

### Multicenter Osteoarthritis Study (MOST) Bio-assay Data (May 2023)

	Study Title (Dataset, Investigators)	Assays	Sampling plan (type of case)	N ppts	Visit Biospecimens from
1	Nutritional Risk Factors for Knee OA (MOSTV0NUTR)	Vit C ; Vit D; Vit E; Vit A; PTH	1. Random sample of ppts eligible for WKROA progression at BL and with BL-30m MRI WORMs 2. Multiple case/control samples of ppts with BL blood sample: <ul style="list-style-type: none"> <li>• Incident SxKOA at 15m with BL-15m MRI WORMs;</li> <li>• Incident WKROA at 30m with BL-30m MRI WORMs;</li> </ul> 3. Supplemental sample of ppts included in the Laxity MRI Study (paired 1.5T MRI at BL and 30m) or Gadolinium Study (30m MRI1.5T)	1067 C; 1389 D; 1372 E & A; 1383 PTH	Baseline
	Association of Vitamin K with MRI Features of Osteoarthritis: Cartilage and Osteophytes (MOSTV0NUTR; AS05-06; T Neogi)	Vit K	All ppts with residual serum sample available from vitamin D assay in Study 1 above (except for incident SxOA at 15m)	1179	Baseline
	Ethnic Differences in the Role of Vitamin D to Achieve & Maintain Musculoskeletal Health (MOSTV0NUTR; AS06-01; J Curtis)	Vit D, PTH	Additional batch included in the records above (selected by PI)	434	Baseline
2	Inflammation and Knee Osteoarthritis (MOSTAS0501_Bioassay; B Lewis; 2008; pilot)	TNFa, Adiponectin Total, CRP, Ox LDL, Leptin, MCP-1, PAI-1, MMP-3, TIMP-1, ICAM-1, COMP, IGF-1, IGFBP-3, TGFb, Estradiol, SHBG, DHEA-s	Random sample of white females with BL and 30m blood samples.	100	Baseline/30m
	(MOSTAS0501_Bioassay; B Lewis; 2010; main study)	TNFa, Adiponectin Total, CRP, Ox LDL, Leptin, MMP-3, TIMP-1, ICAM-1, COMP	All ppts with BL and 30m blood samples, BL DNA extraction process and with consent for genetic analyses	1076	Baseline/30m
3	The Association of n-3 Fatty Acids with Symptoms and Synovial Thickening in Knee Osteoarthritis (MOSTAS0503_Bioassay; K Baker)	Phospholipid n-6 and n-3 PUFAs, arachidonic acid	Selected ppts enrolled in AS04-07 (Gadolinium study)	500	30m
4	Nerve Growth Factor Serum Levels and Pain and Radiographic Severity of Knee Osteoarthritis (MOSTAS1002_Bioassay; B Wise)	NGF	Multiple case/control samples of ppts with BL TFROA and with BL and 30m blood samples <ul style="list-style-type: none"> <li>• Bilateral TFROA and BL frequent pain either knee</li> <li>• Bilateral TFROA and bilateral x-ray progressor at 30m and bilateral x-ray nonprogressor at 30m</li> <li>• Unilateral TFROA and unilateral x-ray progressor at 30m and x-ray nonprogressor at 30m</li> </ul>	337	Baseline/30m
5	Association of Central Sensitization with Pain Post-TKR: (MOSTAS1007_Bioassay; T Neogi)	Leptin, Adiponectin, TNFa	Case/control sample of ppts with incident TKR and plasma sample prior to TKR: <ul style="list-style-type: none"> <li>• TKR at 30m with BL plasma</li> <li>• TKR at 60m with 30m plasma</li> <li>• TKR at 60m with 60m plasma</li> <li>• TKR at 84m with 60m plasma</li> <li>• No TKR by 60m with 60m plasma (750 random controls)</li> </ul>	1121	Baseline/ 30m/60m

