

feces, sputum, bronchoalveolar lavages, vaginal lavages, anal lavages, hair, skin, tumor or cells.

32. The POC device as recited in claim 1, wherein the analyte comprises nucleic acids, proteins, metabolites, carbohydrates, lipids, chemicals, normal eukaryotic cells, diseased eukaryotic cells, tissue, bacteria, fungi or viruses.

33. The POC device as recited in claim 1, wherein one or more tests are performed on the sample or the analyte within the test cartridge, the test cartridge interface or the housing.

34. The POC device as recited in claim 1, wherein the POC device is man-portable or handheld.

35. The POC device as recited in claim 1, wherein the housing is less than or equal to approximately four inches by 2.5 inches by 0.5 inches thick.

36. The POC device as recited in claim 1, wherein the one or more communication interfaces comprise a USB-type interface, a video interface, an audio interface, a printer interface, a data transfer interface, a network interface, an optical communications interface, a keyboard cable interface, a mouse cable interface, a wireless device interface, a wireless transceiver, an identity recognition device or a combination thereof.

37. The POC device as recited in claim 1, wherein the power supply comprises, one or more batteries, an AC or DC electrical connection, one or more solar panels, a piezoelectric generator, a kinetic energy converter, an electromagnetic energy converter, an inductively coupled charger or a combination thereof.

38. The POC device as recited in claim 1, wherein the POC device is controlled remotely by a smartphone or computer communicably coupled to the one or more processors via the one or more communication interfaces.

39. The POC device as recited in claim 1, wherein the one or more processors receive a test data or control one or more external testing devices via the one or more communication interfaces.

40. POC device as recited in claim 1, wherein an elapsed time from receiving the test selection to providing the report is less than 30 minutes.

41. The POC device as recited in claim 1, wherein an elapsed time from receiving the test selection to providing the report is less than 60 minutes.

42. The POC device as recited in claim 1, wherein an elapsed time from receiving the test selection to providing the report is less than 120 minutes.

43. A point-of-care (POC) system comprising:

a point-of-care device comprising:

a housing,

a power supply disposed within the housing,

a memory disposed within the housing,

a user interface attached to or integrated into the housing,

one or more communication interfaces disposed within, attached to or integrated into the housing,

a test cartridge interface disposed within, attached to or integrated into the housing,

one or more detectors or sensors disposed within the test cartridge interface or the housing to detect one or more properties of a sample or an analyte and generate a test results data based on the one or more properties, and

one or more processors disposed within the housing and communicably coupled to the memory, the user interface, the one or more communication interfaces, the

test cartridge interface and the one or more detectors or sensors, wherein the one or more processors receive a test selection from the user interface, determine whether a test cartridge connected to the test cartridge interface matches the test selection, receive the test results data from the one or more detectors or sensors, generate a report based on an analysis of the test results data, and provide the report to the user interface;

a set of test cartridges, wherein each test cartridge is configured to perform a specified test on the sample or the analyte; and

wherein the test results data evaluate nucleic acids, proteins, metabolites, carbohydrates, lipids, chemicals, normal eukaryotic cells, diseased eukaryotic cells, tissue, bacteria, fungi or viruses.

44. The POC system as recited in claim 43, further comprising:

a remote server computer accessible by the POC device via a network;

a data storage communicably coupled to the remote server computer, wherein the data storage contains a database comprising one or more tables of genes, gene variants, drugs, gene-drug interaction scores, drug-drug interaction scores, RNA transcript-drug interaction scores, protein-drug interaction scores, metabolite-drug interaction scores, carbohydrate-drug interaction scores, lipid-drug interaction scores, chemical-drug interaction scores, cell-drug interaction scores, tissue-drug interaction scores, bacterium-drug interaction scores, fungus-drug interaction scores, and virus-drug interaction scores; and

wherein at least a portion of the database is downloaded to the POC device, accessed by the POC device or used by the server computer to generate the report based on the analysis of the test results data.

45. A method of evaluating a sample or an analyte comprising the steps of:

providing a point-of-care device comprising:

a housing,

a power supply disposed within the housing,

a memory disposed within the housing,

a user interface attached to or integrated into the housing,

one or more communication interfaces disposed within, attached to or integrated into the housing,

a test cartridge interface disposed within, attached to or integrated into the housing,

one or more detectors or sensors disposed within the test cartridge interface or the housing,

one or more processors disposed within the housing and communicably coupled to the memory, the user interface, the one or more communication interfaces,

the test cartridge interface and the one or more detectors or sensors;

receiving a test selection from the user interface;

determining whether a test cartridge connected to the test cartridge interface matches the test selection;

detect one or more properties of the sample or the analyte using the one or more detectors or sensors;

generating a test results data based on the one or more properties;

generate a report based on an analysis of the test results data;