



C> Strategic Vision and Discovery & Safety Assessment

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Charles River's C> Strategic Vision

Preferred Partner for Cell and Gene Therapy Innovators Worldwide

Mission Statement

Deliver the fastest and highest quality **end-to-end integrated solution** to accelerate cell and gene therapy development and manufacturing globally by leveraging our **comprehensive portfolio** with a **consistent, easy-to-use, and customizable, high-science approach** while offering the flexibility to **adapt and innovate** to meet our clients' changing needs

Preferred partner for high-quality and expertly-conducted C> drug development to accelerate the path to market

Expand capabilities and geographic reach to complement our leading non-clinical portfolio

Collaborating with our clients and partners to enable and commercialize the next generation of C> innovations

C> Industry Landscape

C> Market Drivers

- Emerging C> modalities are growing faster than traditional modalities
 - Advancements in next-generation cell and gene therapies are fulfilling the promise of personalized medicine
- Established high-growth market
 - >15% of biopharma R&D pipeline is currently C> programs
 - Proportion doubled since 2015
 - >25% CAGR for programs in C> pipeline since 2015

Industry Drivers

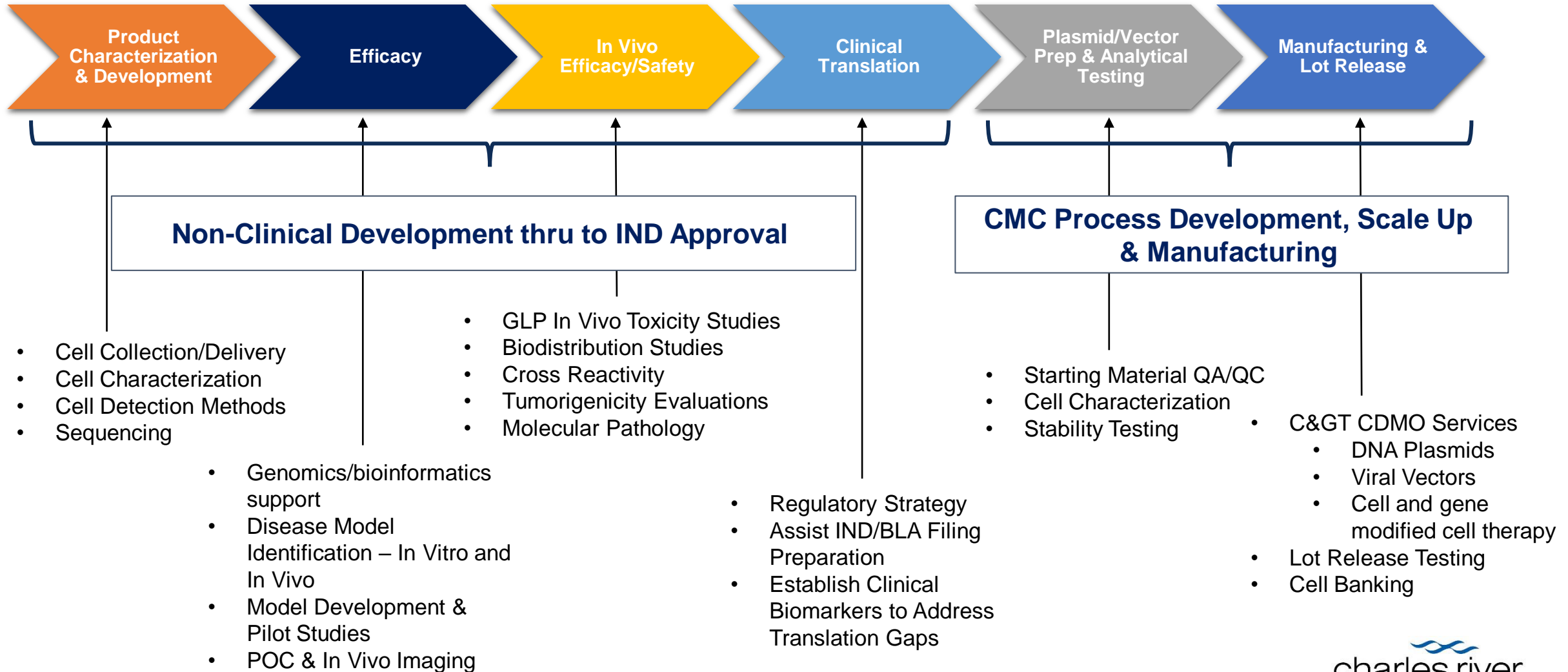
- Speed, safety, reliability, and cost management are among the normal challenges faced by C> clients, driving increasing expectations and the need for better solutions
 - Many of the cell and gene manufacturing processes currently in place have been developed with small patient numbers and involve manual steps
 - Autologous cell therapies are inherently variable and prone to human error
 - Allogeneic cell therapies require challenging scale up of batch sizes

