



***OPKO***

# Shareholder Meeting

July 2022

## Forward Looking Statements

*This presentation contains "forward-looking statements," as that term is defined under the Private Securities Litigation Reform Act of 1995 (PSLRA), which statements may be identified by words such as "expects," "plans," "projects," "will," "may," "anticipates," "believes," "should," "intends," "estimates," and other words of similar meaning, including statements regarding expected financial performance and expectations regarding the market for and sales of our products, whether the acquisition of ModeX, including the expansion of the executive management team, will positively impact OPKO Health, Inc. (Company), whether ModeX will receive regulatory approval for products in development and be able to successfully commercialize such products, whether expectations after completion of the merger will be met, including the viability of the technology; whether our commercial partner will be successful in commercializing NGENLA (somatrogon) and the risks relating to regulatory approvals for NGENLA in other territories, particularly the risk of receipt of approval from FDA, for which we have received a CRL; the risk of downturns and a changing regulatory landscape in the highly competitive healthcare industry, whether Scarlet will be successful or widely adopted, whether our laboratory services business will stabilize, become profitable and return to pre-COVID levels of financial performance, our product development efforts and the expected benefits of our products, whether our products in development will be commercialized, whether the relationship with our business partners will be successful, whether our business partners will be able to commercialize our products and successfully utilize our technologies, our ability to market and sell any of our products in development, as well as other non-historical statements about our expectations, beliefs or intentions regarding our business, technologies and products, financial condition, strategies or prospects. Many factors could cause our actual activities or results to differ materially from the activities and results anticipated in forward-looking statements. These factors include those described in our Annual Reports on Form 10-K filed and to be filed with the Securities and Exchange Commission and under the heading "Risk Factors" in our other filings with the Securities and Exchange Commission, as well as the continuation and success of our relationship with our commercial partners, liquidity issues and the risks inherent in funding, developing and obtaining regulatory approvals of new, commercially-viable and competitive products and treatments. In addition, forward-looking statements may also be adversely affected by general market factors, competitive product development, product availability, federal and state regulations and legislation, the regulatory process for new products and indications, manufacturing issues that may arise, patent positions and litigation, among other factors. The forward-looking statements contained in this press release speak only as of the date the statements were made, and we do not undertake any obligation to update forward-looking statements. We intend that all forward-looking statements be subject to the safe-harbor provisions of the PSLRA.*

## ModeX Therapeutics Acquisition Broadens the Technology Foundation and Product Pipeline of OPKO



# ModeX Therapeutics Scientific Team History

2012

2020



- Derived from the Breakthrough Lab created in 2012 within Sanofi by Dr Zerhouni and led by Dr. Gary Nabel with the mission to explore long term, first-in-class, breakthrough technologies and concepts.
- Initial Focus on cancer, viral diseases and vaccines
- Track record of delivering clinical candidates:
  - 3 phase 1
  - 2 IND-enabled
  - 2 lead candidates in the past 4 years
- Moved to ModeX Therapeutics in November 2020 in incubator facility in Natick, MA.
- State of the art laboratory in immunology, molecular genetics, structural design, vector biology, molecular virology and *in vivo* biology
- Expertise in molecular biology, biochemistry, protein and antibody engineering
- Selected programs using CODV platform technology in oncology and infectious diseases in-licensed from Sanofi (July 2021)
- IP filed on next generation ModeX platform technologies (Sept 2021)

