Should scientists practice human cloning?

The process of cloning which started with Hans Spemann's discovery of the process now known as embryonic induction has come a long way since the early to mid-1900s. Dolly, the sheep became the first mammal to have been successfully cloned from an adult somatic cell that was formed by taking a cell from the udder of her 6-year-old biological mother. Great strides have been made in the field as interest has grown in the potential application of cloning large organisms especially humans. However, the idea of human cloning opens up a Pandora's Box of medical risks and ethical issues that need to be discussed before we move forward.

Before we discuss about the issues associated with human cloning it is imperative to note cloning involves not just reproductive cloning (which is creating an animal that is genetically identical to a donor animal) but also therapeutic cloning (which is used to produce embryonic stem cells in order to replace or repair damaged tissues or organs). While it is the claim of many scientists claim that cloning will aid in the cure of multiple common, rare, and devastating diseases, such as diabetes and degenerative brain diseases in humans, empirical data suggests that success rates are very low, not to mention some of the medical concerns which cannot be overlooked. Despite the great strides in field of biological cloning, 95-97% of animal cloning attempts still end in failure. Evidence of this is embedded in the fact that scientists who cloned Dolly failed over 250 times before they succeeded in producing a single living clone of the adult sheep. Moreover, experts in the field of cloning believe that the process of cloning humans will result in even greater failure rates. Not only does the cloning have a low success rate, but the viable clone also suffers from an increased risk of serious genetic malformation, cancer or shortened lifespan. After cloning Dolly, Ian Wilmut's team observed a high rate of pregnancy losses and abnormal births in the specimen. An attempt was made to clone another lamb in the same lab, however the lamb developed lung problems that caused it to hyperventilate and regularly pass out.

Public's expectations with regards to cloning are extremely detached from the ground realities. Apart from the process of cloning being very risky, one of the biggest misconceptions that people have about cloning is that a cloned individual will not be the same person as his or her donor. Although the donor and the clone will look exactly the same physically, as they have identical genomes, internally, they would be two different individuals. The environment which individuals grow up in and the experiences that we have throughout our life define us and shape us uniquely as individuals. This is something that will be unique about the two individuals and what will separate them despite their many similarities. Furthermore, science fiction books and movies further exacerbate the misconceptions that people have about cloning which lead to people having unrealistic and improbable expectations. There is a need to realize that cloning would produce babies that will eventually grow up to be very different individuals depending on their environment, and not an adult that are literal xerox copies of each other. The problem here is that if one were to clone a diseased loved one such as a spouse, they would probably want them to be their age or older when they're replicate them, but this is an impossible task made that are convoluted creations of the minds of science fiction writers. Some of the other issues include questions like – who would be responsible for the raising the clone? Who are its true family? How would we identify between the two individuals in case one commits a crime?

Despite all these issues associated with cloning, it has immense benefits if used cautiously, judiciously, and ethically especially in the field of therapeutic cloning for organ replacements. However, the

regulation of the practice and coming up with a framework for the same is the challenge that governments across the world are faced with today.