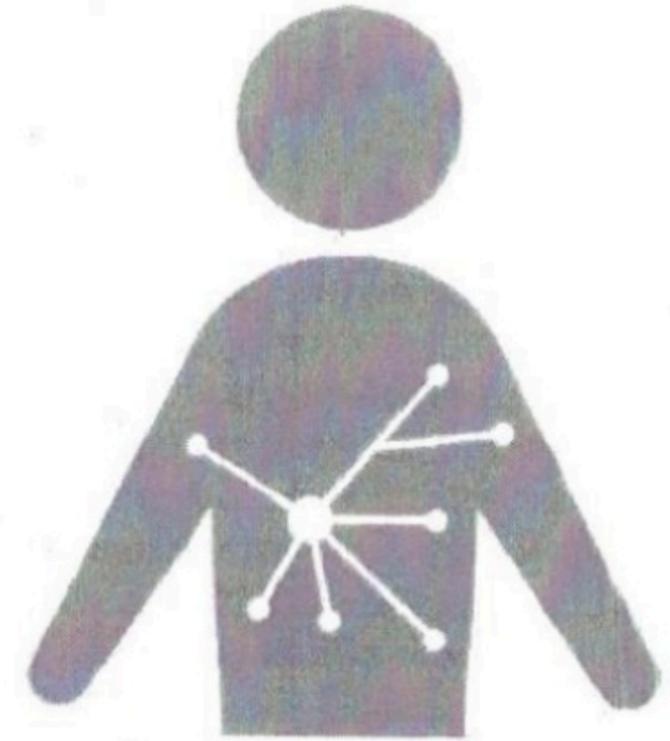
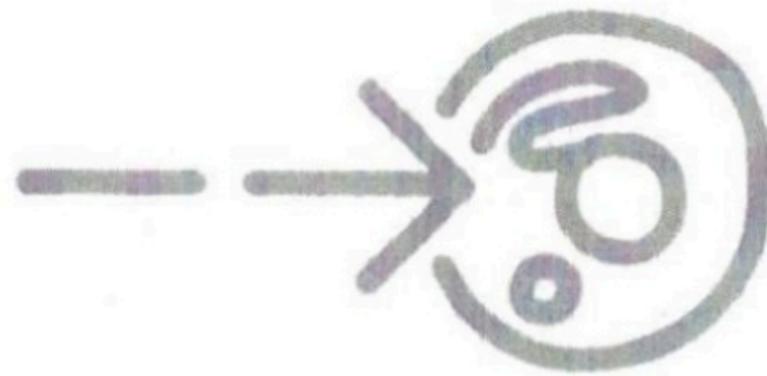


