

Investor Day 2022

Nasdaq MarketSite



September 20, 2022

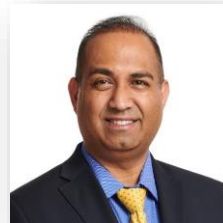
Introductions: Our Team



Tony Hunt
President and CEO



Jim Bylund
COO



Gautam Choudhary
SVP Systems and
Automation



Christine Gebski
SVP Filtration and
Chromatography



Vikas Gupta
VP and GM,
Downstream
Bioprocessing and
Gene Therapy



Craig Harrison
SVP Analytics



Ralf Kuriyel
SVP Research &
Development



Kola Otitoju
SVP Strategy and
Business Development



Jon Snodgres
CFO



Agenda

Introduction	Sondra Newman	8:20 am
Company Overview	Tony Hunt	8:30 am
Upstream/Downstream Solutions & Systems	Christine Gebski Gautam Choudhary	8:50 am
Fluid Management: Connecting Unit Operations	Jim Bylund	9:30 am
❖ Break		9:45 am
R&D: Delivering on Innovation	Ralf Kuriyel	9:55 am
Cell & Gene Therapy: New Modalities	Vikas Gupta	10:15 am
❖ Break		10:35 am
Q&A: Panel includes Jon Snodgres, Craig Harrison, Kola Otitoju		10:45 am
❖ Event End		11:30 am

Safe Harbor / Non-GAAP Financial Measures

This presentation contains forward-looking statements within the meaning of the federal securities laws. Statements in this presentation which are not strictly historical statements including, without limitation, express or implied statements or guidance regarding Repligen's estimated financial results for full-year 2022, future financial performance and other statements identified by words like "estimated," "anticipated," "guidance," or "goal," and similar expressions are forward-looking statements. These statements are subject to risks and uncertainties which may cause our plans to change or actual results to differ materially from those anticipated. In particular, unforeseen events outside of our control may adversely impact future results. Additional information concerning these factors is discussed in our reports filed with the Securities and Exchange Commission including recent Form 8-Ks, our most recent Annual Report on Form 10K and our most recent Quarterly Reports on Form 10Q, all of which are available on our website. The forward-looking statements in this presentation reflect management's current views and may become obsolete as a result of new information, future events or otherwise. We may not update such forward looking statements to reflect a change of events or circumstances that occur after the date hereof, except as required by law. The industry and market data contained in this presentation are based on management's own estimates, independent publications, government publications, reports by market research firms or other published independent sources, and, in each case, are believed by management to be reasonable estimates. Although we believe these sources are reliable, we have not independently verified the information. This presentation discloses certain financial measures not prepared in accordance with generally accepted accounting principles, or GAAP. Repligen strongly encourages investors to review our consolidated financial statements and publicly filed reports in their entirety and cautions investors that the non-GAAP measures used herein may differ from similar measures used by other companies, even when similar terms are used to identify such measures.



Company Overview

Tony Hunt

What you will hear today

Repligen activities to sustain above-market growth

Enabling efficiency with disruptive technologies

- Enabling significant improvements and efficiencies in biologics drug manufacturing
- Displacing traditional technologies
- Step changes in yield, COGS, time, accuracy
- First-to-market innovation

Expanding into emerging modalities

- Cell and gene therapy (AAV, Lenti)
- mRNA moving beyond COVID
- Biosimilar mAb opportunities
- Optimized product portfolio addressing opportunities

Evolving our businesses

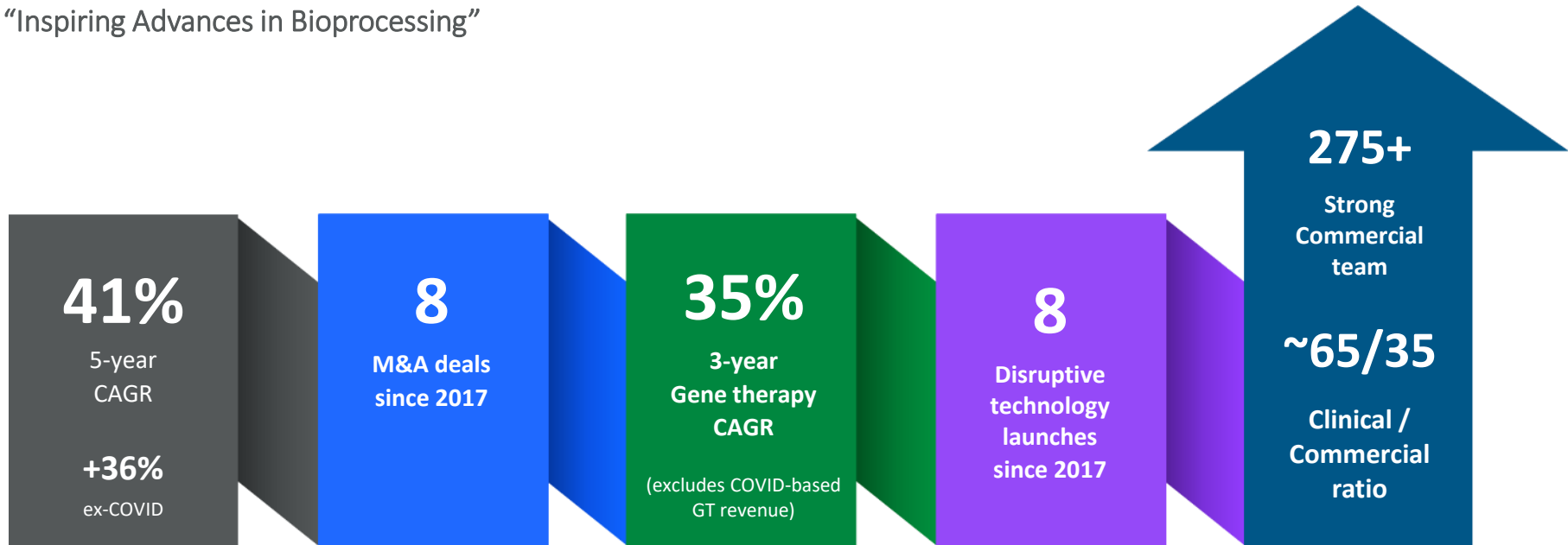
- Winning in Upstream/Downstream
- Integrating Process Analytics
- Expanding our portfolio: Fluid Management
- Balancing M&A and R&D output
- Continuing to be nimble and innovative



We are the innovation leader in bioprocessing

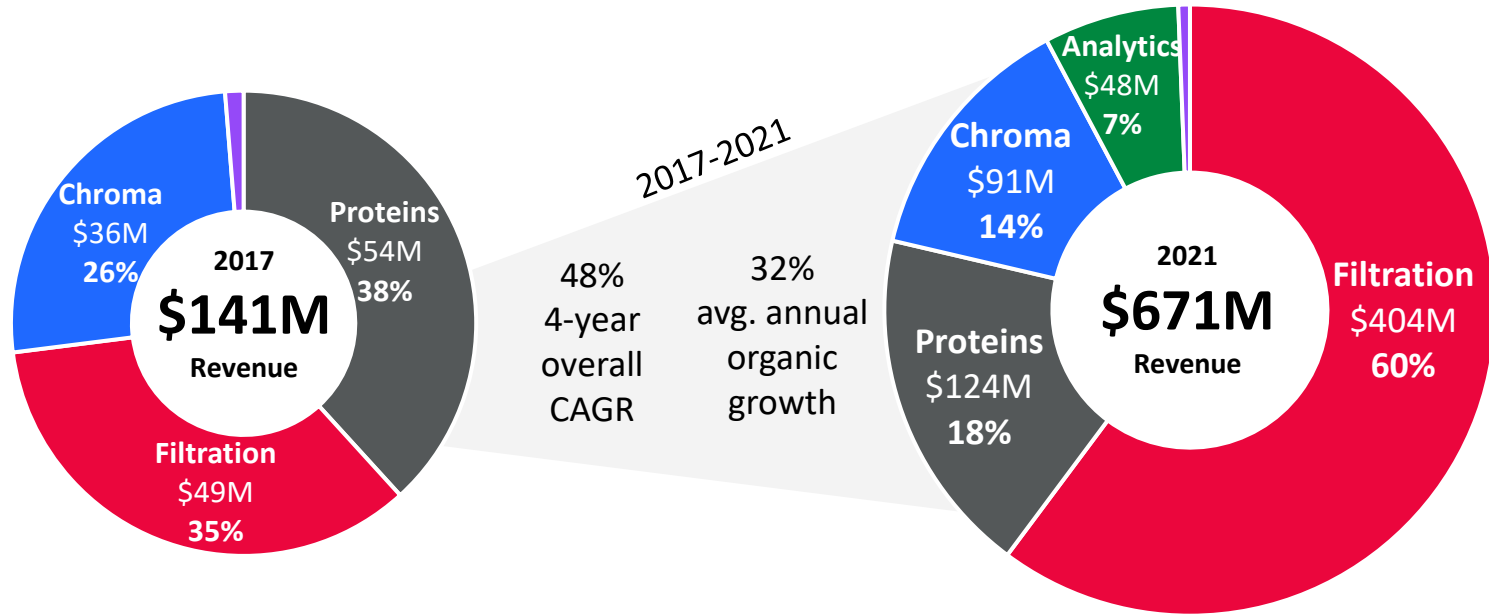
Execution on our goals over the last 5 years (2017-2022e)

“Inspiring Advances in Bioprocessing”



Focused on operational excellence as we expand;
since 2017 we have more than doubled capacity and global presence

Strong revenue growth driven by innovation and portfolio expansion



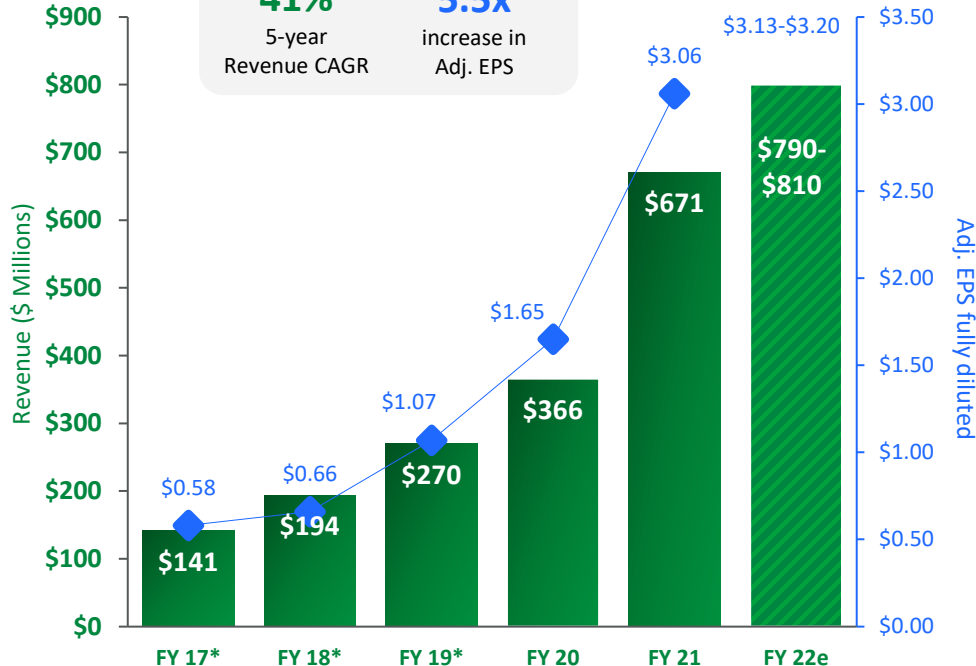
>>> Long life-cycle, highly differentiated systems and consumable products