CRL's Position

- Comprehensive C> portfolio from research models and cell supply, to global DSA services, to analytical testing and manufacturing capabilities
 - Reduces complexity of client's supply chain
- Best-in-class and trusted partner with industry-leading scientific and regulatory capabilities
- Coverage of key geographies
- Accelerating innovation through collaboration with clients and partnering relationships to address inherent C> development challenges

CRL Cell & Gene Therapy Process Map

Where CRL Plays Today



Strategy: First-Choice Partner to Accelerate C> Development and Manufacturing Globally

Preferred partner for high-quality and expertly-conducted C> drug development to accelerate the path to market

Expand C> capabilities and geographic reach to complement our leading non-clinical portfolio



CRL C> Center of Excellence

Team of highly experienced C> scientists, engineers and regulatory professionals to guide and advise our client's programs



Digitally Enabled, Science Forward Client Journey

Best-in-class, easy-to-use client journey delivered through digital enablement, scientific expertise, program management, and data analytics



Comprehensive C> Portfolio

Ensure industry leading C> products and services to support non-clinical development and production of C> globally



Global Cell Therapy Supply Chain Leadership

A premier position in global cell therapy supply with emphasis on securing end-to-end critical global access and supply for cells, media, and reagents as tools for process development and scale up



Enhance C> CDMO Capabilities & Footprint

Continue to enhance our C> CDMO capabilities and geographic footprint to enable clients to drive greater efficiency and accelerate their speed to market



Innovation Through Collaboration

Global leadership in C> through a collaborative, high-science approach and partnerships to provide clients with cutting-edge technologies

Collaborating with our clients and partners to enable and commercialize the next generation of cell and gene therapies

Discovery & Safety Assessment: The Leading, Non-Clinical Contract Research Organization



#1

Position
among early-
stage CROs

~2,000

Scientists with
advanced
degrees
in the DSA
segment



~33%

share of
outsourced
Safety
Assessment
market sector

>400

Patents worked
on by
DSA segment



~10%

DSA organic
revenue
growth
(2021-2024 Target)

