories
- Today's Top
- INVESTING**

- Investing Features
- ONLINE FEATURES**
- Annual Reports
- Book Reviews
- BW 50
- BW Video
- S&P Picks & Pans
- Columnists
- Stock Screeners
- Interactive Gallery
- Free S&P Stock Report
- Newsletters

- SCOREBOARDS**
- Fast Covers
- Mutual Funds
- Info Tech 100
- Podcasts
- S&P 500
- Special Reports
- BLOGS**

- Undergrad Programs**
- MBA Beat
- Blogspotting
- MBA Profiles
- Brand New Day
- MBA Rankings
- Byte of the Apple
- Who's Hiring Grads
- Deal Flow

- Economics Unbound
- BW EXTRAS**
- Fine On Media
- BW Digital
- Hot Property
- BW Mobile

as she gets closer, you see that her legs are as stiff as flagpoles and her neck is rigid and crooked. Farther along, two men sit chatting. As one's eye twitches violently, the other flings out his hand. Then they, too, carry on as if nothing has happened.

It seems like something out of *The Twilight Zone*, but the tragedy is all too real. Barranquitas has the world's highest incidence of Huntington's chorea, a fatal genetic disorder. Nearly half the town's 10,000 people possess the gene.

Huntington's attacks brain cells, and it doesn't discriminate between men and women. It begins with such symptoms as depression and aggressive behavior. Then its insidious onslaught proceeds through loss of muscle control, psychiatric disturbances, and cognitive dysfunction. After 10 to 20 years, it ends with frozen muscles and death. Some 40,000 people in the U.S. face this fate. Its most famous victim was folk singer Woody Guthrie, who inherited it from his mother. His symptoms began at age 40, and he died 15 years later, in 1967. Two of his eight children have died from the disease, too.

The extraordinary concentration of Huntington's victims in Barranquitas and the surrounding towns in Zulia state has made the area a magnet for genetic researchers. For the past 22 years, Nancy S. Wexler, a Columbia University clinical psychologist, has spent two months a year in Zulia. In 1993, her Barranquitas research led to the breakthrough discovery of the Huntington's gene and the abnormal DNA sequence that causes the illness. "There's no way we would have found this gene without these families," she says.

On a sweltering day, Wexler and her team--seven students and professionals from various branches of medicine, mainly neurology and psychology--pile into an old American school bus for the three-hour drive on a paved but potholed road to Barranquitas from Maracaibo, the state capital. As her long, straw-blond hair streams in the breeze, Wexler explains that she started coming here in 1979 to work with a Venezuelan doctor named Amerigo Negrette. He was the first to recognize the prevalence of Huntington's in the area, in the 1950s. Negrette retired, and Wexler continued his genealogical study.

The family tree today stands at 16,000 people, most of whom trace their lineage back nearly 200 years to a common ancestor: a woman with the Huntington's gene who had 10 children. "Every year we add about 1,000 people," Wexler says. The spread of the gene has been exponential because of the astronomical birthrate in the area--families with 8 to 14 children are the norm. Wexler's efforts to make contraception and sterilization available have met with opposition from both authorities and the Catholic Church.

DOUBLE DOSE. The disease, in the meantime, continues its deadly progress. If one parent has Huntington's, offspring stand a 50% chance of contracting it. But inbreeding here makes things worse. Avoided and mocked by outsiders, the afflicted live largely in isolation. So Zulia has the world's only incidence of "double-dose" genes, meaning both parents are offspring of Huntington's victims. That gives their own children a 75% chance of inheriting the disease.

On this April morning, the scientists set up in Barranquitas' spartan ambulatory clinic, where a crowd gathers, eager to participate in the testing. "They're working on a cure--at least, that's my hope," says Maria Gregoria, 24, whose mother died of Huntington's. The team tests motor and cognitive skills to determine factors that trigger the onset and behavior of the disease. Blood and sperm samples are also taken. "We don't know how the gene kills," says Wexler. "That's the zillion-dollar question."

