

Project Viva Biospecimen Assays – as of May 2025

Completed Assays

Assay	Participant	Medium	Results (N)
Not Time Specific			
GWAS	Mom	WBC	815
GWAS	Child	WBC	768

First Trimester			
Albumin	Mom	Plasma	1591
B12	Mom	Plasma	967
Creatinine	Mom	Plasma	1639
CRP (nested case-control)	Mom	Plasma	325
LINE1	Mom	WBC	914
Telomere length	Mom	WBC	937
mtDNA copy number	Mom	WBC	935
PFAS	Mom	Plasma	1645
Folate	Mom	Plasma	967
Metals/trace elements	Mom	RBC	1423
Thyroid Hormones (TSH, TPO, T3, T4)	Mom	Plasma	777
PFAS chemicals (16)	Mom	Plasma	198
Aluminum	Mom	RBC	20
Vanadium	Mom	RBC	20
Chromium	Mom	RBC	20
Manganese	Mom	RBC	20
Iron	Mom	RBC	20
Cobalt	Mom	RBC	20
Nickel	Mom	RBC	20
Copper	Mom	RBC	20
Zinc	Mom	RBC	20
Arsenic	Mom	RBC	20
Selenium	Mom	RBC	20
Strontium	Mom	RBC	20
Molybdenum	Mom	RBC	20
Silver	Mom	RBC	20
Cadmium	Mom	RBC	20
Tin	Mom	RBC	20
Antimony	Mom	RBC	20
Barium	Mom	RBC	20
Mercury	Mom	RBC	20
Thallium	Mom	RBC	20
Lead	Mom	RBC	20
Uranium	Mom	RBC	20

Second Trimester			
Adiponectin	Mom	Plasma	1540
Corticotropin-releasing hormone (CRH)	Mom	Plasma	1005

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Cortisol Sulfate	Mom	Plasma	69
Estriol	Mom	Plasma	71
Fatty acids (Hibbeln lab)	Mom	Plasma	811
Fatty acids (HSPH lab)	Mom	Plasma	265
Fructosamine	Mom	Plasma	1588
hsCRP	Mom	Plasma	953
Leptin	Mom	Plasma	1536
LINE1	Mom	WBC	922
Fatty acids (HSPH lab)	Mom	RBC	1551
Lead	Mom	RBC	951
Manganese	Mom	RBC	951
Mercury	Mom	RBC	1019
Selenium	Mom	RBC	982
Tocopherol Isoforms (Vitamin E)	Mom	Plasma	982
Vitamin D (25-OH) Automated	Mom	Plasma	1327
Vitamin D (25-OH) Manual	Mom	Plasma	1336

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Assay	Participant	Medium	Results (N)
Delivery			
16S bacterial microbiome sequencing [includes Proteobacteria abundance]	Cord	Plasma	27
16S bacterial microbiome sequencing with synthetic spike in [includes Proteobacteria abundance]	Cord	Plasma	358
Peptidoglycan Recognition Protein 1 (PGLYPR-1)	Cord	Plasma	358
5-OH-mC	Cord	WBC	511
Adiponectin	Cord	Plasma	880
Allele-specific DNA methylation of Igf2 and H19	Cord	WBC	96
Bile acids	Cord	Plasma	48
C-peptide	Cord	Plasma	970
Cortisol/Cortisone	Cord	Plasma	362
Cytokines (IL10, IL13, INF, TNF) - Allergen Stimulated	Cord	Supernatant	446
Cytokines (IL6, IL10, IL13, INF, TNF) – Baseline	Cord	Supernatant	446
Lymphocyte proliferation	Cord	WBC?	478
Fatty acids (Hibbeln lab)	Cord	Plasma	676
Fatty acids (HSPH lab)	Cord	Plasma	466
Genome-wide DNA methylation	Cord	WBC	485
hsCRP	Cord	Plasma	47
hsTnT	Cord	Plasma	48
IGF-1	Cord	Plasma	971
IGF-2	Cord	Plasma	971
IGFBP-3	Cord	Plasma	971
Insulin	Cord	Plasma	970
Leptin	Cord	Plasma	839
LINE1	Cord	WBC	557
Mercury	Cord	Plasma	17
Metabolomics	Cord	Plasma	126
Metabolomics (case-control study)	Cord	Plasma	52
mtDNA copy number	Cord	WBC	440
Perfluoroalkyl compounds (ECHO)	Cord	Plasma	189 (37 QC)
Pro-BNP	Cord	Plasma	50
sIL6R α	Cord	Plasma	358
sTNFR-II	Cord	Plasma	48
Telomere length	Cord	WBC	444
Vitamin D (25-OH) Automated	Cord	Plasma	888
Vitamin D (25-OH) Manual	Cord	Plasma	883
Mercury	Mom	Hair	146
T4	Child	Heel stick Blood Spot	512

