### The Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Year and Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taruna Ralhan</td>
<td>3rd yr. MBB</td>
</tr>
<tr>
<td>Raul F. Gonzalez</td>
<td>3rd yr. ME</td>
</tr>
<tr>
<td>Brooke Glover</td>
<td>3rd yr. IO</td>
</tr>
<tr>
<td>Jonathan Friedman</td>
<td>1st yr. Mdes</td>
</tr>
<tr>
<td>Rajiv Kumar</td>
<td>3rd yr. MBB</td>
</tr>
<tr>
<td>Randy MacDonald</td>
<td>4th yr. ME</td>
</tr>
<tr>
<td>Christian Gellert</td>
<td>3rd yr. ME</td>
</tr>
<tr>
<td>Mujtaba Ahmad</td>
<td>3rd yr. MBB</td>
</tr>
</tbody>
</table>
Corporate Mission

➤ Business Question

➤ Company Mission

➤ Company Vision
Business Question

How can we turn the concept of Blood Valve into a commercial venture?
Company Mission

We want to provide optimal quality of blood collection to customers at a highly competitive price with the introduction of the Blood Valve.
Product Offering

- Opportunity
- Phlebotomy Procedure
- Product Innovation
Opportunity

- Procedure Efficiency
- Patient Discomfort
# Phlebotomy Procedure

<table>
<thead>
<tr>
<th>Identification</th>
<th>Familiarization</th>
<th>Confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Patient</td>
<td>Verify Restrictions</td>
<td>Explain/Protocol</td>
</tr>
<tr>
<td>Confirming</td>
<td>Introducing</td>
<td>Tongue-Checking</td>
</tr>
<tr>
<td>Patient record might be available</td>
<td>Identification bracelet/card/ Patient record</td>
<td>Patient record / pen / Formal request</td>
</tr>
<tr>
<td>Patient needs to be well greeted</td>
<td>Misunderstanding may occur leading to written errors</td>
<td>Misunderstanding may occur</td>
</tr>
<tr>
<td>liquor, stress, age and weight, who may be nervous.</td>
<td>Appropriate skills need to be used to calm patient properly</td>
<td>Misspelling may occur during identification</td>
</tr>
<tr>
<td>00:00:10</td>
<td>00:00:30</td>
<td>00:00:40</td>
</tr>
<tr>
<td>00:00:10</td>
<td>00:00:15</td>
<td>00:00:15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Position/Provision</th>
<th>Examination Site</th>
<th>Perform Test</th>
<th>Manage Tubes</th>
<th>Dispose of sharps</th>
<th>Cleaning</th>
<th>Dispose scrap, sharp disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting up</td>
<td>Positioning</td>
<td>Examining site</td>
<td>Performing test</td>
<td>Managing tubes</td>
<td>Disposing scrap</td>
<td>Cleaning</td>
<td>Dispose scrap, sharp disposal</td>
</tr>
<tr>
<td>00:00:27</td>
<td>00:00:15</td>
<td>00:00:05</td>
<td>00:00:40</td>
<td>00:00:10</td>
<td>00:00:03</td>
<td>00:00:06</td>
<td>00:00:05</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Restoration</th>
</tr>
</thead>
<tbody>
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<td>Procedure</td>
<td>Restoration</td>
</tr>
<tr>
<td>00:00:00</td>
<td>00:00:00</td>
</tr>
</tbody>
</table>

- **Preparation**
  - Setting up: Assemble supplies for collecting a blood specimen.
  - Positioning: 1. Locate patient in the area, 2. Position arm according to the planned procedure.

- **Procedure**
  - Disposing: 1. Dispose needles, 2. Dispose scrap.

