

Table S1: Overview of biomarkers and their function

Biomarker (abbreviation)	Function
25-hydroxy-cholecalciferol (25(OH)D)	25-Hydroxyvitamin D3 Modulation of periodontal inflammation
8-hydroxy-2'-deoxyguanosine (8-OHdG)	Biomarker for oxidative stress and DNA-damage
A proliferation-inducing ligand (APRIL)	Member of TNF-superfamily Immune system development and signaling
Aldehyde dehydrogenase (ALDH)	Enzymes for oxidation of aldehydes Protects oral cavity from aldehydes
Annexin-1	Inhibits innate immune cells and promotes T-cell activation
B-cell activating factor (BAFF)	Member of TNF-superfamily Proliferation and differentiation of B cells
C-reactive protein (CRP)	Acute phase protein Activation of complement system
Cystatins	Protease inhibitors Regulate tissue-destructive protease activities in the oral cavity Regulate complement activation Protective effect under inflammatory conditions
Defensins (human beta defensins (hBD-1, -2, -3); human neutrophil peptides (HNP)-1)	Antimicrobial peptides Form pores and trigger lysis in bacteria Immune signaling, chemotactic to T-cells
Extracellular vesicle-CD63+	Surface marker CD63+ containing extracellular vesicles Intercellular communication Proinflammatory
Glutathion peroxidase (GPx)	Antioxidant enzyme protecting tissues against oxidative damage
Interleukin (IL)-1α	Proinflammatory cytokine
IL-1β	Proinflammatory cytokine Stimulator of prostaglandin synthesis Role in physiologic process of parturition
IL-6	Proinflammatory cytokine Stimulation of acute phase protein and PGE2 synthesis
IL-6sR	Proinflammatory cytokine
IL-8	Proinflammatory chemokine Angiogenesis Cleavage of MMPs Tissue damage
IL-10	Anti-inflammatory cytokine

	Inhibition of proinflammatory cytokines
IL-17	Proinflammatory cytokine Increases TNF- α activity Stimulator of prostaglandin synthesis
IL-33	Cytokine Induces helper T-cells, mast cells, eosinophils
INF-γ	Proinflammatory cytokine Innate and adaptive immunity Activates macrophages
Lactoferrin	Antimicrobial protein
Leptin	Signaling molecule Modulates proliferation, protein synthesis
Lysozyme	Antimicrobial protein
Malondialdehyde (MDA)	Lipid peroxidation product, biomarker for oxidative stress
Matrix-metalloproteinase 2 (MMP-2)	Gelatinase Degradation of extracellular matrix, tissue remodeling
MMP-8	Collagenase Degradation of extracellular matrix, tissue remodeling
MMP-9	Gelatinase Degradation of extracellular matrix, tissue remodeling
Monocyte chemoattractant protein-1 (MCP-1)	Proinflammatory cytokine
Myeloperoxidase (MPO)	Lysosomal antimicrobial enzyme secreted by neutrophils in inflammation Formation of Neutrophil Extracellular Traps (NETs)
N-acetyl-β-D-hexosaminidase (HEX)	Salivary exoglycosidase Degradation of oligosaccharide chains in organogenesis, growth and normal tissue turnover
Neutrophil elastase (NE)	Antimicrobial protease secreted by neutrophils in inflammation Formation of Neutrophil Extracellular Traps (NETs)
Osteoprotegerin (OPG)	Member of TNF-superfamily Cytokine receptor Immune system development and signaling
Placental alkaline phosphatase (PLAP)	Allosteric enzyme Indicator for placenta-derived exosomes
Superoxide dismutase	Antioxidant enzyme protecting tissues against oxidative damage
Placental growth factor (PIGF)	Member of VEGF-family, angiogenic Biomarker for preeclampsia

Polymorphonuclear neutrophil (PMN)-elastase	Antimicrobial protease Degrades host extracellular matrix components and to causes Tissue breakdown
Prostaglandin E2 (PGE2)	Inflammatory mediator Role in physiologic process of parturition
Soluble fms-like tyrosine kinase 1 (sFlt-1)	Binds VEGF and PlGF, anti-angiogenic Biomarker for preeclampsia
Soluble intercellular adhesion molecule-1 (sICAM)	Proinflammatory marker Transmigration of leukocytes
Soluble receptor activator of NFκB ligand (RANKL)	Member of TNF-superfamily Immune mediator Cell proliferation and apoptosis
Superoxide dismutase	Antioxidant enzyme protecting tissues against oxidative damage
Thiobarbituric acid-reactive substances (TBARS)	Biomarker for lipid peroxidation Measure of reactive oxygen species damage during inflammation
Tissue inhibitor of MMP-1 (TIMP-1)	Inhibition of MMP-1 Transportation and stabilization of MMPs
Tumor necrosis factor alpha (TNF-α)	Proinflammatory cytokine Activation of immune cells
TNF-R1	TNF-Receptor
TNF-R2	TNF-Receptor
Uric acid	Antioxidant parameter
Vascular endothelial cell growth factor (VEGF)	Signaling protein Angiogenesis Integrity of oral mucosa
β-galactosidase (GAL)	Salivary exoglycosidase Degradation of oligosaccharide chains in organogenesis, growth and normal tissue turnover
α-mannosidase (MAN)	Salivary exoglycosidase Degradation of oligosaccharide chains in organogenesis, growth and normal tissue turnover
α-frucosidase (FUC)	Salivary exoglycosidase Degradation of oligosaccharide chains in organogenesis, growth and normal tissue turnover
β-glucuronidase (GLU)	Salivary exoglycosidase Degradation of oligosaccharide chains in organogenesis, growth and normal tissue turnover