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Investor Presentation

May 2017

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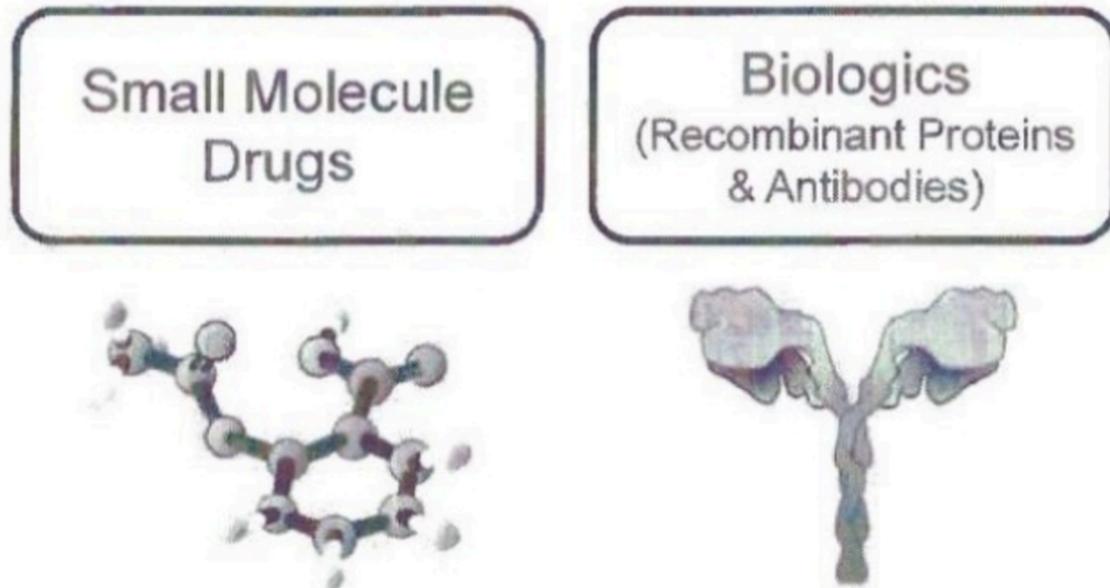
Various statements in this presentation concerning the future expectations of Moderna Therapeutics, Inc. (together with its affiliates, the "Company"), plans and prospects, including without limitation, the Company's views with respect to the potential for mRNA therapeutics, its expectations with respect to timing of regulatory filings and the reporting of initial data from any clinical trial(s), the potential therapeutic opportunities for mRNA, its expectations regarding its product strategies, and its plans regarding commercialization of mRNA therapeutics constitute forward-looking statements. Actual results may differ materially from those indicated by these forward-looking statements as a result of various important factors, including, without limitation, the Company's ability to discover and develop novel drug candidates and delivery approaches, successfully demonstrate the efficacy and safety of its drug candidates, the pre-clinical and clinical results for its product candidates, which may not support further development of product candidates, actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials, obtaining, maintaining and protecting intellectual property, the Company's ability to enforce its patents against infringers and defend its patent portfolio against challenges from third parties, obtaining regulatory approval for products, competition from others using technology similar to the Company's and others developing products for similar uses, the Company's ability to manage operating expenses, the Company's ability to obtain additional funding to support its business activities and establish and maintain strategic business alliances and new business initiatives, the Company's dependence on third parties for development, manufacture, marketing, sales and distribution of products, the outcome of litigation, and unexpected expenditures. In addition, any forward-looking statements represent the Company's views only as of today and should not be relied upon as representing its views as of any subsequent date. The Company explicitly disclaims any obligation to update any forward-looking statements.

Moderna as of May 2017...

6 Years into the Story

- Potentially disruptive drug technology – mRNA is the software of life
- Development pipeline breadth – 3 therapeutic areas – ID, oncology, CV
- Development pipeline depth – 12 programs
 - 5 medicines in the clinic
 - 2 additional INDs opened by FDA
 - 5 additional DCs nominated in pre-clinical development
- 4 industry-leading partners (AZ, Merck, Alexion, Vertex) and 3 government / not-for-profit partners (DARPA, Gates Foundation, BARDA)
 - 3 have asked to do more together
- Strong capital position
 - \$1.22bn cash @ end of March, plus >\$200mm of grants available
- Unrivaled talent – 500 people

Pharma/Biotech is Massive, with ~\$1 Trillion of Sales (2017E) for Small Molecules and Biologics



| Global Revenues | | |
|-----------------|----------|----------|
| 1994 | \$165 bn | \$10 bn |
| 2004 | \$425 bn | \$55 bn |
| 2014 | \$600 bn | \$180 bn |

Risky – Probability of success low

- Low risk targets are gone
- N=1. Each molecule is unique, so few learnings across drug programs