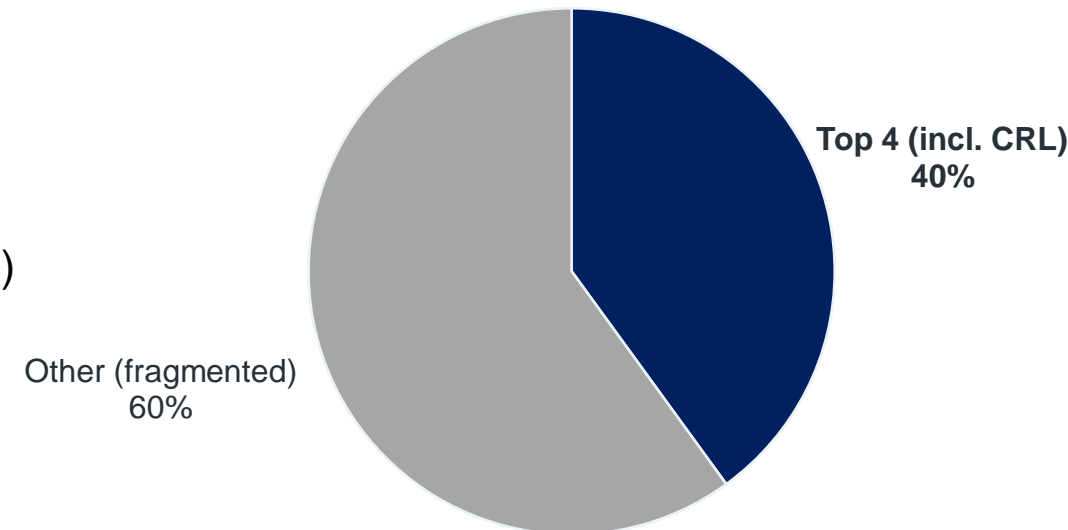
85

Novel
molecules
originated for
clients since
1999

Discovery Services

- A **unique CRO**, offering clients a single source for services across the discovery spectrum
 - Engages with clients earlier in the discovery process
- Integrates **chemistry, *in vitro*, and *in vivo*** capabilities
 - Extensive **medicinal chemistry** and **structural biology** expertise
 - Comprehensive **tumor** and **HTS** (high-throughput screening) libraries
 - **Pharmacology** models for all major disease areas
 - Expertise centered around all major therapeutic areas, including **oncology** and **CNS**
- Early Discovery has discovered **85 novel molecules** for clients since its founding in 1999
- Continuing to expand discovery capabilities through M&A, strategic partnerships, and internal investment
 - Recently acquired **Distributed Bio** (large molecule discovery) and **Retrogenix** (cellular microarray technology) to enhance discovery capabilities

Outsourced Global Discovery Services Market Sector



~\$5-\$6B Outsourced Market Sector
Low-Double-Digit Growth
~25% Outsourcing Penetration

Sources: Citeline (Pharmaprojects), Visiongain, Kalorama, L.E.K. Consulting, Factiva, Wall Street research, and CRL management estimates.

Recent Acquisitions: Distributed Bio & Retrogenix



- Acquired December 2020: A next-generation antibody discovery company
- Establishes CRL's premier, integrated, large molecule discovery platform with an end-to-end solution for therapeutic antibody discovery and development
- Distributed Bio's antibody libraries and integrated antibody optimization technologies expedite the antibody discovery process by several months
 - 76 billion fully-human antibody phage display library
 - ~100s to 1,000s hits against every target panned



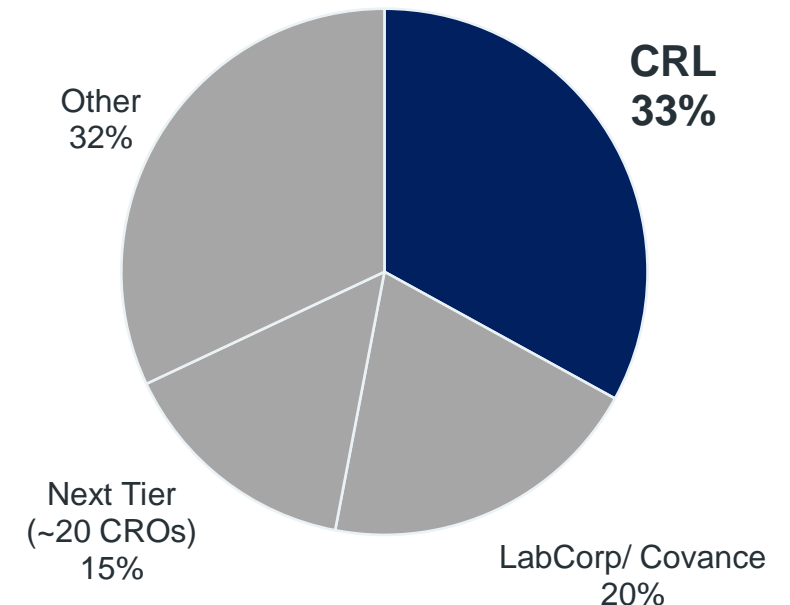
- Acquired March 2021: An early-stage CRO providing specialized bioanalytical services utilizing its proprietary cell microarray technology
- Retrogenix offers cell microarray services for target receptor identification, off-target profiling, and target deconvolution on a wide range of novel therapeutics including biologics, cell therapies, and small molecules
- A premier platform for off-target screening for preclinical safety assurance in CAR-T therapies

