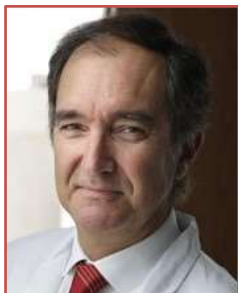


ISCT Leadership



Joan Garcia, MD, PhD

Director of Research and Education

Associated Professor

Chair of Transfusion Medicine & Cellular and Tissue Therapies

Autonomous University

Banc de Sang i Teixits

Barcelona, Spain

I'm writing these notes while sitting in front of my working desk at home, after more than two weeks confined due to this unfortunate COVID -19 epidemic that is tearing down our health, freedom and economy.

Might this be the best atmosphere to slide through several decades of memories? We'll see in the following paragraphs.

I graduated with my degree in Medicine in 1975. Yes, I'm 66 years old. I successively became a specialist in Internal Medicine, Haematology, and earned a PhD at the Hospital Clinic and Barcelona University.

I could say that my courtship with cellular therapies started at the end of my Haematology fellowship.

One day, Dr. Albert Grañena, my tutor at Prof. Rozman's Haematology Department, asked me: Do you know anything about freezing and thawing viable cells? ... I can still imagine the look on my face... Well, he said, have a look at these papers and make a proposal. I recall that one of those papers was signed by Prof. John Goldman describing the first results on CML autologous transplants using chronic phase apheresis products.

I made more than a proposal. After not many months we already had reached the first achievement with the technologies existing at that time - the IBM 1991 apheresis machine and an old Planner mechanically programmed LN2 freezer device. I still remember the anguish while awaiting every patient's haematological reconstitution.

After finalizing my fellowship, I moved to the Haematology Department of the Hospital de Sant Pau, also in Barcelona. There, Prof. Miquel Rutllant gave me the responsibility of building up a modern cryobiology unit to facilitate several research programs including the bone marrow transplantation program. There, with other colleagues having complementary scientific backgrounds, we went further and built up a very well-equipped Biomedical Research Unit where more than 40 researchers soon worked.

The bone transplant program soon ran smoothly which allowed us to explore different cryobiology applications: cell lines, cornea, skin, bone, gametes, etc.

In 1983, I performed a stay at the Fred Hutchinson Cancer Research Center. I was 30 years old; you can imagine what such an experience was like. There I had the opportunity to meet Dean Buckner, Bill Bensinger and the future Nobel Prize winner, Donald Thomas. I learned and learned; more than that, it inspired me for many years after.

I also took that opportunity to visit one of the temples of basic cryobiology at Edmonton University led by Locksley McGann and Ray Rajotte. It opened my eyes to other approaches to research that we implemented over future years.

Back in Barcelona, thanks to a joint grant with Fred Hutch, we were able to start projects on bone marrow *ex vivo* purging with monoclonal antibodies (generously provided by P.J. Martin) and complement for ALL and T cell depletion for allogeneic bone marrow transplants in several clinical research protocols.

Another adventure, difficult to qualify today, was the collaboration in the foetal liver transplantation program for refractory aplastic anaemia treatment in the wake of the Guido Lucarelli program. It had certain success, but - for now understandable reasons - was not viable.

We were at the end of the eighties and now approaching my first contact with what would be ISCT, the ISHAGE. During one of the pioneer meetings on cell processing, we met Gunnar Kvalheim who was developing technologies of bone marrow processing by using magnetic beads, technology that we soon incorporated in ALL and NHL autologous transplants.

We also collaborated with Ron Berenson in the early positive selection experiences based on the avidin/biotin system which led to the creation of "Cellpro".

In 1991, I moved to the recently created Cancer Research Institute (IRO, according to Catalan name) as Director of the Cryobiology and Cell Therapy Department directed by Dr. M. Rutllant.

There, I had the opportunity to build up a new outstanding research team and state of the art research and production facilities. I ran it for ten years. Everything seemed to be possible at that time. Our research targeted stem cells, all possibilities of cell processing and modification and cryobiology. It was a highly creative decade. We promoted the creation of the first collaborative Spanish group in the field and the first national common Manual of Cell Processing. We also participated in the creation of the Spanish Association of Tissue Banks (AEBT) and organized in Barcelona several meetings, such as the European Stem Cell Club Meeting in 1994 and the 1997 Meetings of the International Cryobiology Association and the AEBT.