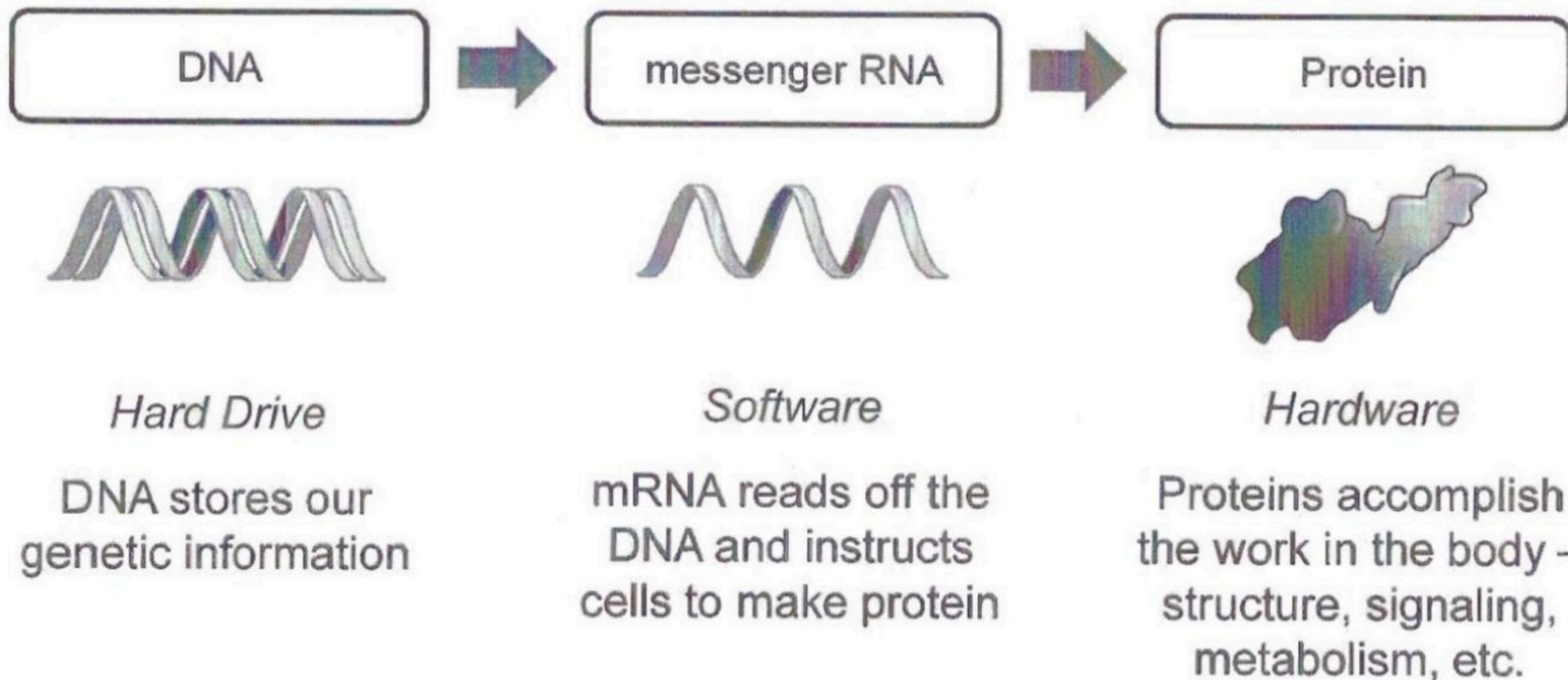
Slow/Unscalable

- Each molecule demands a unique manufacturing process for research *and* development

