

We really can't believe the difference karyomapping is making. More than 90% of patients who need PGD for single gene diseases are able to have their testing done using karyomapping, which is faster and more comprehensive.

Q: What is the risk to patients if IVF labs fail to keep up with the latest technologies?

LW: Every patient who comes into an IVF program wants to have a baby as soon as possible. By not keeping up with the latest technologies, labs can negatively impact the success of their IVF programs. For example, some programs are still running FISH even though it's very clear that it overcalls errors. Because they're unwittingly deselecting viable embryos, the labs are limiting the patient's embryo pool for IVF procedures, potentially delaying the patient's chances of a successful pregnancy.

“One of the advantages of the VeriSeq PGS, 24sure, and HumanKaryomap-12 Kit technologies are that they all use the same BlueFuse Multi Analysis Software.”

Q: What new technologies are on the horizon that might impact the future of PGD?

LW: I think NGS technologies, like VeriSeq PGS, will become more widely used in the future. It's possible that NGS will be used to detect single-gene diseases in embryos. However, that will require significant upfront development work for each disease that we are currently identifying with karyomapping.

We're very excited about the potential of the NextSeq® 550 System dual sequencing scanner to minimize the amount of equipment we have. That's why we were a part of the beta testing for the NextSeq 550 System. We have a lot of large pieces of equipment in different labs, including the iScan® System and several MiSeq® Systems. The possibility of doing sequencing and scanning with 1 machine would be great.

Q: How important is collaboration in developing and implementing future technological advances in IVF?

LW: Collaboration was critical for the successful development of single-cell FISH and metaphase CGH. That's a reflection of the field and everyone's generosity with information. We want to benefit patients around the world, not just in our geographic regions. We're all focused on improving outcomes and helping our patients have a baby as soon as they can.

Learn more about the Illumina products and systems mentioned in this article:

- 24sure Array, www.illumina.com/products/24sure-microarrays.html.
- iScan System, www.illumina.com/systems/iscan.html.
- VeriSeq PGS, www.illumina.com/products/veriseq-pgs.html.
- MiSeq System, www.illumina.com/systems/miseq.html.
- BlueFuse Multi Software, www.illumina.com/clinical/clinical_informatics/bluefuse.html.
- HumanKaryomap-12 DNA Analysis Kit, www.illumina.com/products/human-karyomap.html.
- NextSeq 550 System, www.illumina.com/systems/nextseq-sequencer.html.