Distributed Bio and Retrogenix further strengthen our integrated, end-to-end solution for therapeutic antibody and cell and gene therapy discovery and development

Safety Assessment Services

- **Global leader** in both non-regulated (non-GLP) and regulated (GLP) safety assessment services
- Providing clients with expertise for **integrated drug development**
 - **Non-GLP** efficacy studies
 - **Safety Assessment (SA)**
 - **General** toxicology
 - **Specialty** toxicology
 - Inhalation, infusion, developmental and reproductive, juvenile/neonatal, ocular, bone, immunotoxicology, and phototoxicology
 - Comprehensive suite of **bioanalytical services**
 - Expert **pathology** services
- Acquisitions of **Citoxlab** (2019), **MPI Research** (2018), and **WIL Research** (2016) have further enhanced CRL's leading SA position and solidified our scientific capabilities and global scale in order to fully support our clients' needs

Outsourced Safety Assessment Market Sector



\$4.5-\$5B Outsourced Market Sector
Mid- to High-Single-Digit Growth
60%+ Outsourcing Penetration

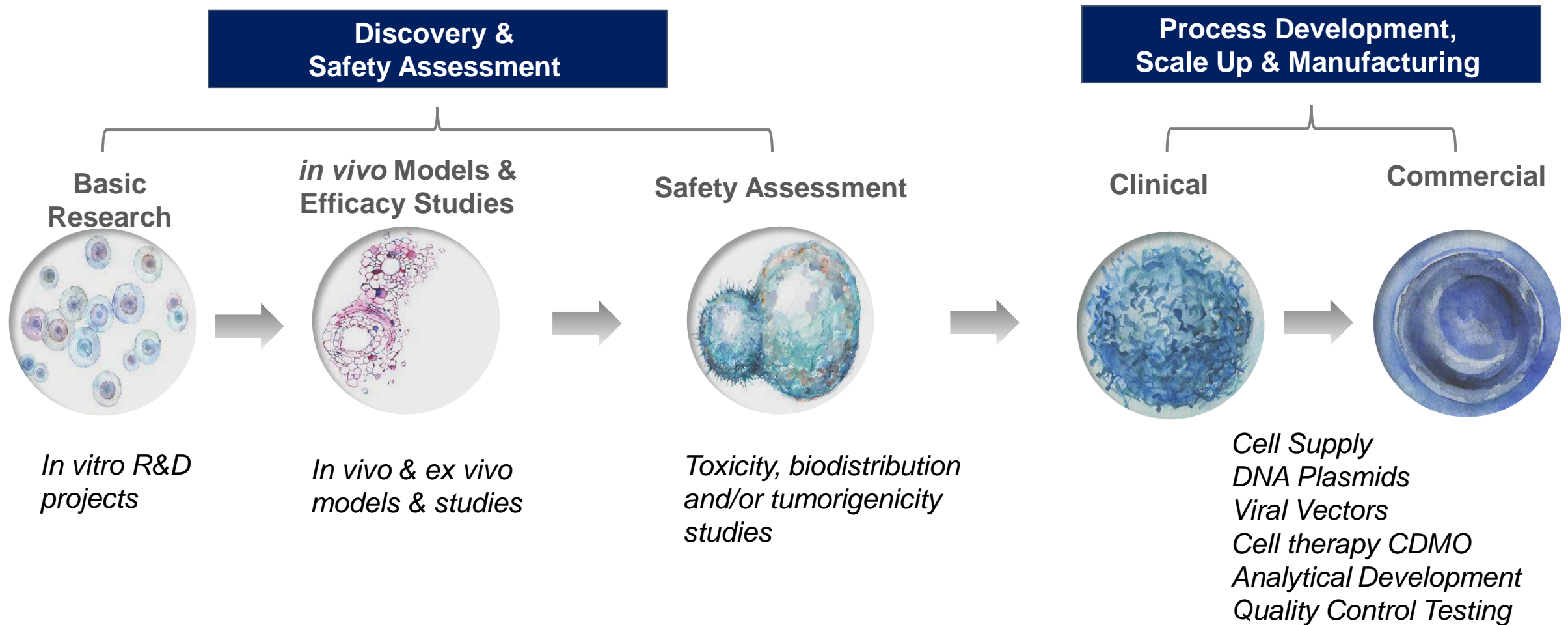
DSA: Best-in-Class C> Experience & Scientific Expertise