Creating value for shareholders

Delivered strong 2017-2022e Revenue and Adj. EPS growth; On track for strong 2022

41%
5-year
Revenue CAGR

5.5x
increase in
Adj. EPS



*Change in accounting for the treatment of tax on certain non-GAAP adjustments

H1 2022 Highlights

- Record revenue \$414M incl. \$88M COVID-related
- Strong base business revenue +39%
- Managed through H1 inflationary issues and regional challenges; China up 27%
- On track with capacity expansion programs; lead times are now at or below pre-COVID
- Increased guidance, driven by base strength



Market Landscape

Healthy end markets: mAbs and C> fuel our growth



Monoclonal Antibodies

~\$150B

Market 2021

Growing at >10% annually

>125

U.S. FDA Approvals
incl. 23 Biosimilars

>800

Candidates Phase I-III

>1,500

Active clinical trials

New approvals and growing biosimilars pipeline



Cell & Gene Therapy

>\$5B

Market 2021

Growing at >25% annually

12

U.S. FDA Approvals
incl. 8 Cell, 4 GT

>500

Candidates Phase I-III

>1,100

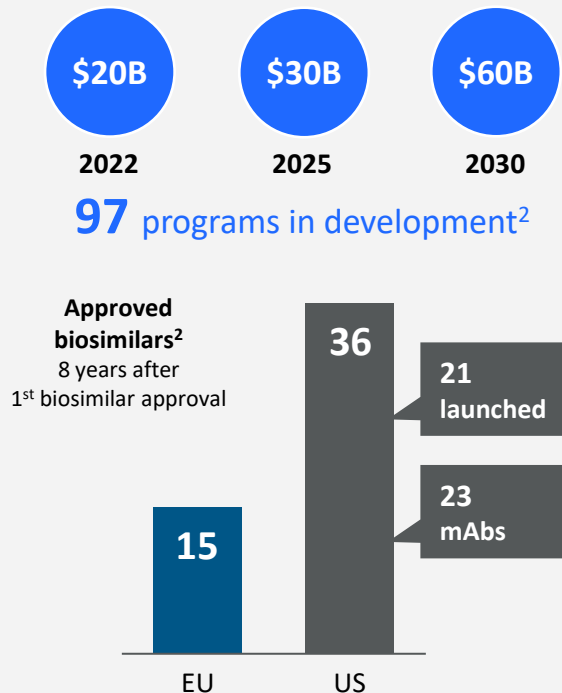
Active clinical trials

Emerging opportunities beyond COVID

Data sources: \$s Company filings/guidance; Approvals: U.S. FDA website; Industry articles incl. www.genengnews.com/a-lists/top-11-best-selling-covid-19-vaccines-and-drugs-of-h1-2021/; mAb approvals: Antibody therapeutics approved or in regulatory review in the EU or US - The Antibody Society; PhRMA report <https://phrma.org/-/media/Project/PhRMA/PhRMA-Org/PhRMA-Org/PDF/A-C/MID-cell-and-gene-therapy-2020.pdf>; Repligen internal mAbs tracker; Market research reports (Research and Markets, Allied Market Research, Brandessence Research, Fortune Business Highlights, Qualikat Research. Candidates C&T: 2)Cell & Gene Therapy reports: American Society of Gene & Cell Therapy: Q2 2022 Cell, Gene & RNA Therapy Trials C&T: BioCentury

Biosimilar mAbs market acceleration – opportunities across our broad portfolio

Global Biosimilar Market Outlook¹



¹ McKinsey & Co, *An inflection point for biosimilars*, June 2021.

² Amgen Biosimilars 2022 Trend Report. 1st approvals: 2006 EU, 2015 US

“Top 6” mAbs with launched biosimilars

	2021 Sales	US FDA approved biosimilars
 HUMIRA adalimumab	\$20.7B	7 ¹
 LUCENTIS RANIBIZUMAB INJECTION	\$3.6B	1
 AVASTIN bevacizumab REMOVES FLUID FROM EYES FOR USE	\$3.4B	3
 Remicade INFLIXIMAB	\$3.2B	4
 Herceptin trastuzumab 21 mg/mL INJECTION FOR INTRAVENOUS USE	\$2.9B	5
 Rituxan Rituximab	\$2.8B	3
Total Sales	\$36.6B	23 approved 14 launched

Looking Ahead:

Humira biosimilars go commercial in 2023

4 additional blockbuster mAbs² with **\$29B** in 2021 sales come off patent over the next 5 years.

¹ An additional 5 are in clinical development.

² Opdivo® (BMS), Perjeta® (Roche), Stelara® (Janssen), Eylea® (Regeneron)

We see the evolution of mRNA as a major new modality and market driver

COVID demand – including from the leading vax manufacturers – provides an mRNA entry point for Repligen

Leading COVID vaccine developers are advancing the greatest number of non-COVID mRNA programs

moderna

40+ programs
21 non-COVID



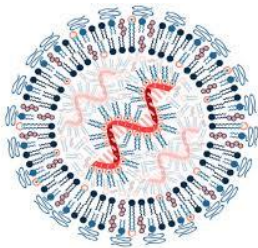
\$470M in mRNA-based vax,
Influenza,
Key partnerships

BIONTECH

25+ programs
13 non-COVID



~20 programs
10 non-COVID



Relationships in place
with many Pharma
collaborators



sanofi

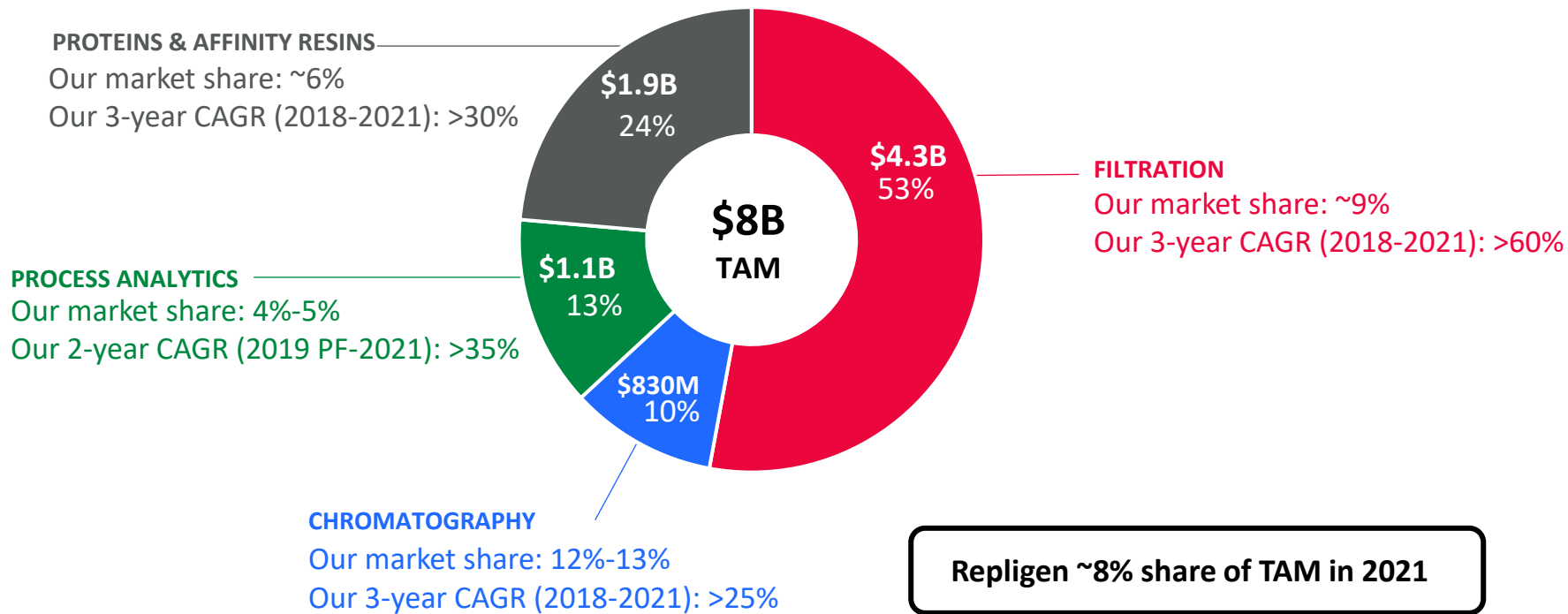




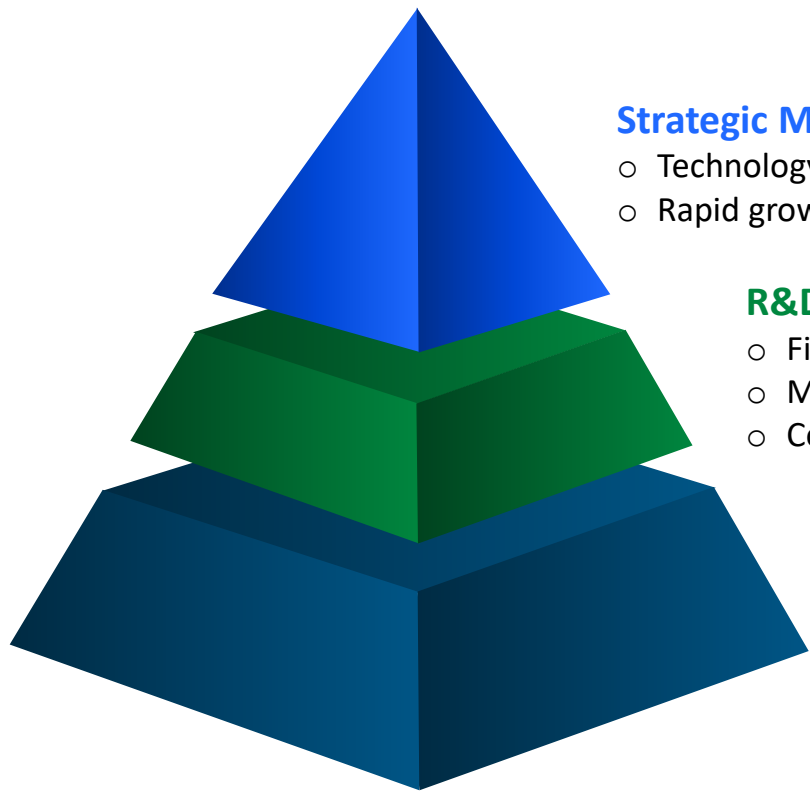
Our Addressable Market and How We are Winning

Expanding addressable market now >\$8B; \$22B total market

Taking share, creating new markets, and delivering industry-leading revenue growth



