

What is claimed is:

1. A method for assessing risk to a putative offspring of developing a condition, the method comprising:
 - obtaining a maternal sample;
 - conducting an assay on at least one infertility-associated biomarker; and
 - assessing risk to a putative offspring of developing a condition based upon results of the assay.
2. The method according to claim 1, wherein the biomarker is a gene.
3. The method according to claim 2, wherein the gene is a maternal effect gene.
4. The method according to claim 3, wherein the assay comprises sequencing at least a portion of the gene to determine presence or absence of a mutation that is associated with infertility.
5. The method according to claim 4, wherein the mutation is selected from the group consisting of: a single nucleotide polymorphism; a deletion; an insertion; a rearrangement; a copy number variation; and a combination thereof.
6. The method according to claim 4, wherein sequencing is sequencing-by-synthesis.
7. The method according to claim 1, wherein the biomarker is a gene product.
8. The method according to claim 7, wherein the gene product is a product of a maternal effect gene.
9. The method according to claim 7, wherein the gene product is RNA or protein.
10. The method according to claim 7, wherein the assay comprises determining an amount of the gene product and comparing the determined amount to a reference.

11. The method according to claim 1, wherein the sample is a human tissue or body fluid.
12. The method according to claim 1, wherein prior to the conducting step, the method further comprises enriching the sample for the biomarker.
13. The method according to claim 1, wherein assessing further comprises correlating results of the assay with at least one infertility associated phenotypic trait or environmental exposure.
14. The method according to claim 1, wherein the condition is an autism spectrum disorder.
15. The method according to claim 14, wherein the autism spectrum disorder is selected from the group consisting of autism (classical autism), asperger syndrome, rett syndrome, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified (PDD-NOS).
16. The method according to claim 1, further comprising producing a treatment plan that reduces or eliminates the risk to the putative offspring of developing the condition based upon results of the assay.
17. The method according to claim 1, wherein the treatment plan comprises administration of vitamins or drugs that reduces or eliminates the risk to the putative offspring of developing the condition.
18. A method for assessing infertility and risk to a putative offspring of developing a condition, the method comprising:
 - obtaining a maternal sample;
 - conducting an assay on at least one infertility-associated biomarker; and
 - assessing infertility and risk to a putative offspring of developing a condition based on results of the assay.
19. The method according to claim 18, wherein the biomarker is a gene.

20. The method according to claim 19, wherein the assay comprises sequencing at least a portion of the gene to determine presence or absence of a mutation that is associated with infertility.
21. The method according to claim 18, wherein the biomarker is a gene product.
22. The method according to claim 21, wherein the assay comprises determining an amount of the gene product and comparing the determined amount to a reference.
23. The method according to claim 18, wherein assessing further comprises correlating results of the assay with at least one infertility associated phenotypic trait or environmental exposure.
24. The method according to claim 23, wherein the condition is an autism spectrum disorder.
25. The method according to claim 24, wherein the autism spectrum disorder is selected from the group consisting of autism (classical autism), asperger syndrome, rett syndrome, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified (PDD-NOS).

What is claimed is:

1. A method for assessing risk to an offspring of developing a condition, the method comprising:
conducting an assay on a sample from a women suspected of being infertile for at least one genetic biomarker that is associated with both infertility and risk of an offspring being diagnosed with a genetic disorder; and
assessing risk-that an offspring of the woman will have a condition based upon results of the assay.
2. The method according to claim 1, wherein the biomarker is a gene.
3. The method according to claim 2, wherein the gene is a maternal effect gene.
4. The method according to claim 3, wherein the assay comprises sequencing at least a portion of the gene to determine presence or absence of a mutation that is associated with infertility.
5. The method according to claim 4, wherein the mutation is selected from the group consisting of: a single nucleotide polymorphism; a deletion; an insertion; a rearrangement; a copy number variation; and a combination thereof.
6. The method according to claim 4, wherein sequencing is sequencing-by-synthesis.
7. The method according to claim 1, wherein the biomarker is a gene product.
8. The method according to claim 7, wherein the gene product is a product of a maternal effect gene.
9. The method according to claim 7, wherein the gene product is RNA or protein.

10. The method according to claim 7, wherein the assay comprises determining an amount of the gene product and comparing the determined amount to a reference.
11. The method according to claim 1, wherein the sample is a human tissue or body fluid.
12. The method according to claim 1, wherein prior to the conducting step, the method further comprises enriching the sample for the biomarker.
13. The method according to claim 1, wherein assessing further comprises correlating results of the assay with at least one infertility associated phenotypic trait or environmental exposure.
14. The method according to claim 1, wherein the condition is an autism spectrum disorder.
15. The method according to claim 14, wherein the autism spectrum disorder is selected from the group consisting of autism (classical autism), asperger syndrome, rett syndrome, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified (PDD-NOS).
16. The method according to claim 1, further comprising producing a treatment plan that reduces or eliminates the risk to the putative offspring of developing the condition based upon results of the assay.
17. The method according to claim 16, wherein the treatment plan comprises administration of vitamins or drugs that reduces or eliminates the risk to the putative offspring of developing the condition.
18. A method for assessing infertility and risk to an offspring of developing a condition, the method comprising:
 - conducting an assay on a sample from a women suspected of being infertile for at least one genetic biomarker that is associated with both infertility and risk of an offspring being diagnosed with a genetic disorder; and

assessing infertility risk in the woman and risk to an offspring of developing a condition after birth based on results of the assay.

19. The method according to claim 18, wherein the biomarker is a gene.

20. The method according to claim 19, wherein the assay comprises sequencing at least a portion of the gene to determine presence or absence of a mutation that is associated with infertility.

21. The method according to claim 18, wherein the biomarker is a gene product.

22. The method according to claim 21, wherein the assay comprises determining an amount of the gene product and comparing the determined amount to a reference.

23. The method according to claim 18, wherein assessing further comprises correlating results of the assay with at least one infertility associated phenotypic trait or environmental exposure.

24. The method according to claim 23, wherein the condition is an autism spectrum disorder.

25. The method according to claim 24, wherein the autism spectrum disorder is selected from the group consisting of autism (classical autism), asperger syndrome, rett syndrome, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified (PDD-NOS).