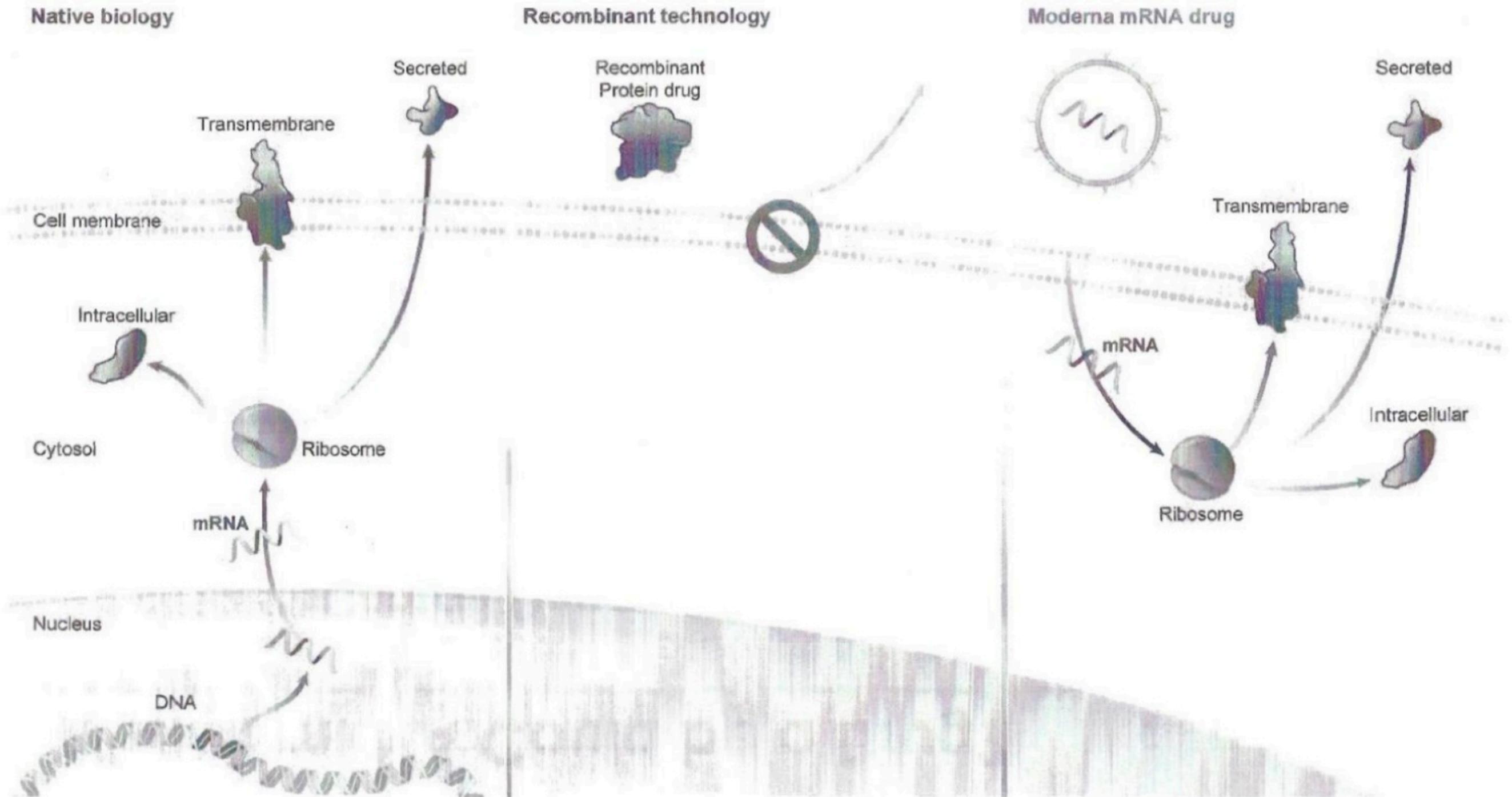
Source: Evaluate Ltd., 01-Nov-2016. Market sizes have been rounded

What if mRNA Could be a Drug?

Central Dogma of Molecular Biology



If mRNA Could be a Drug... it Would Enable New Intra-cellular and Membrane-bound Proteins



If mRNA Could be a Drug... it Would be a Platform

It would act like software; only the coding region varies from mRNA drug to mRNA drug