We have the right blueprint for continued success



Strategic M&A

- Technology focus
- Rapid growth of acquired companies

R&D Innovation

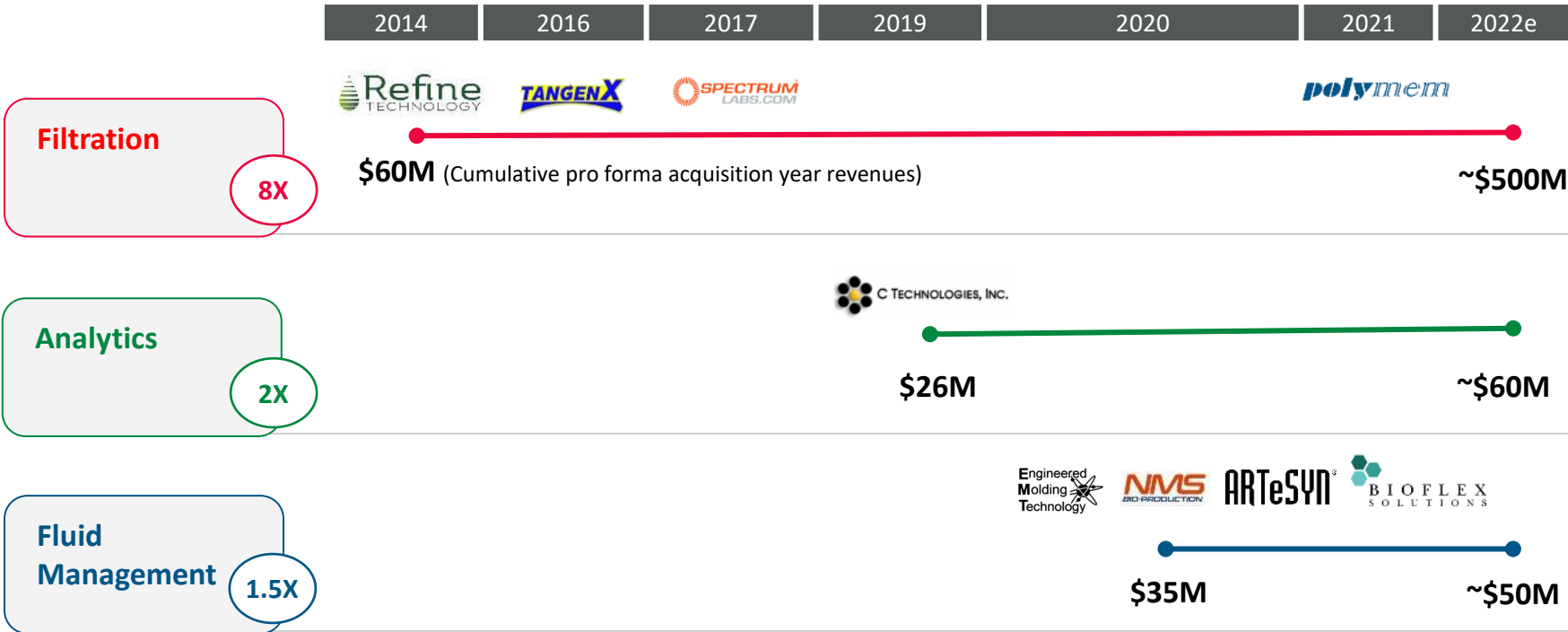
- First-to-market product introductions
- Market-leading technologies
- Collaborations with industry leaders in key growth areas

Operational Excellence

- Capacity expansion, multi-site manufacturing
- Global commercial footprint

Creation of value through strategic acquisitions

Technology differentiation, potential for growth above historical, attractive margins, near term accretion



>>> First full year revenue growth: 24% to 48% (above historical growth rates)

R&D fuels first-to-market innovation and technology leadership

First-to-Market Advantage

8

disruptive
launches
since 2017

Technology Leadership

- Perfusion & process intensification
- Harvest/clarification
- Pre-packed columns
- Viral vector process optimization
- Best-in-class affinity ligands
- In-line process analytics

Key Partnerships

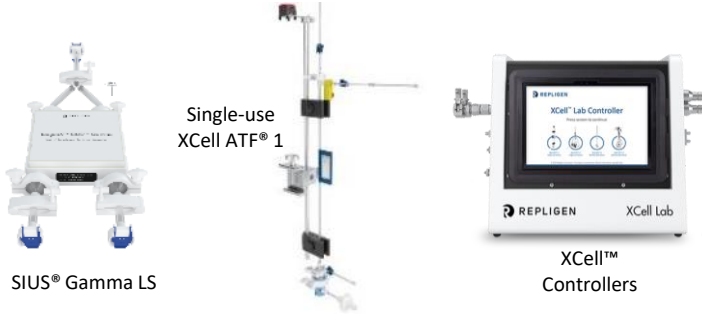
- Navigo Proteins
High performance ligands
- Ecolab (Purolite)
Next-generation Protein A resins
- DRS Daylight Solutions
Quantum Cascade Laser-IR



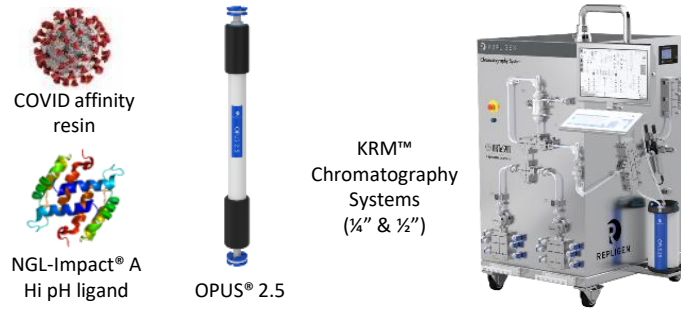
Incredibly productive 2021 for R&D – Drives future revenue growth

Our Applications team is successfully seeding new products into the market

Filtration



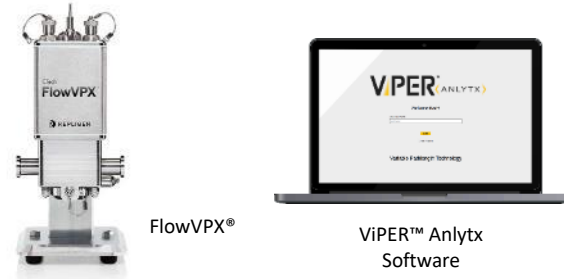
Chromatography: Resins, Columns, and Systems



Lab Scale Systems – Flat Sheet TFF



Process Analytics



12
products
launched
In 2021

4%
of sales
H1 2022

DRS Daylight Solutions (Daylight)

**DRS DAYLIGHT
SOLUTIONS** 

- **Leader in Quantum Cascade Laser mid-IR (QCL-IR) technology**
- Proven reliability in defense & aerospace industries
- Expertise in photonics, semiconductor lasers, commercial production
- Track record of innovation for commercial and defense markets

**Game-changing technology
for bioprocessing: Culpeo®**

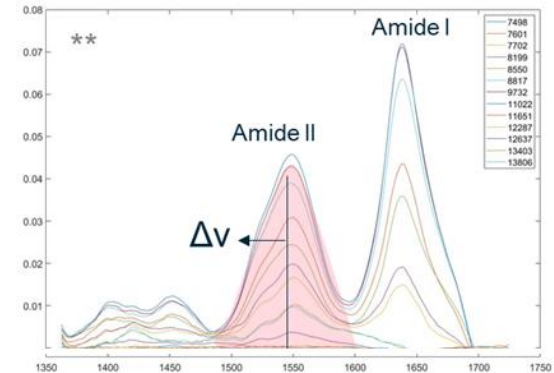


- Measures and quantifies critical quality attributes including protein high order structure
- High sensitivity (e.g. PPM) at lab, pilot and commercial scale manufacturing



**Bioprocessing
applications**

- Nucleic acid quantification
- Stability studies
- Protein aggregation



15-year strategic partnership with Daylight

Bringing advanced mid-IR laser technology to the bioprocessing market

Combines the power of two Innovators

DRS DAYLIGHT SOLUTIONS

- Experts in QCL with advanced solutions in aerospace and defense
- R&D and technology innovator

REPLIGEN

- Bioprocessing solutions leader strong history of innovation
- Commercial & applications partner

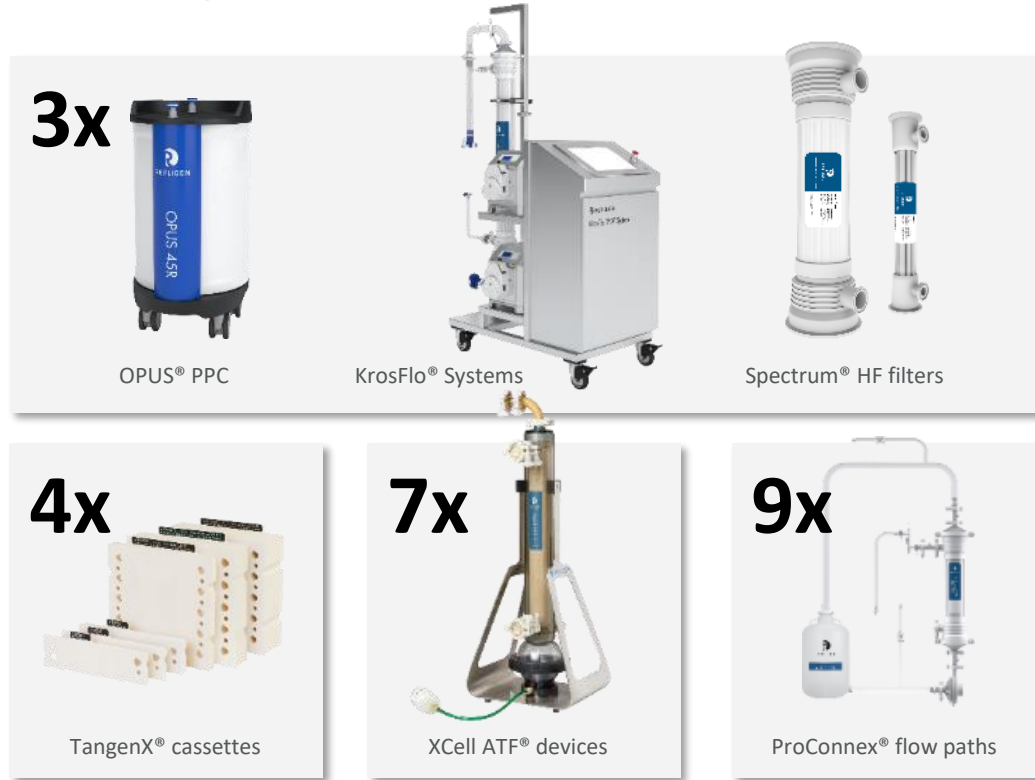
Bioprocessing customers benefit from best-in-class solutions that address needs of PAT

Strengthens Repligen PAT position

- Complementary to C Technologies
 - Adds mid-IR (higher sensitivity QCL-IR) to UV spectroscopy
- Allows further PAT expansion
 - Stronger position in fast growing, \$1.1B PAT market with more bioprocessing applications
- Portfolio synergies via Systems integration
- Supports strategic vision for at-line and in-line solutions

Capacity investments driving improved lead times

- Providing best-in-class lead times and customer satisfaction
- Driving business continuity through multi-site manufacturing
- Securing the supply chain
- Investing in expansion and facility improvements



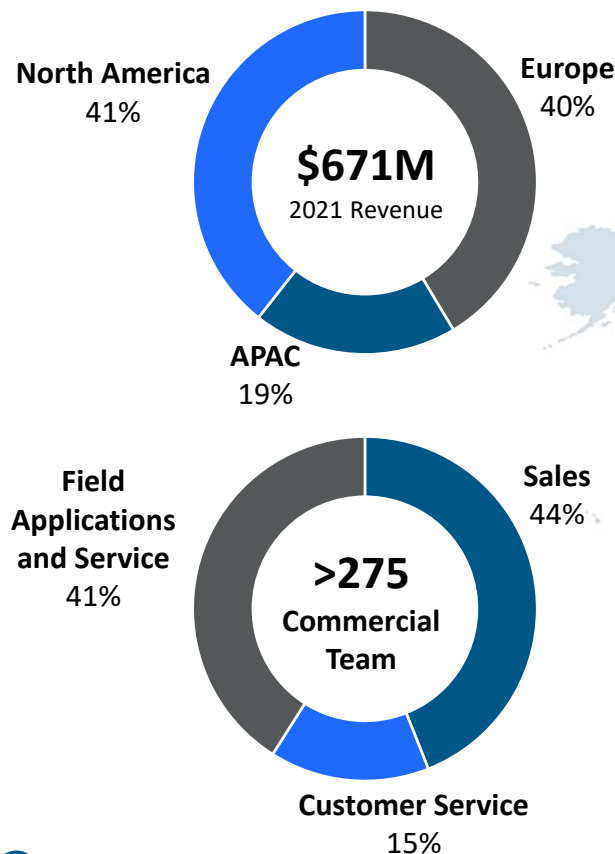
Capacity investment

~\$70M
in 2020/2021

~\$85M
in 2022

»» Lead times are now at pre-COVID levels and continue to improve

Growing our presence in the world of bioprocessing



Advancing our ESG strategy across 4 pillars

Committed to Sustainability

Nov. 2021:

