Cellentra™ VCBM  
(Viable Cell Bone Matrix)

Triad of Bone Remodeling

The Complete Bone Remodeling Triad
• **Viable Osteogenic Cells:** ≥ 250,000 cells per cc including mesenchymal stem cells (MSCs), osteoprogenitor cells and pre-osteoblasts
• **Verified Osteoinductivity:** Demineralized component provides additional inherent growth factors. Demineralized bone has been shown to include BMP-2, 4, 7, VEGF, TGF-β, PDGF, IGF-1, FGF1, 2, 3
• **Osteoconductive Scaffold:** Cancellous bone matrix offers an interconnected trabecular structure

Excellent Safety Profile
• Cellentra™ VCBM test samples were shown to be immuno-protective and immuno-suppressive* * *
• Processed via stringent donor screening, testing and sterility procedures

Optimal Handling
• Graft composition designed to provide superior handling
• Consistent graft-packing capabilities
• Syringe delivery may facilitate controlled graft placement
### Cellentra™ VCBM - The Complete Bone Remodeling Triad

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Viable Osteogenic Cells</th>
<th>Verified Osteoinductivity</th>
<th>Osteoconductive Scaffold</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Feature</strong></td>
<td>At least 250,000 cells/cc of cancellous tissue with at least 70% cell viability</td>
<td>Demineralized component provides additional inherent growth factors</td>
<td>Cancellous bone matrix offers an interconnected trabecular structure</td>
</tr>
<tr>
<td></td>
<td>Cells include mesenchymal stem cells (MSCs), osteoprogenitor cells and pre-osteoblasts</td>
<td>Demineralized bone has been shown to include BMP-2, 4, 6, 7, VEGF, TGF-β, PDGF, IGF-1, FGF-1, 2, 3</td>
<td>Allows for interface activity, bone in-growth and graft remodeling</td>
</tr>
<tr>
<td><strong>Benefit</strong></td>
<td>Provide bone-forming cells that support the fusion process</td>
<td>Deliver proteins that will trigger the differentiation and proliferation of bone-forming cells</td>
<td>Offers an optimal scaffold for bone-forming cells to migrate and remodel</td>
</tr>
<tr>
<td><strong>Efficacy Confirmation</strong></td>
<td>Every lot tested for in vitro osteogenic differentiation</td>
<td>Every lot tested for osteoinductivity</td>
<td>Every lot contains dense cancellous bone matrix</td>
</tr>
<tr>
<td>Test Method</td>
<td>Osteogenic Assay, Trilineage Assay, Cell count with hemocytometer and trypan blue stain</td>
<td>Athymic Rat Ectopic Bone Formation Assay/C2C12 Assay**</td>
<td>Processing specifications and quality inspections ensure consistent graft composition</td>
</tr>
<tr>
<td>Results*, **</td>
<td>Demonstrates the presence of mesenchymal stem cells and verifies the ability to differentiate into bone forming cells</td>
<td>Verifies osteoinductivity</td>
<td>Provides a trabecular osteoconductive scaffold with optimal graft packing capabilities</td>
</tr>
</tbody>
</table>

### Excellent Safety Profile

Cellentra™ VCBM test samples were shown to be immuno-protective and immuno-suppressive* ** ***
Processed via stringent donor screening, testing and sterility procedures

**Test Method**

* Shows That Cellentra™ VCBM:
  - Mixed Lymphocyte Reaction: Does not elicit an immune response
  - Flow Cytometry: Does not contain immunogenic cells
  - Cytotoxicity: Is non-cytotoxic
  - Donor Screening Criteria: Meets stringent criteria in accordance with FDA and AATB guidelines

### Optimal Handling

Graft composition designed to provide superior handling
Consistent graft-packing capabilities
Syringe delivery may facilitate controlled graft placement

Cellentra™ VCBM can be used in vertebral body replacement devices or packed into a syringe for easy delivery.

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* Data on File
** In vitro cellular and pre-clinical studies may not be indicative of human clinical outcomes.
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