BDO's 7 Predictions for the Life Sciences Industry in 2022

BDO

Following extraordinary investment and epic innovation in 2021, the life sciences industry is primed for further growth in 2022. Fueled by new partnerships, public and private investment, and new breakthrough innovations, the future of biotechnology and life sciences is more secure and innovative than ever before.

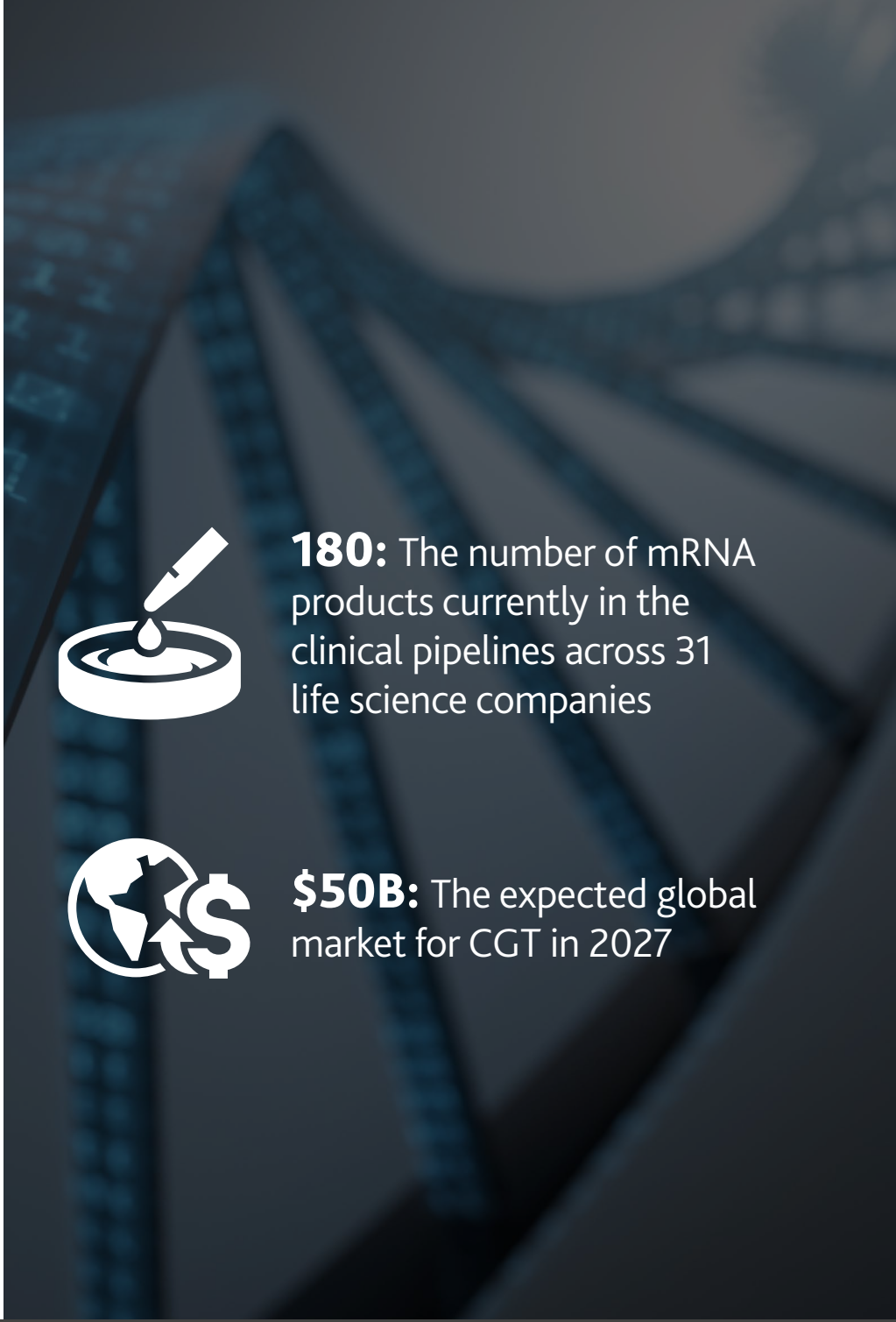
Here are our 7 predictions for the life sciences industry in 2022.

Prediction #1

Massive developments in mRNA technology and cell and gene therapy

The success of the mRNA COVID-19 vaccine is expected to drive private and public investment in mRNA, particularly in biotech startups looking to find new uses for mRNA technology and to improve efficacy. BioNTech has set its sights on developing **personalized cancer vaccines** for colorectal cancer. **Research** carried out by the National Institute of Allergy and Infectious Diseases (NIAID) and Moderna shows promise for a potential mRNA HIV/AIDS vaccine.

While CGT (cell and gene therapy) research has been in motion since the **early 1990s**, new investments have accelerated progress. With an estimated **$10.7B investment** in CGT in 2020 and more than **2,600 current clinical trials**, the market expects a huge influx of approvals in the next 5 years. The full potential of mRNA technology and cell and gene therapy is still to be determined, but we expect it to be the focus of major pharmaceutical developments in 2022 and beyond.