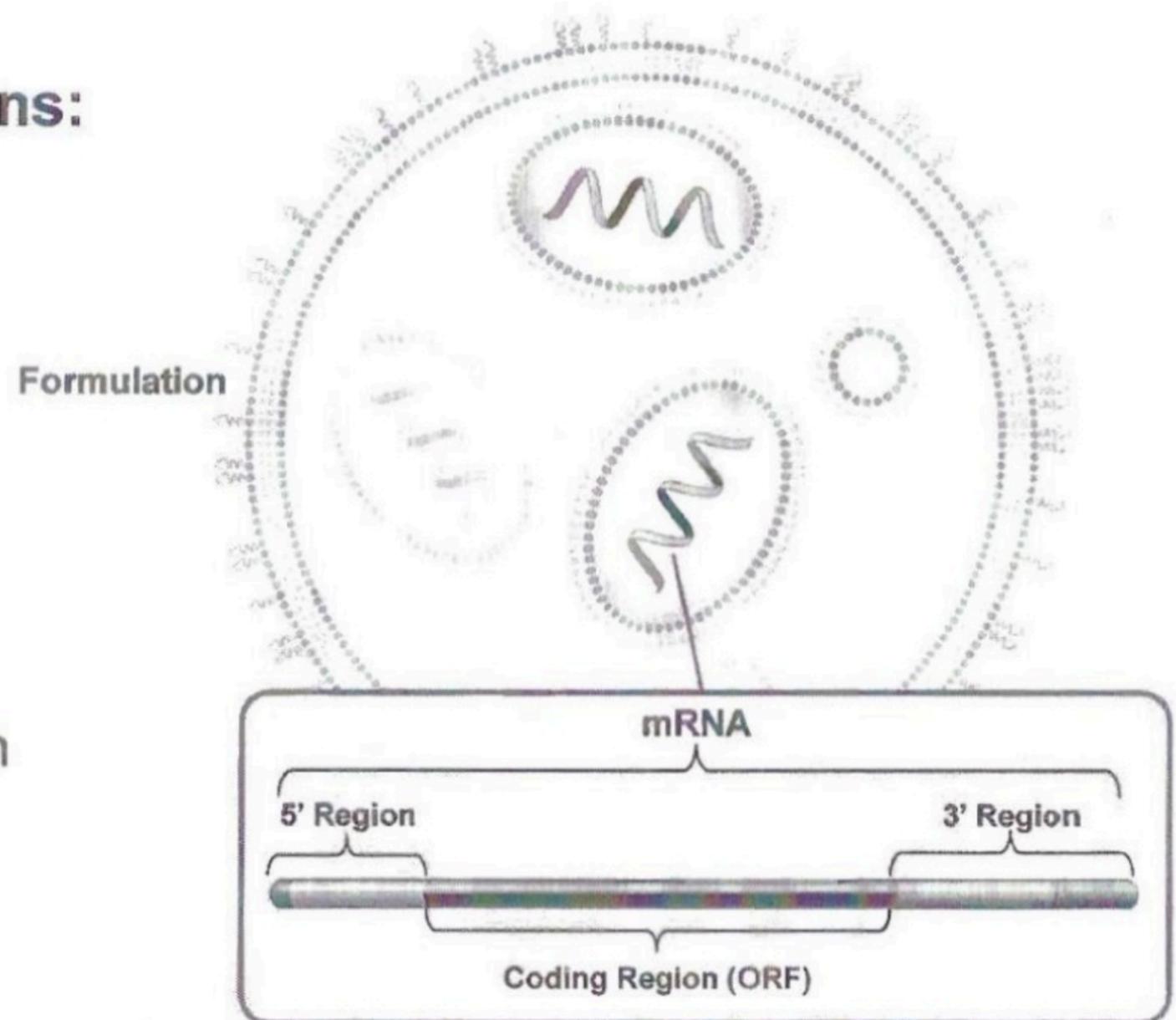
Within a given set of applications:

- Formulation = identical
- 5' Region = identical
- 3' Region = identical

Coding Region (ORF)

- Varies to encode for specific protein

If mRNA works once, it should work many times



If mRNA Could be a Drug...3 Value Drivers Combine to Present a Unique Opportunity

- **Product abundance:**
 - Take your pick of protein to encode
 - Opportunity to hit hundreds of previously undruggable targets
 - Rational drug design (and ability to combine mRNAs)
- **Speed:**
 - Enable faster research to turn ideas into reality
 - Enable faster development to generate clinical data
- **Reduced cost versus traditional pharma/biotech companies:**
 - Run faster R&D with less attrition (platform de-risking)
 - De-risked capital expenditures – manufacturing infrastructure serves all drugs in the pipeline
 - Lower COGS than biologics possible due to cell-free process

Our Platform Takes an Integrated Approach to mRNA Drug Design

Key Platform Components



Chemistry



Process



Bioinformatics



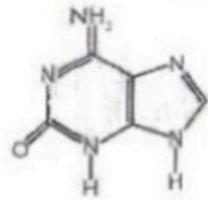
mRNA Engineering



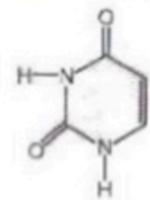
Formulation

Raw Materials

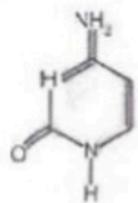
Adenine (A)



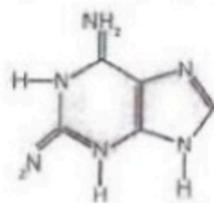
Uracil (U)



