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FOR IMMEDIATE RELEASE

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A new genetic test to predict risk for premature ovarian aging and infertility

Investigators from the Center for Human Reproduction (CHR-New York) in a series of two articles in *Fertility and Sterility* (official organ of the American Society for Reproductive Medicine), which just appeared electronically (*April 1, 2008, [Epub ahead of print*]) report that a frequently used genetic test of the so-called *FMR1* (fragile X mental retardation 1) gene allows for the prediction of risk towards premature ovarian aging (POA) and therefore, one form of female infertility. The *FMR1* gene is located on the X-chromosome. In a second paper in the same medical journal, they demonstrate that this risk is independent of the POA risk statistically associated with abnormal autoimmune function.

Approximately 10 percent of women are believed to age ovaries prematurely. Up to half of all women under infertility treatment may be at risk of POA. POA, thus, represents a significant medical problem and is the principle cause for much female infertility. The ability to predict risk for POA and, therefore, possibly infertility, would allow affected women to adjust their reproductive planning accordingly, and, if necessary, take fertility preserving steps, like embryo or oocyte cryopreservation.

Drs. Norbert Gleicher, Andrea Weghofer and David H. Barad, in these two papers demonstrate that the number of so-called triple CGG repeats on the *FMR1* gene correlates statistically with laboratory parameters indicative of ovarian function (so-called ovarian reserve). The risk towards POA increases above 32 repeats, a number currently widely considered normal. Since in addition to this genetic risk, POA can also be associated with abnormal autoimmune function, the investigation also attempted to determine whether these two risks are linked or independent. In the second manuscript the authors demonstrate that genetic and autoimmune risk independently predispose to POA.

Pointing to the preliminary nature of the findings by describing the two studies as “pilots,” lead author Norbert Gleicher, MD, Medical Director of CHR and Vis. Professor of Obstetrics, Gynecology and Reproductive Sciences, Yale University, New Haven, CT, states, “*If confirmed, these findings will have significance beyond just better diagnosis of female infertility. By demonstrating independent genetic and autoimmune causes, women at risk of POA will become identifiable at young ages, allowing for better reproductive planning, including fertility preservation.*”

Authors of the study are available for further comments. The Center for Human Reproduction is a leading clinical and research center in reproductive medicine and infertility, located in NYC.