FABPL, Insulin, and PH, and b) measuring the level of each N biomarker protein with the set of capture reagents.

[0012] In some embodiments, methods are provided for comparing a plurality of samples collected from a plurality of subjects comprising detecting the level of each of N biomarker proteins in each of the plurality of samples, wherein N is at least 1, and wherein at least 1 of the N biomarker proteins are selected FGFP1, TMEDA, Glucagon, GIP, FABPL, Insulin, and PH, wherein the sample is a plasma sample. In some embodiments, the methods comprise a) determining the approximate fasting time that elapsed from meal until sample collection and b) comparing the determined approximate times for each of the plurality of samples. In some embodiments, the determining is based on comparing the detected levels of each of the N biomarker proteins to reference levels, wherein the reference levels are average levels of the N biomarker proteins present in samples having fasting times of 0.5, 1, 3 and 12 hours.

[0012a] In one embodiment, provided herein is a method for comparing a plurality of samples from a plurality of subjects comprising detecting the level of each of N biomarker proteins in each of the plurality of samples, wherein N is at least 1, and wherein at least 1 of the N biomarker proteins is selected from FGFP1, TMEDA, Glucagon, GIP, FABPL, Insulin, and PH, wherein the sample is a plasma sample.

[0013] In some embodiments, the detected levels of each of the N biomarker proteins compared to the reference levels indicates that the approximate fasting time that elapsed from meal to sample collection was greater than 0.5, greater than 1, greater than 1, greater than 3, greater than 4, greater than 5, greater than 6, greater than 7, greater than 8, greater than 9, greater than 10, greater than 11 or greater than 12 hours; or wherein the levels of each of the N biomarker proteins used in a linear regression model predicts the approximate fasting time that elapsed from meal to sample collection was greater than 0.1, greater than 0.5, greater than 1, greater than 1, greater than 3, greater than 4, greater than 5, greater than 6, greater than 7, greater than 8, greater than 9, greater than 10, greater than 11 or greater than 12 hours. In some embodiments, the determining is based on a panel of N biomarker proteins having an R^2 value of at least 0.600, at least 0.650, at least 0.700, at least 0.750, at least 0.800, at least 0.850, at least 0.900, or at least 0.950. In some embodiments, the methods include performing protein biomarker discovery analysis, protein expression level analysis, a diagnostic method or a prognostic method on the plurality of samples. In some embodiments, the methods comprise modifying a panel of proteins in the protein biomarker discovery analysis, the protein expression level analysis, the diagnostic method or the prognostic method based on the determined approximate time for each of the plurality of samples; or identifying one or more proteins in the sample as being affected by the approximate fasting time that elapsed from meal to sample collection; or identifying the level of one or more proteins in the sample as being affected by the approximate fasting time that elapsed from meal to sample collection; or changing the proteins used in a diagnostic, a prognostic or a