# ModeX Leadership Team



*Highly experienced team with deep research and technology expertise*



**Elias A. Zerhouni, M.D.**  
President and  
Vice Chairman of OPKO



**Gary J. Nabel**  
Chief Innovation Officer of OPKO



**Elizabeth Nabel**  
EVP Modex. CMO OPKO



**Ji Zhang**  
Chief Operating Officer



**Alexis Borisy**  
Board Member



**John Mascola**  
Chief Scientific Officer



**Ronnie Wei, Ph.D., M.B.A**  
Head of Biologics Discovery



**Chih-Jen Wei**  
Head of Synthetic Biologics



**Vijay Chhaklani**  
Chief Technology Officer

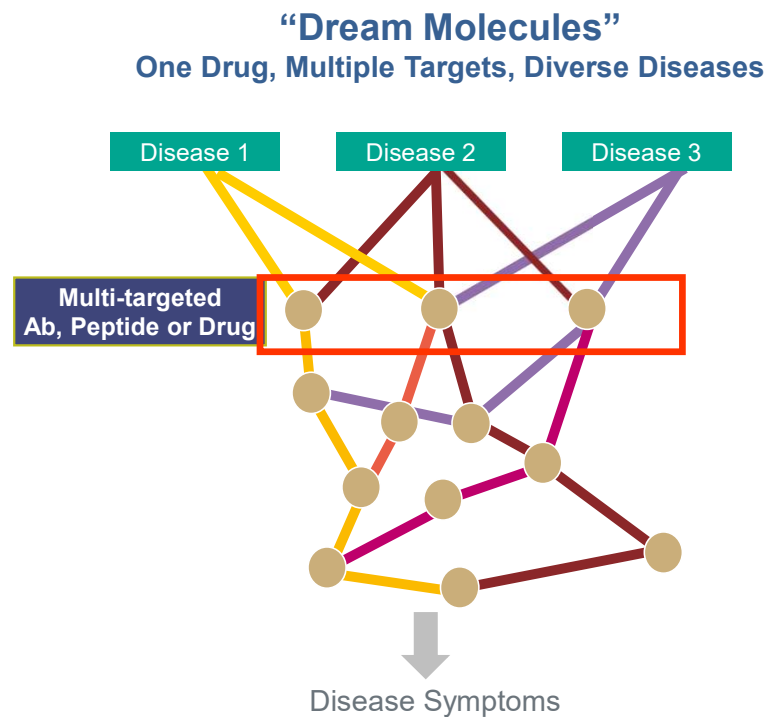


**Zhi-yong Yang**  
Head of Research



# Central concept: Synergistic targeting of disease drivers

## Biological Synergy and Multi-Targeting of disease drives efficacy



- Deep understanding of validated molecular networks and pathways and unique combinations reduce biological risk
- Scientific evidence indicates most diseases will require a combination of therapies to achieve success
- Success in humans: chemotherapy, antibiotics, Immunotherapy (Dupixent), vaccines
- Molecules attacking multiple points in disease pathway may result in efficacy in several diseases or improved risk/benefit in single disease



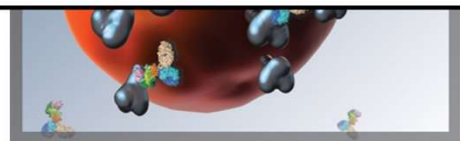
# In-licensed Certain Trispecific Technologies Developed by ModeX Team While at Sanofi (2012-2020)

OPKO



## Trispecific broadly neutralizing HIV antibodies mediate potent SHIV protection in macaques

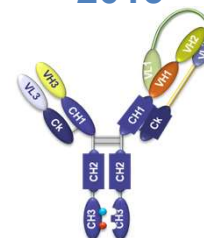
Ling Xu, Amarendra Pegu, Ercole Rao, Nicole Doria-Rose, Jochen Beninga, Krisha McKee, Dana M. Lord, Ronnie R. Wei, Gejing Deng, Mark Louder, Stephen D. Schmidt, Zachary Mankoff, Lan Wu, Mangaiarkarasi Asokan, Christian Bell, Christian Lange, Wulf Dirk Leuschner, Jochen Kruip, Rebecca Sendak, Young Do Kwon, Tongqing Zhou, Xuejun Chen, Robert T. Bailer, Keyun Wang, Misook Choe, Lawrence J. Tartaglia, Dan H. Barouch, Sijy O'Dell, John-Paul Todd, Dennis R. Burton, Mario Roederer, Mark Connors, Richard A. Koup, Peter D. Kwong, Zhi-yong Yang, John R. Mascola, Gary J. Nabel



