



## Editorial

## Diversity in hematology research

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Visualizing the magnitude of amount and pace that data is generated by humans is a task that surpasses the imagination of most of us, requiring us to reason not only from mega- to terabytes, but also from zetta- to yottabytes. While a significant part of this data is still stored out there, it is anticipated that as digital technology evolves, a lot of it will be used to train artificial intelligence (AI) algorithms that are expected to be more and more present in our lives. However, parallel to the development of these algorithms, concerns have been raised on whether the bulk of data used to train them would be representative of the diversity of individuals whose lives are to be affected in different and yet unexpected terms by them.<sup>1</sup>

Similar concerns have been raised about the importance of diversity in the medical field, encompassing the representation of minorities in the data generation enterprise,<sup>2,3</sup> as well as the geographic and ethnic diversity of research subjects in different types of studies. The importance of the latter lies on the acknowledgement that research data obtained mostly from individuals of Europe and North America cannot be necessarily generalized to all ethnic groups, which led to initiatives aimed to increase the representation of other ethnic groups in clinical trials and in genomic studies,<sup>4</sup> whose data are essential references for the growing field of precision/individualized medicine.

However, diversity goes far beyond an individual's genetic structure, and also encompasses how each individual lives, or using a more scientific language, how one's genome interacts with the environment. And this interaction is multidimensional and multifactorial, encompassing how societies are organized, how healthcare is provided, how healthcare professionals are trained, and several other cultural aspects which influence our health, as defined by the World Health Organization.<sup>5</sup> While challenging, considering this diversity is critical, lest bias limits the potential benefits of the digital revolution to change improve healthcare for all.

In this supplemental edition of "Hematology, Transfusion and Cell Therapy" we present readers a collection of scientific papers that should hopefully contribute to raise diversity in our field, not only because some of the studies were conducted in geographic areas that are less frequently represented in hematology literature, but also because they intend to analyze how differences in healthcare provision and organization influence outcomes. Papers included in this supplement address a comprehensive list of conditions and topics from sickle cell disease to acute leukemias, and from healthcare costs to healthcare education, and from transfusion medicine to hematology research as an enterprise.

Importantly, these papers were peer-reviewed using the same standards adopted by our journal which do not value differently the geographic origins of papers and authors. However, by benefitting from a diverse base of submitted manuscripts, we were able to gather in this supplement a collection of papers that combine the scientific standards expected in "Hematology, Transfusion and Cell Therapy" with a

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nice view of the diversity present in hematology research, that we hope to see more and more in the scientific literature.

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### Conflicts of interest

The author declares no conflicts of interest.

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