ORT_28 - Biobanks scenario in Brazil and their role in public health

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Introduction: The availability of human biological materials for scientific research and treatments depends on biobanks, which are responsible for the collection, storage, and supply of these materials. Cellular Processing Centers manipulate, process, and store these cells so that they are available for use in cellular therapies. With the exponential growth of regenerative medicine and research using human cells, biobanks' roles are increasing.

Objectives: The aim of this investigation was to conduct a survey on biobanks and cellular processing centers in Brazil, shedding light on the benefits of establishing a public cell bank.

Methodology: Various sources including the Brazilian Health Regulatory Agency (Anvisa), Ministry of Health, Federal Revenue of Brazil, and Pubmed databases were consulted for data collection.

Results: In Brazil, there are 485 companies registered under the CNAE (National Classification of Economic Activities) for "Services of banks of human cells and tissues". However, this number decreases to 63 companies when considering the category of "Research and experimental development in natural sciences and physical engineering". As of March 2023, 88 biobanks were officially registered in Brazil for research purposes. Regarding cellular processing centers (CPCs), there are 32 specializing in Hematopoietic Progenitor Cells from Umbilical Cord and Placental Blood, and 67 focusing on Hematopoietic Progenitor Cells from Bone Marrow and Peripheral Blood. A notable majority of these centers are privately owned and require ongoing investment for maintaining the stored material.

Conclusion: In contrast to private biobanks, which often have limited sample utilization, public biobanks possess the potential to optimize material usage, thereby ensuring project and therapy quality. Thus, the establishment of a public institution with well-trained staff and adequate infrastructure to meet the country's stem cell demand for research and advanced therapies would be a distinctive advantage. This initiative would provide donors and patients with a nationwide, cost-free, and high-quality service.

Keywords: Biobank; Public health; Stem cells