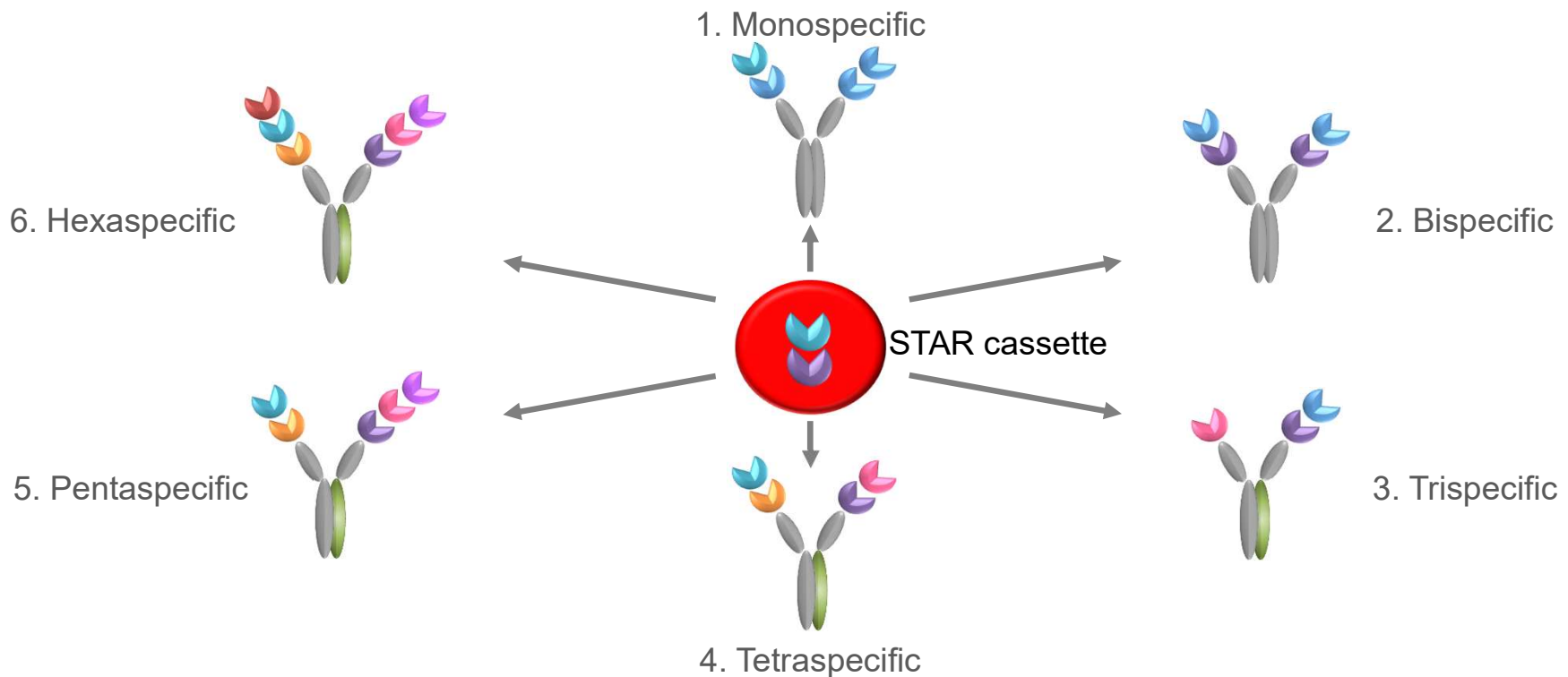
Xu et al. *Science* 358: 85-90 (2017)

- Engage three targets with a single product.
- Built on antibody biologics platform: fewer off-target side effects, higher success rate, less toxicity.
- Simplified pharmacodynamics with single component; easier path to regulatory approval.
- Greater potency, specificity, flexibility and promising early clinical data showing minimal immunogenicity and safety concerns.
- Three tri-specifics already in clinical development (HIV, Cancer)

CODV  
Trispecific  
2015



# STAR Technology: More Flexibility and Valencies **OPKO**



- 1. Plug and play enables screening large numbers of diverse candidates rapidly.*
- 2. Exploit more specificities in different orientations and valencies to optimize function.*
- 3. Adaptable to cell engagers, antibody drug conjugates, radiobiologics, CAR T.*



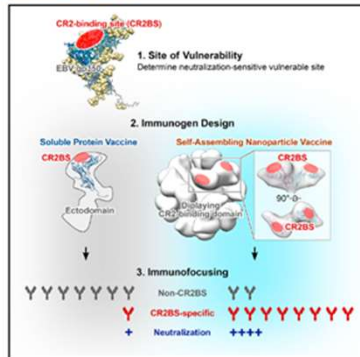
# A Vaccine for Infectious Mononucleosis and Cancer: Epstein Barr Virus

