

# HOPE THROUGH RESEARCH

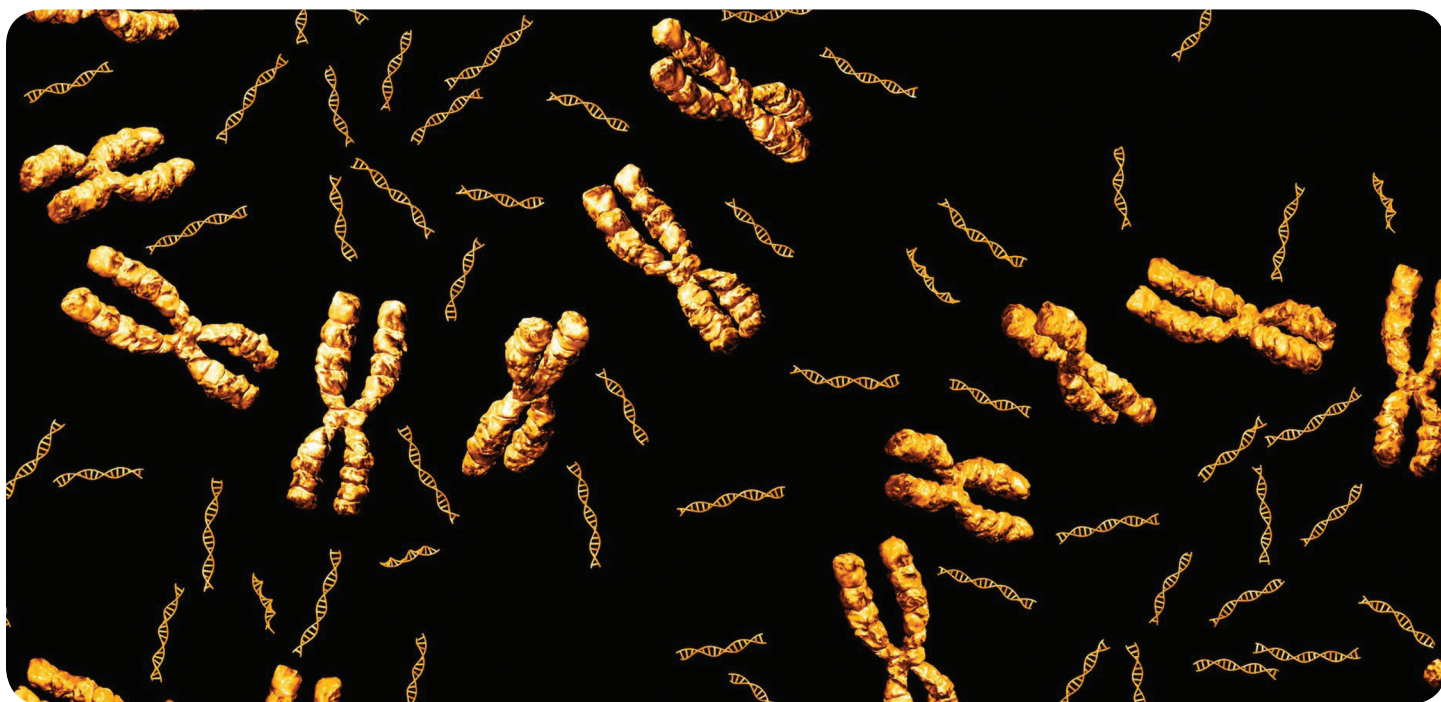


**HOPE FOR DEPRESSION**  
RESEARCH FOUNDATION

FUNDING THE BEST MINDS, TO HEAL MINDS.™

## TENTH ANNIVERSARY BULLETIN

**Our Tenth Anniversary is a time to celebrate our achievements. Today, we are the most advanced depression research and awareness nonprofit organization in the United States.**



Rendering of genes and chromosomes

### MAJOR RESEARCH ADVANCES FROM OUR DEPRESSION TASK FORCE

**Our team of eight pioneers in brain science have made undeniable progress through research grants funded by HDRF.**

#### **Research Advance # 1**

The Depression Task Force has identified several gene families that may be key to unlocking the mystery of depression.

#### **How?**

The same suspect gene clusters continue to show up consistently in tests on animal models and samples of human tissue.

#### **Why is that important?**

Our scientists pinpointed these gene targets from literally thousands of

potential genes by converging data from several different studies in our powerful Data Center. Using the most advanced computer technology in the world, they found noticeable overlaps in the vast data.

