ART IN THE GENETICS CLASSROOM

GUEST EDITORIAL

HUI-MIN CHUNG

The first time I saw Julie Delpy perform was around 1992 in the movie Voyager. In the film, Delpy played a young and enchanting woman, Sabeth, who fell in love on a cruise with the middle-aged, science-minded civil engineer Mr. Faber, played by Sam Shepard. Faber later proposed to Sabeth and traveled with her to meet her mother, Hannah. He realized he could not marry Sabeth because he and she were biologically related. In the end, Sabeth died, leaving Hannah and Faber with saddened hearts. The film was shot wonderfully, Delpy’s astonishing beauty and fantastic performance captured my full attention. But I was disheartened by how a lack of communication within a relationship could result in personal tragedy.

The plot of Voyager took place in the late 1950s; back then, there was no in vitro fertilization or sperm banks. Faber and Sabeth were biologically related because Hannah and Faber had once been lovers but had parted 21 years earlier, when she conceived his child. Although it has nothing to do with assisted reproductive technology (ART), the movie carried my imagination to the extreme about the donors to sperm banks and their biological children. What if there are stories like this, a father falling in love with and even marrying his daughter, without knowing their biological tie? Perhaps more plausible are situations in which children derived from the same sperm donor marry each other without knowing that they are biologically related. Does the use of sperm banks increase the chances of inbreeding, which would increase occurrences of genetic disease? I admit that my questions and doubts might be far fetched, but the bottom line is this: In the era of ART, are we prepared to deal with the consequences of the changing picture of family formation?

In 1978, the first “test-tube baby,” Louise Brown, was born in the United Kingdom. In 1982, the British government appointed a committee to look into the regulation of ART and potential issues related to the practice. In its groundbreaking Warnock Report, the committee composed a list of recommendations, including regulation of the sale of human sperm that limits the number of children that a donor can father (10 per donor). “It is quite unpredictable what the ultimate effect on the gene pool of a society might be if donors were permitted to donate as many times as they chose.” Warnock wrote recently in an e-mail (Mroz, 2011).

Although countries like Britain and France limit the number of children a sperm donor can father, the United States does not have this regulation (Mroz, 2011). However, the American Society for Reproductive Medicine (ASRM) recommends restricting conceptions by individual donors to 25 births per population of 800,000. A recent report indicates that there are many large-sized groups comprising 50 or more half siblings derived from the same sperm donor (Mroz, 2011). In recent survey data reported by an ASRM press release, over 35% of sperm-bank customer respondents had not or did not plan to report back to the sperm banks the results of their pregnancy (ASRM, 2011). It is not clear how many children are born in the United States each year using sperm donors. The survey data also said that 38% of respondents preferred anonymous donors, 20% preferred identified donors, and 42% were willing to use either. Without limits on the number of children a donor can father, and with the protection of sperm-bank customers’ reproductive privacy, accidental incest could occur among hundreds of half siblings. The significance of this concern is no longer far fetched and is shared and discussed by Naomi R. Cahn, a law professor at George Washington University, in her book Test Tube Families: Why the Fertility Markets Need Legal Regulation.

In the film Voyager, Faber’s world view was based totally on logic and technology, which seemed to be severely challenged in the series of coincidences that he encountered and was victimized by. The film is based on Max Frisch’s novel Homo Faber, which in Latin means “Man the Creator.” I have not read the novel, but based on what I learned from the movie, I guess that Frisch meant to question the limitation of technology and the power of human beings. He initiated my concern about what assisted reproductive technology can do to us. While 25 states prohibit marriages between first cousins (National Conference of State Legislatures, 2012), Americans need to ask what legislation should be passed to regulate fertility markets to prevent inbreeding. When we appreciate the new ways of fulfilling lots of people’s dreams of forming families, the society as a whole needs to ask “What is in the best interests of the child to be born?” and “Is it fair to bring a child into the world who will have no access to knowing about one half of their genetics, medical history and ancestry?” (Mroz, 2011). The practice of ART is worthy of discussions in the genetics classroom.

References
American Society for Reproductive Medicine. (2011). Data from sperm bank users show more still prefer anonymous donation; often fail to report pregnancies. ASRM press release, 19 October. Available online at http://www.asrm.org/news/article.aspx?id=7395&terms=28%00Publish_To=Both+Sites+or%00Publish_To=ASRM+Only%29+%2B+sperm+bank.


HUI-MIN CHUNG is Associate Professor in the Biology Department at the University of West Florida, 11000 University Parkway, Pensacola, FL 32514. E-mail: hchung@uwf.edu.

DOI: 10.1525/abt.2012.74.9.2