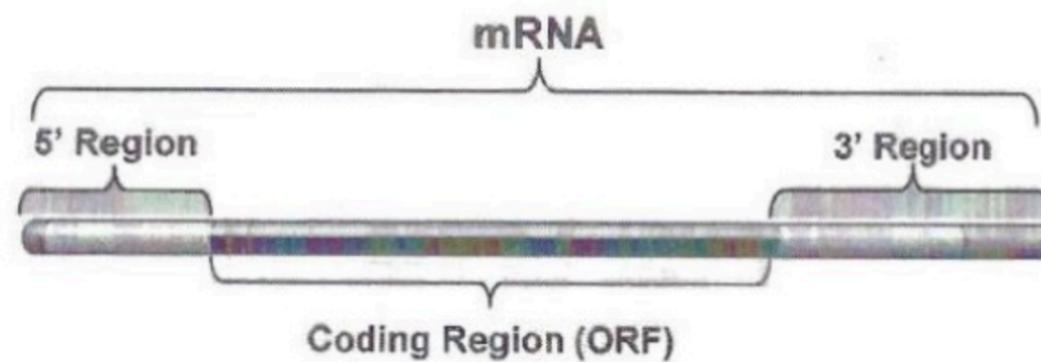
Cytosine (C)



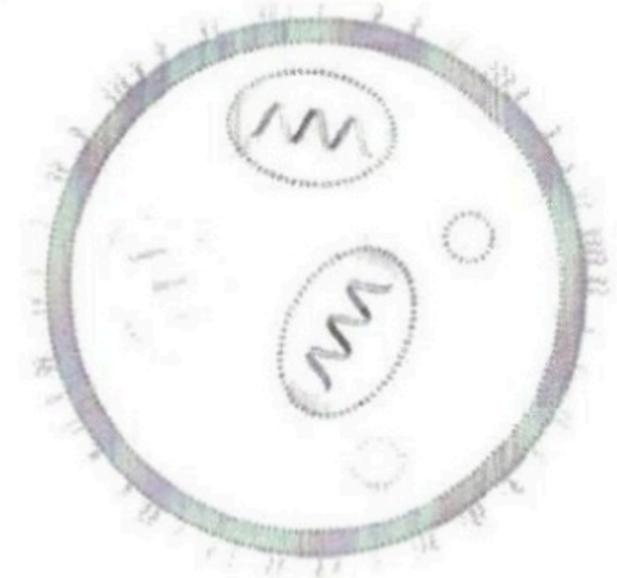
Guanine (G)



