

MPI# _____

REPRODUCTIVE ENDOCRINE ASSOCIATES OF CHARLOTTE, P.C.

Consent Form For In Vitro Fertilization/Assisted Reproduction

INFORMED CONSENT

We, _____ and _____
(print names as appear on driver's license)

desire to participate in the IVF Program offered by REPRODUCTIVE ENDOCRINE ASSOCIATES OF CHARLOTTE, P.A. ("REACH"). We understand that there are a number of steps to this procedure and that starting this process does not guarantee that we will complete the process, achieve pregnancy, or deliver a healthy child. We understand that the Female Partner will receive medication to induce the maturation of several eggs and during this period she will undergo a surgical procedure to retrieve her eggs. The Egg Retrieval Procedure will be done by needle aspiration usually under ultrasound guidance or perhaps by laparoscopy. We understand that the eggs will be prepared and inseminated in marked dishes with a sample of the Male Partner's sperm (or donor sperm as applicable) after preparation, which removes the sperm from the seminal fluid. The embryos, which may result from fertilization, will be placed into the Female Partner's uterus by means of a small catheter, which passes through her cervix under ultrasound guidance. We understand that each of these steps may fail and carries known risks as well as theoretical concerns as detailed in the following paragraphs.

A. Ovulation Induction

We understand that a variety of medications are available for the induction of ovulation including clomiphene citrate, human menopausal gonadotropins, pure follicle stimulating hormone, human chorionic gonadotripon, recombinant FSH, and GnRH analogues or antagonists. We understand that some of these medications must be given by intramuscular injection, which may cause bruising or discomfort at the injection site. Rarely, these medications may cause the ovaries to become over stimulated leading to a condition called ovarian hyper stimulation syndrome (OHSS). We understand that in its most severe form, this condition might require hospitalization for intravenous fluids and monitoring until the syndrome resolves. Worldwide there have been rare reports of blood clots, stroke, paralysis, and death following severe OHSS. We therefore understand the importance of maintaining close contact with the IVF team during the time that these medications are being used and for two (2) weeks afterwards.

We understand that before the start of a cycle, the Male Partner will be asked to supply a semen sample for analysis by the andrology laboratory. He may be asked to take a specific antibiotic during the first part of the stimulation cycle to treat bacteria that may be present in order to increase chances for a successful fertilization. In certain cases, semen may also be frozen in advance to be certain of its availability at the time of egg retrieval.

B. Monitoring Protocol

We understand that while receiving the medications listed above, the Female Partner will be closely monitored by the IVF team. We understand that this monitoring will include daily blood drawing, which can cause mild discomfort and bruising at the puncture site. We understand that ultrasound examination of the ovarian follicles and the uterus will be performed frequently. These examinations may at times be uncomfortable, but have no known risks of any kind. We understand that if monitoring suggests a low probability for successful egg retrieval, that the stimulation cycle will be stopped and no egg retrieval will occur. We also understand that we may be given the option of starting the ovarian stimulation procedure again in a subsequent cycle.

C. Egg Retrieval

We understand that at a time determined by the IVF team, the Female Partner will be admitted to the Procedure Room at REACH Hospital for egg retrieval. We understand that in the vast majority of cases, ultrasound directed needle puncture of the follicles will be done. Rarely, the retrieval may be done by laparoscopy under general anesthesia. The procedure involves the small risk of general anesthesia as well as injury to bowel, bladder, or blood vessels, which might require a large incision (laparotomy) to repair. We understand that a separate informed consent will be obtained for a laparoscopic retrieval if it becomes necessary. With either type of egg retrieval, in rare cases there could be bleeding from the site where the ovaries were punctured. This may require laparotomy (an incision in the abdomen) if the bleeding cannot be controlled through the laparoscope. The risks of the procedure are similar to the risks of laparoscopy, including general anesthesia.

We understand that we cannot be guaranteed that the number of eggs predicted prior to retrieval will indeed be recovered, or that any of the eggs will be normal or capable of fertilization. Some follicles may not yield eggs and rarely none of the follicles will yield eggs. The egg retrieval involves equipment such as incubators, suction apparatuses and ultrasound machines that may fail because of technical malfunction. We also understand that once the eggs are isolated in the laboratory, that blood and abnormal nursing cells are removed from around the egg using dissection needles, and that although unlikely, some or all of the eggs may be damaged in the process. In addition, once removed from the body, eggs may undergo spontaneous changes due to their new environment.

D. Insemination, Fertilization and Embryo Growth

Once retrieved, the eggs will be incubated in the laboratory in a special solution (culture medium) and evaluated for timing of insemination by the embryology team of the IVF program. We understand that a sample of semen from the Male Partner, obtained by masturbation in a private collection room near the laboratory, will be evaluated, prepared, and used for insemination. Semen collection in this way is rarely unsuccessful and if there are any doubts, a sample can be prepared and frozen in advance for thawing at this time. However, in case of unexpected failure it is possible to obtain spermatozoa from the male reproductive system using a minor operative procedure (microsurgical sperm retrieval). Separate consent is needed for this procedure.

