



Biotechnology Business Fundamentals: Biopharma Pipeline, Licensing and Partnering



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Introduction:

Biotechnology business decisions are increasingly made by managers, investors and officials who never trained as scientists. Without a working grasp of how biologic medicines are discovered, developed, protected, financed and made, they misread pipeline risk, overpay for early assets, sign licences with the wrong milestones or back manufacturing plans that never fill. This Core Concept course gives non-scientist professionals the science vocabulary, pipeline economics, deal structures and ecosystem logic of the biopharma sector. Participants finish with a Biotech Asset Evaluation and Partnering Strategy for a case asset.

Course Objectives:

- Explain the science behind biotech products, from DNA and proteins to cells, well enough to question scientific teams and advisers
- Distinguish small molecules, biologics, monoclonal antibodies, vaccines, cell and gene therapies and biosimilars by development risk, manufacturing needs and commercial profile
- Interpret a drug development pipeline by stage, timeline, cost and attrition and judge the value of an asset at each phase
- Assess patent position, freedom to operate and licensing terms as sources of value and risk in a biotech asset
- Compare funding routes and deal structures, including venture rounds, co-development, upfront payments, milestones and royalties
- Build a Biotech Asset Evaluation and Partnering Strategy that links science, pipeline stage, manufacturing route and market access

Target Audience:

- Managers moving into biotech or biopharma units who oversee strategy, portfolio or commercial planning
 - Investment and finance staff who screen, value or monitor life sciences ventures and funds
 - Business development and alliance staff who source, negotiate and manage licensing and partnering deals
 - Policy and economic development staff who design incentives, clusters and localisation programmes for the sector
 - Legal, procurement and corporate support staff who handle contracts, suppliers and governance for biotech organisations
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Course Outline:

Day 1: Biotechnology Science Essentials for Non-Scientists

- DNA, Genes and the Central Dogma From Code to Protein
- Proteins, Enzymes and Receptors as Drug Targets
- Cells, Cell Lines and Living Production Systems
- Recombinant DNA Technology and Genetic Engineering Basics
- Biotech Industry Landscape Map: Platforms, Products and Services

Day 2: Therapeutic Modalities and the Development Pipeline

- Small Molecules Versus Biologics Comparison Matrix
- Monoclonal Antibodies, Recombinant Proteins and Vaccines at Overview
- Cell and Gene Therapies and Biosimilars at Overview
- Discovery, Preclinical and Clinical Phase I to IV Stage Gate Model
- Pipeline Timelines, Cost Drivers and Phase Attrition Curves

Day 3: Regulation, Intellectual Property and Asset Valuation

- Marketing Authorisation Pathways and Expedited Routes in General Terms
- Target Product Profile as a Development and Commercial Anchor
- Patent Families, Exclusivity Periods and Freedom-to-Operate Review
- Risk-Adjusted Net Present Value of a Pipeline Asset
- Comparable Deal Benchmarks and Asset Scoring Scorecard

Day 4: Funding, Partnering, Manufacturing and Market Access

- Venture Capital Rounds, Grants and Public Market Financing
- Licensing Term Sheets: Upfront Payments, Milestones and Royalties
- CDMO Outsourcing Versus In-House Plant Decision Tree
- Technology Transfer and Localisation Models for Biologics Supply
- Market Access, Pricing and Reimbursement Logic at Overview

Day 5: Biotech Ecosystem Strategy and Partnering Case

- Biotech Cluster Building Blocks: Talent, Capital, Infrastructure and Incubators
 - Case Study: Due Diligence Review of a Preclinical Biologic Asset
 - Partner Screening Matrix and Deal Structure Options
 - Partnering Risk Register: Scientific, Regulatory, Manufacturing and Commercial
 - Biotech Asset Evaluation and Partnering Strategy Presentation and Peer Challenge
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Skills You Will Gain:

- Biotech Science Literacy
- Therapeutic Modality Comparison
- Pipeline Risk Appraisal
- Biotech Asset Valuation
- Patent Position Review
- Licensing Deal Structuring
- Manufacturing Route Selection
- Biotech Ecosystem Planning

Why Attend This Course:

- Return with a Biotech Asset Evaluation and Partnering Strategy you can adapt to a real opportunity in your organisation
- Hold informed conversations with scientists, founders and advisers without needing a laboratory background
- Avoid overpaying for early assets or accepting weak licence terms by reading pipeline risk and deal economics clearly
- Exchange views with investors, business development staff, managers and policy staff from across the life sciences sector

Conclusion:

Biotech value depends on how well science, pipeline risk, intellectual property, financing, manufacturing and market access are judged together. The week moves from DNA, proteins and cells through therapeutic modalities and the development pipeline, then to regulatory pathways, patents and risk-adjusted valuation, and on to funding, licensing terms, CDMOs, localisation and pricing logic. The final day applies these tools to a case asset and ecosystem questions, producing a Biotech Asset Evaluation and Partnering Strategy reviewed by peers.