Runner Up for
Best 1st Time Report

SASB & GRI Core frameworks



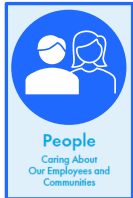
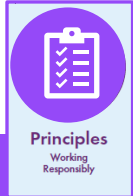
2023:

Our next
Sustainability report

2022: Focused on DE&I and Recycle/Reuse/Reduction Programs

- Progressing on senior level diversity hiring objectives
- Advancing HBCU and BSCP* relationships
(underrepresented student career development and internships)
- Converting machined to molded components - waste reduction
- Reducing chemical solvents in manufacturing
- Attained 100% renewable electricity at 3 additional sites (7 total)
- Advancing post-customer product recycling pilot (US and EU)
- Evaluating grey water re-use program for multiple sites

*Biomedical Science Careers Program



Well positioned for future growth

- Innovation leader in bioprocessing
- Expanding total addressable market >\$8B
- Capturing market share in new modalities
- R&D engine fueling future growth
- Expanding manufacturing capacity
- Track record of strategic M&A execution
- Outstanding financial performance
- 2024 revenue goal: \$1B

Growth Rates 2022e

FILTRATION
24%-28%

CHROMA
25%-30%

ANALYTICS
~25%

PROTEINS
-10%

Setting a new
revenue goal:
**~\$2B in
2027/2028**



Upstream | Downstream | Systems

Christine Gebski, Gautam Choudhary

Strong alignment with industry trends/dynamics

≥85% of pre-commercial product manufacturing now involves near total, single-use systems-based manufacturing¹



State of bioprocessing providers

- Industry is shifting from COVID and fully focused on process intensification
- Acceleration, expansion of new single-use manufacturing capacity
- Increased interaction with CDMOs and regional facilities – increased pharma outsourcing



Market and customer dynamics

- Process intensification a top priority
- Significant investment in mRNA - other vaccines and cancer therapeutics
- Biosimilars market positioned to expand rapidly
- Push to implement Process Analytical Technology (PAT) solutions



Critical success factors

- Leverage lead time advantage
- Expand presence in mRNA and increased vaccine focus
- Differentiate best-in-class systems with Analytics
- Integrate Fluid Management consumables into portfolio

Setting new standards in biological drug production with single-use solutions

mAbs,
rProteins,
vaccines
Workflow



TRENDS:

Process intensification

Fewer steps, smaller footprint

Scalability, flexibility, process monitoring



XCell ATF®



KrosFlo® TFDF®
Systems



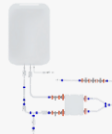
Chromatography Systems
OPUS® Columns



Ligands and resins



KrosFlo® TFF Systems
Spectrum® Hollow Fiber Filters
TangenX® Cassettes



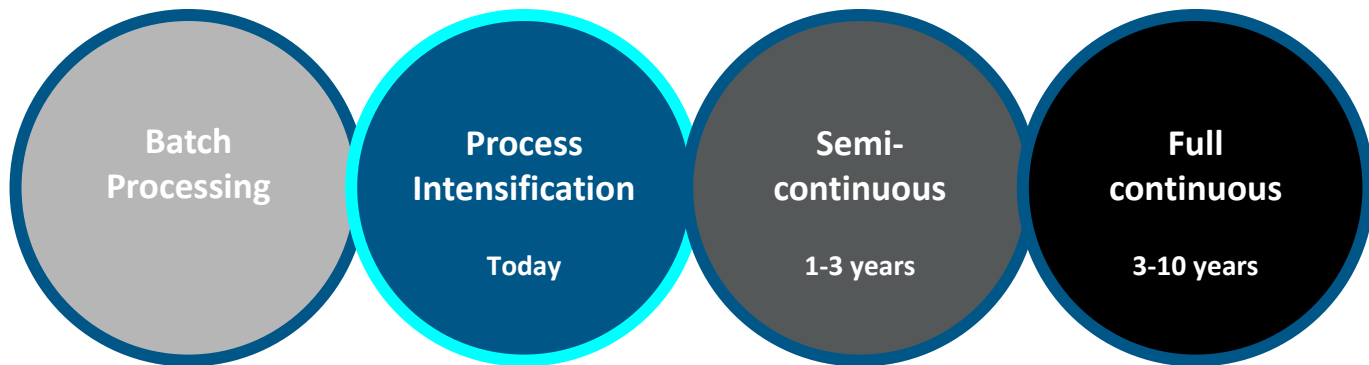
ProConnex® Flow Paths
ProConnex® Fluid
Management



Solo/FlowVPX®
Analytics

The industry is focused on process intensification

The move to semi/full continuous is still 3+ years away



- Focus on max output per unit operation
- Yield gains for mAbs and gene therapies
- Low hold-up volume
- Links upstream and downstream
- Focus on continuous capture; bioreactor upstream to first chromatography column
- Smart systems



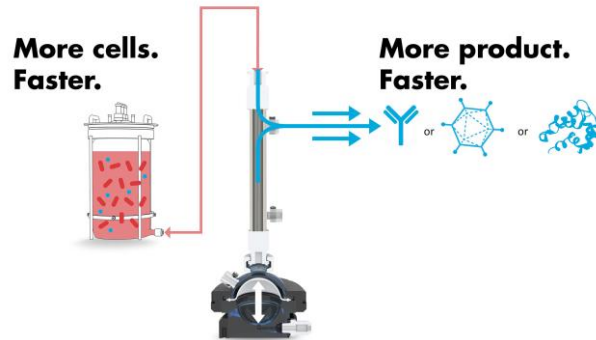
Repligen has built leadership in upstream process intensification with disruptive products (ATF, TFDF)

Repligen is recognized as the leader in process intensification

Net Promoter Score 2022 Survey shows Repligen as #1 in Upstream Intensification



*Size of text indicates greater number of respondents specifying that supplier in Cell Culture bioprocessing. Survey conducted April 2022.
Note: Refine Technology = Repligen (2014 asset acquisition (ATF))



XCell ATF® Technology



KrosFlo® TFDF® Technology

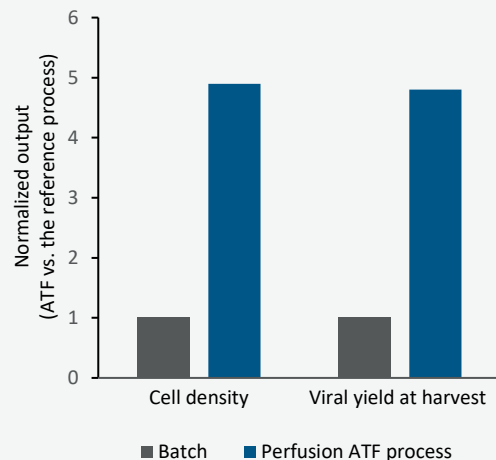
Technology focus	Scaling/adoption and expanding consumables
Market-leading differentiated technology ○ ATF – mAbs, rProtein and vaccine manufacturing ○ TFDF – Viral vector manufacturing	○ ~50% of ATF/TFDF customers implementing in Phase III/Commercial ○ TFDF - a major driver of success in viral vectors over the last 12 months

Addressing the need for improved yield in process intensification



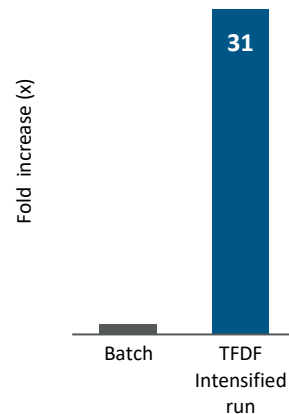
5X cell
density
5X viral
yield

Vaccine production in cell culture



31X
increase
in LV
production

Lentivirus production of a
HEK-293 producer cell line

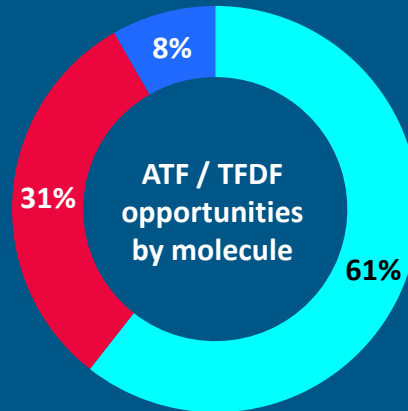


Expanding our leadership position in process intensification

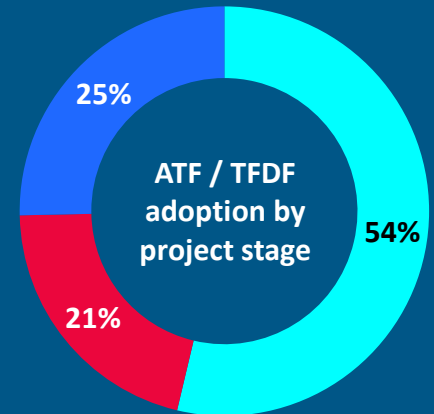
Enhanced performance through new ATF controllers and TFDF Systems

Expanding applications – mAbs, Cell and Gene Therapy and Plasmids

Progress the funnel – Phase I, II and III opportunities



■ mAbs / rProteins
■ Cell and Gene Therapy
■ Vaccine



■ Phase I/II
■ Phase III
■ Commercial

Expanding our presence in downstream processing – with consumables

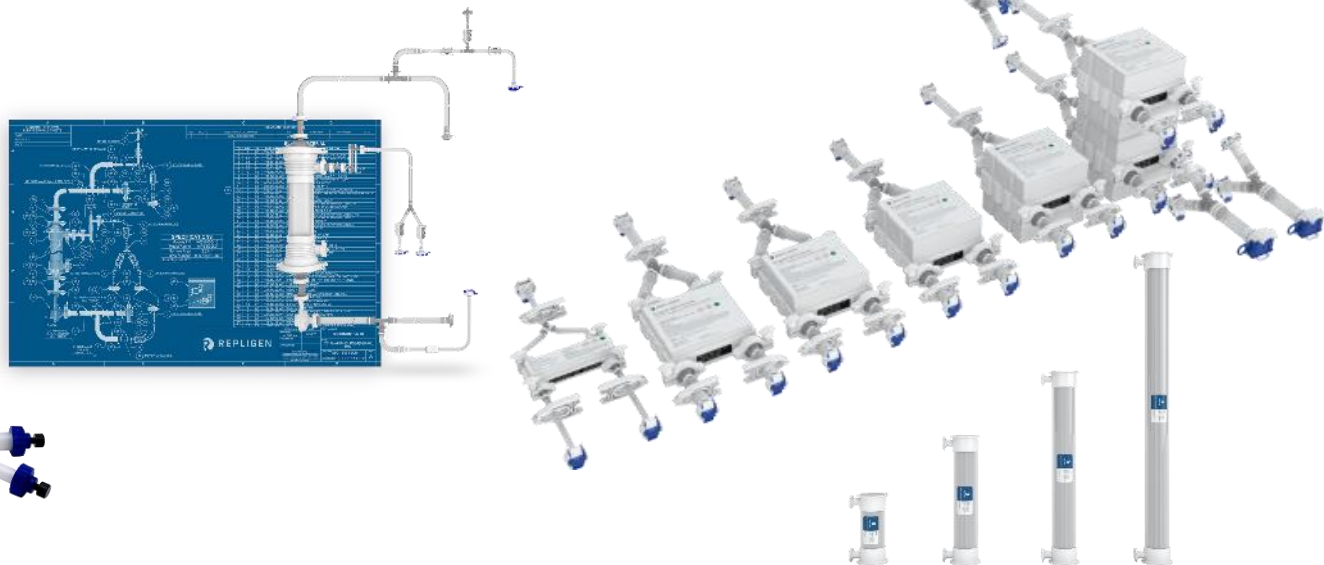
Affinity ligands and resins

- Expanding affinity partnerships - Ecolab
- Market launch of AAV resins – more to come!
- Expand OPUS® Content



