

# Translating Cardiac Regeneration: a Reproductive Endeavour

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“Would you inject those cells in your sister or brother?” asked a basic scientist to a colleague in a closed meeting I attended earlier this month in the South of France. *Cardiac Regeneration Meets Together* was a workshop organised and hosted by a research team headed by Dr Michel Pucéat, from the French National Institute of Health and Medical Research (INSERM). This meeting brought together four research teams that were awarded funding from [Fondation Leducq](#), an “international grant making organisation”, dedicating its resources to cardiovascular and neurovascular studies.



How does a reproductive scholar such as myself end up in a meeting of basic scientists working towards the making of cardiac regeneration therapies? The magic of ethnography and fieldwork encounters has played its trick, once more! More seriously, it is no surprise to any scholar working on reproductive technologies that *in vitro* fertilization has contributed to the expansion of stem cell science and the hopes associated with regeneration. Many researchers interested in reproductive topics have indeed studied IVF –Stem Cell interfaces in various locations of the world (Sarah Franklin, Charis Thompson, Aditya Bharadwaj, Catherine Waldby or Barbara Prainsack to name just a few). Yet, what I wonder about, as I am elaborating new research questions, is how far I

should go into the investigation of regeneration, if I still want to be identified as a reproscholar. It is the fine art of balancing the open call of field-working and the use of 'sensitizing concepts'[\[1\]](#) to navigate new terrains, as Heather Paxson put it in a class on research design I had the chance to attend at the Massachusetts Institute of Technology in 2016. 'Reproduction' is a notion that sensitizes me to the world indeed.

"Would you inject those cells in your sister or brother?" asked a basic scientist to another basic scientist who was presenting the early findings of their research group. Discussing the interaction of a molecule with a molecule with a molecule, suddenly, these scientists reminded the audience of the general purpose of their science: to treat relatives threatened by degenerative diseases and unproven therapies (which can be harmful as they could be associated with unnecessary surgery and unwanted outcomes). The refined discussions about biology were suddenly projected into the subjective and personal world of kinship, into the frailty of living with diseases, the fragile hope to suffer less, the roles, demands and responsibilities of carers. Science for science suddenly vanished as something irrelevant if not tightly connected to the scientist's capacity to link up knowledge of biology and the daily life of individuals and their families. Biologists could help treat real people, and not just address biological mechanisms. They were suddenly reminded this fact through the idea that they themselves are not only biologists. The kinship bonds stemming from reproduction played like a powerful regenerative translational tool.

This version of biology and reproduction is certainly not about asserting that biology is the basis for kinship, but that it can be a tool to maintain threatened relations, as well as kinship can be a tool to evaluate the solidity of bioscientific claims. Uncertainty and risk sparked into the room as the real issues to be discussed when evoking the applicative horizons of regenerative stem cell science.

How much has to be known, controlled and predicted in order to treat sisters and brothers in need? The answer is not easy to give, but this meeting especially valued the idea that it has to be collaboratively established. Fondation Leducq bets on some of the most powerful sociological traits of the scientific enterprise: collaboration, sharing and reflective critical thinking. In a research world where competition, resource scarcity and idolatry of individuals' discoveries can lead to secrets, lies and forcing, this meeting felt like a careful nurturing of strategic trust. The foundation has decided to fund four research teams having four different hypotheses to build the next steps of cardiac regeneration.

And, of course, I was also quite honoured to be able to present on the role that the social sciences can play in bioscientific translation. I suggested to participants how important it is to think about the ways biotechnologies have built within their design social (in)justice, race, gender, and postcolonial dynamics. The translation of *in vitro* fertilisation from the laboratory to the clinic is certainly an excellent reminder of the ways health care systems can welcome new technologies in such different ways. Many brothers and sisters in this world need regenerative therapies. The questions of costs, access, inequality and intersectionality need to be asked right here, right now, and at the bench. Perhaps these have been among the most important questions of reproductive scholarship all along.

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[\[1\]](#) Sensitizing concepts are interpretative tools used as a starting point in qualitative studies. "Sensitizing concepts draw attention to important features of social interaction and provide guidelines for research in specific settings." (Bowen 2006, p.14)

Glenn A. Bowen (2006) "Grounded Theory and Sensitizing Concepts", *International Journal of Qualitative Methods* 5 (3), pp. pp. 12-23