It is worth pointing out that during that period we were progressively involved with the recently born ISHAGE, participating in meetings, setting up the Europe Committee under G. Kvalheim's initiative, the first Standards, the first accreditations. All was new.

But, retrospectively, I must say that the key fact of that decade was the creation of the Barcelona Cord Blood Bank. After meeting with Pablo Rubinstein, with whom after so many years I have the honour of sharing warm friendship, and thanks to national funding and the

decisive collaboration of the José Carreras Foundation, we built up a very competitive cord blood bank. We made it in collaboration with the Duesseldorf Cord Blood Bank led by Peter Wernet. Here, I must acknowledge the decisive intervention of Prof. Ciril Rozman and the friendly support of Prof. Alejandro Madrigal.

At the end of the 90's, the IRO suffered a deep economic crisis, which led my department to be integrated in the still growing Banc de Sang i Teixits (BST) in 2001. Although it was not easy, I only want to recall the positive aspects. In fact, it opened another interesting decade marked by several events. The first was an Honour Award from the Spanish Scientists Association in recognition of my career and contribution to the country's medical science.

In 2002 we organized the ISHAGE/ISCT in Barcelona. I think it was quite a success. Let me explain one anecdote: We prepared the communication plan during the previous years under the ISHAGE image and logo and along the way we had to change it to the current ISCT's. I keep the two different posters of the same meeting!

We continued collaborating with ISCT, now from the JACIE and the newborn Netcord Foundation side, by creating, maintaining standards, and performing (and experiencing) audits.

As I said, that decade of my career was marked by the impact of cord blood banking and transplants.

Together with Pablo Rubinstein, Peter Wernet, Paolo Rebulla, Marcella Contreras, Wim Fibbe, Elizabeth Shpall, Elianne Gluckman, Sergi Querol and many others we created the International Netcord Foundation, one of its objectives being the consolidation of a high quality (FACT/NETCORD standards) and accessible public inventory of cord blood units. Over many years, I dedicated much time and energy there. Finally, I became its President from 2008 to 2010.

In parallel, we participated in the creation and building of Eurocord under the leadership of Elianne Gluckman and in one of the most interesting EU projects at that time - the ALLOSTEM project lead by Prof. Alejandro Madrigal.

Internally, those years served to consolidate our role as a central facility for processing most transplanted cells and tissues in Catalonia.

At that time, simultaneously, I had the opportunity to create the Chair of Transfusion Medicine and Cellular & Tissue Therapies of the Autonomus University of Barcelona, which offers an official master's degree and other educational activities in the field.

My professional life changed again in 2009 when I was nominated to build up and become Director of a new division at BST - The Advanced Therapies Division. In 2010, we called it Xcelia, since we expected to create a spin off.

Dr. Sergi Querol, a colleague and friend who had tightly collaborated with me during all those years, took over my former responsibilities.

Once again, I had a free hand to create a new project. The bad news was that we were immersed in a deep economic crisis which made things difficult. Nevertheless, BST heavily supported the program, and with the help of several national and international grants we were able to build up a state-of-the-art GMP facility and competitive preclinical and clinical research programs. These led us to generate technologies, patents, papers, and to promote several Phase I/II clinical trials based on MSCs and specific T cells, some of them with encouraging results. Unfortunately, we couldn't create the expected spin-off, and the complete project remains under the public umbrella.

At the end of 2017, I was asked to take the Direction of Research and Education of BST. Again, my former responsibilities were taken over by Dr. Sergi Querol, consolidating the complete cell therapy activity in a single department.

This new position, at the final stage of my career, allowed me to generate a 4-year research strategic plan that is now running smoothly and reaching its end.

But, however, life was reserving another surprise: around mid-2018 Mark Lowdell suddenly called me to ask whether I would like to stand for ISCT VP for Europe. Initially it shocked me! And I took two days to make the decision. Obviously you know the end of the story. It is really an honour and a challenge to hold this position, especially in these exciting days.

I must confess that this is the first time that I have summarized my professional life. Looking back, I realize that it has followed quite a straight line, and I also realize that I have been lucky and must appreciate the help of a large number of outstanding collaborators and friends.

Barcelona April 6th, 2020