180: The number of mRNA products currently in the clinical pipelines across 31 life science companies

$50B: The expected global market for CGT in 2027

Prediction #2

Life Sciences X Tech: Coming together to advance science

We anticipate tech companies and life sciences firms working together more closely in 2022 through licensing agreements, joint ventures, tech share agreements, and partnerships. Collaborations are expected to accelerate drug development by speeding the collection and processing of clinical trial data. Beyond drug development, the wearables med tech industry is forecasted to have a compound annual growth rate (CAGR) of 26.8% through to 2028. Wearable med tech can not only make treatment more convenient for the patient, but through cloud technology, it can facilitate the analysis of swaths of data. Data analytics gives doctors more information to review, provide a diagnosis and personalize treatment to each patient.

Wearable Medical Devices Market Forecast

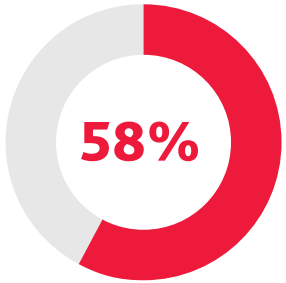
Market size value in 2021
USD 21.3 billion

Revenue forecast in 2028
USD 111.9 billion

Prediction #3

The digital transformation of medicine

Telemedicine, including remote monitoring of clinical trials, is expected to continue to expand. COVID-19 brought on rapid adoption of digitized clinical trials, and we anticipate further growth in 2022. The digital transformation of clinical trials enables researchers to reach a broader group of subjects, including those that tend to be underrepresented, offers more secure means of handling data and reduces the time burden of participants. Moreover, digitization is reducing the overall cost of clinical trials and brings with it data collection improvements – allowing for nonstop passive patient monitoring which can identify novel and fleeting events often missed by traditional clinical trials.



The portion of traditional clinical trials disrupted due to COVID-19

Prediction #4

Strong PE and VC investment in biotech sector

The success of mRNA technology and COVID-19 vaccines in 2021 helped to buoy valuations in the first half of 2021. This, paired with **record venture capital spending** and an abundance of unspent capital held by private equity firms, means PE and VC investment will be robust in 2022, although unlikely to surpass 2021. With valuations coming down to earth in the second half of 2021, and an abundance of liquidity, we expect the M&A and collaborations market to be quite strong in 2022.

$47B
PE investment in biopharma in H1 2021

Prediction #5

Tech deployed in new ways to secure and track drugs in transit

The counterfeit drug market is estimated to be as large as $431B, and it is showing no signs of slowing down. The resale or administration of counterfeit drugs is having damaging effects on more than just the people who take them–the practice costs firms billions of dollars of revenue and hundreds of thousands of U.S. jobs. New technologies, such as blockchain, could provide a solution to this fraud. Blockchain can document and confirm the chain of custody of a drug, tracking it from manufacturing to administration and ensuring doctors and patients that the administered drug matches the label on the bottle. We expect to see growth in the use of these chain of custody safeguard technologies in 2022 and beyond.

$200 to $431B
The estimated size of the counterfeit drug market, annually

Prediction #6

Increased data privacy scrutiny

With more data than ever being collected, processed, and transferred by wearable devices, international clinical trials, and the globalization of products and therapeutics, protecting consumer and patient privacy is paramount. The recent promulgation of data privacy laws has increased the burden on already overloaded compliance programs.

Life sciences organizations must balance their data protection responsibilities with these emerging technologies to maintain compliance while still deriving business value from the data. A prime example: data secured with the blockchain is, by nature, immutable – yet data privacy regulations afford certain rights to individuals, including the right for data to be deleted upon request.

There have already been notable data protection fines and penalties imposed on life sciences organizations and we expect an uptick in this trend. As life sciences companies collect more data, more risk is assumed, and that will undoubtedly increase regulatory scrutiny around data privacy and protection.

2,314 exabytes
The estimated amount of healthcare data collected in 2020

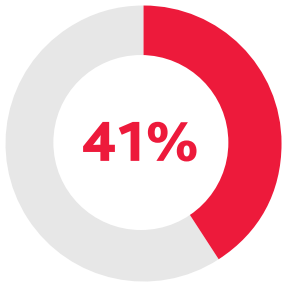
$1.25B
Fines issued for GDPR non-compliance by the EU in 2021

Prediction #7

Drug development costs continue to increase

Improvements in drug development technology and processes may have reduced costs in some areas of pharmaceutical development, but these savings are often outweighed by new expenses.

Emerging development and testing techniques frequently require the support of new equipment and facilities – a cost reflected in the steady rise of annual R&D spending in the last decade. Studies indicate that the average cost to develop a single drug has risen from $800M in 2000 to anywhere from $1-2B today depending on disease indication and prevalence.



the increase in R&D spending by PhRMA members from 2010 - 2019

Unprecedented investment and leaps in innovation in 2021 are pointing to even bigger advancements in 2022. Life sciences firms should look to strike tech partnerships to unlock new efficiencies, court PE and VC investments to gain capital for accelerated R&D efforts and look to secure their products against fraud with technology, such as blockchain.

We're optimistic about the future of the life sciences industry and the benefits research and investment can bring to advancing science and medicine.

TODD BERRY
Assurance Partner and National Co-Leader
BDO Life Sciences
tberry@bdo.com / **LinkedIn**

LANCE MINOR
Principal and National Co-Leader
BDO Life Sciences
lminor@bdo.com / **LinkedIn**

ELENI LAGOS
Partner and National Tax Leader
BDO Life Sciences
elagos@bdo.com / **LinkedIn**

MARK ANTALIK
Managing Director, Data Privacy and Data Governance Services
mantalik@bdo.com / **LinkedIn**