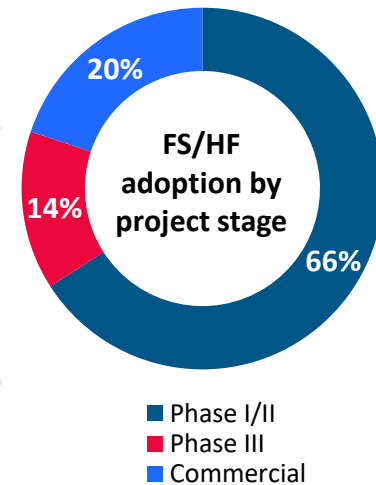
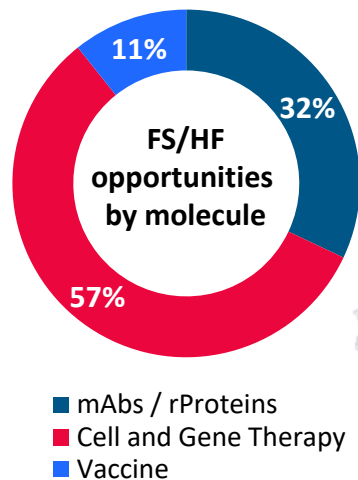
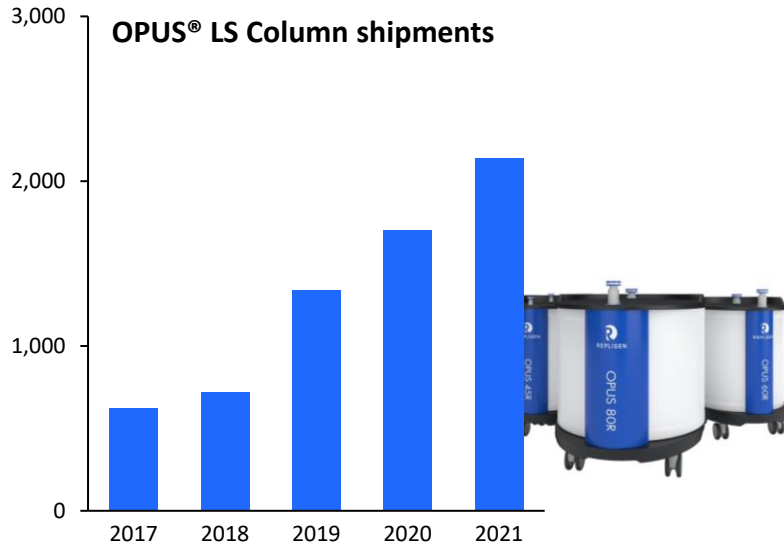
Flat Sheet and Hollow Fiber Filters

- Market-leading filtration portfolio
- Expanding applications and funnel
- Complement/leverage our Systems



Downstream adoption increasing

Modalities expanding, late-stage opportunities gaining momentum



Consumables feed our Systems strategy

Expanding our presence in downstream processing – with Systems

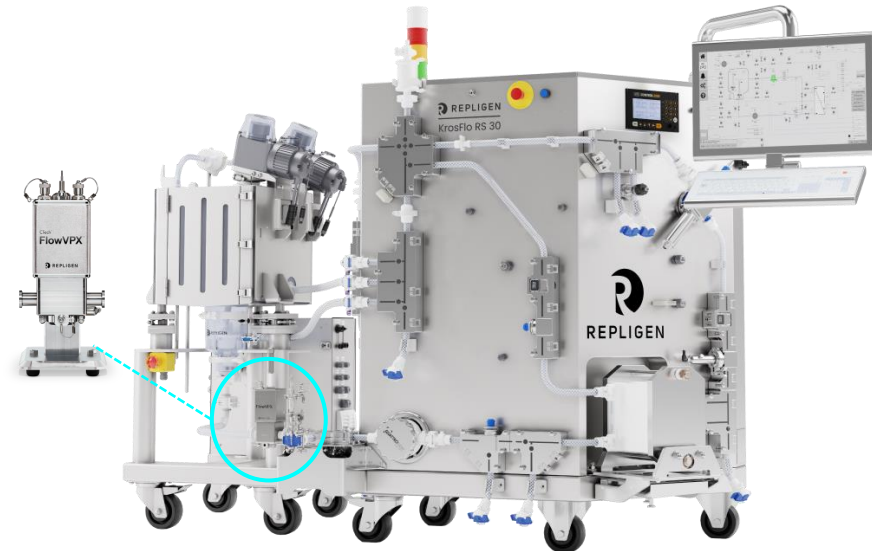
TFF and Chromatography Systems

- Expanded presence in downstream systems
- High recovery, gentle systems providing maximum yield
- Low hold-up volume, high pressure capability



FlowVPX® Integration

- Advancing PAT in Bioprocessing
- Only system capable of measuring protein concentration in-line



Driving consumables revenue through our Systems

Expanding Systems portfolio to address all modalities

**Hollow
Fiber TFF
Systems
Downstream**



KR2i Lab System



KMPi System



Plex System



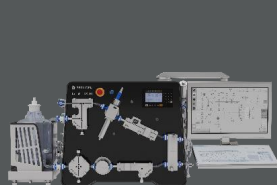
KPS System



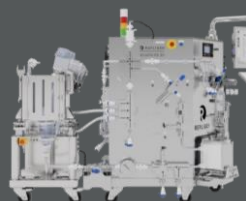
KTF System

Scalable single-use TFF and Chromatography Systems

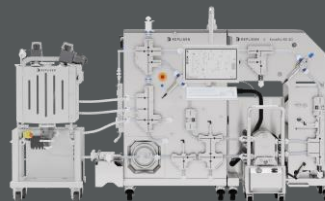
FS Cassette TFF Systems



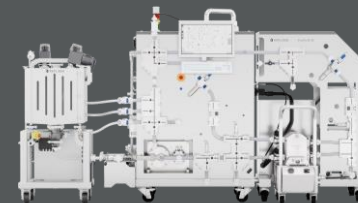
RS 20 System



RS 30 System



RS 40 System



RS 50 System

Scalable from product development to manufacturing

Chrom Systems



KRM10 System



KRM20 System



KRM30 System



KRM40 System

Addressing needs of Gene Therapy and mRNA customers with product innovation

When every drop counts

KrosFlo®
RS 20
TFF
System

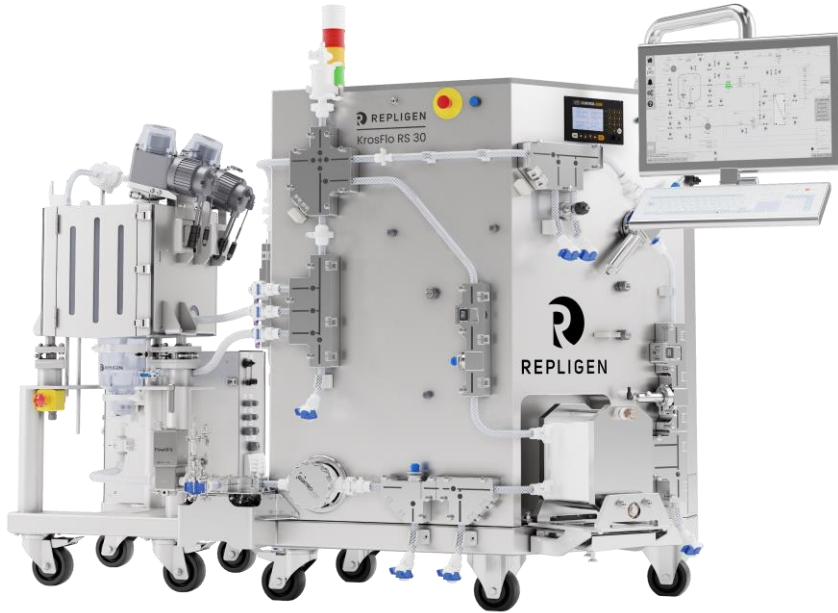


○ Highly automated

○ Robust

○ Scalable

Integrated Systems redesigning bioprocessing



KrosFlo® RS TFF System

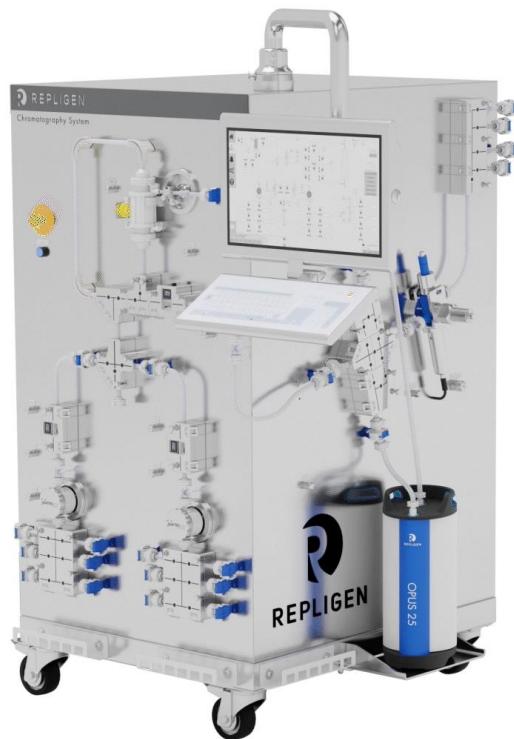
- Precision-engineered high recovery systems
- Closed single-use flow paths
- PAT-enabled
- Intuitive software
- Integrated consumables



KRM™ Chromatography System



Differentiated by state-of-the-art innovation and precision engineering



PAT and Real-Time Process Management (RPM™) impacting downstream processing



Integrating FlowVPX for high concentration mAbs

Final concentration step targets
~200mg/ml, short processing window



Jay West, Single-use program BMS

"Integration of FlowVPX will provide for in-line sampling for all steps from initial concentration to final formulation that could enable future real time/in-process release of drug substance..."