- Extensive discovery and safety assessment expertise across advanced drug modalities
 - Meaningful growth potential with ~two-thirds of the C> R&D programs currently in the preclinical phase
- We offer extensive preclinical testing requirements for C>, which vary by molecule:
 - Gene-modified cell therapies (i.e. T cell therapies) typically require a non-clinical program involving combo efficacy/safety studies
 - Primarily using immunodeficient/genetically modified models
 - Gene therapies require a non-clinical program similar is to a traditional large molecule
 - More complex specialty programs
 - Regenerative medicine cell therapy programs vary by therapeutic and can be quite complex
- CRL has established one of the largest, early-stage testing platforms to support this emerging, high-growth sector

Conducted
>900
cell & gene therapy studies in 2020



CRL's Translationally Focused Approach to C>



DSA Strategy Drives Innovation and Growth

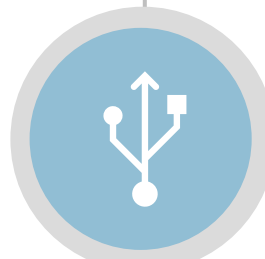
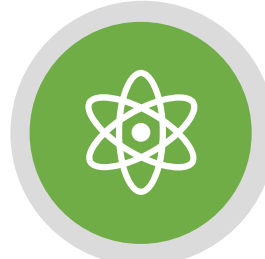
Scientific Expertise

Accelerate pathways to go/no-go decisions by investing organically and through partnerships and M&A

- Innovation to accommodate shift to **large molecule** and **C>** research programs

Digital Strategy

Best-in-class outsourcing experience through **digitalization** of data, enhanced data analytics, and providing **self-service** options