EBV: responsible for >200,000 cancers/year and infectious mononucleosis

Cell

## Rational Design of an Epstein-Barr Virus Vaccine Targeting the Receptor-Binding Site

Graphical Abstract



Authors

Masaru Kanekiyo, Wei Bu, M. Gordon Joyce, ..., Barney S. Graham, Jeffrey I. Cohen, Gary J. Nabel

Correspondence

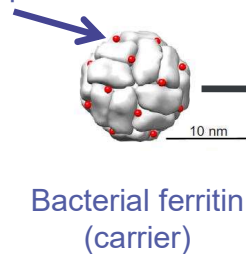
jcohen@niaid.nih.gov (J.I.C.), gary.nabel@sanofi.com (G.J.N.)

In Brief

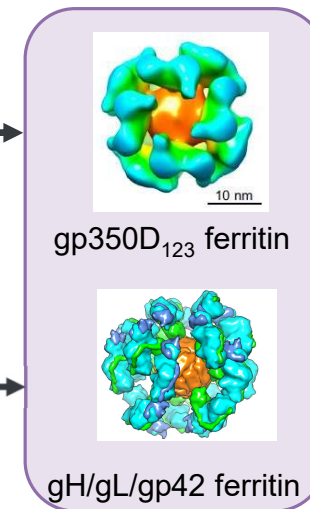
Structurally designed EBV vaccine candidates based on self-assembling nanoparticles elicit potent and durable virus-neutralizing antibodies that target the receptor-binding site on the viral envelope protein gp350, a site of vulnerability, serving as a template to develop an EBV vaccine and providing a basis for immunofocusing through rational vaccine design.

Article

Red spheres indicates where EBV antigens are displayed on the surface of the nanoparticle



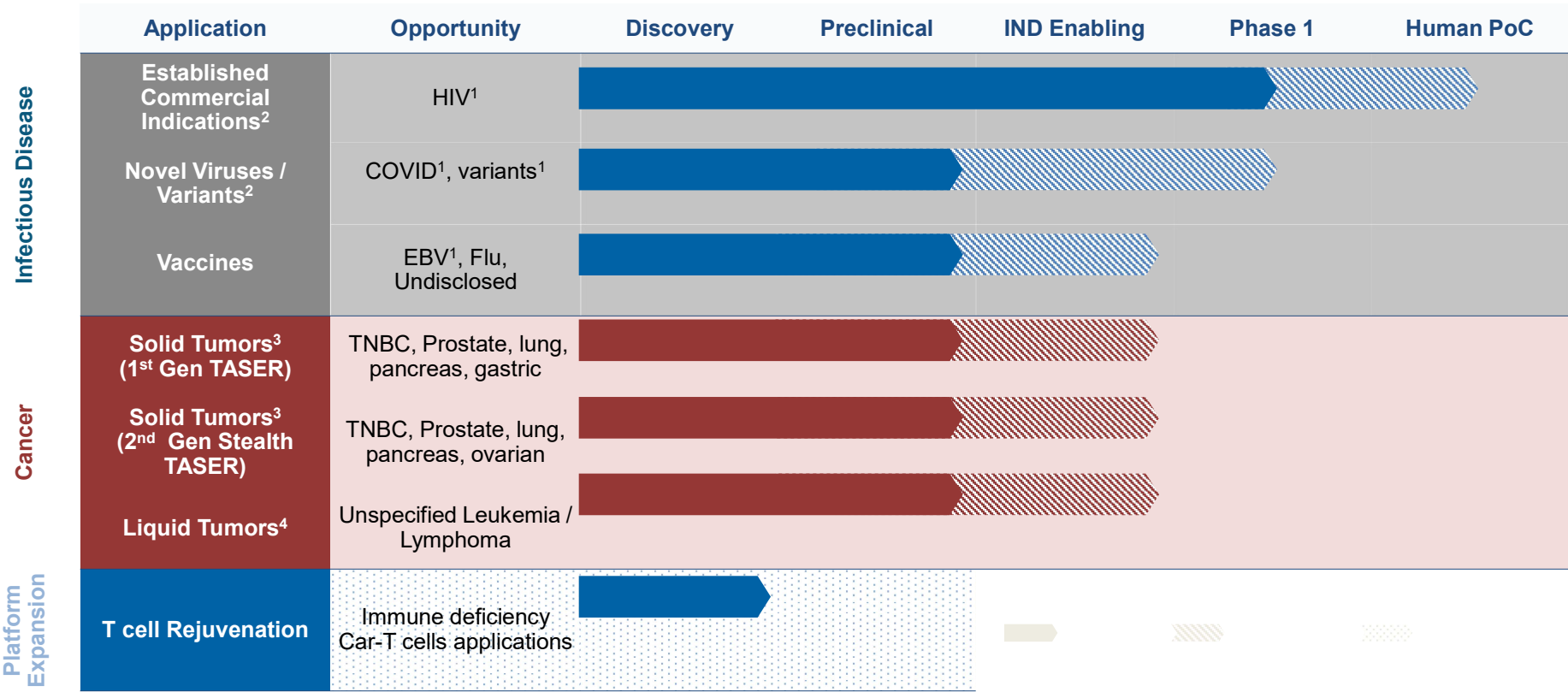
Bacterial ferritin (carrier)



