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Mr. Speice

Independent Study and Mentorship- 3A

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Eggcellent Improvements

Assessment #20

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Subject: Egg Donation

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Aldridge, Susan. "Egg (Ovum) Donors." *Biotechnology: In Context*, edited by Brenda Wilmoth Lerner and K. Lee Lerner, Gale, 2012. In Context Series. *Science In Context*, <http://link.galegroup.com/apps/doc/JNRVHP236490281/SCIC?u=j043905010&sid=SCIC&xid=d02503a8>. Accessed 30 Mar. 2018.

Assessment:

The technology behind assisted reproduction has improved greatly throughout recent years. The use of egg donations truly picked up in the early 1980's. However, since procedures, such as in-vitro fertilization (IVF), have become so mainstream to individuals living in the 21st century, it is hard to believe that this technology really started to be utilized less than 40 years ago. IVF technology was initially quite restricted to the the sperm and egg of married couples, but egg donations, and subsequent improvements in cryopreservation, have expanded this scope greatly.

When I began my mentorship with Dr. Meintjes, I was informed that a career in assisted reproduction is one dedicated to constant learning and adaptation. This is now quite obvious through the large improvements made to egg donations. Initially, the menstrual cycles and time frames of the egg donor and recipient had to be adjusted for fast transfer. However, the improved methods of cryopreservation, which is the freezing of eggs and/or embryos in liquid nitrogen, has allowed for more flexibility for donors and recipients. Prior to studying reproductive endocrinology in ISM, I was the most familiar with sperm donations, which involves a quite simple process. Egg donations, on the other hand, involve much more invasive measures that have greater chances of putting the donor at risk. Fortunately, the process of retrieving oocytes and ovums from ovary follicles is becoming increasingly simple as time passes, which reinforces the constant learning involved in a fertility specialist's career. This constant learning is something to keep in mind when deciding the career I would like to pursue in the future. This learning is a fantastic way to always keep your career new and never dull, but there are individuals who treasure the consistency presented to them in their jobs. As of right now I do not know which one of these I crave, but having the facts will allow me to quickly pinpoint whether fertility specialty is the best suited career for my future.

The presence of improving methods of egg donations have allowed for many different individuals to start a family. From gay couples to women who have battled diseases such as cancer, egg donors bring forth hope that was essentially nonexistent before. This part of assisted reproduction is what I absolutely love. The conventional method of starting a family works in a so-called perfect world, but the truth of the matter is that we do not live in a perfect world. We live in a society that is fortunate enough to have many differing beliefs and lifestyles, which

allows for every person on this planet to become more informed and open. A reproductive endocrinologist is able to use methods, such as egg donations, to aid in the development of these differing beliefs and lifestyles.

However, egg donations have paved the way for many arguments and controversies. Besides assisting in the start of a family, scientists have begun to experiment with cloning. There are two types of cloning being explored, including therapeutic cloning and reproductive human cloning. Therapeutic cloning involves the use of embryonic stem cells for repairing the body. Conversely, reproductive human cloning involves the embryo growing into a whole organism. Backlash has been severe as a result of this sort of science. This makes you wonder, what is considered “good” science and what is considered “bad” science? My mentor, Dr. Meintjes, and I have had a few conversations in regard to the ethics of reproductive medicine. Every physician in this area of medicine needs to consider their morals and their ethical beliefs. How far a physician is willing to go depends on that individual, and if I were to continue in this field, these sort of ethical questions are necessary to think about. Regardless of your viewpoints, legal backlash and lawsuits from patients are almost guaranteed and inevitable.

The topic of egg donation is one I never thought about prior to my mentorship with Dr. Meintjes. Not only does Dr. Meintjes’s office have an individual working there specializing in all forms of donations, but my final product also involves donors. Since a large portion of my final product is reviewing the health of blastocysts on the fifth and sixth days, I have discovered many patients who are utilizing egg donors. As I have been working on the data for my research project, I have discovered many patients who freeze their eggs or donor eggs. Also, because of improved cryopreservation techniques, many of these patients have been able to freeze the eggs

for years prior to use. As I continue my final product, Dr. Meintjes and I will continue to use information about egg donations in our analysis of embryo health in the fifth or sixth day prior to implantation. Additionally, I will continue this knowledge I have received as I continue to build upon it in the years to come.