**Bioanalytical Methods Available at the Bioanalytics, Metabolomics and**

**Pharmacokinetics (BMPK) Shared Resource of Roswell Park Comprehensive Cancer Center**

**From the discovery stage to preclinical research through clinical development, our bioanalytical laboratories are here to help you achieve your research objectives by delivering high quality results in a timely manner. Our experienced staff can develop and validate new bioanalytical methods using a variety of techniques to quantitate drug and metabolite concentrations in a variety of animal and human matrices (e.g., cell pellets, media, plasma, serum, cerebrospinal fluid (CSF), urine, and tissue). The following is a listing of our non-proprietary methods arranged by compound name. Validated methods are those whose acceptance criteria are consistent with FDA’s Bioanalytical Method Validation Guidance for Industry while qualified methods are discovery based methods that have undergone less stringent testing. Our overall goal is to help ensure that you meet your critical deadlines and advance your aims to the next level.**

| **Analyte(s)** | **Lower Limit of  Quantitation (LLOQ)** | **Calibration Range** | **Methodology** | **Status** | **Matrices** |
| --- | --- | --- | --- | --- | --- |
| **Androgens (5) Androstenedione Testosterone Dihydrotestosterone Dehydroepiandrosterone Androsterone** | **6.25 pg/mL 6.25 pg/mL 12.5 pg/mL 200 pg/mL 200 pg/mL** | **0.00625 - 3.75 ng/mL 0.00625 - 3.75 ng/mL 0.0125 - 7.50 ng/mL 0.200 - 7.50 ng/mL 0.200 - 7.50 ng/mL** | **LC-MS/MS** | **Validated** | **Mouse Serum Human Heparinized Plasma Human Serum** |
| **Calcitriol** | **10.0 ng/mL** | **10.0 - 1,000 ng/mL** | **LC-MS/MS** | **Validated** | **Drug Formulation** |
| **Carfilzomib** | **0.400 ng/mL** | **0.400 - 1,000 ng/mL** | **LC-MS/MS** | **Validated** | **Human Heparinized Plasma** |
| **Ceritinib** | **1.00 ng/mL** | **1.00 - 500 ng/mL** | **LC-MS/MS** | **Validated** | **Human Plasma** |
| **CFAK-C4** | **2.50 pg/mL** | **2.50 - 2,500 pg/mL** | **LC-MS/MS** | **Qualified** | **Dog Heparinized Plasma** |
| **CPT-11 (Irinotecan)** | **2.50 ng/mL** | **2.50 - 1,000 ng/mL** | **UPLC/Fluorescence** | **Qualified** | **Human Plasma** |
| **Cytarabine** | **1.00 ng/mL** | **1.00 - 1,000 ng/mL** | **LC-MS/MS** | **Qualified** | **Human Plasma** |
| **Docetaxel** | **0.200 ng/mL** | **0.200 - 400 ng/mL** | **LC-MS/MS** | **Validated** | **Human Plasma** |
| **Docetaxel Docetaxel M1 Docetaxel M2 Docetaxel M3 Docetaxel M4** | **5.00 ng/mL 5.00 ng/mL 5.00 ng/mL 5.00 ng/mL 7.50 ng/mL** | **5.00 - 1,000 ng/mL 5.00 - 1,000 ng/mL 5.00 - 1,000 ng/mL 5.00 - 1,000 ng/mL 7.50 - 1,500 ng/mL** | **LC-MS/MS** | **Qualified** | **Mouse Plasma Rat Plasma Dog Plasma Human Plasma** |
| **Dovitinib** | **2.00 ng/mL** | **2.00 - 1,000 ng/mL** | **LC-MS/MS** | **Qualified** | **Human Heparinized Plasma** |
| **Eicosanoids (7) Prostaglandin D2 Prostaglandin E2 13-Hydroxyoctadecadienoic acid 5-Hydroxyeicosatetraenoic acid 12-Hydroxyeicosatetraenoic acid 15-Hydroxyeicosatetraenoic acid Arachidonic Acid** | **1.00 ng/mL** | **1.00 - 400 ng/mL** | **LC-MS/MS** | **Qualified** | **Mouse Xenografts** |
| **Enterodiol Enterolactone** | **0.500 ng/mL 0.500 ng/mL** | **0.500 - 150 ng/mL 0.500 - 150 ng/mL** | **LC-MS/MS** | **Validated** | **Human Serum** |
| **Entinostat** | **0.500 ng/mL** | **0.500 - 250 ng/mL** | **LC-MS/MS** | **Qualified** | **Human Plasma** |
| **Enzalutamide N-Desmethyl Enzalutamide** | **10.0 ng/mL 10.0 ng/mL** | **10.0 - 20,000 ng/mL 10.0 - 20,000 ng/mL** | **LC-MS/MS** | **Validated** | **Human EDTA Plasma** |
| **Enzalutamide N-Desmethyl Enzalutamide** | **10.0 ng/mL 10.0 ng/mL** | **10.0 - 20,000 ng/mL 10.0 - 20,000 ng/mL** | **LC-MS/MS** | **Qualified** | **Woodchuck EDTA Plasma** |
