

Our lab develops in-house assays for some analytes, and adapts commercial kits for off-label uses. Some examples of the assays that have been in routine use are listed below. The lab is equipped to use most commercial microtiter plate-based assay kits, Quansys Biosciences multiplex kits, and other methods like line immunoassays, Western blot kits, etc.

ELISA/chemiluminescent immunoassay	HUMAN				BABOON		
	urine	saliva	serum/ plasma	DBS	urine	saliva	serum/ plasma
alpha-1-acid glycoprotein (AGP)			X	X			
anti-Mullerian hormone (AMH)			X				X
beta luteinizing hormone (bLH)	X						
intact luteinizing hormone (LH)	X		X	X			
cortisol	X	X	X	X	X	X	X
creatinine	X				X		
c-reactive protein (CRP)			X	X			
Epstein Barr virus (EBV)			X	X			
estradiol (E2)		X	X				X
estrone conjugates (E1C; includes E1, E1G, E1S)	X				X		
estrone-3-glucuronide (E1G)	X						
follicle stimulating hormone (FSH)	X		X		X		X
ghrelin	X		X	X			
human chorionic gonadotropin (hCG)	X						
human growth hormone (hGH)							
Immunoglobulin E			X	X			
inhibin B			X				X
insulin-like growth factor 1 (IGF-1)			X				
leptin			X				
pregnanediol glucuronide (PDG)	X				X		
progesterone (P4)		X	X	X			X
retinol binding protein (RBP)			X	X			
salivary alpha amylase		X					
sex hormone binding globulin (SHBG)			X	X			
soluble transferrin receptor (sTfR)			X	X			
testosterone (T)	X	X	X	X			X

Point-Of-Care
Portable instruments using capillary whole blood to return results in 10 minutes or less
glycosylated hemoglobin (HbA1c)
total cholesterol
LDL cholesterol
HDL cholesterol
triglycerides
glucose
white blood cells (WBC)
hemoglobin

Other methods	
Hair cortisol	Enzyme immunoassay
Cholesterol in serum or plasma (DBS under development)	Amplex Red fluorometric method
Micronutrient multiplex panel (AGP, CRP, Ferritin, sTfR, RBP)	Quansys Biosciences array

## Selected lab methods publications

1. Brindle, Eleanor, Masako Fujita, Jane B Shofer, and Kathleen A O'Connor. 2010. "Serum, Plasma, and Dried Blood Spot High-Sensitivity C-Reactive Protein Enzyme Immunoassay for Population Research." *Journal of Immunological Methods* 362 (1-2): 112–20. doi:10.1016/j.jim.2010.09.014.
2. Brindle, Eleanor, Rebecca C Miller, Jane B Shofer, Nancy a Klein, Michael R Soules, and Kathleen A O'Connor. 2006. "Urinary Beta-Luteinizing Hormone and Beta-Follicle Stimulating Hormone Immunoenzymometric Assays for Population Research." *Clinical Biochemistry* 39 (11): 1071–79. doi:10.1016/j.clinbiochem.2006.08.009.
3. Brindle, Eleanor, Kathleen A O'Connor, and Dean A Garrett. 2014. "DBS in General Human Health Studies." In *Dried Blood Spots: Applications and Techniques*, edited by Wenkui Li and Mike S Lee, 114–29. John Wiley & Sons.
4. Brindle, Eleanor, Daniel Stevens, Christopher Crudder, Carol E. Levin, Dean Garrett, Chris Lyman, and David S. Boyle. 2014. "A Multiplex Immunoassay Method for Simultaneous Quantification of Iron, Vitamin A and Inflammation Status Markers." *PLoS ONE* 9 (12): e115164. doi:10.1371/journal.pone.0115164.
5. Miller, Rebecca C, Eleanor Brindle, Darryl J Holman, Jane B Shofer, Nancy a Klein, Michael R Soules, and Kathleen A O'Connor. 2004. "Comparison of Specific Gravity and Creatinine for Normalizing Urinary Reproductive Hormone Concentrations." *Clinical Chemistry* 50 (5): 924–32. doi:10.1373/clinchem.2004.032292.
6. O'Connor, Kathleen A, Eleanor Brindle, Darryl J Holman, Nancy a Klein, Michael R Soules, Kenneth L Campbell, Fortune Kohen, et al. 2003. "Urinary Estrone Conjugate and Pregnanediol 3-Glucuronide Enzyme Immunoassays for Population Research." *Clinical Chemistry* 49 (7): 1139–48. <http://www.ncbi.nlm.nih.gov/pubmed/12816911>.
7. Salvante, Katrina G, Eleanor Brindle, Daniel McConnell, Kathleen A O'Connor, and Pablo A Nepomnaschy. 2012. "Validation of a New Multiplex Assay against Individual Immunoassays for the Quantification of Reproductive, Stress, and Energetic Metabolism Biomarkers in Urine Specimens." *American Journal of Human Biology* 86 (November): 81–86. doi:10.1002/ajhb.21229.