

# Terry's Foundation for Muscular Dystrophy

## Winter 2018 Newsletter

Dear Families and Friends,

I hope all is well and that you and your family had a nice holiday break. With the new year, I want to update you on our activities & significant progress since we last connected, events coming up, notable news and how you can get involved. Our gala in October was a big success, raising over \$100,000 for targeted Duchenne research with our collaborators. **Thank you to all of our wonderful supporters and attendees!** Also, be on the lookout for a podcast from Harvard Business School surrounding our precision medicine collaboration and its potential to rapidly help boys & young men with DMD.

Below, you'll find the updates of our winter newsletter. As we continue to build progress and momentum, I encourage you to share our work and ask questions. As always, our goal is to distill helpful information for you and your family.

All the best,

-Rich Horgan Founder & President

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## **Terry's Foundation Research Update**



#### **Precision Medicine**

Since we last spoke, we've grown our collaboration by adding Yale Medical School – the Lek Lab – and UCLA with Drs. Stan Nelson and Richard Wang. We've signed a research agreement with Yale who will be responsible for developing the first targeted CRISPR constructs based on individual mutations – think "precision medicine".

As a reminder, our strategy is to develop therapeutics **based on the individual's mutation.** Our strategy is to first, understand the patient's specific mutation and to what degree dystrophin (the protein whose absence causes Duchenne) is being produced by the body. We are doing this by conducting several analyses including:

- Whole genome sequence (where is the individual's mutation),
- Western blot (is there dystrophin?)
- RNA sequencing (how is dystrophin being produced?).

These understandings create a baseline from which our collaborators can then develop different strategies to upregulate dystrophin levels, based on the individual.

## **Yale Medical School Progress**

The Lek Lab at Yale Medical School, led by Dr. Monkol Lek, has created a construct that carries with it Terry's (one of our first patients) missing gene promoter and missing piece of his first exon. Think of it as a package that carries the missing components specific to the individual's genetics whose introduction could cause dystrophin levels to rise significantly.

#### Next steps:

The next step is to test the construct against Terry's cell line.

- We're expecting this to be complete in the end of January/early February.
- Success, in this step, is defined as increasing dystrophin levels in the cell line.
- In parallel, a knockout mouse line (that mimics Terry's mutation) is being created & sent to the lab. With this, we will test the efficacy & safety in a mouse model ahead of human trials.

This is one "shot on goal" for a therapeutic approach that holds high potential, as Dr. Lek describes below:

"This collaboration that Terry's Foundation has orchestrated, to bring together the leading researchers from across the world to develop precision medicine, is unlike any I've seen before. The progress we have already made and what will develop over the next few months holds incredible potential to stop this disease and to do so in a relatively short amount of time. This approach has could change the paradigm of how DMD is treated."

## -Dr. Timothy Yu, Boston Children's Hospital

#### Boston Children's Hospital/University of Massachusetts Medical School Progress

As another "shot on goal", our work with Boston Children's Hospital and Dr. Tim Yu is awaiting our RNA sequencing to be complete. This sequencing is being done at UCLA via Drs. Stan Nelson and Richard Wang. We're expecting the output of the RNA sequencing by the middle of January. From that, Dr. Yu will use computational prediction (being guided by RNA sequencing) to create a series of anti-sense oligos (they restore protein function – in this case they would, ideally, restore dystrophin function). These, too, will be tested in Terry's cell line once created – likely in the spring/summer.

We're excited about what's next to come and hopeful that we will see dystrophin levels upregulated in the cell line.

As we've made significant progress, we'll be adding individuals with differing mutations to this process as we march towards dystrophin restoration and the creation of a process generalizable to all with Duchenne.

#### **Kunkel Lab Grant**

An update on progress is due in March 2019.

## **Industry News**



- Wave Life Sciences Announces Phase 2/3 Duchenne Muscular Dystrophy Clinical Trial of Suvodirsen (WVE-210201) Selected for FDA Complex Innovative Trial Designs Pilot Program. More Details Here.
- Catabasis Pharmaceuticals Initiates Phase 3 PolarisDMD Clinical Trial for Edasalonexent in Duchenne Muscular Dystrophy. More Details Here.
- Sarepta Therapeutics Completes Submission of New Drug Application Seeking Approval of Golodirsen (SRP-4053) in Patients with Duchenne Muscular Dystrophy Amenable to Skipping Exon 53. More Details Here.
- Sarepta Therapeutics / Jerry Mendell, M.D., Presented Positive Updated Results from the Four Children Dosed in the Gene Therapy Micro-dystrophin Trial to Treat Patients with Duchenne Muscular Dystrophy. More Details Here.
- Capricor Therapeutics HOPE-2 (CAP-1002) trial placed on clinical hold due to patient allergic reaction. More Details Here.

## We need your help



#### Share.

Our community is rapidly growing. We encourage our friends and supporters to share our newsletter & progress with your network by word of mouth and social media. Together we can do much more and multiply our impact to defeat Duchenne.

#### Join.

When the foundation was established in late 2017, we had a group of 5 forging the path forward. Since then, the number of people we touch, work with and benefit from has swelled into the hundreds – ranging from the east coast to the west coast and internationally. If you are interested in working with the foundation to multiply our impact – let's talk.

#### Support.

To all our sponsors and supporters: <u>Thank You</u>. It's with your support that in only slightly over a year, we've been able to form a world-class collaboration with the brightest minds in Duchenne research, push

our understanding of the disease to new levels and progress against a singular goal to develop precision medicine for boys & young men suffering from the disease, *in time*.

For those thinking of supporting our mission, I encourage you to do so. The foundation prides itself on having the most efficient capital utilization. No level of support is too small – from a small donation to a large donation, it all helps us get closer to ending Duchenne. If you, or someone you know, is interested in running a fundraiser or donating, we are here to support you.

## **Upcoming Events**

## Terry's Foundation: Annual Educational Seminar

- Our second annual educational seminar for families and caregivers will be held in summer 2019. Keep an eye out for updates coming soon!
- We will invite the leading companies, clinicians and researchers to discuss progress in the field, clinical trials enrolling and to answer your questions.

## Research Updates

• We're expecting a significant inflection point in late winter/early spring. We look forward to sharing exciting progress with everyone.

## **Terry's Foundation Third Annual Gala**

• We are already planning for our third annual gala to be held in October 2019 in Boston.







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