The seminal fluid that surrounds the spermatozoa must be removed prior to insemination. Sperm processing involves high centrifugal force, washing with an artificial colloidal suspension called *PurespermTM*, or by swim-up. We understand that the consistency of highly viscous semen will be reduced by an enzyme. The prepared semen may be exposed to substances intended to promote sperm movement or materials intended to remove toxic substances. The zygotes are changed into a culture solution. This solution may be changed every forty-eight (48) hours or more frequently. Solutions may be specially tailored to the embryonic stage. The embryos are checked at least once daily and their development is determined. Embryos will remain in the solution(s) for forty-eight (48) to one hundred twenty (120) hours and then transferred.

Should a pregnancy occur, we understand that no risk to the fetus is presently known to medical science arising from the materials and methods used in the preparation and handling of eggs, semen and embryos. We understand that not all eggs recovered can be fertilized, and that it is possible that none of the eggs may fertilize. Further, some eggs may be fertilized multiple times by sperm or even self-fertilize without the sperm participating, thus resulting in abnormal embryos. Zygotes and later stage embryos may develop abnormally at any time.

E. Embryo Transfer

We understand that between three (3) to four (4) days after egg retrieval our embryos will be placed into the uterine cavity of the Female Partner. Alternatively you may be asked to consider having embryos transferred at the blastocyst stage five (5) or six (6) days after transfer, using culture solutions that support growth for a longer period. For the embryo transfer, a thin catheter will be passed through the cervix and into the uterus so the embryo may be deposited there. We understand that this procedure may cause some cramping and discomfort, and possibly a small amount of bleeding. Rarely, infection could be introduced at the time of the catheter insertion into the uterus requiring antibiotic therapy. We understand there is no guarantee that any of the embryos *thus* transferred

will result in a pregnancy.

We understand that the success of IVF can often relate directly with the number of embryos transferred to the uterus. We also understand that IVF significantly increases the risk for multiple gestation (more than one baby), and that this risk also correlates directly with the number of embryos transferred, their development, the age of the Female Partner (or egg donor), the number of prior attempts and other unknown factors. We also understand that in rare cases, embryos may split in two (2) or three (3), resulting in multiple fetuses. (On occasion, this can mean that there are more fetuses than embryos transferred.) There are distinct obstetric risks to multiple gestations, the most serious of which are pre-term labor and the delivery of premature infants who require intensive care. It is the policy of this program to replace the number of embryos deemed medically necessary in a given cycle which determination is based in part, but is not limited to, availability and other factors such as age, cycle attempts and embryonic parameters. Any additional viable embryos may be cryopreserved (frozen) for possible replacement in a subsequent cycle. We understand that a separate consent must be completed if the embryos are to be cryopreserved.

F. Post-Transfer Management

We understand that in conjunction with the transfer of embryos, the Female Partner may be given natural progesterone by intramuscular injection, vaginal suppository, vaginal gel, or oral capsule in an attempt to increase the chances of successful implantation. Further, natural estrogen by skin patch or oral tablet may be given. Should a pregnancy result, we understand that no harmful effects to the mother of the fetus are presently known to medical science from the use of this natural progesterone and/or estrogen supplementation. During this period, we understand that various blood hormone levels may be evaluated.

G. Disposition Of Unwanted or Unsuitable Cells, Fluids, Spermatozoa, Eggs and Embryos

Blood, blood products and cells, as well as follicular and seminal fluids and cells contained therein, obtained during follicular monitoring, egg or sperm retrieval, may be used for scientific observations. In the event that we have such unused materials, this material may be subjected to scientific observations or discarded without any further observations. Under no circumstances will excess spermatozoa or other unused cellular materials be used for fertilization purposes or donation to other individuals, couples, corporations or institutions. In the event that we have immature, unfertilized or abnormally fertilized eggs, these may be subjected to scientific observations or discarded without further studies. We understand that such eggs are clinically non-viable and / or considered abnormal. Embryos that arrest after one (1) to six (6) days after egg retrieval, that are partially degenerate, or for any other reasons considered unsuitable for embryo

transfer or cryopreservation, may be observed to determine cellular inclusions, genes, gene mutations, proteins and chromosomes. Such studies use protocols that will cease the immediate growth of individual cells. We also understand that such embryos and their cellular components are clinically non-viable and considered abnormal.

H. Use Of Blood Products

Human serum albumin, human insulin, commercially prepared products for clinical laboratory use, may be used in the the egg cultivation fluid, micromanipulation, and semen preparation fluids. Careful screening is done by the manufacturers to reduce the likelihood of transmission of infectious diseases such as HIV and Hepatitis B and C. To date there have been no documented cases of disease transmission linked to human serum albumin usage at REACH. We understand and accept the remote risk that use of these blood products could result in the transmission of HIV, Hepatitis and/or other viral or possibly as yet unknown non-viral diseases.

