GFB

BETA-SARCOGLYCANOPATHY FAMILY GROUP

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Extraordinary newsletter - april 2015

DIRECT LINE GFB ONLUS-COLUMBUS,

SENT 900,000 DOLLARS

WHAT'S NEW: Since 2012, the families of the GFB ONLUS have been funding without any other help ***the preclinical gene therapy on Limb Girdle Muscular Dystrophy type 2E***, at the National Children's Hospital in Columbus OHIO USA, carried out by the team of Prof. Jerry Mendell.

FROM WHEN AND HOW: In 2012 Prof. Cerletti Massimilano, from Chiavenna, was sent to the American laboratories by the GFB ONLUS. Prof. Cerletti has been studying for 15 years the muscular dystrophies at Harvard in Boston and is currently a university professor in London where also director of a centre of stem cells. Following the positive feedbacks given by Prof. Cerletti, the GFB families decided to start with the first fundings to the project of gene therapy for LGMD2E. ***Three payments*** **for a total of $ 900,000** have been paid up today**.** In these four years the GFB has received three reports with all the results of the phases of the project and has taken part in four conference calls with American doctors and the medical and scientific committee of the association.

First National Congress GFB, april 19th 2013, Milan Italy. From left Gonnella A., Dr.ssa Rodino Klapac L., Prof. Mendell J., Vola B., Dr.ssa Bonetti P., Perlini M.

In April 2013 the American doctors took part in the First National Convention of the GFB in Milan "What next?" and last July the GFB ONLUS received consent to treatment by the American FDA (the American agency of the drug), which authorizes the use of gene therapy on the first patients.

In these months the laboratories are completing the production of human vectors whose new report will be sent to the GFB so to pass then to the following phase.

Our Association is carrying on alone this fight against this particular pathology. Big associations of rare diseases, provincial and national did not join us, as already involved in other projects. Anyway we hope some other associations will join our projects as

LGMD2E is one of the most suitable candidates for the application of this therapy. In fact the gene that causes this pathology is one of the smallest among all the today's known genetic diseases. The same therapy may help many other similar genetic diseases as this same treatment can also be used on them.

In January the GFB ONLUS took part in a meeting at the University of Milan, where an Italian doctor, who worked last year in the America hospital, reported on the current studies on the gene therapy. During the meeting it was told this is a very delicate path, there were some obstacles now overcome, but also that everything seems to be ready to be started on patients.

FUND FOR RESEARCH:

In 2015 the GFB ONLUS had to change its accounting system so to be able to to finance, for the first time, the American projects directly from the association's bank account. For this purpose a special **FUND FOR RESEARCH** was created on its bank account of Banca Prossima. All donations on the account will be used to finance the American projects and the scientific researches on the LGMD2E.

HEADING FOR RESEARCH FUND: Gruppo Familiari Beta-sarcoglicanopatie Onlus

IBAN: IT33X0335901600100000076500 BIC /SWIFT code BCITITMX

The GFB ONLUS is the only association in the world existing for LGMD2E, this project for the gene therapy is the only ongoing project in this moment for this pathology and the only hope for these patients.

THE PROJECT:

In 2012 the beta-sarcoglycan gene transfer project for treatment of Limb Girdle Muscular Dystrophy Type 2E had already been started at the Research Institute by Nationwide Children's Hospital - Columbus Ohio.

Dr. J.R. Mendell and Dr. L. Rodino Klapac had started their work, the scientific way to be followed is based on their experiences, gained by completing a similar trial for the treatment, throughout a gene transfer therapy, of the Limb Girdle Muscular Dystrophy Type 2D.

Dr. Mendell explained in details aims and phases of the pathway to be followed:

Aim 1. Determination of pre-clinical efficacy of the transfer of human b-sarcoglycan gene, using recombinant adeno-associated virus to act as delivery vehicle, in b-sarcoglycan deficient mice. Time required: one year.

