

## Debates on Stem Cell Research in Brazil: A Review of an Article

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Received April 25, 2018; Accepted May 02, 2018; Published August 21, 2018

### ABSTRACT

The article reviewed “Science, public policy and engagement: Debates on stem cell research in Brazil” analyses the main narratives, rhetorical resources and themes deployed during public contemporary debates on stem cell research (SCR) and cellular therapy in Brazil, an emergent global player. It examines the discursive rhetoric used to discuss adult and embryonic stem cell research and analyses the processes and main themes involved in the approval of the 2005 Biosecurity Law at the National Congress and, more specifically, during the 2007 public hearing at the Federal Supreme Court (STF). There are three main areas of focus in the analysis of the narratives voiced by the two opposing scientist-led lobbies: forms of scientific, technical and moral construction of discourse and regulation, strategies towards civil society’s engagement and participation and the country’s contributions to global genetics and health biotechnology. The paper reviewed argues that the specificities of these narratives are a product not solely of sociocultural and religious backgrounds and practices, but also of local SCR development and social awareness, of the exercise of citizens’ rights and of prevalent cultural trends in the local relations between science, medicine and society.

**Keywords:** Stem cell research, Public engagement, Scientific governance, Public policy

**Abbreviations:** SCR: Stem Cell Research; ESRC: Embryonic Stem Cell Research; CTNBio: National Technical Commission on Biosecurity; STF: Federal Supreme Court

### INTRODUCTION

Stem cell research (SCR) has increasingly become a global activity [1,2], in which initiatives from the industrialized and emerging economies promise important socio-economic contributions, mainly through the design of new therapies for non-infectious disease that has increased among ageing populations, also within the developing world [3]. The use of embryonic stem cell lines as an innovation trajectory in research and isolated clinical trials, has given rise to international controversies relating to embryo use and disposal [4]. These debates are also relevant for: the sustainability of high-risk experimental research in developing countries and for their technological choices, as well as, for the information on health-care the local ‘publics’ have access to and which they need in order to be able to participate as informed citizens in policy-making. Some of the technologies being researched by industrialized countries are being tested in emerging economies under dubious conditions [5,6]. Future technological and regulatory regimes will articulate and influence each other [7,8].

The article reviewed examines the discursive rhetoric used during public debates on adult and embryonic stem cell research in Brazil. It focuses on the analysis of the main common themes found in the scientists’ narratives to map the characteristics of the Brazilian debates and to establish the main convergences and divergences between the positions taken by opposing lobbies and the discourses each of them developed to engage public opinion (illustrated by selected statements on recurrent themes and assumptions).

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**Citation:** Acero L. (2018) Debates on Stem Cell Research in Brazil: A Review of an Article. J Genet Cell Biol, 1(1): 9-12.

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## LEGALIZING BRAZILIAN SCR

In Brazil, a very long process of negotiation and public debate was required to change the 1995 Biosecurity Law (Lei nº 8.974) and approve its replacement (Lei nº 11.105). The legislative process included the following events: the approval of the first law on biosecurity (the 1995 law), the creation of a National Technical Commission on Biosecurity (CTNBio) and challenges against its decisions on genetically modified organisms (GMOs); the 2003 law reform project; the initial approval of the new law in 2005; a federal legal case declaring its unconstitutionality (ADIn 3510); and its final approval in 2008.

The four phases that led to the approval of the new law were based on different social appraisals on biosecurity and on changing relations between science, medicine and society. Between 1997 and 2003, under increasing social pressure for regulation, the government sought to pass a law governing transgenic crops and foods. In 2003, a biosecurity law reform project was drafted. At the time, there was no specific federal law to regulate the use of human embryos in research or assisted reproduction, although assisted reproduction has been expanding steadily since the early 1980s. This reform project was seen as an opportunity to negotiate the conditions for the approval of transgenic crops, together with that of embryonic stem cell research (ESCR).

During initial negotiations, the legal ban on ESCR, based on Article 6 of the 1995 Biosecurity Law, banning the production, banking and manipulation of human embryos, was upheld. However, it was lifted when the 2003 law reform project was sent to the Deputy Chamber of Congress. Between 2004 and 2005 the lobby in favor of ESCR became better organized. The 2004 Senate debate changed the balance of forces in Congress. During the last vote on the law in the Chamber of Deputies on 2 March 2005, many of the Christian deputies, especially the evangelicals, were already favorable towards the liberalization of ESCR and the law was finally approved with 366 votes in favor and only 59 votes against.

However, on 16 May 2005, soon after the approval of the new law, the Brazilian attorney-general Claudio Fonteles, a self-declared Catholic, filed a lawsuit (ADIn 3510) in the Federal Supreme Court (STF) declaring the law unconstitutional mainly because of its Article 5, which authorized the derivation of ESC from surplus embryos from in vitro fertilization, if frozen for three or more years at the date of publication of the law; in vitro embryos not yet frozen at that date could be used for research only after a three-year freezing period.

Between 2005 and 2007, research in the area continued intermittently with little public financial support and within a highly uncertain context. The presiding justice, Carlos Ayres Britto, a practicing Catholic, decided to hold a public hearing on 24 April 2007, the first in the Supreme Federal

Tribunal's (STF) history, in order to explicitly: "listen to presentations from people with experience and authority". Implicitly, the hearing was intended to increase the legitimacy of the STF's decisions. Twenty-two specialists were selected to present 20 min individual research reports and they were equally divided into two well-characterized opinion blocs: one against and one favorable to the lawsuit.

