What is claimed is:

1. A test kit panel for testing food intolerance in a patient diagnosed with or suspected of having irritable bowel syndrome, consisting essentially of:

    a plurality of distinct food preparations immobilized to an individually addressable solid carrier;

    wherein the plurality of distinct food preparations each have a raw p-value of ≤ 0.07 or a false discovery rate (FDR) multiplicity adjusted p-value of ≤ 0.10.

2. The test kit panel of claim 1, wherein the plurality of food preparations includes at least two food preparations selected from the group consisting of cocoa, tea, oat, cabbage, cow milk, onion, honey, rye, corn, yeast, wheat, soybean, egg, tuna, lemon, pineapple, cucumber, orange, halibut, walnut, grapefruit, cane sugar, chicken, blueberry, and shrimp.

3. The test kit panel of claim 1, wherein the plurality of distinct food preparations each have a raw p-value of ≤ 0.05 or a false discovery rate (FDR) multiplicity adjusted p-value of ≤ 0.08.

4. The test kit panel of claim 1, wherein the plurality of distinct food preparations is crude aqueous extracts or processed aqueous extracts.

5. A method of testing food intolerance in a patient diagnosed with or suspected of having irritable bowel syndrome, comprising:

    contacting the test kit panel of claim 1 with a bodily fluid of a patient that is diagnosed with or suspected of having irritable bowel syndrome;

    wherein the step of contacting is performed under conditions that allow IgG from the bodily fluid to bind to at least one component of the food preparation;

    measuring IgG bound to the at least one component of the food preparation to obtain a signal;

updating or generating a report using the signal.

6. The method of claim 5, wherein the plurality of distinct food preparations is selected from the group consisting essentially of cocoa, tea, oat, cabbage, cow milk, onion, honey, rye, corn, yeast, wheat, soybean, egg, tuna, lemon, pineapple, cucumber, orange, halibut, walnut, grapefruit, cane sugar, chicken, blueberry, and shrimp.

7. The method of claim 5, wherein the plurality of distinct food preparations each have a raw p-value of ≤ 0.07 or a FDR multiplicity adjusted p-value of ≤ 0.10.

8. A method of generating a test kit panel for food intolerance comprising:

obtaining test results for a plurality of distinct food preparations, wherein the test results are based on bodily fluids of patients diagnosed with or suspected of having irritable bowel syndrome and bodily fluids of a control group not diagnosed with or not suspected to have irritable bowel syndrome;

stratifying the test results by gender for each of the distinct food preparations;

assigning for a predetermined percentile rank a different cutoff value for male and female patients for each of the distinct food preparations;

selecting a plurality of distinct food preparations that each have a raw p-value of ≤ 0.07 or a FDR multiplicity adjusted p-value of ≤ 0.10;

immobilizing the selected food preparations on a solid carrier in an individually addressable manner; and

generating a test kit panel consisting essentially of the selected food preparations for food intolerance in a patient diagnosed with or suspected of having irritable bowel syndrome.

9. The method of claim 8, wherein the plurality of distinct food preparations includes at least two food preparations selected from the group consisting of cocoa, tea, oat, cabbage, cow milk, onion, honey, rye, corn, yeast, wheat, soybean, egg, tuna, lemon, pineapple,

cucumber, orange, halibut, walnut, grapefruit, cane sugar, chicken, blueberry, and shrimp.

10. The method of claim 8, wherein the predetermined percentile rank is an at least 90^{th} percentile rank.

11. The method of claim 8, wherein the cutoff value for male and female patients has a difference of at least 10% (abs).

12. The method of claim 8, further comprising a step of normalizing the result to the patients' total IgG.

13. The method of claim 8, further comprising a step of normalizing the result to the global mean of the patients' food specific IgG results.

14. A test kit panel for testing food intolerance in a patient diagnosed with or suspected of having irritable bowel syndrome, comprising:

a plurality of distinct food preparations coupled to an individually addressable solid carrier;

wherein all of the food preparations in the kit have a raw p-value of ≤ 0.07 or a FDR multiplicity adjusted p-value of ≤ 0.10.

15. The test kit panel of claim 14, wherein the plurality of food preparations includes at least two food preparations prepared from food items selected from the group consisting of

cocoa, tea, oat, cabbage, cow milk, onion, honey, rye, corn, yeast, wheat, soybean, egg, tuna, lemon, pineapple, cucumber, orange, halibut, walnut, grapefruit, cane sugar, chicken, blueberry, and shrimp.

16. The test kit panel of claim 14, wherein the plurality of distinct food preparations each have a raw p-value of ≤ 0.05 or a FDR multiplicity adjusted p-value of ≤ 0.08.

17. The test kit panel of claim 14, wherein the plurality of distinct food preparations is crude aqueous extracts or processed aqueous extracts.

18. The test kit panel of claim 1 or 14 wherein the solid carrier is selected from the group consisting of a well of a microwell plate, a microfluidic device, a dipstick, a membrane-bound array, a bead, an electrical sensor, a chemical sensor, a microchip and an adsorptive film.