FlowVPX® enables PAT



Critical process parameter

Outcome

Minimize overconcentration

Improve product yield

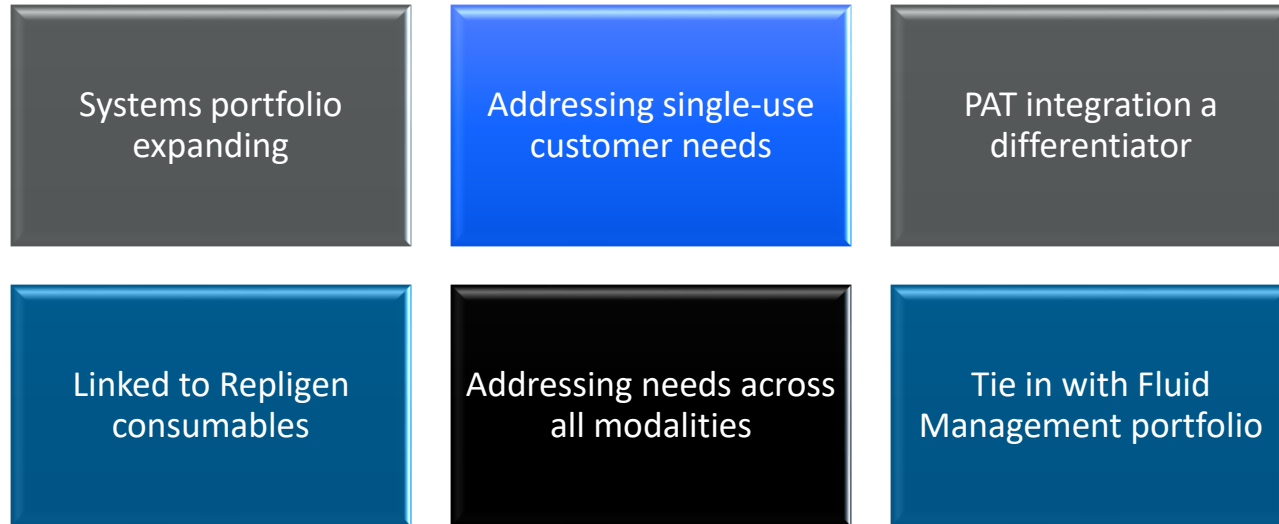
Reduce overmixing and residence time

Avoid shear and product degradation

Faster batch release

Through in-line protein measurement

Systems now fully integrated with Repligen consumables across modalities

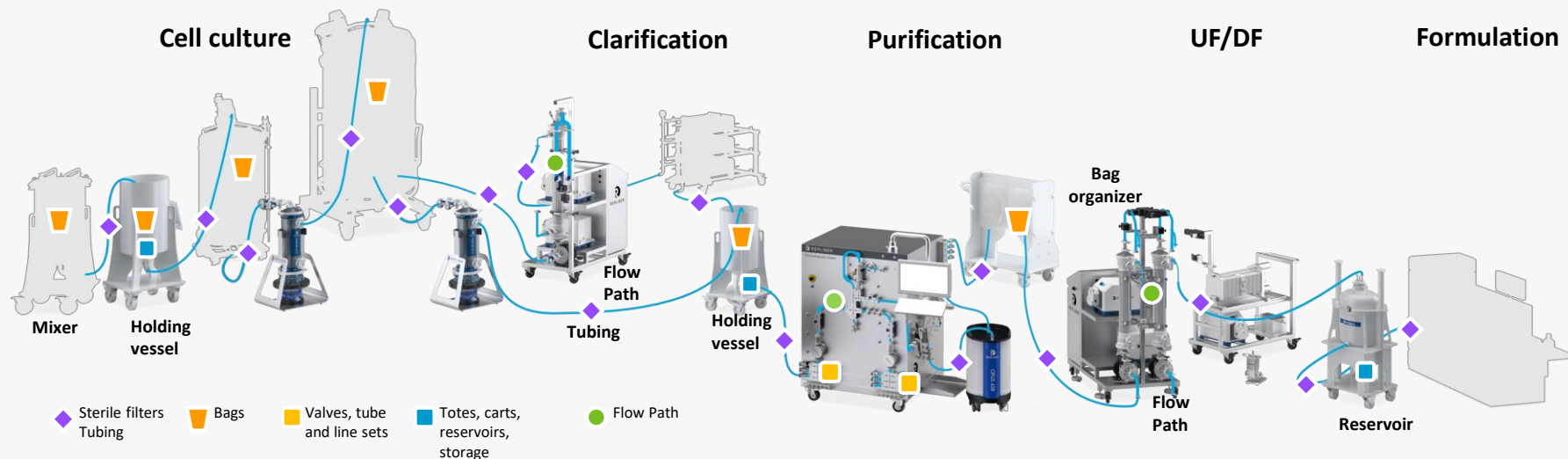




Fluid Management

Jim Bylund

What is Fluid Management?



Single-use solutions that connect unit operations

- Moves fluid between unit operations
- Includes bags, totes, tubing, other components
- Recurring consumable

Single-use solutions within a unit operation

- Moves fluid via a customized flow path
- Includes flow paths, bags, tubing
- Recurring consumable

Building a Fluid Management division - \$50M in 2022

Phase 1: Acquire Technology 2020-2021

Tubing
Molding



Bottles
Molds
Fabrication



Valves
Blocks
Liners



Clamps
Fittings



Phase 2: Build the Division Today

Key components in-house

Tubing, bottles, fittings

Assembly centers

Hopkinton and Ireland

System flow kits

Leverage Systems strategy
Support/leverage flow kits

Channel

Commercial team, business team
support structure

Phase 3: Expand Presence in FM

Execution Phase



Dual manufacturing sites are critical to success



Hopkinton, MA
~32,000 sq. ft.



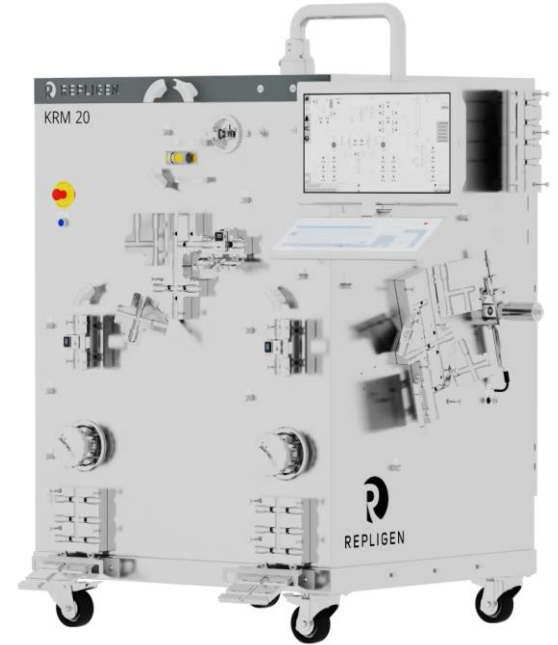
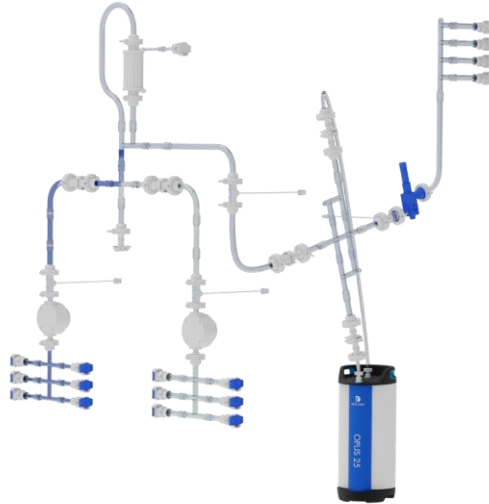
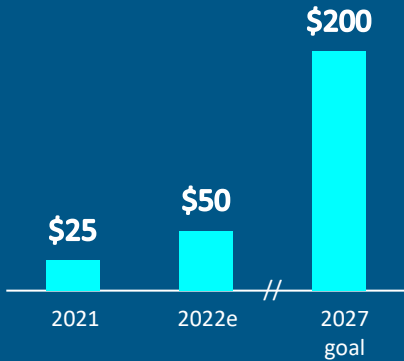
Waterford, Ireland
~33,000 sq. ft.



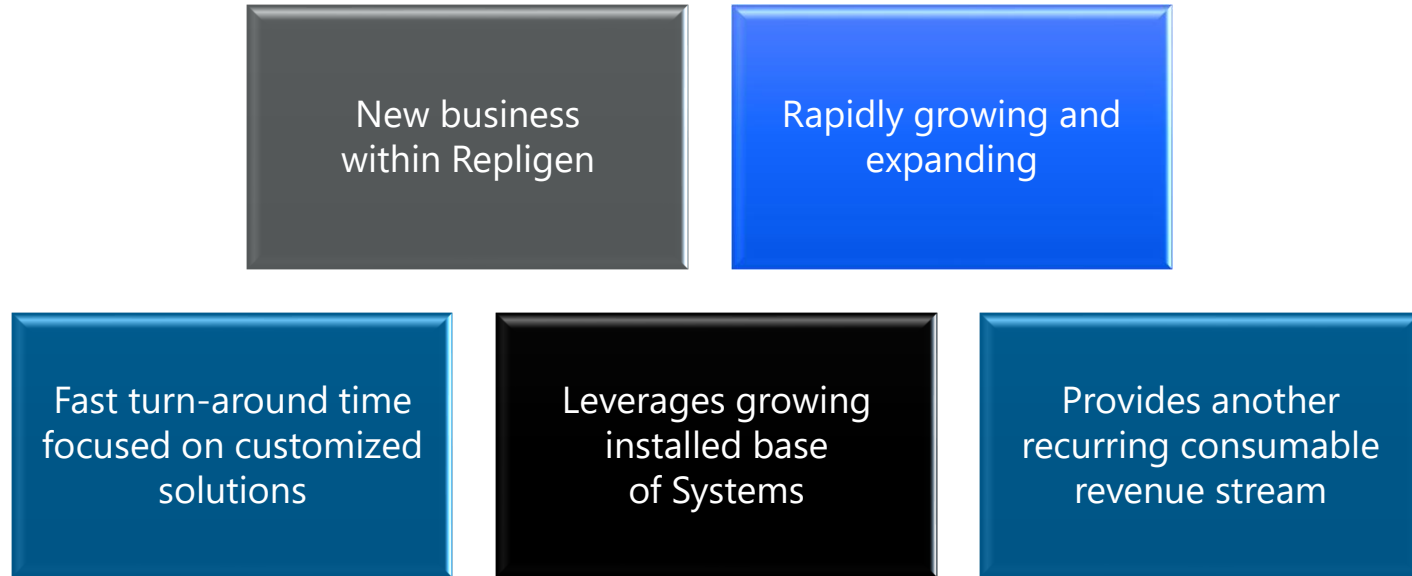
Repeatable value to be realized through systems consumables

Flow path solutions unique for Repligen Systems

Revenue ramp for Fluid Management
(\$ Millions)



Fluid Management business rapidly accelerating





Research and Development

Ralf Kuriyel

Our approach to R&D

Continuous innovation so latest manufacturing challenges are addressed

Making significant improvements in biomanufacturing to address current challenges

- Increasing yields and titers through process intensification
- Reducing bioprocessing steps - eliminating unit operations
- Accelerating process development through on-line analytics and providing real-time decisions on the manufacturing floor
- Enabling large-scale robust manufacturing of increasingly complex therapeutics
- Addressing needs in emerging modalities through – upstream and downstream

» Internal and external expertise provide close relationships with our customers and help optimize solutions

Supported
by
applications
expertise



Improving biomanufacturing through technology platforms

Upstream intensification

- Increase titers and yields
- Increase facility utilization
- Reduce number of production steps

High performance process systems

- Accelerate process development times through scalable Systems
- Increase yields
- Minimize errors on the manufacturing floor

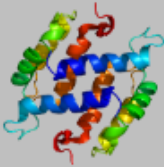
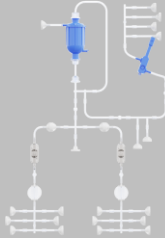
Affinity purification

- Reduce number of production steps
- Increase facility utilization
- Reduce buffer utilization