I. Use Of Chemical Substances, Disposable Items And Mechanical Devices During The Procedures

A large number of chemical substances (sugars, salts, enzymes, proteins), mechanical devices (incubator chambers, microscopes, air handling systems, filters, standard laboratory equipment) and disposable items (pipettes, Petri dishes, flasks, microtools) are used during the laboratory procedures. There may be unknown risks associated with the use of any of these items that cause the procedure to fail, even though checks and quality control measures are performed on a regular basis. Thus far, there is no known association between the use of these materials and anomalies of pregnancy and fetal development.

J. Possible Risks Associated With Procedures

Based on current medical knowledge, we understand there generally does not appear to be a higher incidence of birth defects in children associated with IVF procedures. However, there is not at present sufficient statistical data available to definitively conclude that this is the case. Therefore, we understand that IVF may impose risks to the fetus during development. We also understand that because more than one embryo or egg may be transferred, there may be a higher incidence of multiple births. Occasionally, an embryo may split when inside the uterus, forming 'identical' (monozygotic) multiple fetuses , which may be associated with other anomalies. In certain cases, fetal reduction may be considered if more embryos implant than can be medically (or personally) deemed advisable to carry through a pregnancy. Preterm labor and preterm delivery of low birth weight babies has been associated with pregnancies achieved through IVF, and therefore should warrant increased obstetrical surveillance during the second and third trimesters of pregnancy. We also understand that ectopic or tubal pregnancies may occur in the procedure. These associated procedures can also produce increased financial and

emotional burdens.

We understand and accept that the use of ovarian fertility drugs may be associated with an increased risk of ovarian diseases or breast diseases in later life, including cancer. Current medical studies generally do not support this causative relationship. We recognize that the exact risk, if any, has yet to be concluded and may not be known for many years.

K. Success Rate And Outcome

We understand that failure to obtain a pregnancy may result from many reasons, including the following:

- (1) Maturation of the egg(s) may not occur, or the time of the egg maturation may be misjudged, may not be predictable or may not take place in the monitored cycle.
- (2) Pelvic adhesions may prevent access to the ovary with the follicles, thus causing the procedure to obtain the egg from the ovary to fail.
- (3) The egg(s) obtained from the Female Partner may be abnormal.
- (4) Normal spermatozoa may not be available.
- (5) Normal fertilization of the egg(s) by the sperm may not occur.
- (6) Cleavage or cell division of the embryo(s) may not occur or the embryo(s) may not develop normally.
- (7) The embryo(s) may become infected in the laboratory or an unforeseen laboratory accident may result in loss or damage to the eggs, sperm, or embryo(s).
- (8) The embryo(s) may become contaminated by infection in the semen or bacteria from the vagina.
- (9) Implantation of the embryo(s) in the uterus after embryo transfer may not occur or an early pregnancy may be lost after an initial positive result.
- (10) Even if a pregnancy is established, we understand that delivery of a child may not occur due to miscarriage, ectopic pregnancy (outside the uterus), stillbirth, or other complications associated with pregnancy and delivery.
- (11) There may be unknown side effects from any of the procedures used resulting in abnormal pregnancy or abnormal fetal development.

We understand that while the members of the IVF team hope that a pregnancy will result from this procedure, they cannot guarantee it. Even in normally fertile couples, the chance of pregnancy is approximately twenty-five percent (25%) in a natural menstrual cycle. If no pregnancy occurs, we may be offered participation in future cycles when assessment by the IVF team reveals no contraindications. We understand that the IVF team cannot guarantee the normality of any infant that results from this procedure.

We understand that we may at any time decide to withdraw from participation in this program without prejudice. Any information obtained during this procedure and identified with us will remain confidential and will be disclosed only with our permission.

L. Confidentiality

Any publication resulting from this procedure will not identify us individually. Representatives of The Food and Drug Administration (FDA), The Center for Disease Control (CDC), The Department of Health and Environmental Control of North Carolina, and the Society of Assisted Reproduction Technologies (SART) may inspect our records.

We have been encouraged to ask questions and any that we have asked have been answered to our satisfaction. A member of the IVF team will answer questions you may have in the future.

M. Execution of Consent

By signing this form below you expressly indicate and certify the following:

- (1) That we have read and understand each and every provision herein;
- (2) That we have been given the opportunity to review this document with any and all third parties of our choosing;
- (3) That we have been given an opportunity to ask any and all questions;
- (4) That for each question we have asked, we have received a satisfactory answer;
- (5) That we know that we may ask additional questions at any time in the future;
- (6) That we may discontinue this program at any time in the future; and
- (7) That we are over the age of twenty-one (21).

Female Partner's Signature

Date

Male Partner's Signature

Date

REACH representative verifying completion of consent

Date

Witness – if signed outside of REACH

Date