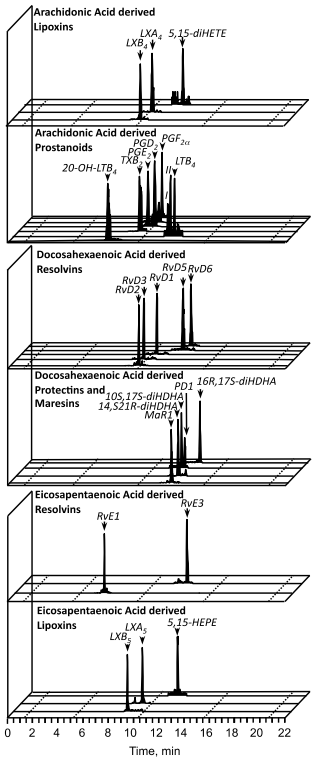
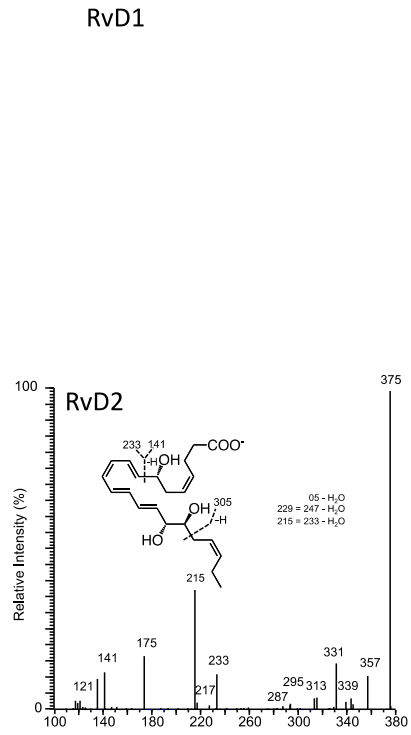
A



B



C

DHA Bioactive Metabolome	Spleen			Bone Marrow			
RvD1	1.8	±	0.6	1.5	±	0.7	
RvD2	0.0	±	0.0	10.2	±	2.8	###
RvD3	0.6	±	0.1	11.6	±	2.2	###
RvD5	1.5	±	0.7	5.5	±	1.4	##
RvD6	2.8	±	1.9	6.9	±	4.1	
PD1	1.8	±	1.3	0.7	±	0.2	
10S,17S-diHDHA	2.2	±	1.2	8.4	±	4.0	
16,17S-diHDHA	3.7	±	0.7	14.5	±	5.8	##
MaR1	0.2	±	0.1	0.7	±	0.3	
14S,21-diHDHA	0.9	±	0.3	7.0	±	2.1	###
EPA Bioactive Metabolome							
RvE1	0.2	±	0.2	11.1	±	4.4	##
RvE2	0.0	±	0.0	0.0	±	0.0	
RvE3	5.3	±	4.4	6.2	±	2.3	
LXA_5	1.5	±	0.2	11.2	±	4.8	
LXB_5	9.6	±	3.9	4.3	±	3.1	
5,15-diHEPE	0.5	±	0.2	1.3	±	0.8	
AA Bioactive Metabolome							
LXA_4	2.9	±	0.7	32.2	±	6.5	###
LXB_4	49.5	±	8.1	284.9	±	30.8	###
5,15-diHETE	1.4	±	0.4	11.4	±	3.9	##
LTB_4	34.2	±	14.4	57.6	±	14.7	
20-OH-LTB_4	0.4	±	0.3	4.4	±	1.7	##
PGD_2	12.1	±	4.6	792.7	±	153.0	###
PGE_2	24.0	±	9.1	764.3	±	128.3	###
$PGF_{2\alpha}$	5.8	±	2.7	290.1	±	44.2	###
TXB_2	50.8	±	20.8	195.4	±	53.2	##

D

DHA Bioactive Metabolome	Vehicle			PTH			
RvD1	0.8	±	0.4	6.2	±	2.2	###
RvD2	5.3	±	1.5	23.7	±	13.7	##
RvD3	6.0	±	1.2	22.4	±	7.4	###
RvD5	2.8	±	0.7	3.7	±	1.1	
RvD6	3.6	±	2.1	6.0	±	4.3	
PD1	0.4	±	0.1	0.4	±	0.3	
10S,17S-diHDHA	4.4	±	2.1	7.3	±	2.6	
16,17S-diHDHA	7.5	±	3.0	8.6	±	4.3	
MaR1	0.4	±	0.2	0.3	±	0.4	
14S,21-diHDHA	3.6	±	1.1	6.7	±	2.9	#
EPA Bioactive Metabolome							
RvE1	5.8	±	2.3	9.6	±	2.5	
RvE2	0.0	±	0.0	0.0	±	0.0	
RvE3	3.2	±	1.2	21.7	±	8.9	###
LXA_5	5.8	±	2.5	12.5	±	4.9	#
LXB_5	2.2	±	1.6	3.4	±	2.6	
5,15-diHEPE	0.7	±	0.4	1.8	±	1.4	
AA Bioactive Metabolome							
LXA_4	16.7	±	3.4	50.1	±	13.3	###
LXB_4	147.6	±	16.0	214.0	±	64.0	#
5,15-diHETE	5.9	±	2.0	7.9	±	2.7	
LTB_4	29.8	±	7.6	27.8	±	14.8	
20-OH-LTB_4	2.3	±	0.9	3.7	±	3.7	
PGD_2	410.6	±	79.3	448.8	±	123.6	
PGE_2	395.9	±	66.5	425.2	±	95.5	
$PGF_{2\alpha}$	150.3	±	22.9	154.4	±	20.8	
TXB_2	101.2	±	27.6	102.5	±	26.4	

Supplemental Figure 1: Pro-resolving lipid mediator levels are found with their bioactive range in hematopoietic tissues of unchallenged mice:regulation by PTH. Bone marrows and spleens were collected from unchallenged mice (A-C) or (D) from bone marrows after mice were administered vehicle/control (CT) or PTH (50 mg/kg),2h later femurs and tibias collected and snap frozen. Lipid mediator levels were assessed following solid phase extraction by LC-MS-MS based lipid mediator metabololipidomoics (see methods for details). (A) Representative MRM traces for the identified lipid mediators in murine self-resolving exudates. (B) Accompanying MS/MS spectra used for identification. (C,D) Individual bioactive lipid mediator and precursor/pathway markers at the where: Q1, M-H (parent ion); and Q3, diagnostic ion in the MS-MS (daughter ion) along with mean ± SEM values for each of the mediators. Results are expressed in pg/1x10^8 cells. The detection limit was ~ 1 pg. Results for C are mean ± SEM. n= 5 mice; D n= 8-9 mice #p<0.05, ##p<0.01, ###p<0.001 vs bone marrow or Vehicle treated mice lipid mediator profiles.

Supplemental Videos: Video 1) Video of murine bone marrow macrophages (Green BIODIPY label) phagocytosing apoptotic osteoblasts (Cell Tracker orange label) over a 24hr period, and Videos 2-5) 4 videos in 3D movie format of Z stack images from co-incubation of apoptotic osteoblasts (Red CMPTX label) and bone marrow macrophages (Green BIODIPY label) and corresponding to static images in Figure 3B.