Simplified Antegrade Cardioplegic Catheter

From the lab of
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Surgery

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Emory OTT Breakfast Club
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Gateway to Discovery, Innovation, and Products
Antegrade Cardioplegia

Conventional Catheter
Medtronic, Edwards Lifesciences, Quest Medical

Flexible tube
Anchoring platform
Removable Needle/rod
Cluttered Cardiac Surgical Field
Video of Device Demo
Value Proposition

• Ease of use – reduced clutter in surgical field
• Applicable to newer minimally invasive surgical techniques
• Simplified “one piece” design
• Relatively low-cost development pathway
• 510(k) regulatory approval
IP/Patents

- US, Canada, EPO, nationalized applications pending (5/5/05 priority date)
- First office actions received for US and EPO cases
  - No prior art cited in EPO case
  - Reference in U.S. case appears not directly related
Future Plans

• Engineering/prototype development
• In vivo testing (pigs/dogs)-Emory Cardiothoracic Research Lab
• IP protection–Emory Patent Group
• License
## Estimated Market

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Valve Replacements Worldwide/yr</td>
<td>300,000</td>
</tr>
<tr>
<td>CABG Surgeries Worldwide/yr</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Total</td>
<td>1,500,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit COGS</td>
<td>$8</td>
</tr>
<tr>
<td>Unit sales price</td>
<td>$30</td>
</tr>
<tr>
<td>Market penetration</td>
<td>25%</td>
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</table>

<table>
<thead>
<tr>
<th>Revenue Item</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Estimated Gross Revenues/yr</td>
<td>$11,250,000</td>
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<tr>
<td>Estimated Gross Margin/yr</td>
<td>$8,250,000</td>
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