

Available Assays

The Eicosanoid Core Laboratory is a Vanderbilt University Shared Resource designated for the analysis of oxidation products of arachidonic acid and other polyunsaturated fatty acids. These molecules include isoprostanes, prostaglandins, leukotrienes, epoxyeicosatetraenoic acids (EETs), and hydroxy- and di-hydroxy-eicosatetraenoic acids (20-HETE and DHETs), and their metabolites. The services available in the Core are listed in the Table below. All of the assays performed are validated highly precise, accurate, and sensitive mass spectrometric assays, many of which were developed by Core personnel.

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Analyte	Matrix
20-hydroxy-eicosatetraenoic acid (20-HETE)	Plasma, Tissues, Cells/Media
Di-hydroxy-eicosatetraenoic acids (DHETs)	Plasma, Tissues, Cells/Media
Epoxyeicosatetraenoic acids (EETs)	Plasma, Tissues, Cells/Media
F ₂ -Isoprostanes	Plasma, Urine, Tissues, Cells/Media, CSF, BAL
F ₂ -Isoprostane metabolite	Urine
F ₃ -Isoprostanes (from eicosapentaenoic acid)	Plasma, Urine, Tissues, Cells/Media, CSF, BAL
F ₄ -Isoprostanes/Neuroprostanes (from eicosapentaenoic acid)	Plasma, Urine, Tissues, Cells/Media, CSF, BAL
Isopurans	Plasma, Urine, Tissues, Cells/Media, CSF, BAL
Thromboxane B ₂	Serum
PGE ₂ metabolite	Urine
PGD ₂ metabolite	Urine
PGI ₂ (prostacyclin) metabolite	Urine
Thromboxane B ₂ metabolite	Urine
Leukotriene B ₄	Cells/Media
Leukotriene E ₄	Urine
Parent Prostaglandins (F, D, E, J, A, I, and thromboxane B ₂)	Tissues, Cells/Media, CSF, EBC, BAL