# HOPE THROUGH RESEARCH

HOPE FOR DEPRESSION RESEARCH FOUNDATION

**SPRING 2023** 

## THE HDRF DEPRESSION TASK FORCE CELEBRATES PROGRESS AT ANNUAL SCIENTIFIC SUMMIT



#### **Members of the Depression Task Force (DTF)**

#### KEY FACTS ABOUT DEPRESSION

- Depression is a debilitating psychiatric disorder affecting millions worldwide that is roughly one-third heritable.
- Large-scale genomic studies indicate that more than 200 risk genes contribute to depression.
- Depression is a disorder that involves an interaction between an individual with a susceptible genotype and exposure to life stressors.

#### WHY THE DEPRESSION TASK FORCE STRATEGIC PLAN GIVES HOPE

The DTF is a consortium of scientists working together as a single unit to study how depression pathways develop in individuals with susceptible genotypes. Their annual summit, held on April 19 in New York City, laid out their broad strategic plan for the next three-year grant cycle.

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It is well-established that stress is the strongest risk factor for depression. But what's particularly noteworthy is that **many** people who are exposed to severe stress, according to studies with combat veterans and civilian victims of physical or sexual assault, many people are somehow able to maintain normal function. This is what scientists refer to as "resilience." The question of what makes one person susceptible under some circumstances, and another person resilient under those same circumstances, is the major issue that the Depression Task Force is addressing.

To find answers, the DTF's strategy is to better understand the effects of stress on the brain, in health and disease. They are looking at how pathways of risk can develop in the fetus and childhood and continue to develop through old age. They are observing how risk pathways develop on multiple layers – from molecules to cells to the whole brain and behaviors.

They are also looking to define the

subtypes of depression that are driven by different genes that contribute to the risk pathways. This will lead us to a more precise way to treat depression in each individual, rather than the one-size-fits all approach of today.

Our knowledge of the biology of resilience can also help people with more susceptible genotypes by giving them treatments to activate their own mechanisms of resilience, rather than undoing the negative effects of stress after depression takes root.

Only a consortium of scientists who work together as a single unit can mount an effort of such breadth and mine important advances to develop better, precision treatments. Their work continues to lead the field of stress and depression research.

#### LOUISA BENTON

*Please turn the page to read highlights from the DTF's recent annual scientific summit.* 

### **ANNUAL SCIENTIFIC SUMMIT HIGHLIGHTS**



"Since we can't undo the stress in this world, a major goal of my lab is to understand how we can counter it by inducing resilience. Resilience is an active process – something the brain can acquire." Huda Akil, Ph.D.

University of Michigan



"We try to understand the early pathways of risk in children. Depression has a peak age of onset around adolescence, so we need to catch it early." Michael Meaney, Ph.D.

McGill University & Singapore Institute



"When people take SSRIs, like Prozac and Zoloft, about 50% respond, and 50% don't respond. We're trying to figure out the mechanisms for that lack of responsiveness, to find novel targets to treat the nonresponders."

René Hen, Ph.D. *Columbia University* 



"What is the circuit of depression that you can map in humans? The goal is to find it so we can track if a patient is getting better."

Helen S. Mayberg, M.D. Mount Sinai School of Medicine



"Childhood is a very critical period. The shaping of our risk and resilience to psychiatric illness already starts in the womb."

Elisabeth Binder, M.D., Ph.D. Max Planck Institute of Psychiatry



"We believe there is a kind of rainbow of different flavors of depression. The goal is to discover new subtypes of depression and devise ways of treating people based on their subtype."

Conor Liston, M.D., Ph.D. Weill Cornell Medicine



"In my lab we record electricity in the brain. Just like we take an EKG to monitor the heart, I want to come up with an EKG for the brain to diagnose states like anxiety and depression."

Kafui Dzirasa, M.D., Ph.D. *Duke University* 



"Today we just lump everybody together in their treatments. Soon we might be able to actually separate patients and know how to treat them with precision psychiatry." Jonathan Javitch, M.D., Ph.D.

Columbia University



"The DTF has been in the thick of this research for a decade now. We are delineating how it is that stress causes changes in the brain that are harmful in the vulnerable brain, starting in utero and persisting throughout life."

Eric Nestler, M.D., Ph.D. Mount Sinai School of Medicine Chair, HDRF Depression Task Force

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