Two Component Vaccine

1. Exclusive license from Sanofi
2. Scalable and cost-effective ferritin nanoparticle carrier de-risked in phase 1 human trials by NIH.
3. Amenable to mRNA delivery.

ModeX has a robust early-stage pipeline with assets in key areas of the antibody market



## Vision and Mission of ModeX

---

**OPKO**

**ModeX aims to use its proprietary platforms and digital technologies to develop the next generation of higher order multi-specific antibodies and vaccines as novel therapies in multiple disease areas beginning with Cancer and Viral diseases**

**Comprehensive R&D day planned for fall 2022**

# BioReference

LABORATORIES

an **OPKO** Health Company

# BioReference Overview

One of the largest full-service commercial laboratories in the U.S.<sup>1</sup>

>80% payer coverage nationally

Serving all 50 states with labs in New Jersey, Texas, Florida and California

Specialty expertise in oncology, women's health and urology

40-year history, with a menu of >3,000 tests

>5,000 employees serving ~15 million patients annually

## Driven by Two Complementary Sets of Attributes

Deep expertise across the **Core Commercial Lab Business**, operating high throughput facilities and specialty labs

A culture of **adaptability** and **agility** to innovate and execute on core capabilities:

- ✓ **Digital Customer Enablement**
- ✓ **Services at Scale**
- ✓ **Custom Solutions**

1. Core Commercial Lab Business. Excludes Scarlet.

## Key Growth Pillars



Successful track record of investing in high-growth specialty testing areas



Delivering on large B2B partnerships



A technology-driven patient experience that can disrupt the industry

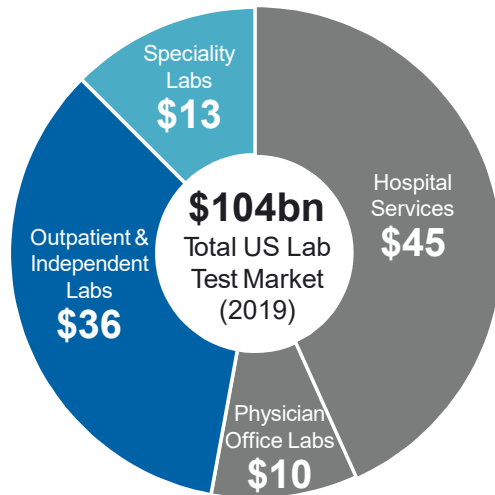
**Executing On A Three-Prong Strategy Expected to Deliver Above Market Growth**



# BioReference's Core Business Operates in a Large Market, with a Focus on High Growth Areas

## Market Sizing

(\$ in billions)



2-3% CAGR for total markets

## Key Focus Areas for BioReference



### Segment Growth:

>10%

>10%

>10%

>15%

~50% of The Business is Strategically Focused on High-growth Areas

## Women's Health: Addressing All Stages of a Woman's Life

### Services

Cervical Cancer

Reproductive Genetics

Sexually Transmitted  
Diseases

Hereditary Cancer  
Screening



Industry leader with deep expertise and a designated sales force, positioned to continue to grow all four segments



