Building a Biotechnology Company

“Entrepreneurship, Corporate Finance, and Related Best Practices”

Prepared for:

James W. Hawkins, MBA, PhD

FOCUS Investment Banking LLC
1133 20th Street NW
Suite 200
Washington, DC 20036

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Three Questions Need to Be Answered

What is a biotech company?
Are there different types of biotech companies?
How do you build a biotech company?
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What is a Biotech Company?

A commercial vehicle for technology transfer built within a regulatory framework.
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Technology Transfer Process

- Basic research
- Applied research
- Scientific and medical products
- Product sales and marketing
Technology Transfer Process

Basic research

Applied research

Scientific and medical products

Product sales and marketing
What is a Biotech Company?

A commercial vehicle for technology transfer built within a legal/regulatory framework
Legal/Regulatory Framework

• U.S. Food and Drug Administration
• U.S. Securities and Exchange Commission
• U.S. Internal Revenue Service
• U.S. Environmental Protection Agency
• State and Local Authorities
• Counterparts in Other Countries
What is a Biotech Company?

A **commercial vehicle for technology transfer** built within a **regulatory framework**.
Three Questions Need to Be Answered

What is a biotech company?

Are there different types of biotech companies?

How do you build a biotech company?
Types of Biotech Companies:

1. Research products
2. Research instruments
3. Medical diagnostics and devices
4. Drugs and biologics
5. Service
Types of Biotech Companies:

1. Research products
2. Research instruments
3. Medical diagnostics and devices
4. Drugs and biologics
5. Service
Research Products:

• short product development cycle
• low risk in product development
• only basic regulatory requirements
• small need for unsophisticated equity capital
• business can grow organically
• companies don’t need professional managers; often have original owners
Types of Biotech Companies:

1. Research products
2. **Research instruments**
3. Medical diagnostics and devices
4. Drugs and biologics
5. Service
Research Instruments:

- intermediate product development cycle
- medium risk in product development
- only basic regulatory requirements
- new need, intellectual property
- moderate need for unsophisticated or sophisticated equity capital
- hard to grow organically
- companies don’t need professional managers; will likely have new owners
Types of Biotech Companies:

1. Research products
2. Research instruments
3. Medical diagnostics and devices
4. Drugs and biologics
5. Service
Medical Diagnostics and Devices:

- intermediate product development cycle
- medium risk in product development
- sophisticated regulatory requirements
- needs intellectual property
- large need for unsophisticated or sophisticated equity capital
- hard to grow organically
- companies likely need professional managers; will likely have new owners
Types of Biotech Companies:

1. Research products
2. Research instruments
3. Medical diagnostics and devices
4. **Drugs and biologics**
5. Service
Drugs and Biologics:

- long product development cycle
- high risk in product development
- very sophisticated regulatory requirements
- intellectual property essential
- very large need for sophisticated equity capital
- cannot grow organically
- companies definitely need professional managers; will have new owners
Types of Biotech Companies:

1. Research products
2. Research instruments
3. Medical diagnostics and devices
4. Drugs and biologics
5. Service
Service:

- range of product development cycles served
- reduced risk in product development
- range of regulatory requirements
- no intellectual property
- only specialized need for equity capital
- can grow organically or through roll-up
- range of need for professional managers
# Types of Biotech Companies

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<th>Research Products</th>
<th>Research Instruments</th>
<th>Diagnostics, Devices</th>
<th>Drugs and Biologics</th>
<th>Service</th>
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<td><strong>Product Development</strong></td>
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<td><strong>Regulatory Requirements</strong></td>
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<td><strong>Capital Need</strong></td>
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<td><strong>Organic Growth</strong></td>
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<td><strong>Professional Management</strong></td>
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- Basic Research
- Applied Research
- Preclinical, Clinical Development
- Commercialization
- Successful
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- Preclinical, Clinical Development
- Commercialization

Cash Flow

Time

Successful

Focus Investment Banking
Types of Biotech Companies:

- Basic Research
- Applied Research
- Preclinical, Clinical Development
- Commercialization

Funding Sources:
- SBIR Grants
- DoD Contracts
- Angel Investors
- Private Foundations
- Early Venture Capital

Graph showing the timeline of cash flow with "Valley of Death" and examples of funding sources.

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Types of Biotech Companies:

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Financial Sources:
- SBIR Grants
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- Private Foundations
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Times of Cash Flow:
- "Valley of Death"

Growth Path:
- Successful
Types of Biotech Companies:

- Basic Research
- Applied Research
- Preclinical, Clinical Development
- Commercialization

**Sources of Funding:***
- SBIR Grants
- DoD Contracts
- Angel Investors
- Private Foundations
- Early Venture Capital
- Late Stage Venture Capital
- Big Pharma
- Other Financings

**Focus Investment Banking**
Types of Biotech Companies:

- Basic Research
- Applied Research
- Preclinical, Clinical Development
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Sources of Finance:
- SBIR Grants
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- Angel Investors
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- Early Venture Capital
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Risk Factors:
- Technical Risk
- Market Risk

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