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Assay	Participant	Medium	Results (N)
Early Childhood (Age 3)			
Adiponectin	Mom	Plasma	586
AMH	Mom	Plasma	800
CRP	Mom	Plasma	585
Free testosterone	Mom	Plasma	805
Ghrelin	Mom	Plasma	184
Glucose	Mom	Plasma	181
hbA1c	Mom	RBC	580
HDL cholesterol	Mom	Plasma	181
hsIL-6	Mom	Plasma	585
Insulin	Mom	Plasma	181
LDL cholesterol	Mom	Plasma	181
Leptin	Mom	Plasma	586
Lipids	Mom	Plasma	181
PYY	Mom	Plasma	184
Sex hormone binding globulin (SHBG)	Mom	Plasma	586
Total cholesterol	Mom	Plasma	181
Total Testosterone	Mom	Plasma	805
Triglycerides	Mom	Plasma	181
Adiponectin	Child	Plasma	730
Complete Blood Count (CBC)	Child	WBC	793
Cytokines (IFNg, IL6, IL10, IL13, TNFa)	Child	Plasma	175
Eosinophil count	Child	WBC	744
Fatty acids	Child	RBC	215
Genome-wide blood DNA methylation	Child	WBC	120
IgE (allergy-specific)	Child	Plasma	765
IgE (total)	Child	Plasma	765
Lead (clinical)	Child	Whole Blood	502
Leptin	Child	Plasma	729
miRNA	Child	WBC	139
Metals (17)	Child	RBC	399
Tocopherol Isoforms (Vitamin E)	Child	Plasma	506
Tocopherol Isoforms (Vitamin E) - Hemolyzed	Child	Plasma	150
Vitamin D (25-OH)	Child	Plasma	745
Dust Allergens (Blag2, Derf1, Feld1)	Home	Dust	296
Aluminum	Mom	RBC	396
Vanadium	Mom	RBC	396
Chromium	Mom	RBC	396
Manganese	Mom	RBC	396
Iron	Mom	RBC	396
Cobalt	Mom	RBC	396
Nickel	Mom	RBC	396
Copper	Mom	RBC	396
Zinc	Mom	RBC	396
Arsenic	Mom	RBC	396
Selenium	Mom	RBC	396

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Strontium	Mom	RBC	396
Molybdenum	Mom	RBC	396
Silver	Mom	RBC	396
Cadmium	Mom	RBC	396
Tin	Mom	RBC	396
Antimony	Mom	RBC	396
Barium	Mom	RBC	396
Mercury	Mom	RBC	396
Thallium	Mom	RBC	396
Lead	Mom	RBC	396
Uranium	Mom	RBC	396
IgE to major food allergens	Child	Plasma	287

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Assay	Participant	Medium	Results (N)
Mid-Childhood (Age 7)			
Adiponectin (CM lab)	Child	Plasma	615
ALT	Child	Plasma	635
Bile acids	Child	Plasma	48
Cortisol	Child	Hair	914
DHEA	Child	Hair	884
Genome-wide DNA methylation	Child	WBC	460
Glucose (GB lab, 579 fasting)	Child	Plasma	596
HDL Cholesterol	Child	Plasma	630
hs-CRP (CM lab)	Child	Plasma	615
hs-CRP (GB lab)	Child	Plasma	635
IgE (allergy-specific)	Child	Plasma	616
IgE (total)	Child	Plasma	616
IGF-1 (CM lab)	Child	Plasma	648
IGF-1 (GB lab)	Child	Plasma	640
IGFBP-3 (CM lab)	Child	Plasma	648
IGFBP-3 (GB lab)	Child	Plasma	640
IL-6 (CM lab)	Child	Plasma	615
Insulin (GB lab, 608 fasting)	Child	Plasma	648
Insulin (CM lab, 608 fasting)	Child	Plasma	648
Leptin (CM lab)	Child	Plasma	615
Metabolomics	Child	Plasma	262
mtDNA	Child	WBC	44
PFAS	Child	Plasma	653
sTNF-R2 (CM lab)	Child	Plasma	615
Total Cholesterol	Child	Plasma	630
Triglycerides	Child	Plasma	630
Phthalate Metabolites	Child	Urine	830
Specific Gravity	Child	Urine	830
Vitamin D (25-OH)	Child	Plasma	655
Vitamin D gene polymorphisms	Child	Plasma	814
Metals/trace elements	Child	Baby Teeth	210
Cystatin-C	Child	Plasma	73
Creatinine	Child	Plasma	73

