

# 9<sup>th</sup> World Digital Pathology & Pathologists Congress

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## Advances in bone marrow transplantation

Since the first bone marrow transplant (BMT) in 1972 by D.E. Donor, advances in stem cell biology, genetics, and immunobiology have led to significant improvements in the field of hematopoietic stem cell transplantation (HSCT). HSCT has become a standard treatment for various hematological and non-hematological diseases. However, despite these advances, there are still challenges in improving graft-versus-host disease (GVHD) prevention and management. Recent developments include the use of gene editing techniques like CRISPR-Cas9 to modify donor stem cells before transplantation, and the use of adoptive T-cell therapies like CAR-T cells to target specific cancer cells. These innovations hold promise for further advancing the field of bone marrow transplantation.

### Biography

Marcio Alvarez-Silva is currently a Professor at the Federal University of Santa Catarina and coordinates the Laboratory of Stem Cell and Bioengineering at the Department of Cell Biology, Embryology and Genetics.

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