Huntington Disease: The Ticking Time-Bomb

Imagine what it must be like to have a time-bomb ticking away inside your head. Nothing happens except for the constant tick-tick-tick of the clock until… boom! The switch is flicked and the killer gene starts to do its thing. That’s Huntington Disease (HD), an inherited disorder marked by progressive degeneration and death of brain cells. HD is caused by an inherited defect in a gene i.e. you get the HD gene time-bomb at birth (children of individuals with HD have a 50% chance of inheriting the gene and ultimately developing the disease), and tests can be done at any time to determine if you are a carrier of the gene, but most individuals with Huntington’s disease don’t develop signs and symptoms until their 30s or 40s. About 1 in every 10,000 Americans has HD and more than 250,000 others are at risk of having inherited it from a parent.

Huntington’s disease results in worsening difficulty in motor control (movement), cognition (thinking), and behavior. In many cases, a person with HD will experience the same areas of difficulty throughout the course of the disease, with severity varying from stage to stage. There is no cure. There is no way to stop the progression of HD. Even options for managing the symptoms are limited.

Advancing clinical research in Huntington Disease

Teva is working hard to change this, and, along with work being done by the NNE, has the broadest HD research program in the industry. In November of 2014, Teva screened the first patient in the Phase 2 LEGA-TO-HD study, which evaluates the safety and efficacy of laquinimod in Huntington’s disease. The primary outcome measure of the study is the change from baseline after 12 months of treatment using the Unified Huntington’s Disease Rating Scale - Total Motor Score (UHDRS TMS).

Additionally ongoing is the Pride-HD study, a phase 2 global study designed to evaluate the impact of pridopidine, an investigational medication, on motor impairment in patients with Huntington’s disease.

“Huntington’s disease represents a significant unmet medical need as there are currently no treatments that improve the motor movements that are crucial for gait, balance and coordination – things that greatly impact a patient,” said Professor G. Bernhard Landwehrmeyer, M.D., Ph.D., FRCP, lead study investigator and professor of neurology, Ulm University Hospital, Germany. “Based on previous observations using the compound, we believe pridopidine holds promise for symptomatic relief with an acceptable safety profile.”

The recent acquisition of Auspex (March 2015) further strengthens Teva’s core CNS franchise and establishes leadership in the underserved movement disorders space. Auspex’s leading product, SD-809, is being developed for the treatment of chorea, abnormal involuntary movement associated with Huntington’s disease, tardive dyskinesia and Tourette syndrome. SD-809 for Huntington’s is expected to win regulatory approval and be launched commercially in 2016.

Teva’s commitment to Neuroscience

Dr. Michael Hayden, President of Global R&D and CSO, Teva

The Israeli National Network of Excellence, established by Teva to support academic research, is a fundamental component in our ongoing efforts to find new ways to treat diseases of the brain.

This pursuit of new therapeutic strategies, collectively by Teva and leading academic investigators, signals to be a powerful mean to accelerate scientific discovery in neuroscience research.

Reinforcement for this progress continues and is being built on by the recent announcement of the 2015 NNE grants recipients. We are proud to welcome them into the NNE scientific community.

Our journey continues and it is filled with promise and hope.
One of the great challenges facing mankind today is the issue of diseases of the brain. Teva, together with Israel’s leading academic and research centers, are facing that challenge head-on, forming a unique collaboration known as “The Israeli National Network of Excellence in Neuroscience (NNE).” Established in 2012, the NNE is entirely focused on finding new ways to understand and treat diseases of the brain, which strike at the very core of what it is to be a human being.

The 1st class of the NNE program’s scientists has already made advances. Promising work is ongoing in devastating illness such as Alzheimer’s disease, Multiple Sclerosis, ALS, Huntington Disease and Parkinson’s disease. Potential new targets and therapies have already been identified and vital work is now being done to further validate and progress the ideas and concepts that Israel’s brightest neuroscientists are generating as part of this program. This work is getting noticed and has already led to 15 publications in leading scientific journals. Support for this effort continues and is being built on by the recent announcement of the 2015 NNE grants. Following rigorous assessments, Teva was finally proud to welcome the new class of grant recipients and their ideas and concepts that Israel’s brightest neuroscientists are generating as part of this program. This work is getting noticed and has already led to 15 publications in leading scientific journals.