#### **What's next?**

The scientists will collaborate to reveal what role the genes play in key mood circuits involved in depression. Their discoveries promise to open new pathways to develop novel treatments for depression.

*continued on page 2*



## FOUNDER'S MESSAGE

As we mark our Tenth Anniversary, I can't help but marvel at all that we've accomplished, and with your help, all that we *will* accomplish.

With our acclaimed Depression Task Force, HDRF has become the definition of frontier science. Our team of eight top scientists is on the brink of discoveries that can transform the way we view and treat a debilitating illness. They are an engine for innovation and a model for the entire field.

HDRF is also at the forefront of changing public attitudes about depression. This year we launched a national public awareness ad that strikes at the heart of stigma and misunderstanding.

As you read about the progress we've made, please know you have played a role in these achievements. 100% of your gift goes directly to research. Your continued support will make a world of difference.

Thank you,

**Audrey Gruss**  
Founder & Chairman

## MAJOR ADVANCES FROM OUR DEPRESSION RESEARCH TASK FORCE

*continued from page 1*

### Research Advance #2

Our scientists have begun a major study on how traumatic environments can cause physical changes in the brain that lead to depression.

#### How?

Our scientists are using a breakthrough new technology that allows them to track chemical changes in genes when the brain is subjected to high doses of stress.

#### Why is this important?

This new technology will shed light on how environmental stressors might affect the activity of genes, brain cells and brain circuits involved in depression.

#### What's next?

We have long known from broad studies on whole populations that children who grow up in abusive environments are more vulnerable to stress and resulting depression later in life. But why? How can traumatic environments literally become embedded in the biology of an individual? The new technology will help our scientists map the corrosive trail a big stressor can leave behind in the brain, ultimately revealing precise ways we can intervene to reverse the damage.

### Research Advance #3

50% of depression patients do not respond to existing medications. The Depression Task Force is confronting the problem of treatment resistance head on.

#### How?

Our scientists have developed groundbreaking animal models of treatment resistance in the laboratory. Lack of these models has been holding the field back for decades.

#### Why is this important?

These new models allow our scientists to understand the brain biology and genetics associated with treatment resistance. Our scientists can also test new candidate drugs to see if they work when traditional medications (like the SSRIs) stop working, or fail to work in the first place.

#### What's next?

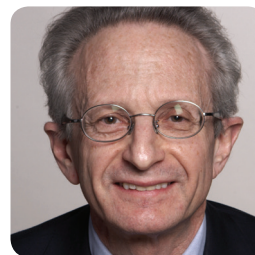
The Depression Task Force is laser-focused on several new antidepressant drug candidates that show encouraging results in the laboratory. We will continue to update you as the research unfolds in 2016!

## MEET AN HDRF PSYCHIATRIST

**HDRF Board member Dr. Harold Koenigsberg is a Professor of Psychiatry at Mt. Sinai.**

*Dr. Koenigsberg specializes in Borderline Personality Disorder (BPD).*

BPD is a serious mental illness marked by unstable moods, behavior and relationships. Up to 6 percent of adults in the U.S. have been estimated to have borderline personality disorder each year. People with BPD have extreme reactions – including panic, depression and rage – to loss or rejection, whether



real or perceived. Unable to control impulses, they are often confused about who they are and what they want. Yet, they can be very bright, articulate, and effective.

People with this disorder also have high rates

of co-occurring disorders, such as depression, anxiety disorders and substance abuse. In fact, over 80% of borderline patients have a lifetime history of major depressive disorder.

# MEET AN HDRF NEUROSCIENTIST

HDRF Depression Task Force member **Dr. Michael Meaney** is Professor of Psychiatry and Neurology at McGill University.

*Dr. Meaney is a world-acclaimed expert in epigenetics – the study of how the environment alters the brain's chemistry. His particular interest is in how maternal care shapes emotional and cognitive development. Here Dr. Meaney explains how new technology developed at McGill will propel the next research breakthroughs of the Depression Task Force.*



thorough grasp of how the genes work in living animal models.

At McGill we've developed neuro-imaging technology that allows us to view the brain of a living animal while we simultaneously test genes. We can

actually observe brain circuits changing in real time after we trigger the gene to change with a drug or stress hit from the environment. Finally we can solve huge problems like why some people respond to existing SSRIs and others don't. The ability to see the living brain in such detail will reveal clues that can fuel dramatic advances in the field.

Today, a key part of depression research is identifying genes potentially at the root of depression. These genes are identified and tested in animal models. However, to date we have not had the technology to get a

# MEET AN HDRF DONOR

**Kristen Krusen** is an investment professional and mother of two who recently joined the prestigious Chairman's Council of top donors.

