



## Editor's corner

Dear TRIGR Study families,

I wrote a short story of my work in the TRIGR project at the beginning.

Eneko and Mikel from Bilbao, Spain and Nica from Washington, USA tell us their stories in the Kid's corner. In the Science Corner Minna Hirvasniemi tells us about the TrialNet network and our Research Fellow Lea Kovanen prepared a summary of a recent article indicating that early intake of probiotics reduces the risk of islet autoimmunity.

At the end is the obituary of Professor MUDr. Jan Vavřinec, DrSc, the National TRIGR Investigator in the Czech Republic.

*Matti Koski, Chief Editor*

## Matti's TRIGR journey

I am going to retire from the TRIGR Study in the autumn of this year, but before that, let's share some unforgettable moments along the way. I am an IT Specialist and Professor Hans Åkerblom at the University of Helsinki hired me in the autumn of 2001 when the TRIGR Study was starting. Previously I worked in a newspaper and a bank mainly with ADP systems. A totally new world opened up to me in the strange research world.

I started to learn new issues related to type 1 diabetes, a completely new medical terminology, laboratory measurements of milk antibody and autoantibody tests, the IT environment of the University and a very complicated research world with strange regulations. The

most interesting section was to learn to know new colleagues and especially TRIGR Investigators.

I read all TRIGR documents and got the understanding of the trial and I can tell you, I was more than concerned about the massive scale of the demanding TRIGR project. My biggest challenge was to find the database solution. I started to map different possibilities worldwide and found potential candidates in e.g. Canada, Finland, UK and USA. The one which was chosen was Pediatrics Epidemiology Center and Health Informatics Institute, University of South Florida, Tampa, USA. Dr Jeffrey P. Krischer, PhD was the Managing Director of the Unit. They were familiar with large diabetes studies such as DPT-1, and they were also willing to use new Internet technics to collect the study data worldwide (please remember that the year was 2002).

The TRIGR Data Management Unit was founded and the hard construction work started. They were building a new main database in Tampa and I constructed the laboratory Access-database in Helsinki. Most of the samples were stored in the TRIGR Core laboratory in Helsinki. These two databases were connected via FTP (File Transfer Protocol). I was excited and the best reward was when the first TRIGR child was randomized in the new database in May 2002.

Today the main database contains the data of 2159 study participants, more than 65 000 Study Forms and over 261 000 Study Tests (samples). The development of the database is not exclusively the credit of technical people. The Study Doctors and Study Nurses together with Study Families have helped us a lot by giving feedback related to the forms and other technical issues.

I have also been honored to be the Editor of the TRIGR Family News since its beginning. This way I have been closer to the study families and it has revitalized my work a lot. I think that it has been a fruitful media to inform you of what is going on in our study.

*You all will be on my mind until the end of the TRIGR Study,*



*Matti Koski, IT Specialist, TRIGR*

## Science Corner

### **TrialNet - Can type 1 diabetes be prevented?**

The rate of type 1 diabetes is rising worldwide. Today, there's no proven way to slow down or prevent type 1 diabetes. In an effort to find a way, the National Institutes of Health (NIH) has created a network of diabetes researchers, called Type 1 Diabetes TrialNet. It is an international network of researchers dedicated to the study including prevention, and early treatment of type 1 diabetes.

TrialNet screens relatives of people with type 1 diabetes. They have 10-15 times higher risk of developing the disease than people with no family history. Those who are interested can participate in TrialNet by giving a small sample of blood. The blood is tested for autoantibodies that signal an increased disease risk. If your test shows that you have autoantibodies and are therefore at increased risk for developing type 1 diabetes, you will be asked to join the monitoring arm of the Study.

TrialNet screens people who are:

- 1-45-year-old and have a parent, brother, sister, or child with type 1 diabetes

OR

- 1-20-year-old and have a niece, nephew, aunt, uncle, grandparent, half-brother, half-sister, or cousin with type 1 diabetes
- TRIGR participants will be eligible for TrialNet once the results of TRIGR study become publicly known.

TrialNet has more than 200 study locations around the world (United States, Canada, Sweden, Finland, Germany, Italy and Australia). More information and closest study locations can be found by visiting [www.DiabetesTrialNet.org](http://www.DiabetesTrialNet.org).

*Minna Hirvasniemi  
TrialNet - Study Coordinator, Finland*

### **Early intake of probiotics may reduce the risk of islet autoimmunity in high risk children**

Intestinal microbiota can influence immunologic responses and an imbalance in gut microbiota has been associated with type 1 diabetes. Probiotics, which are live organisms that confer a health benefit to the host, have been hypothesized to affect the risk of developing type 1 diabetes related autoimmunity by supporting healthy gut microbiota. In the multinational TEDDY study, researchers set out to examine how supplemental probiotic use during the first year of life affects islet autoimmunity among children at increased genetic risk for type 1 diabetes.

Probiotic intake via dietary supplements or fortified infant formula during the first month of life, compared with probiotic intake after the first month or no probiotic use at all, was associated with a reduced risk of islet autoimmunity among children carrying genetic risk for type 1 diabetes. The association was evident among children with the highest risk genotype (*DR3/4*) but not among other genotypes. The researchers conclude that early probiotic supplementation may decrease the risk of islet autoimmunity in children at the highest genetic risk of type 1 diabetes. However, this association needs to be confirmed in further studies before any recommendation can be given on the use of probiotic supplementation.

