

# A Balanced Approach to Fertility Technologies

Using technology and technique, George S. Taliadouros, M.D., of Delaware Valley Institute of Fertility & Genetics helps families grow in sensible, informed manners

by GLORI GAYSTER | Photography by ALISON DUNLAP

**F**ounded in 1994, the Delaware Valley Institute of Fertility & Genetics (DVIF&G) is one of the leading fertility practices in the greater Philadelphia area. With three New Jersey offices conveniently located in Marlton, Lawrenceville and Vineland, the center provides personalized fertility treatment tailored to the needs of each individual couple. From molecular medicine and robotic surgery to emotional and nutritional counseling, DVIF&G offers a full spectrum of care.

Educating patients is an important part of the DVIF&G philosophy of personalized care. As each couple is unique, the possible reasons for infertility and types of treatment vary greatly. For some couples, in vitro fertilization (IVF) is a good option, and one that has been around for almost half of a century and resulted in the births of several million babies worldwide. DVIF&G founder and director George S. Taliadouros, M.D., says IVF “has had a dramatic effect on the field of reproductive

medicine, and an unparalleled wealth of scientific discoveries resulted from its application and improved our understanding of reproductive physiology.”

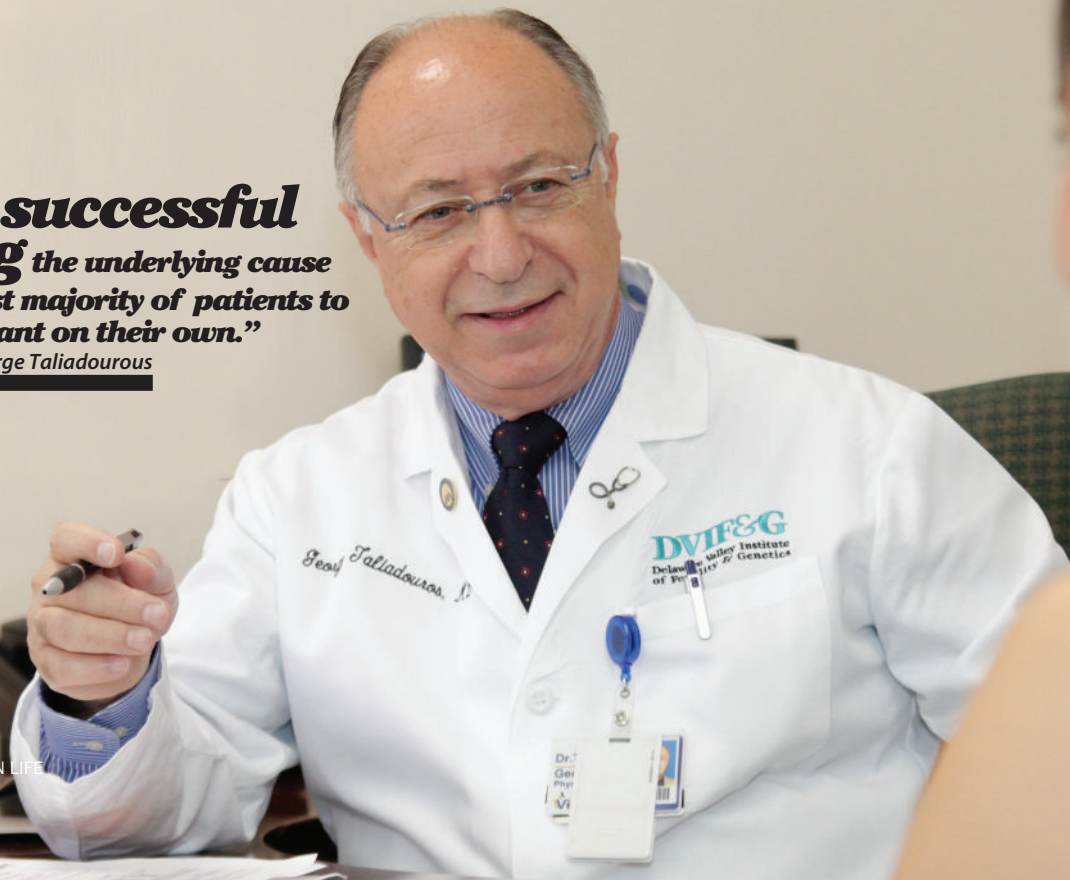
## Keeping Technology Honest

Couples who seek fertility treatment are vulnerable because of their desire to fulfill their life’s dream of having a family. Although infertile couples, in general, are considered one of the most informed groups of patients for their medical condition, navigating through the plethora of information concerning different diagnoses and treatments can be difficult.

Dr. Taliadouros explains, “While the World Health Organization (WHO) has provided normal values for semen analysis, some practices use as a normal concentration of sperm in the semen of 30 million, as compared to WHO standards of 15 million. That leads to a couple of

**“We are successful in treating the underlying cause and allowing the vast majority of patients to become pregnant on their own.”**

—Dr. George Taliadouros



things: First, an unjustified diagnosis of 'male factor infertility'; and, secondarily, an equally unjustifiable indication for advanced reproductive technologies (ARTs) treatments such as insemination (IUI) and in vitro fertilization, embryo transfer (IVF-ET)."

Another issue is the drive to identify embryos that will yield a full-term pregnancy, an issue as old as the IVF procedure itself. In that regard, preimplantation genetic diagnosis (PGD), is intended to screen for known genetically transmitted abnormalities, now extended to the entire chromosomal complement under the name of complete genetic screening (CGS), thereby allowing for the selection of embryos with a complete set of normal chromosomes for transfer to the intended mother.