Dedicated team of genetic counselors



Women's Health is a \$25bn+ market growing at high single digits / low double digits

### Women's Health Growth Drivers



Enhanced testing capabilities from acquired US Ariosa NIPS business (Aug 2021)

Leveraging recent ACOG guidelines change to drive penetration to average risk NIPS

Revamped designated sales force to expand reach

Single source solution for large Ob-Gyn groups, addressing needs from adolescents to senior women

# Oncology: Leading Provider of Cancer Solutions

## Services

Pathology

Hereditary Cancer

Hematology

Cancer Genomics



The largest heme flow lab in the country, industry leader in heme/onc diagnostics



Focus on specific tumor analysis and next gen sequencing



Cancer genomics is expected to grow 30% over the next 5 years

## Oncology Growth Drivers



Recent investments TS 500-OnkoSight, NGS-523 genes segmented into actionable, targeted tumor specific panels (solid tumor, myeloid and lymphoid malignancies)

One stop solution for cancer centers, oncology practices and health systems, many of which do not have the funds to invest in these technologies

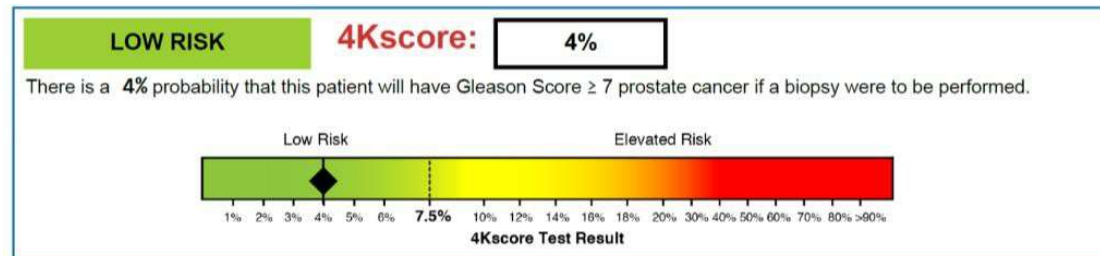
# Urology: The 4Kscore Test® Received FDA Approval

## The 4Kscore® Test

Proprietary test that distinguishes men with a low risk for aggressive prostate cancer from those with a high risk

Included in NCCN Guidelines for Prostate Cancer Early Detection

Positive Medicare coverage decision in 2020



**64%**

Reduction in  
Biopsy Rate

**>93%**

Blood test with  
>93% **negative predictive value** for aggressive prostate cancer

**>12,000**

**Physicians** have used  
4Kscore in their practice

**FDA**

**Approval received in 2021**

## Strategic Ventures: Custom Partnerships

- Devoted business unit to pursue strategic B2B partnerships
- Develop custom solutions for partners to enhance their lab operations, increase revenue, decrease costs and improve profitability
- Key focus of BioReference with a designated sales force

### Recent wins: strong traction with robust pipeline

Unified Physicians of  
Texas

**40+ Care Centers**

Privia Mid-Atlantic

**100+ Care  
Centers**

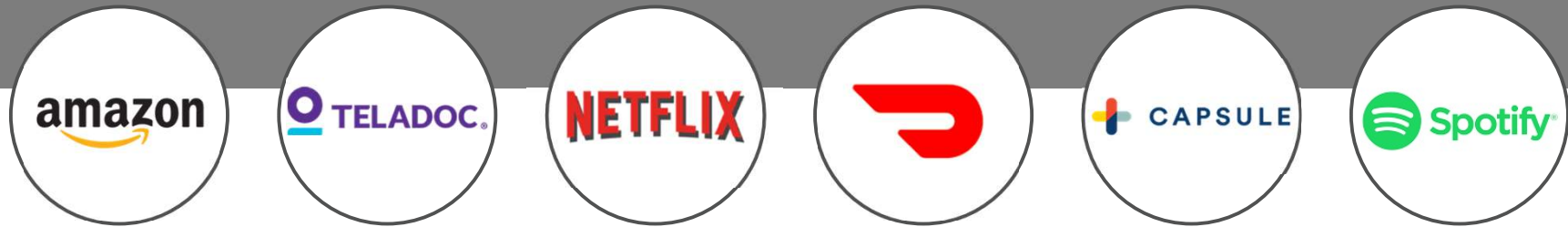
MDNow

**55+ locations**

Westchester Health System

**1,700 beds, 10 hospitals &  
3,000 physicians**

## Patients Expect a Real Consumer Experience ...



...and they're ready for a **lab experience**  
**that is tailored to their needs**