The new NNE Class includes of 11 outstanding Post-Doctoral fellows and PhD Graduate Students from leading academic institutes and medical centers such as The Hebrew University, The Weizmann Institute, Tel Aviv University, Ben Gurion University, Haifa University and Sourasky Medical Center.

Neurodegenerative diseases encompass a broad array of conditions and collectively affect millions of individuals in all age groups who suffer from reduced quality of life and/or life expectancy. This pursuit of new therapeutic strategies, collectively by Teva and leading academic investigators, signals to be a powerful mean to accelerate scientific discovery and make progress against the formidable challenges presented by neurodegenerative diseases.

Teva-Talks are short, sharp and snappy (alike TED talks). Last year’s Teva-Talks at Teva’s exhibition booth in Biomed attracted a lot of attention! This year, at the 2015 Biomed meeting in Tel Aviv, will be just as exciting, stimulating and thought-provoking as visitors to the Teva exhibition will once again be dazzled by a variety of 15-min TEVA-talk sessions.

On stand we will have senior executives and leading researchers sharing their insights on important topics such as: the future of pharma research and development efforts, personalized medicine and technological evolution, research and the impact of market forces and economics, and much more!

Also on stage will be the cream of Israel’s neuroscience research community, who will outline the most innovative academic research in the fields of MS, ALS, Alzheimer and Parkinson’s disease.

So get your daily dose of debate at the Teva booth, and get up-to-speed on the current trends in the biome world and the latest neuroscience programs in Israel

In a breakthrough $8m collaboration mutually funded by Teva and Bar-Ilan University and supported by the Ministry of the Negev and Galilee Development, two new state-of-the-art research centers in the north of Israel have just opened. The Teva Center for Human Genetics Research at the Western Galilee Hospital, Nahariya, and the Teva Center for Neuroscience Research at the Faculty of Medicine in the Galilee, will advance the research in the fields of genetic diseases and autism and contribute significantly to the development of medical services in the north.

The Teva Center for Neuroscience Research, will assist the Faculty of Medicine in the Galilee to develop unique research and teaching programs, including the establishment of a new, state of the art autism registry, in Safed, that will be available to all researchers in the country.

The Teva Center for Human Genetics, at the Western Galilee Hospital, Nahariya, will focus on research of the high frequency genetics-dependent morbidity in the Galilee in order to develop new therapeutic approaches to reduce this morbidity.

“The connection between government, academia and industry creates a winning model, that enables to realize every goal, and demonstrates what may be achieved jointly for the State of Israel,” said Erez Vigodman, Teva’s President and CEO.

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Meet the NNEs

Chen Eitan
27 years old lives in Tel Aviv
PhD Graduate Student at Weizmann Institute
NNE Class of 2014
Research Title: Discovery of micro RNA-related mutations in human ALS patients by a personalized genomics approach.
Short Bio: “The field of brain science interests me the most.”
Other than that, I love tracking outdoors whenever I can.

Shahar Barbash
31 years old lives in Tel Aviv
PhD Graduate Student at Hebrew University of Jerusalem
NNE class of 2013
Research Title: Identifying Novel Targets for Therapeutic Interference with the Progression of Alzheimer’s Disease.
Short Bio: Shahar won several awards on his publications in the field of molecular and computational neuroscience and as teacher in the ELSC faculty. Shahar is a father of 3 kids and a talented musician, a drum player, and a co-founder of Mura, a group composing and performing music.

Roy Sar-El
31 years old lives in Tel Aviv
MD/PhD Graduate Student at Tel Aviv University
NNE class of 2013
Research Title: Stimulating brain functional-pharmacological coupling to target drug effect in humans
Short Bio: An ultra-marathon runner (100km), married to Muriel (also a MD at Sourasky) and a father to a newborn baby girl.