She escorts the newest team members on a tour of the town. After a short walk through tidy neighborhoods of cinderblock homes, they arrive at the tin-shack settlements where most victims live. The dirt paths are criss-crossed by open sewage ditches filled with garbage, dead fish, and poisonous-looking black water. The stench of excrement permeates the air. Naked and near-naked children, bellies distended from parasites, their normally black hair gone light brown from

- Investing Insights
- MAY 29, 2000 ISSUE
- Get Four Free Issues
- New Top 500 Asia
- Healthcare Design
- Use Issues
- Tech Beat
- Register
- Working Parents
- Subscribe to BW
- TECHNOLOGY
- Customer Service
- J.D. Power Ratings
- Asian News
- European News
- Tech Stats
- S&P Global Funds
- Webcam: Tech
- Maven
- War in Iraq

Get BusinessWeek directly on your desktop with our **RSS feeds.** RSS 2.0

Add BusinessWeek news to your Web site with our **headline feed.**

Click to buy an **e-print or reprint** of a *BusinessWeek* or BusinessWeek Online story or video.

To subscribe online to *BusinessWeek* magazine, please **click here.**

Learn more, go to the **BusinessWeekOnline home page**

▲ [BACK TO TOP](#)

TODAY'S MOST POPULAR STORIES

1. **Real Estate: The Going Gets Tougher**
2. **Ethanol: Myths and Realities**
3. **The Growl of a Housing Bear**
4. **Free Broadband for the Masses**
5. **Medical**

[Get Free RSS Feed >>](#)

MARKET INFO

DJIA	11100.67	-43.40
S&P 500	1260.84	-6.19
Nasdaq	2170.19	-23.69

STOCK LOOKUP GO

Stocks Inch Higher in Choppy Trading

Create / Check Portfolio
Launch Popup Ticker



AUTOS Reports
Copyright 2005, by The McGraw-Hill Companies Inc. All rights reserved.
Home Page
Terms of Service | Privacy Notice

Auto Reviews
Classic Cars | MarketPlace | Knowledge Centers

Tap into advanced **II Companies**
 Car Care & Safety
 Hybrid
 INNOVATION
 & DESIGN TRADER GO+

Home Page

BUSINESS DIRECTORY

Architecture

Brand Equity

Auto Design

Auto Design

Car Care & Safety

Small Biz & Marketing

Smart Answers

All Channel

Success Stories

Antivirus / Antispar

Today's Top Solutions

INVESTING

Investing: Europe

Annual Reports

BW 50

PREMIUM CONTENT

Stock Raiders

Free S&P Stock Report

BW MAGAZINE

SCOREBOARDS

Get Four Free Issues

Mutual Funds

Register

Info Tech 100

Subscribe

S&P 500

Customer Service

B-SCHOOLS

ONLINE FEATURES

Undergrad Programs

Book Reviews

BYA Profiles

Columnists

Media Rankings

Interactive Gallery

Newsletters

BW EXTRAS

Fast Covers

BW Digital

Philanthropy

BW Mobile

Podcasts

BW Online Alerts

Special Reports

Dashboard Widgets

BLOGS

Podcasts RSS 2.0

Auto Beat

BSS Feeds RSS 2.0

Blogspotting

Brand New Day

Conferences

Eye for the Apple

Investor Workshops

Research Services

Research Services

Fine On Media

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property

Hot Property



[Investing Insights](#)
[New Tech in Asia](#)
[NussbaumOnDesign](#)
[Tech Beat](#)
[Working Parents](#)

TECHNOLOGY

[J.D. Power Ratings](#)
[Product Reviews](#)
[Tech Stats](#)
[Wildstrom: Tech Maven](#)

AUTOS

[Home Page](#)
[Auto Reviews](#)
[Classic Cars](#)
[Car Care & Safety](#)
[Hybrids](#)

INNOVATION & DESIGN

[Home Page](#)
[Architecture](#)
[Brand Equity](#)
[Auto Design](#)
[Game Room](#)

SMALLBIZ

[Smart Answers](#)
[Success Stories](#)
[Today's Tip](#)

INVESTING

[Investing: Europe](#)
[Annual Reports](#)
[BW 50](#)
[S&P Picks & Pans](#)
[Stock Screeners](#)
[Free S&P Stock Report](#)

SCOREBOARDS

[Mutual Funds](#)
[Info Tech 100](#)
[S&P 500](#)

B-SCHOOLS

[Undergrad Programs](#)
[MBA Blogs](#)
[MBA Profiles](#)
[MBA Rankings](#)
[Who's Hiring Grads](#)

BW EXTRAS

[BW Digital](#)
[BW Mobile](#)
[BW Online Alerts](#)
[Dashboard Widgets](#)
[Podcasts](#) 
[RSS Feeds](#) 
[Reprints/Permissions](#)
[Conferences](#)
[Investor Workshops](#)
[Research Services](#)