

Materials List for

# Decellularized Apple-Derived Scaffolds for Bone Tissue Engineering *In Vitro* and *In Vivo*

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## Materials

| Name                                                   | Company                       | Catalog Number  | Comments                                           |
|--------------------------------------------------------|-------------------------------|-----------------|----------------------------------------------------|
| 4',6-diamidino-2-phenylindole                          | ThermoFisher                  | D1306           | DAPI                                               |
| Alizarin red S                                         | Sigma-Aldrich                 | A5533           | ARS                                                |
| Ascorbic acid                                          | Sigma-Aldrich                 | A4403           | Cell Culture                                       |
| Calcium Chloride                                       | ThermoFisher                  | AA12316         | CaCl <sub>2</sub>                                  |
| Calcofluor White                                       | Sigma-Aldrich                 | 18909           |                                                    |
| Dental drill                                           |                               |                 | Surgical tool                                      |
| Ethanol                                                | ThermoFisher                  | 615095000       |                                                    |
| Fetal bovine serum                                     | Hyclone Laboratories          | SH30396         | FBS                                                |
| Formalin                                               | Sigma-Aldrich                 | HT501128        | 10% Formalin                                       |
| Goldner's trichrome stain                              | Sigma-Aldrich                 | 1.00485         | GTC                                                |
| Hematoxylin and eosin stain                            | Fisher Scientific             | NC1470670       | H&E                                                |
| High-speed resonant confocal laser scanning microscope | Nikon                         | Nikon Ti-E A1-R |                                                    |
| Hydrochloric acid                                      | Sigma-Aldrich                 | 258148          |                                                    |
| ImageJ software                                        | National Institutes of Health |                 |                                                    |
| Irrigation saline                                      | Baxter                        | JF7123          | 0.9% NaCl                                          |
| MC3T3-E1 Subclone 4 cells                              | ATCC                          | CRL-2593        | Pre-osteoblast cells                               |
| McIntosh apples                                        |                               |                 | Canada Fancy grade                                 |
| Methyl methacrylate                                    | Sigma-Aldrich                 | M55909          | Histological embedding                             |
| Minimum Essential Medium                               | ThermoFisher                  | M0894           | α-MEM                                              |
| Paraformaldehyde                                       | Fisher Scientific             | O4042           | 4%; PFA                                            |
| Penicillin/Streptomycin                                | Hyclone Laboratories          | SV30010         | Cell Culture                                       |
| Periodic acid                                          | Sigma-Aldrich                 | 375810          |                                                    |
| Phosphate buffered saline                              | Hyclone Laboratories          | 2810305         | PBS; without Ca <sup>2+</sup> and Mg <sup>2+</sup> |
| Propidium iodide                                       | Invitrogen                    | p3566           |                                                    |
| Scanning electron microscope                           | JEOL                          | JSM-7500F FESEM | SEM and EDS                                        |

|                              |                            |                 |               |
|------------------------------|----------------------------|-----------------|---------------|
| Slide scanner microscope     | Zeiss                      | AXIOVERT 40 CFL |               |
| Sodium dodecyl sulfate       | Fisher Scientific          | BP166           | SDS           |
| Sodium metabisulphite        | Sigma-Aldrich              | 31448           |               |
| Sodium phosphate             | ThermoFisher               | BP329           |               |
| Sprague-Dawley rats          | Charles-River Laboratories | 400             | Male          |
| Sutures                      | Ethicon                    | J494G           | 4-0           |
| Trephine                     | ACE Surgical Supply Co     | 583-0182        | 5-mm diameter |
| Triton-X 100                 | ThermoFisher               | 807423          |               |
| Trypsin                      | Hyclone Laboratories       | SH30236.02      | Cell Culture  |
| Tween                        | Fisher Scientific          | BP337           |               |
| Universal compression Device | CellScale                  | UniVert         |               |
| Von Kossa stain              | Sigma-Aldrich              | 1.00362         | Histology     |