

3C – Venular endothelial cells stimulated with TNF α , IL-1 β , and IFN γ

Markers: CCL2/MCP-1, CD106/VCAM-1, CD141/Thrombomodulin, CD142/Tissue Factor, CD54/ICAM-1, CD62E/E-Selectin, CD87/uPAR, CXCL8/IL-8, CXCL9/MIG, HLA-DR, Proliferation, SRB

4H – Venular endothelial cells stimulated with IL-4 and Histamine

Markers: CCL2/MCP-1, CCL26/Eotaxin-3, CD106/VCAM-1, CD62P/P-selectin, CD87/uPAR, SRB, VEGFR2

LPS – Venular endothelial cells and PBMCs stimulated with TLR4 ligand

Markers: CCL2/MCP-1, CD106/VCAM-1, CD141/Thrombomodulin, CD142/Tissue Factor, CD40, CD62E/E-Selectin, CD69, CXCL8/IL-8, IL-1 α , M-CSF, sPGE2, SRB, sTNF- α

SAG – Venular endothelial cells and PBMCs stimulated with TCR ligands

Markers: CCL2/MCP-1, CD38, CD40, CD62E/E-Selectin, CD69, CXCL8/IL-8, CXCL9/MIG, PBMC Cytotoxicity, Proliferation, SRB

BT – PBMCs and B cells stimulated with α -IgM and TCR ligands

Markers: B cell Proliferation, PBMC Cytotoxicity, Secreted IgG, sIL-17A, sIL-17F, sIL-2, sIL-6, sTNF- α

BF4T – Bronchial epithelial cells and dermal fibroblasts stimulated with IL-4 and TNF α

Markers: CCL2/MCP-1, CCL26/Eotaxin-3, CD106/VCAM-1, CD54/ICAM-1, CD90, CXCL8/IL-8, IL-1 α , Keratin 8/18, MMP-1, MMP-3, MMP-9, PAI-I, SRB, tPA, uPA

BE3C – Bronchial epithelial cells stimulated with IL-1 β , TNF α , and IFN γ

Markers: CD54/ICAM-1, CD87/uPAR, CXCL10/IP-10, CXCL11/I-TAC, CXCL8/IL-8, CXCL9/MIG, EGFR, HLA-DR, IL-1 α , Keratin 8/18, MMP-1, MMP-9, PAI-I, SRB, tPA, uPA

CASM3C – Coronary artery smooth muscle cells stimulated with IL-1 β , TNF α , and IFN γ

Markers: CCL2/MCP-1, CD106/VCAM-1, CD141/Thrombomodulin, CD142/Tissue Factor, CD87/uPAR, CXCL8/IL-8, CXCL9/MIG, HLA-DR, IL-6, LDLR, M-CSF, PAI-I, Proliferation, Serum Amyloid A, SRB

HDF3CGF – Dermal fibroblasts stimulated with IFN γ , TNF α , IL-1 β , EGF, bFGF, and PDGF-BB

Markers: CCL2/MCP-1, CD106/VCAM-1, CD54/ICAM-1, Collagen I, Collagen III, CXCL10/IP-10, CXCL11/I-TAC, CXCL8/IL-8, CXCL9/MIG, EGFR, M-CSF, MMP-1, PAI-I, Proliferation_72hr, SRB, TIMP-1, TIMP-2

KF3CT – Keratinocytes and dermal fibroblasts stimulated with IL-1 β , IFN γ , TGF β , and TNF α

Markers: CCL2/MCP-1, CD54/ICAM-1, CXCL10/IP-10, CXCL8/IL-8, CXCL9/MIG, IL-1 α , MMP-9, PAI-I, SRB, TIMP-2, uPA

MyoF – Lung fibroblasts stimulated with TGF β , and TNF α

Markers: α -SM Actin, bFGF, CD106/VCAM-1, Collagen I, Collagen III, Collagen IV, CXCL8/IL-8, Decorin, MMP-1, PAI-I, SRB, TIMP-1

/Mphg – Macrophages and venular endothelial cells stimulated with TLR2 ligand

Markers: CCL2/MCP-1, CCL3/MIP-1 α , CD106/VCAM-1, CD40, CD62E/E-Selectin, CD69, CXCL8/IL-8, IL-1 α , M-CSF, sIL-10, SRB, SRB-Mphg

Additional file 2 – Summary of BioMAP® Diversity PLUS® Panel cellular models

Table summarising the cell types and stimulation as well as list of biomarkers assessed in each of the 12 cellular models on the BioMAP® Diversity PLUS® Platform.

<i>S. officinalis</i> extract dose (µg/ml)	Database match	BioMAP Z-standard	Pearson's Score	Mechanism class
20	Chlorquinaldol (1.1µM)	13.990	0.822	Antimicrobial agent
20	Sertaconazole Nitrate (3.3µM)	12.883	0.789	Antifungal agent
20	Butamben (26µM)	11.795	0.837	Anaesthetic agent
10	S31-201 (10µM)	8.992	0.638	STAT3 inhibitor
10	ZM449829 (3.3µM)	8.872	0.632	JAK inhibitor
10	Caffeic acid (28µM)	8.743	0.724	15-Lipoxygenase inhibitor
5	Caffeic acid (28µM)	6.701	0.606	15-Lipoxygenase inhibitor
5	Coffee extract (450µg/ml)	6.401	0.487	Coffee Extract
5	S31-201 (10µM)	6.117	0.473	STAT3 inhibitor
2.5	Orphenadrine Citrate (3.3µM)	6.886	0.517	Muscle Relaxant
2.5	Ethoxzolamide (30µM)	6.234	0.476	Carbonic Anhydrase Inhibitor
2.5	Acitretin (30µM)	5.845	0.462	Retinoid

Additional file 2 – Table of BioMAP database matches for *S. officinalis* extract

Table summarising the top matching profile hits for the sage extract against the database of treatments run across the BioMAP® Diversity PLUS® platform.