



# Conceivable

REPRODUCTIVE RESOURCE CENTER

20 years of Innovation

Rodney Lyles, M.D. • Celeste Brabec, M.D. • Ryan Riggs, M.D.

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## Donor Oocytes - A Primer for Physicians

It is the wish of almost all couples who seek fertility treatment to utilize their own oocytes (eggs) and sperm to have a genetic child. Even from early childhood, most young men and young women look forward to the day when they can someday become a parent. Many sexually active young people fear getting pregnant before they are ready, and have concerns about contraception, assuming they are “fertile.”

Therefore, it is a surprise when infertility confronts a couple. It is even more surprising when infertility testing reveals severely diminished ovarian reserve, meaning a significant enough decline in oocyte quantity and/or quality to justify utilization of donor oocytes.

It is easy to understand the need for donor oocytes in women of advanced reproductive age, in women who are surgically or medically menopausal (such as women with a history of prior radiation therapy or chemotherapy), or when there is a significant genetic disease in the woman which she desires to avoid passing on to offspring. **What may come as a surprise to women and their doctors alike, however, is how common diminished ovarian reserve really is. Diminished ovarian reserve is the most common cause of unexplained infertility, and can affect even very young women.**

Assessment of ovarian reserve cannot be measured with a single test. Ovarian reserve typically requires evaluating a combination of clinical data, including patient age, menstrual history, symptoms, antral

follicle count by transvaginal ultrasound, day 3 measurements of both serum FSH and estradiol (E2), random serum anti-Mullerian hormone (AMH) and past response to ovarian stimulation. Ovarian reserve testing is discussed in more detail on page 3 of this newsletter.

Not all women with diminished ovarian reserve need donor oocytes. Often, aggressive attempts at ovarian stimulation can result in sufficient egg quantity/quality to result in an ongoing pregnancy. However, if these attempts fail, oocyte donation is indicated. Once oocyte donation is decided upon, the overall process is reviewed in detail with the couple. At the current time, most oocyte donation cycles are done “fresh”, meaning that the donor undergoes fertility treatment and oocyte retrieval while the intended recipient undergoes synchronization of her endometrium using hormonal medications. This obviously requires intensive coordination of scheduling for all parties involved, including the provider, the laboratory, the donor/her family and the recipient/her spouse. In the near future, donor banks of frozen oocytes will likely become the norm; studies are ongoing and early data are extremely promising.

Donor oocytes can be obtained from several different sources, including local anonymous donors, local known or “directed” donors (when a couple knows a young woman whom they desire to be their donor), national donor oocyte centers, and soon, from national cryopreserved oocyte banks.

All of these are acceptable and available to our patients. **Most commonly in our practice, couples elect local anonymous donors who are actively recruited by our center specifically for utilization by our patients. This is the simplest and least costly. A couple need not worry if they do not know someone who wants to be their oocyte donor.** All donors, as well as their recipient couples, are carefully screened according to strict FDA guidelines. In the states of Kansas and Missouri, the birth parents are the legal parents; this is not an adoption and no attorney is needed.

Donor oocytes provide the highest pregnancy rates of all fertility treatments available worldwide at this time, averaging approximately 65-70% take-home baby rate per embryo transfer. Costs usually are slightly less than twice the cost of an IVF cycle using one's own oocytes, due to medication costs for both the donor and the recipient, and typically an inconvenience fee to the donor.

Many couples desire nondisclosure; that is to say, they do not want it known to their obstetrician, pediatrician, family or friends that they utilized donor oocytes. Who to tell, if and when, are complex issues that are reviewed with each couple.

Overall, while utilization of donor oocytes initially sounds foreign and scary to many couples, those who ultimately choose this therapy are extremely satisfied. For more information contact RRC at (913) 894-2323.

# RRC Staff

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Website: [rrc.com](http://rrc.com)

Reproductive Resource Center is open from 7:30 a.m. to 4 p.m. Phones are answered Monday through Friday, 8 a.m. to 4 p.m. Calls received during off-hours are returned as soon as possible. If you have inquiries pertaining to any urgent issues, please call 913 894-2323.

Every effort will be made to have the appropriate individual answer your question.

Editor of Conceivable Newsletter is Celeste Brabec M.D.

## Featured Employee



Margaret "Marge" Vogt, WHNP, is a Nurse Practitioner who joined Reproductive Resource Center in 1994 as the Third Party Nurse Coordinator. Her expertise is in assisting couples who require the aid of third party assisted reproductive technology, including donor oocytes, donor sperm or a gestational carrier, as a means to have a family. Her role includes the screening of oocyte donors and gestational carriers. Marge is also the FDA Compliance Officer for the practice, ensuring that all regulatory requirements are met as it relates to third party reproduction.

Marge completed her Bachelor Degree in Nursing at the University of Colorado. She obtained both her Master's Degree in Maternal-Child Nursing and her Nurse Practitioner training at the University of Texas. She is certified as a Women's Health Care Nurse Practitioner with additional certification in Reproductive Endocrinology and Infertility.

Marge has served on the Advanced Nurse Practitioner Committee for the State Board of Nurse Examiners and as a board member on the American Society for Reproductive Medicine Nurse Professional Group. She is married with two sons, and spends her time outside the office as a board member on various nonprofit organizations.

## NEW On-line Donor Matching

Effective November 2009, patients may go on-line to access information on oocyte donors who are currently available for treatment through our Center. With the aid of a password provided at the time of their Ovum Donor Recipient Consultation appointment, recipient patients will have access to information about prospective donors' physical characteristics, psychosocial history, medical history, family history, and see a photograph of the oocyte donor. Additionally, the donor has the option to share personal thoughts about herself and why she is considering oocyte donation. Most patients find they are able to select a donor and undergo treatment within a few months of their entry into the program.