Aim 2. Regulatory preparation for a "recombinant adeno-associated virus human b-sarcoglycan" gene transfer intramuscular clinical trial, including formal toxicology/biodistribution study and clinical vector production. Time required: about one year.

Aim 3. Perform an intramuscular clinical gene therapy trial with recombinant adeno-associated virus human b-sarcoglycan transfer (into the "extensor digitorum brevis" muscle) in LGMD2E patients. Time required: about one year starting since the closing of the previous aim.

Currently the second phase of the project is almost at the end. In 2015 there will be the start of the third phase concerning the first clinical trial for the beta-sarcoglycan.

Moreover, Dr. Mendell underlined his clear intention to take this project to the following important level (Aim 4) whose target is the vascular delivery of the missed gene to the lower limbs. He is in fact confident this can be achieved with an outcome that will mean widespread gene expression into the treated muscles and functions improvement. At this purpose they are already testing and discussing, with U.S. FDA, a procedure which will be developed and carried out during the next eighteen months.

We wish to underline this trial-study, as we know up to now, is today the most important worldwide scientific project entirely and solely committed to the research of a treatment for LGMD2E. It is therefore extremely important for us and represents a substantial step in order to get more attention to the disease that affects our children. We can say it is a reward for all the efforts we have made till now, independently on the results and the applications it will produce.

If you or anybody else is interested in this project and wishes to get more information about it, please contact us to: info@beta-sacrcoglicanopatie.it

AGENDA OF THE PROJECT:

8 to 11 November 2011: Participation of Beatrice Vola in the TREAT-NMD INTERNATIONAL CONFERENCE in GENEVA; 8-11 NOVEMBER 2011 meeting: Beatrice Vola and Prof. Jerry Mendell, Columbus USA.

16 May 2012: first conference call with Dr. Mendell and Dr. Rodino, participation of Dr. Cerletti and Bonetti, Fam. Gonella Andrea, Beatrice Vola and Perlini Marco.

24 July 2012: second conference call with Dr. Mendell and Dr. Rodino, participation of Dr. Cerletti and Bonetti, Fam. Gonella Andrea, Beatrice Vola and Perlini Marco. Start of the first phase with a funding of $ 150,000

1 to 2 November 2012: Meeting: Dr. Massimiliano Cerletti in Columbus OHIO USA and Dr Jerry Mendell for discussing the state of gene therapy on sarcoglycan and the ongoing project on the beta.

19 April 2013: First National Conference GFB Milan, meeting: the GFB, Dr. Mendell and Dr. Rodino.

28 October 2013: Third Conference Call of the GFB, Dr. Mendell and Dr. Rodino, participation of Dr. Cerletti and Bonetti, Fam. Gonella Andrea, Beatrice Vola and Perlini Marco for discussing on the report of the first phase. Start of the second phase with a contribution of $ 350,000.

September 2014: Fourth conference call with Dr. Mendell (participating Dr. Rodino, Dr. Cerletti, Bonetti, Vola, Perlini, Gonnella) for an update on the progress of the second phase. An additional contribution of $ 350,000.

15 January 2015: meeting "Gene Therapy and clinical trials for MD" with Dr. Alessandra Govoni, Policlinico of Milan (Participants Gonella, Dr. Bonetti, Perlini, Vola). Dr. Alessandra Govoni worked in 2014 in Columbus with Prof. Mendell.

THE SECOND MEETING OF LGMD EuroNET

The Second Meeting of LGMD EuroNET, established in October in Venice, will be held in Naples. The meeting will be included in the 15th National Congress AIM. For the complete programme of the 15th National Congress AIM see the link:

http://iscrizioni.fclass.it/eventi/msm-aim2015/pdf/ProgrammaAIM.pdf

The meeting of LGMD EuroNET will be on **Friday 22 May, at 15.15,** during the session "Future Projects and Programs". The objective is to take stock of the projects CREST and E-rare and plan future developments for collaborative programs Horizon 2020.

More info: http://www.beta-sarcoglicanopatie.it/index.php?option=com_content&view=article&id=168&Itemid=168