

#### BIG PHARMA & START-UP: VERSO UN NUOVO PARADIGMA PER LA RICERCA

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# Big Pharma Models changes from Massive to Lean Biotech play an important role

#### The 1995–2005 period intense M&A,

Astra and Zeneca, Ciba-Geigy and Sandoz, Pfizer and Warner Lambert, Sanofi and Aventis, and Glaxo and SmithKline, Pfizer-Pharmacia merger in 2003

By contrast, since the late 2000s, big pharma has started a 'leaner and focused' model by divesting non-core assets and focusing on key value assets

Abbott split into two parts: AbbVie (Innovation) and Abbott; GSK and Novartis swapped their oncology, and vaccines business to create focused organizations; AstraZeneca divested infectious disease and created a unit for neuroscience;

2010-2020 New Biotech built up on divested assets from Big Pharma

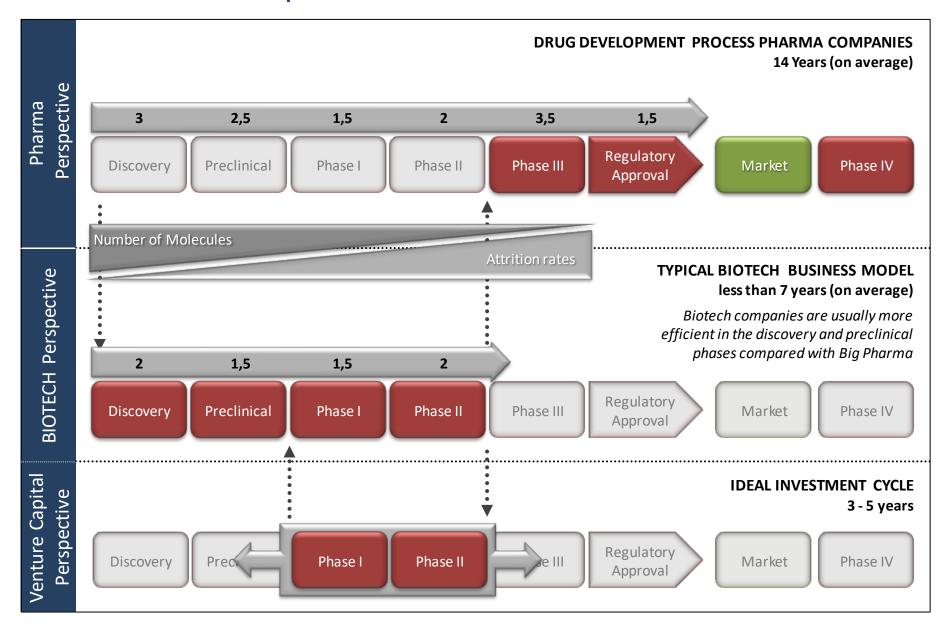
new dynamic with Big Pharma

#### «Covid Era»-

Biotech dynamism help in quickly develop new vaccines (BioNtech & Moderna)

Re-balancing the power vs Big Pharma

#### Big Pharma and Biotech path to commercialization - 2010-2020



### Key elements that trigger the entire process

- Big merges were associated to low performance R&D
- With rising demand for healthcare and falling budgets, governments and payers are exerting pressure to drive down prices. Big Pharma needed a better cost control versus risk
- Need of more Patient Centric solution an patient holistic view
- Shift to personalized treatment and new diagnostic approaches
- Huge development of technology (e-Health, remote patient monitoring)
- Patient access to data and technology
- Outdoor patient treatment

## ..... Boosted by Covid pandemia

- Clinical trials less Hospital centric
- Remotely monitoring
- Clinical trial design «Covid-friendly»
- Regulatory environment reacted promptly to the emergency (Covid 19 Vaccines)
- Successful partnerships between big player (eg Pfizer) and biotech (eg BioNtech)
- Emerging of new clinical indications within Long-Covid syndrome (e.g. chronique fatigue)

#### Biotech new paradigm

- Extremely lean companies almost virtual operating thorugh external partners «virtual» value chain
- Nich indications (rare indication) players are increasing
- Platform based players (eg mRNA vaccine based platforms) as succesful model
- E-health and technology based biotech are boosting
- Ability to answer BigPharma and market new needs quickly
- Flexibility to adapt swiftly to new challanges

#### **NLS Pharmaceutics AG**

- Swiss based Biotech Company CNS drug development
- Lean team less then 5 employees
- Listed in NASDAQ on Jan 29 2021
- Two Phase II protocols (rare indication narcolepsy) submitted at FDA in mid June and full approval in Mid July
- Full approval from US Ethic Committe end of Aug
- First patient enrolled 13 Sept 2021
- Highly patient centric clinical studies and «Covid-friendly»
- Competitors like Jazz Pharmaceutics (\$8.5 billion market cap) and Takeda Pharmaceutical (\$45 billion Market cap)
- Flexibility, dynamism, quick decision processes, easier to adapt to challangers



## Thank you

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