*HDRF's Chairman's Council recognizes donors who give \$10,000 or more annually to advanced research. A supporter since 2008, Krusen has been excited to see her investment drive tangible change.*



It doesn't make you less of a person. HDRF shows that with the speakers at its annual events.

The second reason I give is HDRF's research team. HDRF got the best minds together – and that is unique.

I've never seen research executed this way. Breaking down silos and putting the best researchers together – that approach has to be exponentially more powerful. I feel that every dollar I give can make a difference. It's a privilege to be involved.

I support HDRF because it has really broken through the barrier of stigma. There are many accomplished, influential people with great lives that go through this illness, or know someone struggling with it, and that's okay.

## IN THE NEWS

We're thrilled to announce that *The New Yorker* has named a recent HDRF-funded study as one of the six most interesting psychology findings of the year.

Dr. Huda Akil, Chair of our acclaimed Depression Task Force, and her lab at UMich have identified a brain protein that seems to play a key role in depression. The protein – **Fibroblast Growth Factor 9** – is part of a family of molecules that serve to stimulate and regulate the growth and activity of nerve cells in the brain.

Dr. Akil's study shows that levels of FGF9 are concentrated at a high level in depressed adults. This finding could lead to new strategies for drug treatment.

## HDRF BOARD OF DIRECTORS

- Audrey Gruss, *Chairman*
- Harold W. Koenigsberg, M.D.
- Robert Michels, M.D.
- Steven P. Roose, M.D.
- William T. Speck, M.D.

## DEPRESSION TASK FORCE

- Huda Akil, Ph.D.  
*University of Michigan, DTF Chair*
- Joshua Gordon, M.D., Ph.D.  
*New York State Psychiatric Institute & New York Presbyterian Hospital*
- René Hen, Ph.D.  
*Columbia University*
- Jonathan Javitch, M.D., Ph.D.  
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*Rockefeller University*
- Michael Meaney, Ph.D.  
*Douglas Institute & McGill University*
- Eric Nestler, M.D., Ph.D.  
*Mount Sinai School of Medicine*

# HOPE LUNCHEON SEMINAR NOVEMBER 10, 2015

“Alcoholism and Depression:  
Dual Diagnosis, Dual Treatment”



At left, Mariel Hemingway accepts the HOPE Award from Audrey Gross. Above, Demi Lovato, HOPE Ambassador for a New Generation.

Our sold-out Ninth Annual HOPE event honored Academy Award-nominated actress, writer and mental health advocate **Mariel Hemingway**, as well as **Caron Treatment Centers**, who are leaders in the field of addiction treatment. Multi-platinum artist and actress **Demi Lovato** was also honored as a *HOPE Ambassador for a New Generation*. Noted experts included **Dr. Charles O'Brien**, Founding Director of the Center for Studies in Addiction at the University of Pennsylvania.

Honoree Mariel Hemingway moved the audience with her personal remarks. “I tell my story because it’s not a unique story,” she said. “Although I come from one of the most famous American families, I grew up in a world of depression, addiction, and alcoholism. What people don’t understand is that depression is a brain problem and a life problem, and it needs to be talked about.”

## MESSENGERS OF HOPE

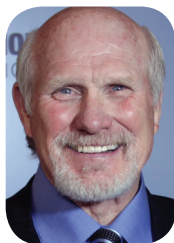
In our media-oriented culture, one of the strongest ways to raise awareness about depression is through the power of celebrity communication. HDRF thanks all the public figures who have spoken at our events over the past ten years including **Lorraine Bracco**, **Terry Bradshaw**, **Candace Bushnell**, **Richard Dreyfuss**, **Dominick Dunne**, **Linda Hamilton**, **Jay McInerney**, **David O’Russell**, **Brooke Shields** and **Callie Thorne**.



Brooke Shields



Lorraine Bracco



Terry Bradshaw



Richard Dreyfuss



David O’Russell

SAVE THE DATE!

## WALK OF HOPE TO DEFEAT DEPRESSION

Saturday, July 30, 2016  
Southampton, NY

## TENTH ANNIVERSARY HOPE LUNCHEON SEMINAR

Tuesday, November 15, 2016  
The Plaza Hotel

## HELP SUPPORT HDRF

100% of all donations go directly to research leading to a better diagnosis, new treatments and prevention of depression and its related mood and emotional disorders.

HDRF is a nonprofit 501(c)(3) public charitable organization. All donations are tax-deductible to the fullest extent of the law.

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