**Table S1.** 3D-printed scaffolds for periodontal tissue engineering.

| | Authors | 3D printing technology | Printed material(s), bioactive factor(s) and / or cells used | Scaffold geometry | Mesh thickness | Porosity |
|---|---|---|---|---|---|---|
| MONOPHASIC | Kim [128] | Extrusion | PCL (80%) + HA (20%) with SDF1 and BMP-7 (100 ng/mL each) | Shape of tooth (rat mandibular central incisor and human mandibular first molar) | 200 μm | 200 μm diameter interconnecting channels |
| | Mangano [129] | Extrusion | 30% HA, 60% β-TCP, 10% α-TCP | Blocks with a volume of about 0.14 $cm^3$ | 300 ± 30 μm | 370 ± 25 μm<br>Open interconnecting microporosity with pores sizes of about 1 μm<br>Total porosity : 60% |
| | Baba [130, 131] | Melt spinning | 75/25 PLGA+BMMSCs + PRP | 1.5 diameter | - | - |
| | Carrel [132] | Extrusion | α-TCP + HA (calcium-to-phosphate ratio : 1.43) | Hemispheric blocks | 400 μm | 250 μm<br>Total porosity: 50–65%<br>Macroporosity: 40–50% |
| | Cho [133] | Extrusion | PCL scaffolds with microspheres of 75/25 PLGA with BMP-2, BMP-7 + CTGF | Rectangular scaffolds (5×3×0.5 $mm^3$) | 200 μm | 500 μm transverse pores |
| | Puppi [134] | Extrusion (wet spinning) | PCL fiber construct and a chitosan/poly(***γ***-glutamic acid) polyelectrolyte complex hydrogel | Rectangular scaffold: 10 × 10 mm, 50 layers | 200–300 μm | 200–1800 μm |
| BIPHASIC | Park [135] | 3D wax printing system | Bone compartment : 25% PCL with recombinantadenovirus-encodingmurine BMP-7 | Rectangular scaffolds: 1.75 × 5.0 × 4.0 mm | - | Windows dimensions: 0.75 × 0.50 × 0.05 $mm^3$ |
| | | | PDL compartment: 25% PGA | Rectangular scaffolds: 1.5 × 5.0 × 4.0 mm | Diameter: 0.8 mm<br>Height: 0.3 mm | - |
| | Park [136] | 3D wax printing system | Bone compartment: PCL + BMP-7 | 3 × 2 × 2 mm | - | 0.60 × 0.50 $mm^2$ window pores to contact residual bone tissue |

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| | | | PDL compartment: PCL+PDL cells | | 3 cylindrical-shaped PDL fiber-guiding architectures per layer 0.225 mm diameter, 0.250 mm ligament interface | - | 0.175 mm thick interconnective space between PDL and bone regions |
| | Vaquette [84, 137] Dan [138] Mathew [139] | Electrospinning | Calcium phosphate coated melt electrospun polycaprolactone (CaP-PCL) scaffold | | Small pieces (approximately 3 mm × 1.5 mm × 0.5 mm in size) | 500 μm | over 150 μm diameter interconnecting pores |
| | | | PCL membrane (associated) (can be loaded with azithromycin) | | Small pieces (approximately 8 mm × 5 mm × 0.3 mm in size) | 300–400 μm with 3 μm diameter fibers | 5–10 μm |
| | Vaquette [89] | Extrusion (FDM) | Bone compartment: PCL + b-tricalcium Phosphate (β-TCP, 20% wt.) | | 100 × 100 × 2 $mm^3$ sectioned into 5 × 5 × 2 $mm^3$ | - | interconnectivity, 70% porosity |
| | | Electrospinning | PDL compartment: PCL | | cell membrane: 7 × 9 × 0.4 $mm^3$ | - | - |
| | Costa [90] | FDM | Bone compartment: PCL + β-TCP (20% wt.) | | 100 × 100 × 2 $mm^3$ sectioned into 5 × 5 × 2 $mm^3$ | - | interconnectivity, 70% porosity |
| | | Electrospinning | PDL compartment: PCL | | Circular membranes with 8 mm diameter | Fiber diameter: 10–15 μm | Interconnected pore Pore size: 100–400 μm |
| TRIPHASIC | Lee [140] | Extrusion (layer-by-layer deposition) | PCL/HA scaffolds and poly(lactic-co-glycolic acid) microspheres encapsulating factors | Bone compartment: +BMP2 | 5 × 5× 3 $mm^3$ | 2.25 mm (width) | - | 300 mm microchannels |
| | | | | PDL compartment: + CTGF | | 0.5 mm (width) | - | 600 mm transverse microchannels |
| | | | | Cementum/dentin interface: +amelogenin | | 2.25 mm (width) | - | 100 mm transverse microchannels |
| CUSTOM | Rasperini [141] | SLS | PCL and 4% HA | | Customized scaffold: patient's defect | | Mean strut length: 600 μm for support of extensions in the PDL region | Channel width for PDGF delivery was ≈ 500 μm |

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| ORIENTE | Jiang [142] | Electrospinning | Biodegradable poly PCE copolymer electrospun nanofibrous mats into porous CHI | 30 layers of nanofibers embedded within the porous CHI, with thickness ≈ 4 mm | Diameter (nm):<br>- Random fibers: 574.3±218.2<br>- Aligned fibers: 616.1±213.1 nm | 103.38 ± 49.54 μm between layers |
| | Kim [143] | Electrospinning | PCL/gelatin (Gel) nanofiber with periodontal ligament cells | 30 mm × 4 mm × 200 μm | - | - |
| | Pilipchuk [144] | SLS | Bone compartment: PCL and 4% HA | Idem [130]: 5.1 × 4.1 × 3.2 mm | ≈ 0.7 × 0.7 mm | 0.7 × 0.7 mm |
| | | Molding | Periodontal ligament: PCL | Idem [130]: 3.6 × 2.8 × 0.4 mm | 400 × 250 μm, with/ without grooves | 400 μm wide pores |

BMMSCs: mesenchymal cells derived from bone marrow, BMP: Bone morphogenetic protein, CHI: chitosan, CTGF: Connective tissue growth factor, FDM: Fused Deposition Modeling, HA: hydroxyapatite, SLS: selective laser sintering, PCE: poly (e-caprolactone)-poly(ethylene glycol), PCL: polycaprolactone, PDGF: Platelet-derived growth factor, PDL: periodontal ligament, PGA: Polyglycolic acid, PLGA: poly-L-lactic acid, PRP: Platelet Rich Plasma, SDF: Stromal-derived factor, SLS: Selective Laser Sintering, TCP: tricalcium phosphate.