Systems with integrated analytics

- Accurate adaptive control – reduce reworking batches
- Increase yields – no batch holding while waiting for sample measurement
- Real-time lot release

Focused on R&D solutions to address the greatest needs of our customers

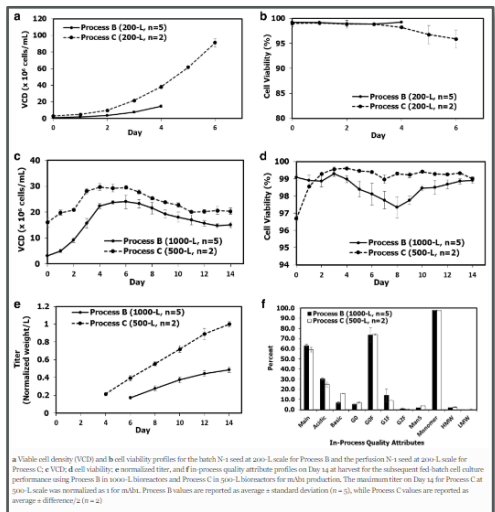
Customer pain points / opportunities	Improving yields in upstream processing	Protein aggregation during antibody production	In-line process monitoring and control	Need to connect and simplify disparate units
Repligen response	 KrosFlo® TDFD® Solutions	 NGL-Impact® A Hi pH Ligand	 FlowVPX® ViPER™ Anlytx Software	 Flow Paths
Game changing market impact	✓ Leaders in N-1 process intensification, increased yield ✓ Simplified Harvest/Clarification	✓ Increasing overall antibody yield ✓ Increasing facility utilization, reduces buffer required	✓ Real-time decisions on manufacturing floor ✓ Minimize re-work and product loss	✓ Gentle flow, minimize product loss ✓ Low hold-up volume, minimize yield losses

N-1 process intensification mainstreamed

Process Development



Development of an intensified fed-batch production platform with doubled titers using N-1 perfusion seed for cell culture manufacturing¹



Large-scale manufacturing



Seed stage (N-1) to enable inoculation of 15,000L bioreactors

30%
reduction in production time

10X
cell density

98%
cell viability consistently maintained



TFDF® - Technology for Harvest Clarification & process intensification

Displacing traditional depth filtration

Tangential Flow Depth Filtration (TFDF)



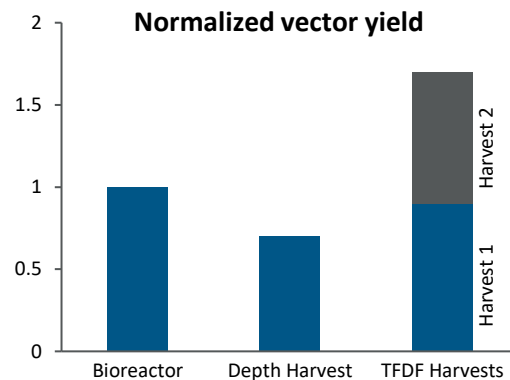
Oxford
Biomedica

- **Multiple harvests**
 - 80% higher yield than single harvest
- **Continuous operation**

EXPERT INSIGHT

Lentiviral vector manufacturing process enhancement utilizing TFDF™ technology

Thomas Williams, Oliver Goodyear, Lee Davies, Carol Knevelman, Michael Bransby, Kyriacos Mitrophanous & James Miskin



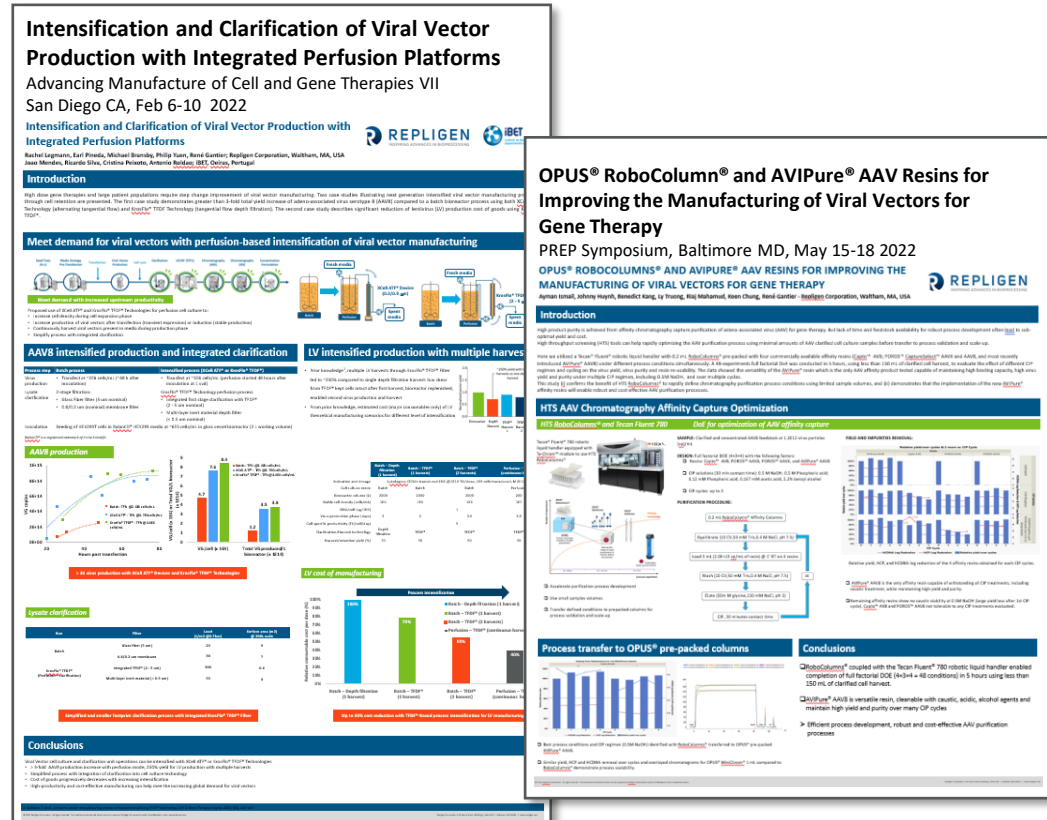
Game changer: integrating real-time analytics into Systems



Expanding into new modalities through Gene Therapy Applications Center



- Developing state of the art methods and data
- Collaborating with Academic Centers of Excellence and the industry
- Demonstrating deep understanding via publications and scientific presentations



Moving towards an integrated product offering

From unit solutions:

N-1/Perfusion
and
Clarification



ATF



TFDF

Purification



OPUS PD, OPUS LS



Affinity Resins



Concentration
/Buffer
Exchange
(UF/DF)



Hollow
Fibers



Flat Sheet
Cassettes

Moving to integrated solutions:



Unit +
SU Flow Paths



Unit +
Systems



Unit +
Controllers



Plus intelligent
Systems



+ Process
Analytics



Cell and Gene Therapy

Vikas Gupta

Viral vector demand is increasing, driving greater cell culture volumes

Reproducible and scalable processes are critical to commercial success of next-generation gene therapy

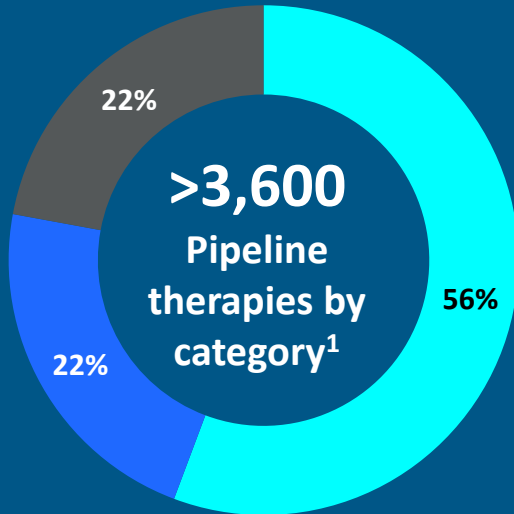
Disease Indications	Therapy Type
Retinal Dystrophy	AAV
Spinal Muscular Atrophy	AAV
Blood Cancers	CAR-T
Hemophilia A (Factor VIII)	AAV
Duchenne Muscular Dystrophy	AAV
Melanoma	HSV1
β -thalassemia	LV
Solid Tumors	Ad5, Retrovirus, AAV, LV

Evolving to:
indications with
larger patient
populations;
label expansions;
higher dosing

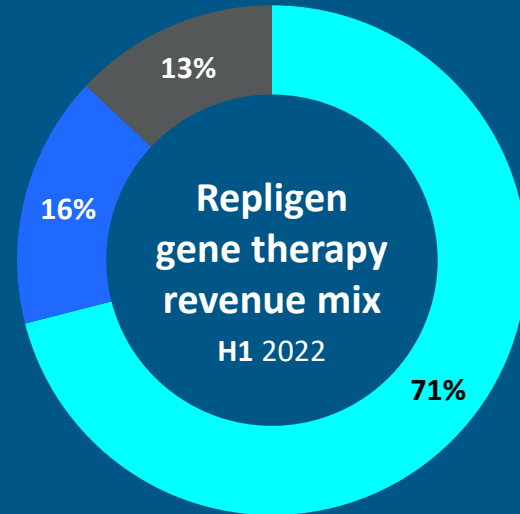
Cell culture
demand is
increasing; fed-
batch volumes
will not suffice

Large pipeline of gene, cell and RNA therapies (including preclinical)

We have many opportunities to embed Repligen products early



- Gene therapies*
- RNA-based (Non-viral vector)
- Cell therapies (non-genetically modified)

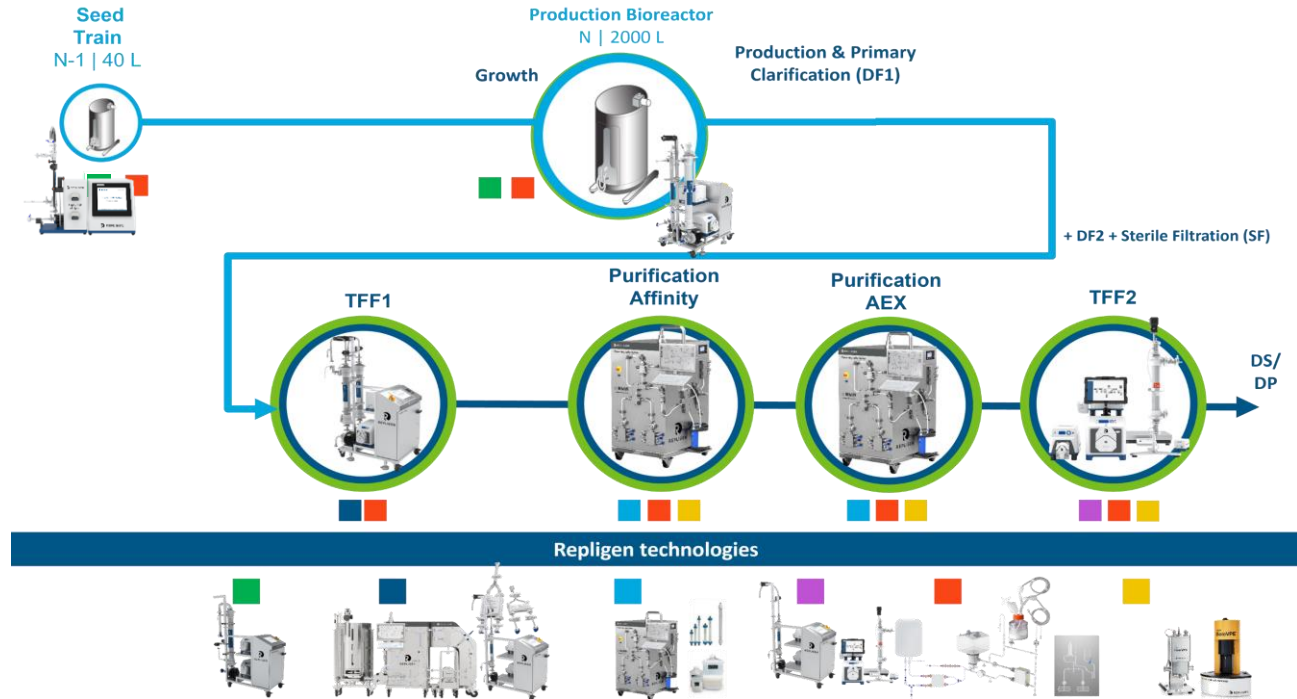
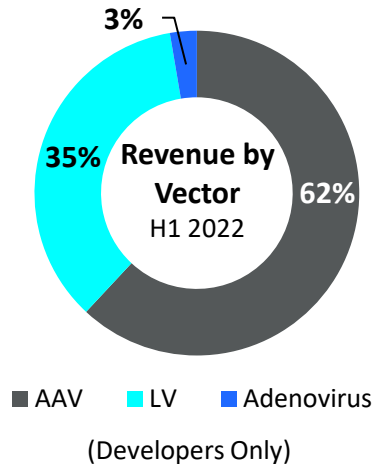