Operational Excellence

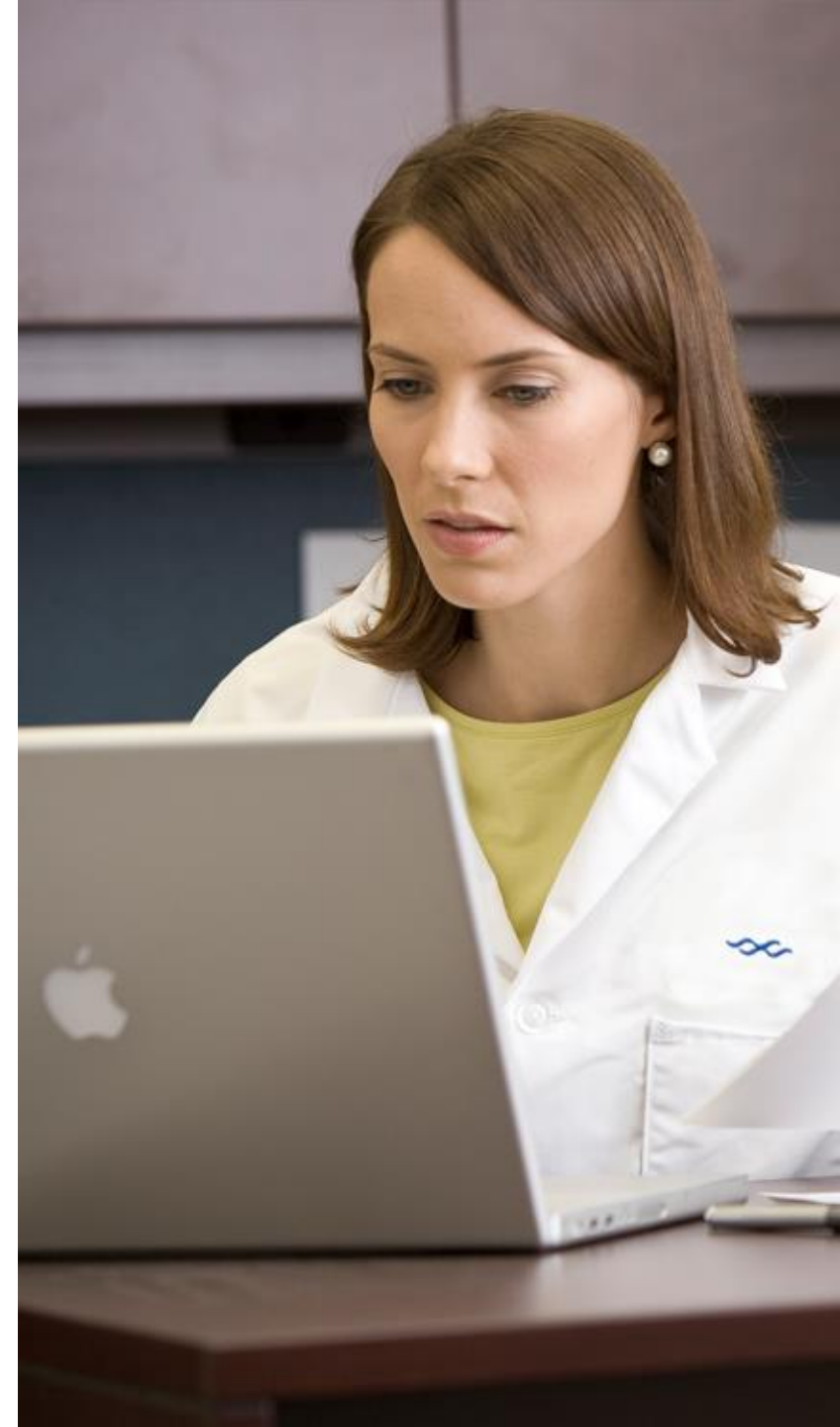
Revolutionize the industry with a seamless and flexible end-to-end, early-stage drug development platform through collaboration, harmonization, and process improvement

Our People

Engage, hire, and retain the best people by developing, appreciating, and empowering our people and allowing them to **make fast decisions**

Digital Strategy

- Build **best-in-class** outsourcing experience through **digitalization** of data, data analytics, and self-service options
 - Scientific data is the core of our business
- Digital strategy entails:
 1. Continuous upgrades to IT security and foundational information and data management tools to support global digital strategy and data analytics
 2. Enhance tools to support the operational excellence of CRL and our clients
 3. Migrate towards a **full digital client experience** to enable clients with real-time access to data and self-service options



Digitally Enabled Client Journey



Flexible and Secure Technology

- Best-in-class technology platforms
- Information security as the highest priority
- Enterprise architecture roadmap
- **Goal:** Secure and scalable infrastructure



Talent and Operating Model

- Recruitment and retention of best digital talent
- Agile operating model
- Culture of continuous development, learning and problem solving
- **Goal:** Acceleration of digital capabilities



Data as an Asset

- Data is leveraged for operational efficiencies and scientific insights
- Drive cross-selling throughout the CRL portfolio
- Licensing of emerging technologies
- **Goal:** Efficiencies and competitive advantage



Client Engagement And Speed

- Enable self-service with human touch
- Maintain fastest turnaround times in the industry
- Reduce 'whitespace' in drug development
- **Goal:** Reduce drug development timeline by an additional year

Establish CRL as a leading digitally powered CRO to support clients' increasing complex needs and accommodate future growth