Social actors' initiatives tend to reflect the different civic epistemologies of the culture where the debate takes place. In the Brazilian case, they expressed contradictory and ambivalent social and moral/ethical beliefs within a culture undergoing a transition towards a more inclusive democracy. Beliefs discussed in detail in the article being reviewed- i.e., the core of the article's analysis- reflect mainly: different definitions of human life and science, the shaping of a new epistemic scientific community, a variety of appraisals on social and gender roles on motherhood, infertility and abortion, as well as, strategies on national competition in genetics and biotechnology. The readers are encouraged to pursue this interesting discussion in the original text of the article reviewed.

## CONCLUSION

The Brazilian debates are shown in the paper being commented - vis-à-vis other international public debates, as well as, the wider Brazilian health and development context - to reflect some relevant local trends and social positions in relation to at least the following three topics: forms of scientific, technical and moral construction of discourse and regulation; social views on civil society's engagement; and perceptions on Brazil's contributions to global genetics.

Brazilian debates on SCR are relatively recent and do not form part of a structured public revision of human reproduction and genetic institutions and regulation [9-13]. Many countries pioneering ESCR concentrate on the difficulty in establishing adequate regulatory frontiers for research objects that defy traditional rules and codes of practice [14-16]. This is also the case in Brazil, in relation to one central aspect of the public debates: the use of viable and unviable embryos for experimentation.

The 'embryo question' plays a dominant role in defining the content of the different local debates, based on sociocultural and religious backgrounds (root religion or regularly practiced religion - as acquired through family background and/or education and not necessarily being practiced). Pragmatic perspectives dominant among defenders of ESCR are supported by ontological positions that are not so clearly defined and, sometimes, juxtapose and articulate elements of different approaches to life within a single argument. Brazilian opponents of ESCR frame their exploration of biological facts and of related ethical frameworks and ontological references more coherently within their own perspective, but less systematically. Only sporadic elements of an ontological paradigm shift from the human embryo to

the stem cell as the initial unit of life, key to other societies' debates, are found in the Brazilian context. Also, the definition of hierarchies and grades between types of human research embryos, for example, between viable and unviable frozen and fresh embryos, although addressed by ESCR advocates, does not become a central axis of debates.

However, local debates largely converge with narratives in other countries SCR public debates in their utilitarian approach, emphasizing the potential service that in vitro embryos might offer to society or to specific patients, even among ESCR opponents, where Catholicism plays a central role in perceptions and narratives. Moreover, the utilitarian approach apparently becomes even stronger when the Catholic religion is acquired by background and not regularly practiced; and it is even more marked among atheists.

Brazilian narratives on scientific and technical progress tend to deal with scientific discourse as a form of 'authoritative knowledge' and reflect structured and quite evenly distributed cultural beliefs on trust in scientific and technological paths. The construction of new frontiers in this field, reveal the use of dichotomies such as, 'science' and 'non-science' and 'good' or 'bad' science, which play quite a central role in the controversies, and are supported by abundant references to international practices. However, there is no significant initiative to build a coherent and institutionally referenced scientific, technical and ethical framework that could give rise to distinct new concepts and vocabulary – e.g. that of 'pre-embryos'- which would contribute substantially to the design of new regulations.

Politicization of public health and ethics is a common feature of Brazilian public debates on different health topics. In the case of ESCR, morality is used as a resort and polarized between: the embryo versus the suffering patients or their families or the rights of the embryo versus the scientists' responsibilities. The potential patients are represented as being desperate for cures, despite a lack of consultation with some key patient groups and organizations for people with disabilities.

Lobbies for and against ESCR try to engage the 'publics' through a 'hype and hope' strategy ( meaning the use of information and emotional tones that exaggerate the benefits and delivery-times of potential therapies and cures and thus 'hype' eventual user's expectations and hopes), but in significantly different ways [17,18]. The ESCR defender's lobby mainly targets patients and families, while the opposition lobby mainly targets anti-abortion and religious groups.

Also, local 'bottom up' public engagement campaigns on SCR have been based upon short-term lobbying strategies and voluntary public advocacy, rather than upon a stable and solid participation process and institution-building for policy decision-making like in other countries. Brazilian patient

organizations tend to be smaller than, for example, most US or European equivalents and are less active and articulate in public debates. (An important exception is that of HIV/AIDS patients, relatives and activists, many grouped in NGOs that have become highly influential in the country over the last decade).

The SCR 'publics' are drawn mainly from a: 'deficit top-down model' where lay publics are considered to possess a deficit of knowledge and are treated as passive recipients of the information transmitted through public training and education programs [19-22]. Even though the Brazilian Government develops public consultation of concerned stakeholders for specific SCR topics, it lacks an appropriate design for an inclusive public consultation strategy.

Scientists' narratives on Brazil's global participation in genetics and biotechnology are constructed with reference to the country's international competitiveness and are intended to promote the acceptance of scientific progress in SCR. Cellular therapies are measured in terms of their potential for disease treatment and for the country's competitiveness. This field is seen as an opportunity for Brazil's international expansion, so the country's national success in adult SCR tends to be 'hyped.'

There was an important omission in the construction of the National Congress public debates, the potential commercialization and distribution of the eventual embryo-based cellular therapies, a central issue for an emerging economy that seeks both better public health therapies and greater leadership in the international arena. This topic was not significantly addressed within the SFT public hearing either by the justices or the speakers. Given the rate of local innovation and developments in the area, it is particularly relevant to focus on this aspect in the future, i.e., the potential participation of the biotechnology and pharmaceutical industries in the development of SCR-based therapies for the public health system.

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