mRNA API



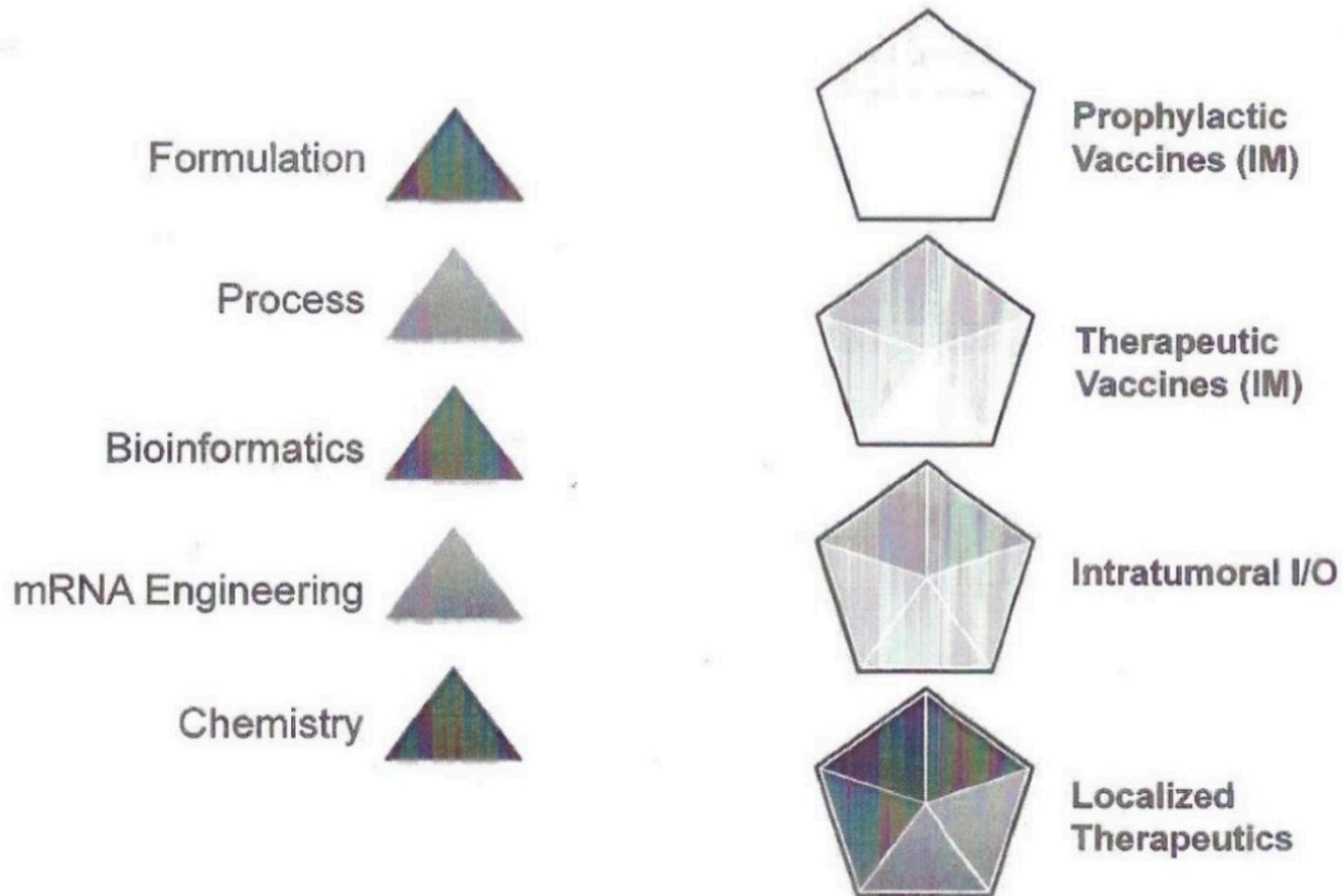
mRNA Drug Product



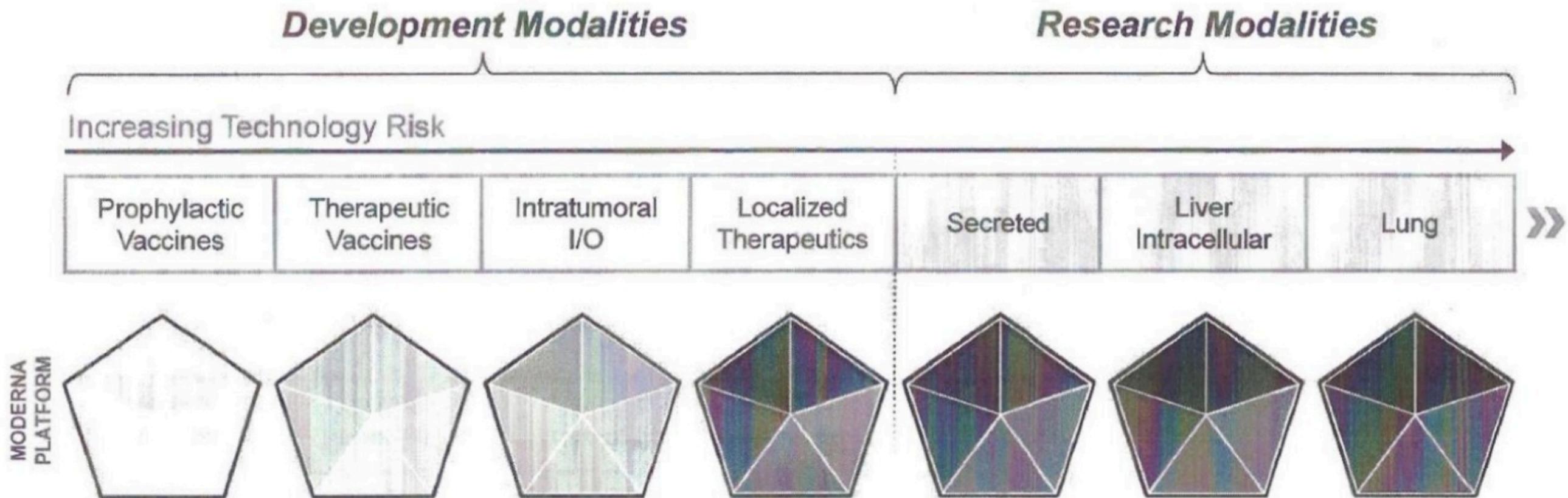
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Modalities are Toolkits Created from Different Platform Components

mRNA Technology Platform  Modalities



Our Platform is Enabling Many Modalities to Prevent and Treat Disease



» Exploratory

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Partnerships Provide Leverage to Continue Building the Platform and New Modalities