6	Hyperglycemia and Osteoarthritis (MOSTAS1102_Bioassay; A Schwartz, N Lane)	Glucose, Insulin	Random sample of ppts eligible for incident TFROA in both knees at BL and at least one follow up visit by 84m	999	Baseline
7	Obesity and Knee Osteoarthritis: Understanding the Link (MOSTAS1201_Bioassay; D Misra)	Leptin	Sample of ppts eligible for incident TFROA in both knees at BL, with a knee x-ray OA reading at 30m and/or 60m and with: <ul style="list-style-type: none"> <li>•BL serum only</li> <li>•BL and 30m serum</li> </ul>	691	Baseline/30m
8	The Predictive Values of Novel Plasma Metabolic Markers for Early Knee Osteoarthritis Changes (MOSTAS1403_Bioassay; G Zhai)	Metabolite assays: Amino acids, biogenic amines; acylcarnitines; glycerophospholipids; sphingolipids. Total of 156 metabolites	Multiple knee OA case/control samples of ppts with BL blood samples <ul style="list-style-type: none"> <li>• Incident WKROA at 30m/60m and controls</li> <li>• Incident SxTFOA at 30m/60m and controls</li> <li>• WKROA progressor at 30m/60m and non-progressors</li> <li>• Knees with BL early OA (KL 0-1 and frequent knee pain) and MRI WORMs BL-60m-84m: Case knees have cartilage lesions or meniscus damage or BMLs; control knees have none of these lesions.</li> </ul>	1246	Baseline
9	Fat, Fiber and Osteoarthritis (MOSTAS1406_Bioassay; D. Felson, D. Misra)	Magnesium, lipid profile, fatty acids, alkylresorcinol, magnesium	Multiple knee OA case/control samples of ppts with BL blood samples <ul style="list-style-type: none"> <li>• Incident WKROA at 15m/30m/60m and controls</li> <li>• Incident SxTFOA at 15m/30m/60m and controls</li> </ul>	994	Baseline
10	Magnesium and Chondrocalcinosis in Osteoarthritis: the Multicenter Osteoarthritis Study (MOSTAS1406mg_bioassay; D. Felson, D. Misra)	Magnesium	Multiple knee chondrocalcinosis case/control samples of ppts with BL blood samples <ul style="list-style-type: none"> <li>• Incident chondrocalcinosis at 30m/60m and controls</li> <li>• Incident Sx chondrocalcinosis at 30m/60m and controls</li> </ul>	215	Baseline
11	Fat and Osteoarthritis – pilot study (MOSTAS1406pilot_bioassay; D. Felson, D. Misra)	Leptin, sLeptin Receptor, HMW Adiponectin, Visfatin, TNFa, IL-6, SAA	75 cases / 75 controls	150	Baseline
12	Fat and Osteoarthritis – SxOA study (MOSTAS1406SX_bioassay; D. Felson, D. Misra)	Total Adiponectin & High Molecular Wt. Adiponectin	430 Sx OA cases / 1026 controls	1456	Baseline

Table 2. Summary Assays performed by clinic visit and sex/gender.

	V0=Baseline		V2=30-months		V3=60-months		Total records (with overlap)
	Female	Male	Female	Male	Female	Male	
<b>Total records</b>	1602	1079	711	508	555	380	4835
<b>By study:</b>							
MOSTV0NUTR	1131	695					1826
MOSTAS0501	687	487	687	487			2348
MOSTAS0503			247	253			500
MOSTAS1002	203	134	203	134			674
MOSTAS1007	94	40	35	17	555	380	1121
MOSTAS1102	580	419					999
MOSTAS1201	432	258	59	14			763
MOSTAS1403	776	470					1246
MOSTAS1406	588	406	.	.	.	.	994
MOSTAS1406mg	132	83	.	.	.	.	215
MOSTAS1406pilot	81	69	.	.	.	.	150
MOSTAS1406SX	867	589	.	.	.	.	1456