



The talk was recorded by C. Nasadyuk, immunologist, PhD

## INTERVIEW WITH DR. SUSANA GOMEZ, THE DIRECTOR OF THE ANTHONY NOLAN CORD BLOOD BANK (NOTTINGHAM, UK)

Dr. Susana Gomez heads a public cord blood bank Biobank created at the Anthony Nolan Cell Therapy Centre (Nottingham, UK). Biobank operates within the first and the world's largest registry of hematopoietic stem cells. In 1974, in London Shirley Nolan, whose son Anthony suffered from congenital immunodeficiency and needed a hematopoietic stem cell transplantation, founded the world's first Bone Marrow Donor Registry (of volunteers willing to donate the part of their bone marrow to immunologically compatible patient), which till this day carries the name of Anthony Nolan. Actually the Anthony Nolan Registry of Hematopoietic Stem Cells in the UK has more than 500000 registered potential donors.

The cord blood Biobank, headed by Susana Gomez, stores cellular and non-cellular fractions of cord blood, that are used both clinically as hematopoietic stem cells transplants and for research purposes.

Research directions of the Anthony Nolan Research Institute and Biobank include the study of foetomaternal immunoregulation as a natural model of immune tolerance: proteomic approach as well as development of techniques of separation, freezing and cryo-storage of cord blood cells.

Dr. Susana Gomez kindly agreed to share experience of the organization of a public cord blood bank with the scientific staff of the Institute of Cell Therapy, and also gave a brief interview to the journal «Cell and Organ Transplantation», which is published with the support of the Institute.

**Press:** Mrs. Gomez, on the example of Biobank, that you head, we would be interested to discover how the public cord blood banks are being operated in the developed countries of the world?

**Susana Gomez:** From the perspective in the United Kingdom, it looks so that all hematopoietic stem cells registries are closely cooperating with one another. And this is very helpful, as the transplantation centre in UK goes only to one registry and this is enough to find a matching donor. The staff of the transplantation centers do not need to get in touch with different people and search for transplants in different places. From the perspective of cord blood, this approach is also much better as cooperating banks have the same quality measurement, we have the same processes of the umbilical cord blood and we do the same testing of a sample. Our goal is to provide the highest quality of the transplant. And this work together is very helpful in this goal.

**Press:** And how many samples are stored in your bank? What is the experience of their clinical application? To which countries have you released samples?

**Susana Gomez:** You know that Anthony Nolan Hematopoietic Stem Cells Registry was the first in the world, it is 40 years old. And the Anthony Nolan cord blood bank launched 5 years ago. Actually we store about 2 000 samples. During this period we released 25 cord blood samples to transplantation centers. Our main customers are the transplantation centers in the UK and the National Marrow Donor Program (NMDP) in USA. Such geographical distribution is mediated by HLA-matching, as you understand.

**Press:** And how do you evaluate the place of the umbilical cord blood among the other stem cells sources? To your mind, is it better than bone marrow, worse or maybe these sources are comparable?

**Susana Gomez:** Yes, it is quite comparable. It gives the transplantologists and patients two options – to use hematopoietic stem cells of an adult donor or the cord blood to achieve the best immunologic matching. These sources should not compete with one another as the umbilical cord blood is just one more source of hematopoietic stem cells. And this is really good to have the option of choice. I think, it's great for the patient because we can save more lives

**Press:** What is your attitude to private cord blood banks?

**Susana Gomez:** Well, I am a public one! But from my point of view parents should have two options. The most important thing is that the parents receive the most accurate information and quality service regardless they go to autologous bank or to public cord blood banks.

**Press:** Concerning the quality of transplants, which percentage of cord blood samples processed do you preserve for the future application?

**Susana Gomez:** Well, from the total number of units collected we preserve about 25%. They are suitable for transplants.

**Press:** And do you categorize the stored units somehow?

**Susana Gomez:** Yes, we distinguish 3 different categories of units due to the quality of a sample. Relevantly these are samples, suitable for single transplants, double transplants as well as for use in children.

**Press:** Scientific literature gives data on the application of non-sterile cord blood units in special cases? Do you store non-sterile units?

**Susana Gomez:** No, we store only sterile samples.

**Press:** Thank you very much for the interesting talk and we wish further development for your young but already quite successful bank!



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