"Unfortunately, over 90 percent of the embryos miscarried during an advanced pregnancy (more than 20 weeks) are chromosomally normal, and 50 percent of the embryos miscarried during the first three months of the pregnancy also have a normal chromosomal complement," says Dr. Taliadouros. "PGS may improve pregnancy rates, but it will not guarantee a term pregnancy or live child."

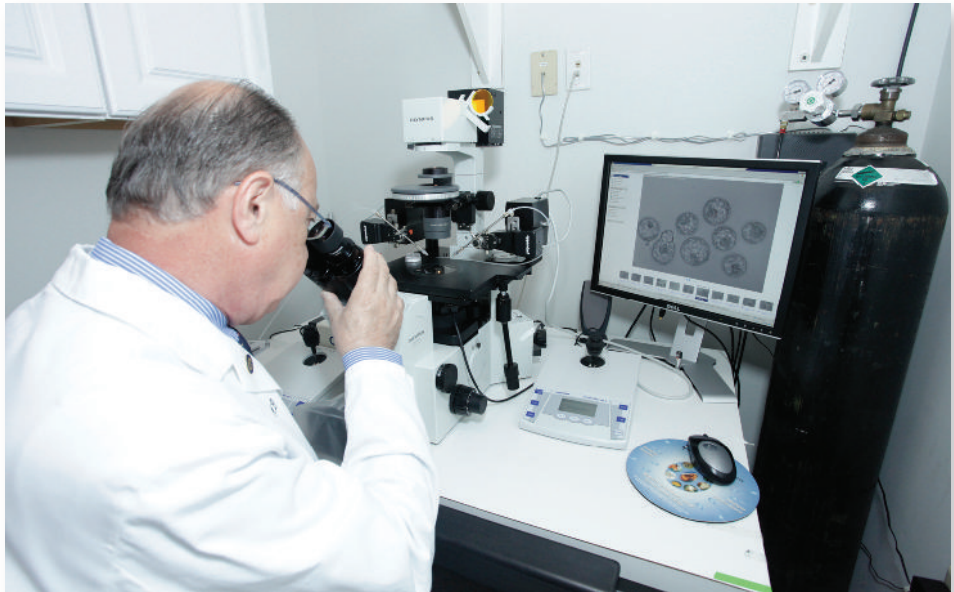
In spite of this known fact, several commercial companies and some homegrown methods have appeared and made the test available to prospective patients and fertility practices. This has had a ripple effect on several aspects, including results and costs of treatment. As noted by Dr. Taliadouros, "One would expect that subjecting embryos to biopsy in order to assess their chromosomal complement at an additional cost of 40 to 50 percent of that of an IVF cycle must secure a pregnancy. However, if the data shows a 10 percent increase in the yield of the treatment, does this justify the increase in the cost? For some this increase in cost might be justifiable, but not for all."

Similar arguments have been made in the past for other procedures and technologies when they were introduced. Technology will continue to advance until the methodologies improve and the cost decreases significantly, so that this can be incorporated as a routine treatment. However, at the end of the day, a couple that is having difficulty becoming pregnant needs to know that the reproductive system has evolved over many centuries and it is not made to fail.

## The Nature of Fertility

Dr. Taliadouros explains fertility best by comparing it to nature. "Nature is wise; reproductive systems have evolved over millions and millions of years," he says. "The evidence: Unlike the extinct dinosaurs, we are still here." He goes on to say that what is often missed in today's culture is that this sophisticated mechanism controls the process and protects the outcome of a pregnancy. For example, stress can affect the quality of a woman's egg, and while it isn't impossible to get pregnant under stress, the reproductive system will make it more difficult. As if it is an alert, this difficulty should not be ignored and instead should be treated.

According to Dr. Taliadouros, if a couple is young, they need to know the underlying diagnosis and understand the mechanism that affects their reproductive potential. This holds even greater importance in those cases when there is adequate sperm, the anatomy of the reproductive system is intact and a woman is ovulating properly. Even if there is a problem such as an aberration in ovulation, they need to



From molecular medicine and robotic surgery to emotional and nutritional counseling, the Delaware Valley Institute of Fertility & Genetics offers a full spectrum of care.

know why this is occurring and what can be done so that it will be rectified for the couple to achieve pregnancy on their own and not necessarily seek technologies to answer these questions.

"We are successful in treating the underlying cause and allowing the vast majority of patients to become pregnant on their own," says Dr. Taliadouros. "At the same time, we do not shy away from the new achievements of technology." The center has excellent results concerning insemination and approaches similar success rates as the other programs are reporting for IVF treatment.

He adds, "We are one of the leading programs in IVF-ET without having to subject the embryos to biopsy. Although we have mastered this technology and provided it to our patients when necessary, our embryo biopsy rate is 1 percent. The single embryo transfer, admittedly, with patients that desire to have a single embryo transfer, has a respectable 60 percent pregnancy rate, again without obtaining embryo biopsies. We have developed a method to mature oocytes in the lab IVM (in vitro maturation) and are the only program in the country with continuous success." DVIF&G has provided the SEEDS (Semen, Embryo, Egg Depository and Storage) program for those cancer patients who would like to preserve their fertility potential. So far 10 babies have been born to parents who were cancer survivors.

Dr. Taliadouros is confident that debate in the scientific forum will lead to patients' abilities to make informed and peaceful decisions. "Technology is important for fertility treatment; yet, it has inadvertently been exploited," he says. "While regulations are in place to control them, they are not perfect. Therefore, at DVIF&G we embrace such technologies and use them wisely." ■

## ➔ Delaware Valley Institute of Fertility & Genetics

George S. Taliadouros, M.D.  
6000 Sagemore Drive, Suite 6102  
Marlton, NJ 08053  
856-988-0072 | [www.startfertility.com](http://www.startfertility.com)