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Assay	Participant	Results (N)	
Early Teen (Age 12)			
Adiponectin	Child	Plasma	688
ALT	Child	Plasma	687
C peptide	Child	Plasma	687
Cortisol	Child	Hair	785
DHEA	Child	Hair	785
Genome wide DNA Methylation	Child	WBC	664
Glucose	Child	Plasma	625
HDL Cholesterol	Child	Plasma	688
hsCRP	Child	Plasma	667
IL-6	Child	Plasma	685
IgE	Child	Plasma	647
IGF-1	Child	Plasma	688
IGF-BP3	Child	Plasma	688
IgG4	Child	Plasma	210
Insulin	Child	Plasma	688
Leptin	Child	Plasma	688
Metabolomics	Child	Plasma	560
Genome-wide DNA methylation	Child	Nasal cells	547
sTNFR-II	Child	Plasma	688
Total Cholesterol	Child	Plasma	688
Triglycerides	Child	Plasma	688
Uric acid	Child	Plasma	688

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Assay	Participant	Results (N)	
Mid-life/Mid-teen (Age 17)			
Adiponectin	Mom	Plasma	560
AMH	Mom	Plasma	560
Beta-xlaps	Mom	Plasma	560
Fasting insulin	Mom	Plasma	560
Glucose – 2 hr post 75g	Mom	Plasma	207
Glucose – Fasting	Mom	Plasma	527
HDL cholesterol	Mom	Plasma	560
Hemoglobin A1c	Mom	RBC	556
hsCRP	Mom	Plasma	560
IL-6	Mom	Plasma	560
Leptin	Mom	Plasma	560
PINP	Mom	Plasma	560
Total cholesterol	Mom	Plasma	560
Triglycerides	Mom	Plasma	560
PFAS chemicals (16)	Mom	Plasma	555
Adiponectin	Child	Plasma	522
ALT	Child	Plasma	522
CBC	Child	WBC	506
Creatinine	Child	Plasma	505
Cystatin-C	Child	Plasma	505
Cortisol	Child	Hair	606
Cortisone	Child	Hair	616
DHEA	Child	Hair	615
Testosterone	Child	Hair	615
Progesterone	Child	Hair	610
Glucose – Fasting	Child	Plasma	500
HDL Cholesterol	Child	Plasma	522
Hemoglobin A1c	Child	RBC	520
hsCRP	Child	Plasma	522
IGF-1	Child	Plasma	522
IGF-BP3	Child	Plasma	522
IL-6	Child	Plasma	522
Insulin	Child	Plasma	522
Leptin	Child	Plasma	522
Metabolomics	Child	Plasma	503
sTNFr-II	Child	Plasma	522
Total Cholesterol	Child	Plasma	522
Triglycerides	Child	Plasma	522

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Assay	Participant	Results (N)	
The Women's Health Visit 1 (~20-23 years postpartum)			
HDL Cholesterol	Mom	Plasma	47
Total Cholesterol	Mom	Plasma	47
Triglycerides	Mom	Plasma	47
CTX-1	Mom	Plasma	47
Fasting Insulin	Mom	Plasma	47
hsCRP	Mom	Plasma	47
Leptin	Mom	Plasma	47
Adiponectin	Mom	Plasma	47
IL6	Mom	Plasma	47
AMH	Mom	Plasma	47
HbA1c	Mom	RBC	24

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[Funded / Planned Assays](#)

CHILD PARTICIPANTS

Assay	Collection	Medium	Sample Size (N)	Funded Grant	Status
IgG4 to major food allergens	Early childhood (Age 3)	Plasma	62	ECHO	Funded, in process
Immunoglobulins	Mid-Teen (Age 17)	Plasma	477	ECHO	Funded, in process
Proteomics	Mother at Y3	Plasma	176	Zhang AHA Y2	Funded, in process