*Uusitalo U, Liu X, Yang J, Aronsson CA, Hummel S, Buterworth M, Lernmark Å, Rewers M, Hagopian W, She JX, Simell O, Toppari J, Ziegler AG, Akolkar B, Krischer J, Norris JM, Virtanen SM; TEDDY Study Group. Association of early exposure of probiotics and islet autoimmunity in the TEDDY Study. JAMA Pediatrics 2016;170:20-28.*

## Kid's corner

Hi!

My name is Eneko Martinez and I am 10-year-old. I live in Getxo (Bizkaia) with my sister Naroa and my parents, Unai and Eva. I attend a basque school named *Geroa* and I am in the fourth grade right now.



I have been asked to tell you about my experience of the TRIGR, study in which I participate since I was born. I like it because I can take the decision to remain in the study or not. In addition, I like it because my participation in TRIGR is helping other people and all of this makes me feel important. Every year a blood sample is drawn, but it's not painful at all because our nurses do it very carefully. And I like to look at what they are doing and see how the blood tubes get full. Thanks to TRIGR, I have met our nurses and Teba, whom I like very much.

Lastly, visiting Cruces hospital is ok for me because at the same time I can visit my aunt, who is working at the hospital.



One of my favorite hobbies is playing basketball. I have played in a team since I was 8. My team is called *Getxo*. We are not tall, neither short, but we are very good players and the

best of all, we enjoy so much playing. We train 3 days a week, although I just can train 2 days this year. We usually play a match on Saturday. In the previous match I scored 21 points and I got very happy.

*Eneko Fernández, age 10 years*

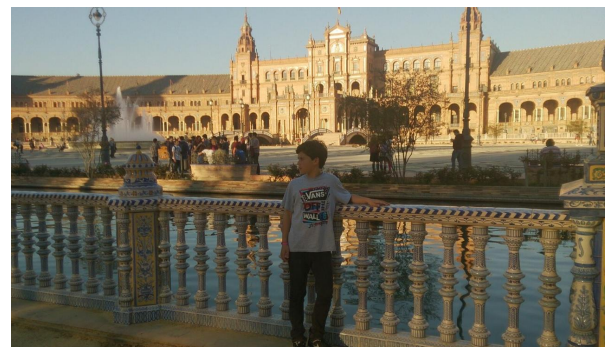
Hi to all!

This year in Easter time, we could not go on a holiday on Thursday (Bankholiday in Basque Country) as we usually do because I got a soccer championship with Real Sociedad football team. This championship took place in Lemona and we played against two teams; Lemona and Real Zaragoza.



I played as forward and scored 5 goals. We passed to second round and played against Athletic de Bilbao this time, winning by 3-0. In the semifinals we won again against Osasuna, on penalties. So, we played the final against Zaragoza and, we won again 3-1. The celebration was very nice and exciting: An incredible happiness feeling.

Later, we traveled to Andalusia to the village where my grandparents lived. We had a very good time there and the weather was very warm.



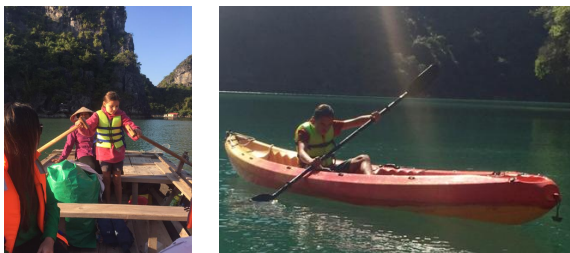
Then, we went to Sevilla and visited all sight-seeing like “La torre de oro”, “La Giralda”, the cathedral, “La plaza de España”, “Maria Luisa’s park”, Triana neighborhood and Betis football stadium. Finally, we said goodbye to Sevilla with a nice ride on a horse cab.

*Mikel Molina, age 12 years*

### **Nica in Southeast Asia**

Hello!

I am Nica and I am 11 years old. At my last TRIGR visit, I was asked if I could write a short story about a trip that I recently took. My Mom had a 3 month sabbatical so we decided to take a trip flying around Southeast Asia. We went to lots of different places; Indonesia, Thailand, Singapore, Malaysia, Cambodia and Vietnam.



One of my favorite places was Halong Bay in Vietnam, because we went kayaking through caves and I got to paddle my own kayak. We also went swimming in Halong Bay and ate many soups that were served on our cruise. It was very cool to see the other side of the world and I wondered what people do when they have diabetes and are so poor.



I am glad to be part of TRIGR to help us learn more about diabetes.

*Nica Robertson from Mercer Island, Washington, USA*

## **I N M E M O R I A M**



*Prof. MUDr. Jan Vavřinec, DrSc.  
1947 – 2016*

Professor Jan Vavřinec, the National Investigator of the TRIGR in the Czech Republic, passed away in Prague on February, 2016.

He was a Researcher of diverse talents in Paediatrics in the Czech Republic and he held several senior positions in University Hospital Motol, Prague. He was nominated Professor of Paediatrics at the 3rd Medical School, Charles University, Prague 2006-2016. He published close to 70 research papers in international and national journals focusing on diabetology, immunology and rheumatology.

Some people, when you meet them at international congresses, make a strong impression on you, and Dr. Vavřinec was one of them. I remember clearly his strong but pleasant approach to the TRIGR Study program – many questions, clear description of the available facilities in the Czech Republic. There were not too many words exchanged, but I remember so well his determination and vision. His success in carrying out the TRIGR Study as National Investigator in Czech Republic was evident.

We all in TRIGR Study appreciate his input and honor his memory,

*Hans K. Åkerblom,  
Deputy Chairman*