| **Estrone 17ß-Estradiol** | **2.00 pg/mL 1.00 pg/mL** | **2.00 - 250 pg/mL 1.00 - 250 pg/mL** | **LC-MS/MS** | **Validated** | **Human Heparinized Plasma Human Serum** |
| **FL118** | **1.00 ng/mL** | **1.00 - 500 ng/mL** | **UPLC/Fluorescence** | **Qualified** | **Human Plasma** |
| **Gemcitabine dFdU** | **1.00 ng/mL 5.00 ng/mL** | **1.00 - 2,000 ng/mL 5.00 - 10,000 ng/mL** | **LC-MS/MS** | **Validated** | **Human Plasma** |
| **Gemcitabine dFdU Capecitabine 5-Fluorouracil 5-DFCR 5-DFUR** | **1.00 ng/mL 1.00 ng/mL 1.00 ng/mL 5.00 ng/mL 5.00 ng/mL 5.00 ng/mL** | **1.00 - 1,000 ng/mL 1.00 - 1,000 ng/mL 1.00 - 1,000 ng/mL 5.00 - 1,000 ng/mL 5.00 - 1,000 ng/mL 5.00 - 1,000 ng/mL** | **LC-MS/MS** | **Qualified** | **Human Plasma** |
| **Irinotecan (CPT-11)** | **2.50 ng/mL** | **2.50 - 1,000 ng/mL** | **UPLC/Fluorescence** | **Qualified** | **Human Plasma** |
| **JP-11646** | **1.00 ng/mL** | **1.00 - 500 ng/mL** | **LC-MS/MS** | **Validated** | **Mouse Plasma Rat Plasma Dog Plasma** |
| **Mannitol Lactulose 3-MGP** | **0.980 µg/mL 0.980 µg/mL 2.93 µg/mL** | **0.980 - 62.5 µg/mL 0.980 - 62.5 µg/mL 2.93 - 62.5 µg/mL** | **LC-MS/MS** | **Qualified** | **Human Plasma** |
| **Molybdenum** | **10.0 ng/mL** | **10.0 - 1,000 ng/mL** | **Atomic Absorption** | **Qualified** | **Human Plasma** |
| **Nicotine Cotinine Hydroxy Cotinine Cotinine Glucuronide Anatabine Atabasine** | **1.00 ng/mL 1.00 ng/mL 1.00 ng/mL 10.0 ng/mL 1.00 ng/mL 1.00 ng/mL** | **1.00 - 100 ng/mL 1.00 - 100 ng/mL 1.00 - 100 ng/mL 10.0 - 500 ng/mL 1.00 - 100 ng/mL 1.00 - 100 ng/mL** | **LC-MS/MS** | **Qualified** | **Human Urine** |
| **Nintedanib** | **0.500 ng/mL** | **0.500 - 250 ng/mL** | **LC-MS/MS** | **Validated** | **Human EDTA Plasma** |
| **Paclitaxel 6α-Hydroxy Paclitaxel** | **2.00 ng/mL 2.00 ng/mL** | **2.00 - 1,000 ng/mL 2.00 - 1,000 ng/mL** | **LC-MS/MS** | **Validated** | **Human Plasma** |
| **Pemetrexed** | **5.00 ng/mL** | **5.00 - 2,000 ng/mL** | **LC-MS/MS** | **Qualified** | **Human Plasma** |
| **Platinum** | **250 ng/mL** | **250 - 8,000 ng/mL** | **Atomic Absorption** | **Qualified** | **Drug Formulation Human Plasma** |
| **Rapamycin** | **1.25 ng/mL** | **1.25 - 100 ng/mL** | **LC-MS/MS** | **Validated** | **Human Plasma** |
| **Selenium** | **70.0 ng/mL** | **70.0 - 1,200 ng/mL** | **Atomic Absorption** | **Validated** | **Human Plasma** |
| **Sex Hormone Binding Globulin (SHBG)** | **2.00 nmol/L** | **2.00 - 250 nmol/L** | **Chemiluminescent microparticle immunoassay** | **Validated** | **Human Serum** |
| **SN-38 SN-38G** | **0.200 ng/mL 0.200 ng/mL** | **0.200 - 1,000 ng/mL** | **UPLC/Fluorescence** | **Qualified** | **Human Plasma** |
| **Sorafenib Sorafenib N-oxide** | **50.0 ng/mL 12.5 ng/mL** | **50.0 - 10,000 ng/mL 12.5 - 2,500 ng/mL** | **LC-MS/MS** | **Validated** | **Human Plasma** |
| **Sorafenib Sorafenib N-oxide** | **50.0 ng/mL 12.5 ng/mL** | **50.0 - 10,000 ng/mL 12.5 - 2,500 ng/mL** | **LC-MS/MS** | **Qualified** | **Woodchuck Plasma** |
| **(Z)-Tamoxifen (Z)-N-Desmethyltamoxifen (Z)-4-Endoxifen (Z)-4-Hydoxytamoxifen** | **1.00 ng/mL 1.00 ng/mL 0.500 ng/mL 0.250 ng/mL** | **1.00 - 400 ng/mL 1.00 - 400 ng/mL 0.500 - 200 ng/mL 0.250 - 100 ng/mL** | **LC-MS/MS** | **Validated** | **Human Plasma Human Breast Tissue** |
| **Tivozanib** | **0.500 ng/mL** | **0.500 - 150 ng/mL** | **LC-MS/MS** | **Validated** | **Human EDTA Plasma** |
| **Tryptophan Kynurenine** | **40.0 ng/mL 10.0 ng/mL** | **40.0 - 20,000 ng/mL 10.0 - 5,000 ng/mL** | **LC-MS/MS** | **Validated** | **Human Plasma** |
| **VEGFR2** | **80.0 pg/mL** | **80.0 - 5,000 pg/mL** | **ELISA** | **Validated** | **Human EDTA Plasma** |