## Thirty Percent of Patients Never Fill their Physician-Ordered Diagnostics

- Patients having their blood drawn at a service center does not address the industry trends of home care and telehealth
- Lack of on-demand, convenient testing substantially reduces patient compliance
- The patient journey from order to scheduling to blood draw and results is not what consumers have grown to expect

## One Company, Two Sets of Attributes

**Core commercial lab business** with historic capabilities and deep experience to operate complex large throughput facilities, growing the base and specialty businesses.

A proven set of three core capabilities that have enabled BRL to innovate and execute like a **Digital-First Operation**: Digital Mindset, Services at Scale, Custom Solutions

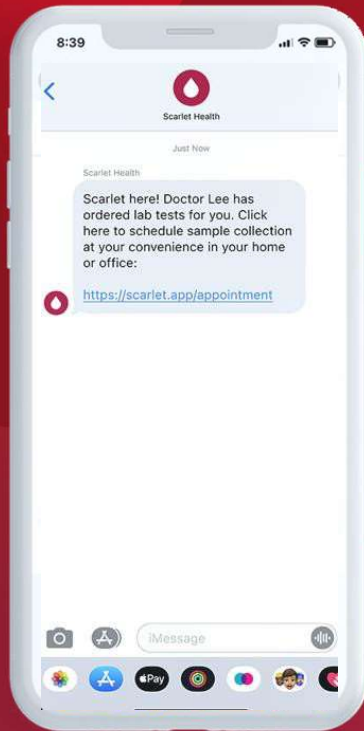
*One of the most successful  
COVID testing programs in  
the U.S.*

**Poised to disrupt the industry with Scarlet Health®**

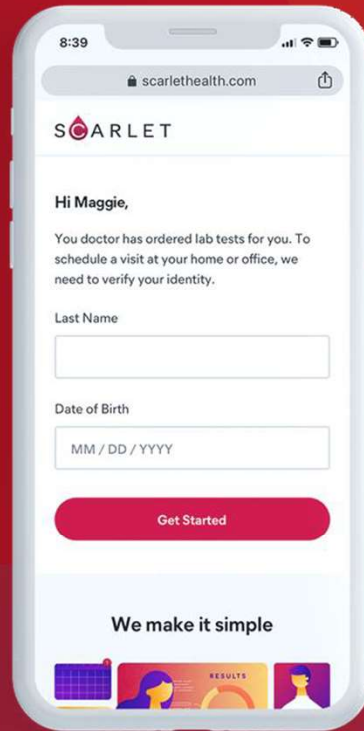


Scarlet Health® is **reimagining** the delivery of diagnostics by disrupting the **specimen collection experience.**