- **Restoration**
  - Greeting: Upon leaving the room, phlebotomist should thank the patient.
  - Scraps, garbage can, sink, soap.
Product Innovation

- Elimination of Vial Sequence
- Increased Patient Comfort
- Increased Efficiency of Procedure
Product Details

- Needle
- Body
- Valve
- Slide button
- Vial sockets

The Team
Executive Summary
Corporate Mission
Product Offering
Manufacturing Plan
Market Analysis
Competitor Analysis
Financial Plan
Risks
Summary
Manufacturing Plan

➢ Manufacturing Technology

➢ Customer Analysis

➢ Product Value
Manufacturing Technology

- Clean manufacturing environment
- Plastic Injection Molding
- Steam Sterilization
- Horizontal continuous packaging equip.
Component Source

- **External needle**: Purchased
- **Butterfly valve**: Purchased
  - (Optional consumer configuration)
- **Body**: Manufactured
- **Valve**: Manufactured
- **Safety sheath**: Purchased / manufactured
- **Assembly**: Leverage existing manufacturer’s equipment
- **Distribution**: Partnership
Project Implementation

- Design refinement
- Human factors concerns
- Initial market feedback
- Engineering for production
- FDA approval
- Manufacture tooling
Market Analysis

- Market Characteristics
- Customer Analysis
- Product Value
Market Characteristics

- Market Size
- Regulations
Customer Analysis

- **Purchasing**
- **Evaluation Board**
- **Phlebotomy Department**
- **Training Department**
- **Patient**

- **Primary Customers**
- **Secondary Customers**
- **Group Purchasing Organizations (GPOs)**
- **Customer Limitations**
Product Value

❖ Need based value

❖ Benefits
Competitor Analysis

磙 Blood Valve Uniqueness

❄ Current competition only offers conventional needles and vacuum blood drawing systems

磙 Competitors
The Team

Executive Summary

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Risks

Summary

Competitors

- Becton-Dickinson Company (60-70%) Safety-lock™ safety needles SafetyGlide™ safety needles Vacutainer plastic vacuum vials

- Terumo Company (10-20%) VENOSAFE™ Blood collection system TERUMO PET plastic technology VENOJECT multi-sample needles
Other Competitors

- Kendal (Tyco Healthcare)
- Monoject™ safety needle
- Magellan™ safety needles
- Greiner International/Greiner Bio-One
- VACUETTE® safe blood collection system
Financial Plan

➢ Manufacturing Costs
### BLOODVALVE 3 YEAR FORECAST

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Price per Unit</strong></td>
<td>$1.75</td>
<td>$1.95</td>
<td>$2.00</td>
</tr>
<tr>
<td><strong>Units Sold</strong></td>
<td>0</td>
<td>5,000,000</td>
<td>20,000,000</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td>$0.00</td>
<td>$9,750,000.00</td>
<td>$40,000,000.00</td>
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</table>

### Direct Costs

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Cost per Unit</td>
<td>$1.30</td>
<td>$1.28</td>
<td>$1.24</td>
</tr>
<tr>
<td>Total Mfg. Cost</td>
<td>$0.00</td>
<td>$6,400,000.00</td>
<td>$24,800,000.00</td>
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<tr>
<td>Design</td>
<td>$150,000.00</td>
<td>$20,000.00</td>
<td>$150,000.00</td>
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<tr>
<td>R &amp; D</td>
<td>$250,000.00</td>
<td>$40,000.00</td>
<td>$300,000.00</td>
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<tr>
<td>FDA Approval</td>
<td>$0.00</td>
<td>$300,000.00</td>
<td>$0.00</td>
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<tr>
<td><strong>Total Direct Costs</strong></td>
<td>$400,000.00</td>
<td>$6,760,000.00</td>
<td>$25,250,000.00</td>
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### Gross Profit

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling Expenses</td>
<td>$0.00</td>
<td>$975,000.00</td>
<td>$4,000,000.00</td>
</tr>
<tr>
<td>General/ Administrative Expenses</td>
<td>$0.00</td>
<td>$1,462,500.00</td>
<td>$6,000,000.00</td>
</tr>
<tr>
<td>Market Consulting firms</td>
<td>$10,000.00</td>
<td>$30,000.00</td>
<td>$15,000.00</td>
</tr>
<tr>
<td><strong>Earnings before interest and taxes (EBIT)</strong></td>
<td>-$410,000.00</td>
<td>$522,500.00</td>
<td>$4,735,000.00</td>
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</tbody>
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Risks

- Product Risk
- Market Risk
- Exit Strategy
Exit Strategy

- Acquisitions
- Mergers
- Sale / Buy-out
- Initial Public Offering (IPO)
Thank You