## Continuing Medical Education

Brandi Oude Alink, WHNP, attended the Reproductive Nurse Advisory Board annual meeting in Miami, Florida in September.

Mary Ellen Bulmash, PA-C, Kathy Hartke, B.A., Ryan Riggs, M.D., Marge Vogt, WHNP and Michael Wilson, Ph.D. attended the American Society for Reproductive Medicine 65th Annual Meeting in Atlanta in October.

Ryan Riggs, M.D., was the Jack Betts Memorial Speaker at the fall meeting for the Kansas City Gynecological Meeting in September. His topic was "Insights into the Assessment of Ovarian Reserve."

# Teaching Pearls

## New Insights into the Assessment of Ovarian Reserve

As women age their fertility inevitably declines. This decline represents a diminution in overall oocyte quantity and quality as well as increased rates of genetic abnormalities. This phenomenon is often defined clinically as a fertility patient's "ovarian reserve". Age-related infertility represents a challenging and largely unresolved problem to overcome even with treatment utilizing state of the art assisted reproductive technologies. Consequently, an accurate evaluation of a patient's ticking "biological clock" empowers patients and their treating physicians to make informed decisions about their ability to conceive and facilitates safe and effective fertility treatment.

Traditionally, ovarian reserve has been measured with an ultrasound evaluation of the ovaries (antral follicle count) which, although considered one of the best diagnostic tools, is highly user-dependent and is not always available. Additionally, there are traditional patient blood tests such as menstrual cycle day three measurement of serum follicle stimulating hormone (FSH), luteinizing hormone (LH), estradiol (E2) and inhibin B, levels that are widely available but not considered highly sensitive and, like antral follicle count, require specific menstrual cycle days for analysis.

Menstrual cycle day 2-4 levels of FSH and E2, although not exquisitely sensitive, do correlate with pregnancy and live birth rate, with live birth rates dropping when day 3 FSH levels exceed 7 IU/L, and fall to almost zero (no live births) when day 3 FSH levels exceed 14-18 IU/L, with some variability between testing sites, centers, patient age and history.

Recently, the predictive value of a single measurement of serum anti-Müllerian hormone (AMH) has received attention as a new marker for ovarian reserve. Because AMH is solely produced by the early developing ovarian follicles, it has potential as a marker of ovarian reserve and aging. Preliminary studies have noted AMH to be relatively stable throughout the menstrual cycle/ pregnancy and unaffected by exogenous or endogenous hormonal perturbations. Consequently, serum AMH levels may be drawn on any cycle day, regardless of patient utilization of contraceptives or hormones. Lastly, studies also suggest AMH to have little variability between menstrual cycles. Recently, a retrospective evaluation of the predictive value of AMH by Dr. Riggs demonstrated AMH to be as good as or better than age, FSH, and inhibin B for the prediction of ovarian reserve in in-vitro fertilization patients.

Studies to assess the predictive value of AMH for embryo quality, fertilization, pregnancy and live birth are ongoing. Lastly, multiple variables (e.g. age, FSH, AMH, antral follicle count) may be combined using complex mathematical equations to further improve the predictive value of ovarian reserve testing. While multiple variable models may improve testing sensitivity and specificity under some circumstances, they are usually more costly and less convenient for patients because multiple serum analytes are measured on a specific menstrual cycle day.

Accurate assessment of ovarian reserve is critical, as it helps reproductive fertility specialists direct patients to appropriate treatment. When ovarian reserve testing reveals markedly abnormal results, and attempts of ovarian stimulation document extremely poor ovarian reserve, third party reproduction in the form of oocyte donation may be indicated.

RRC offers assessment of ovarian reserve by Fellowship-trained Reproductive Endocrinologists using all of the above mentioned tools. Contact RRC at (913) 894-2323 for more information.

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## emailable

If you prefer to have *Conceivable* emailed to you in the future instead of mail, please drop our Business Manager a quick email to notify us of that change, [tclark@rrc.com](mailto:tclark@rrc.com)

If you have a topic you would like to see discussed, please email your ideas to [tclark@rrc.com](mailto:tclark@rrc.com).

### Multi-Cycle Discount Program

This new plan reduces the cost per cycle in the event your patient needs more than one IVF cycle to achieve success.

Call (913) 894-2323  
or come see us for details!

Learn the facts,  
check the stats.

See [SART.org](http://SART.org)

Take a look to see  
why you should  
choose Reproductive  
Resource Center

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REPRODUCTIVE  
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*20 years of Innovation*

Reproductive Resource Center  
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## Choose RRC for your patients with infertility needs. **Here's why:**

- RRC is the ONLY center in the region to offer on-site embryo biopsy for pre-implantation genetic diagnosis with a full-time Ph.D. Embryologist Laboratory Director on-site.
- RRC was the first center in the region to offer ICSI, a donor egg program, blastocyst transfer, blastocyst freezing, on-site embryo biopsy, and 24 chromosome aneuploidy screening with parental support.
- RRC does more cycles per year than all other programs in the metro area, and has done so for the past 20 years.
- RRC has an excellent national reputation, and has been consulted to help other programs throughout the country when they are having difficulties.
- RRC staff have published and presented scientific data on our revolutionary techniques both nationally and internationally.
- RRC has the most experienced, most highly educated staff in the metro area.
- RRC just celebrated our 20th Anniversary.
- RRC has some of the highest pregnancy rates and lowest high order multiple rates in the country, right here in your backyard.

Visit [www.rrc.com](http://www.rrc.com) or call (913) 894-2323.