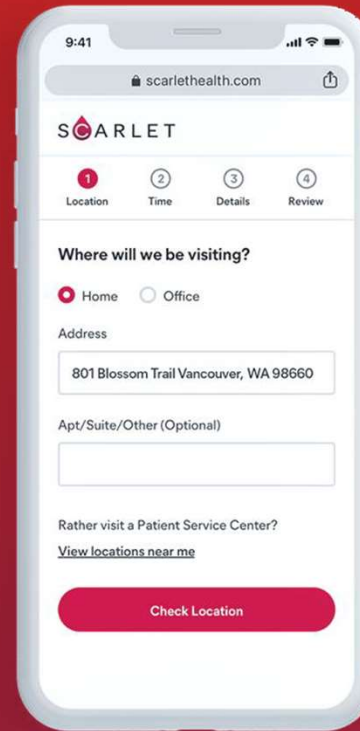
# How It Works



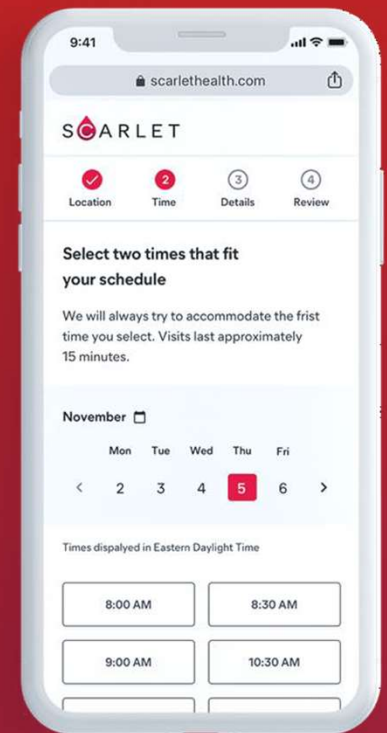
Your doctor has ordered lab tests for you



Enter your information

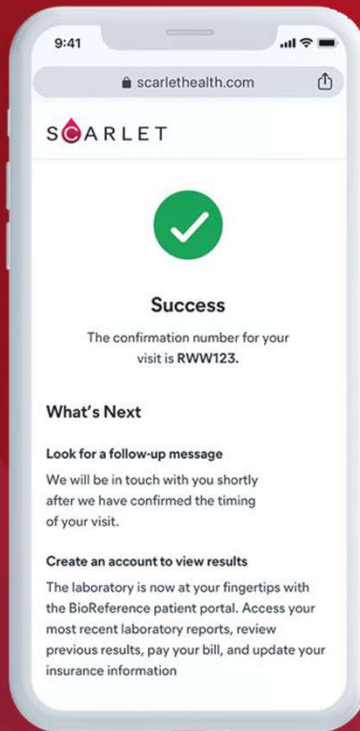


Enter your location

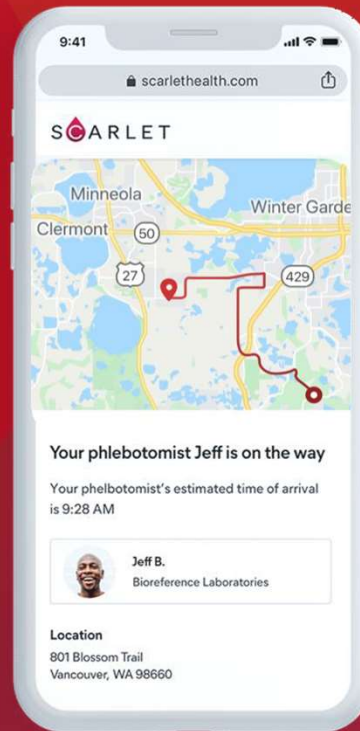


Select two times slots

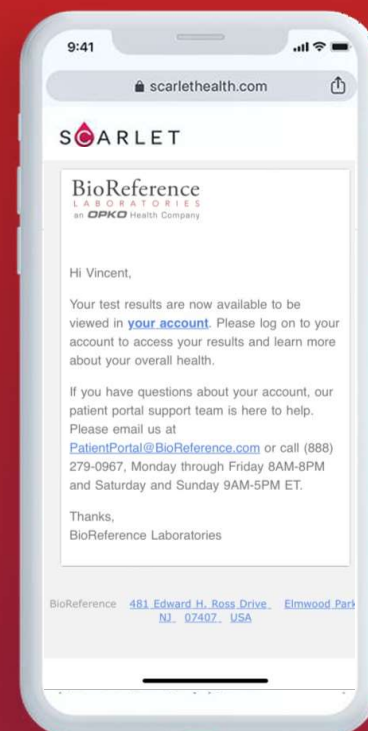
## How It Works (Continued)



Your appointment is confirmed



Your phlebotomist is on the way



Your results are ready

# Scarlet Has A Strong Foundation For Growth

## Payers



## Providers



## Patients



### Upload your lab order

Please upload a complete photo or file of your order.  
Supported file types include JPG, GIF, PDF, DOCX and PNG.



Patients are finding Scarlet and uploading their lab orders via ScarletHealth.com with no promotion

**84M+ Covered Lives**

Significant uptake by a broad group of practitioners, including Digital Health

**NPS of 93** or greater throughout 2021

★ Denotes Regional