- Gene therapies*
- RNA-based (Non-viral vector)
- Other incl. exosome, cell therapy, oligonucleotides

* Viral vector based (AAV, Adeno, Lenti); also includes genetically-modified cell therapies such as CAR-T

Viral vector platforms employed in gene therapy clinical trials

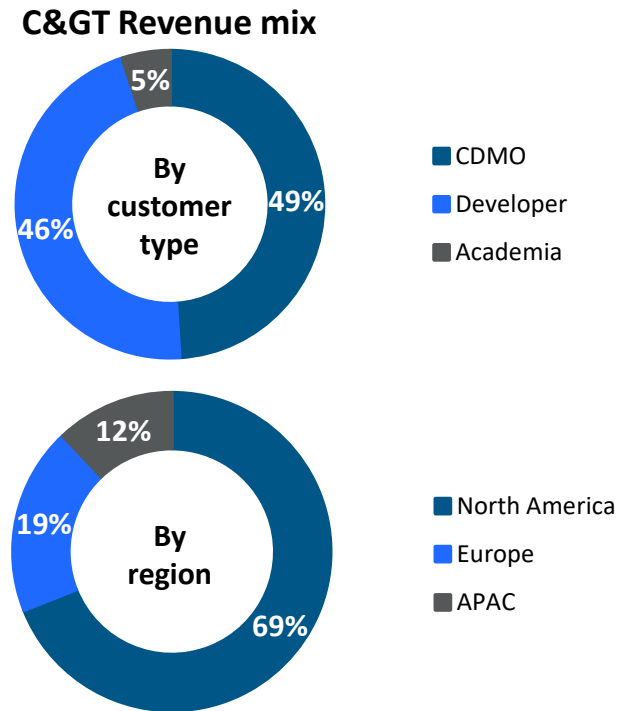
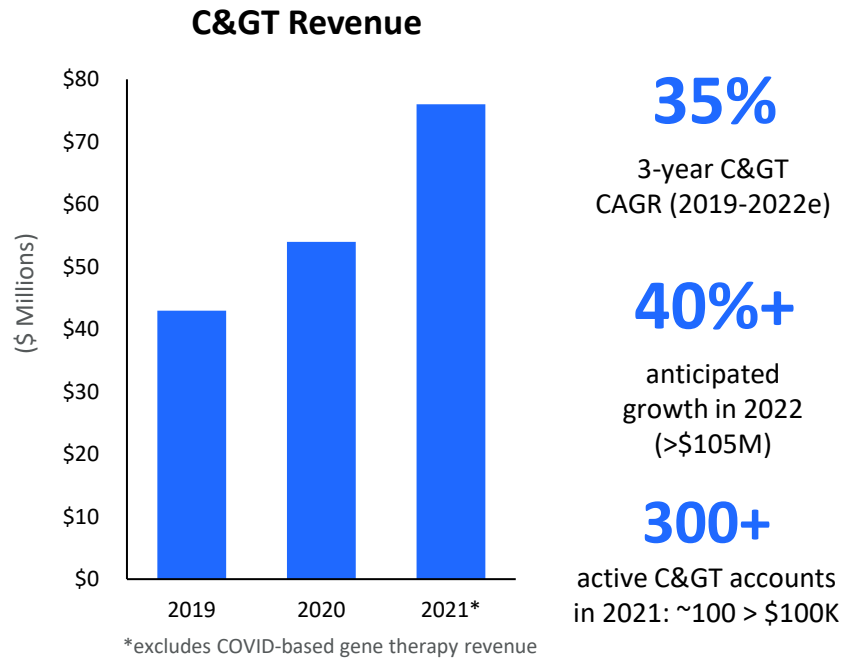
Repligen technologies are agnostic to viral vector platform



»» Our goal: Embed Repligen technology early in viral vector platform development

Demand from CDMOs and developers drives majority of our C> revenue

\$2B addressable market in 2022, growing at 25%; Repligen estimated growth 30%+



Repligen is solving pain points in viral vector manufacturing

Pain points

1

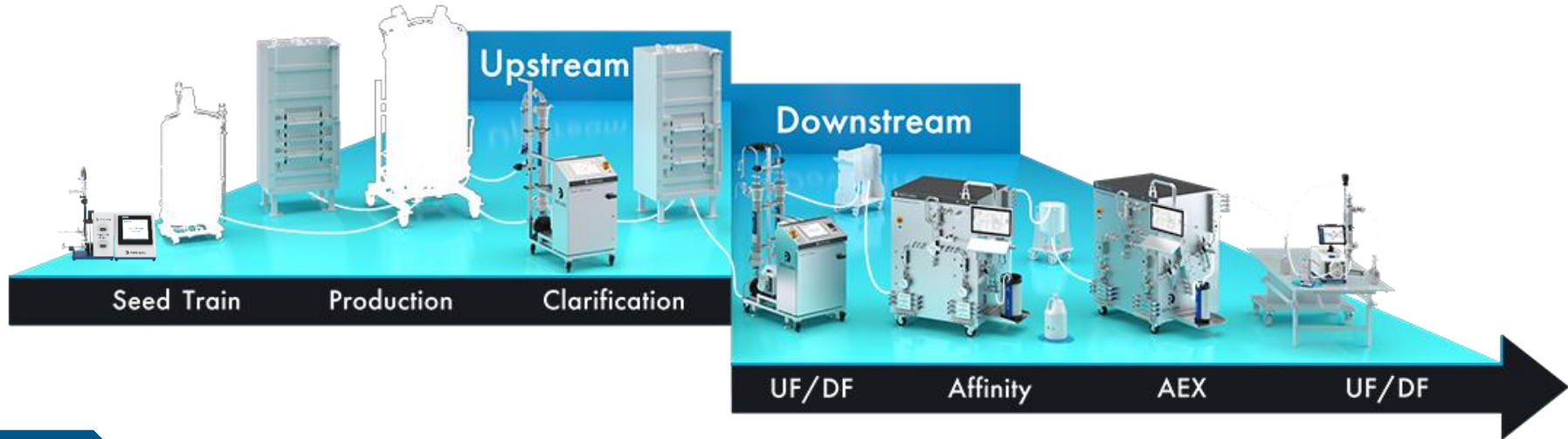
Limited upstream productivity and scalability (adherent cell culture, transient expression)

2

Low downstream yield of recovery

3

Scale-up challenges downstream



Repligen impact

3X + productivity

with intensified suspension cell culture and producer cell lines

2X downstream yield

with optimized TFF and chromatography steps

Improved process quality

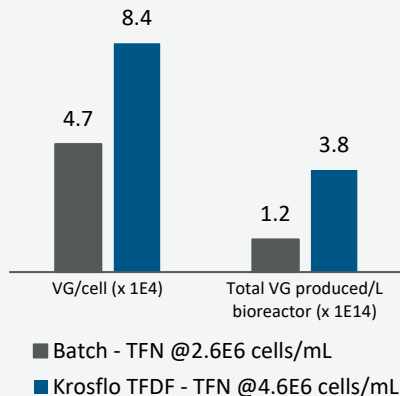
with in/at-line analytics and closed processing

1 Addressing the upstream titer challenge

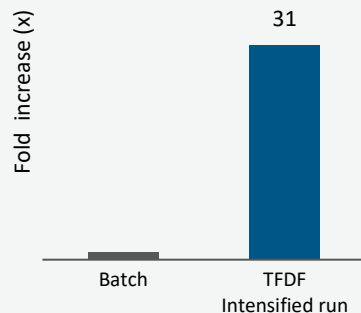
KrosFlo® TFDF® improves upstream productivity and scalability



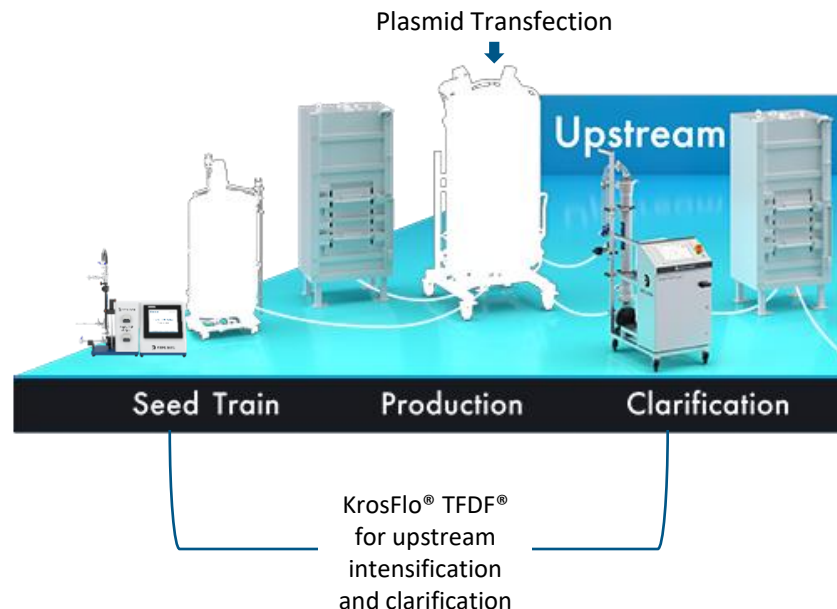
3X
increase
in AAV
with TFDF



~31X
increase
in LV
with TFDF



Intensified Upstream Cell Growth, Harvest and Clarification



2

3

Addressing downstream yield and scale-up challenges

Repligen KRM™ Chromatography System maximizes product recovery

Major C> CDMO

- Significant improvement in product recovery
- Maintained process steps and parameters during scale-up

AAV 9 serotype

Bench scale

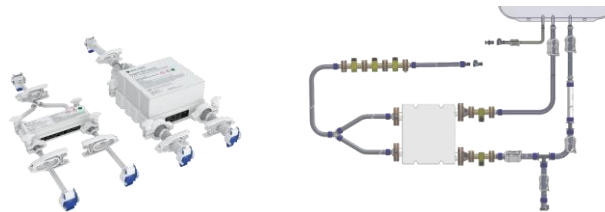
5 ml

Production scale

500 L



OPUS® PD



Flat sheet TFF and ProConnex® flow paths

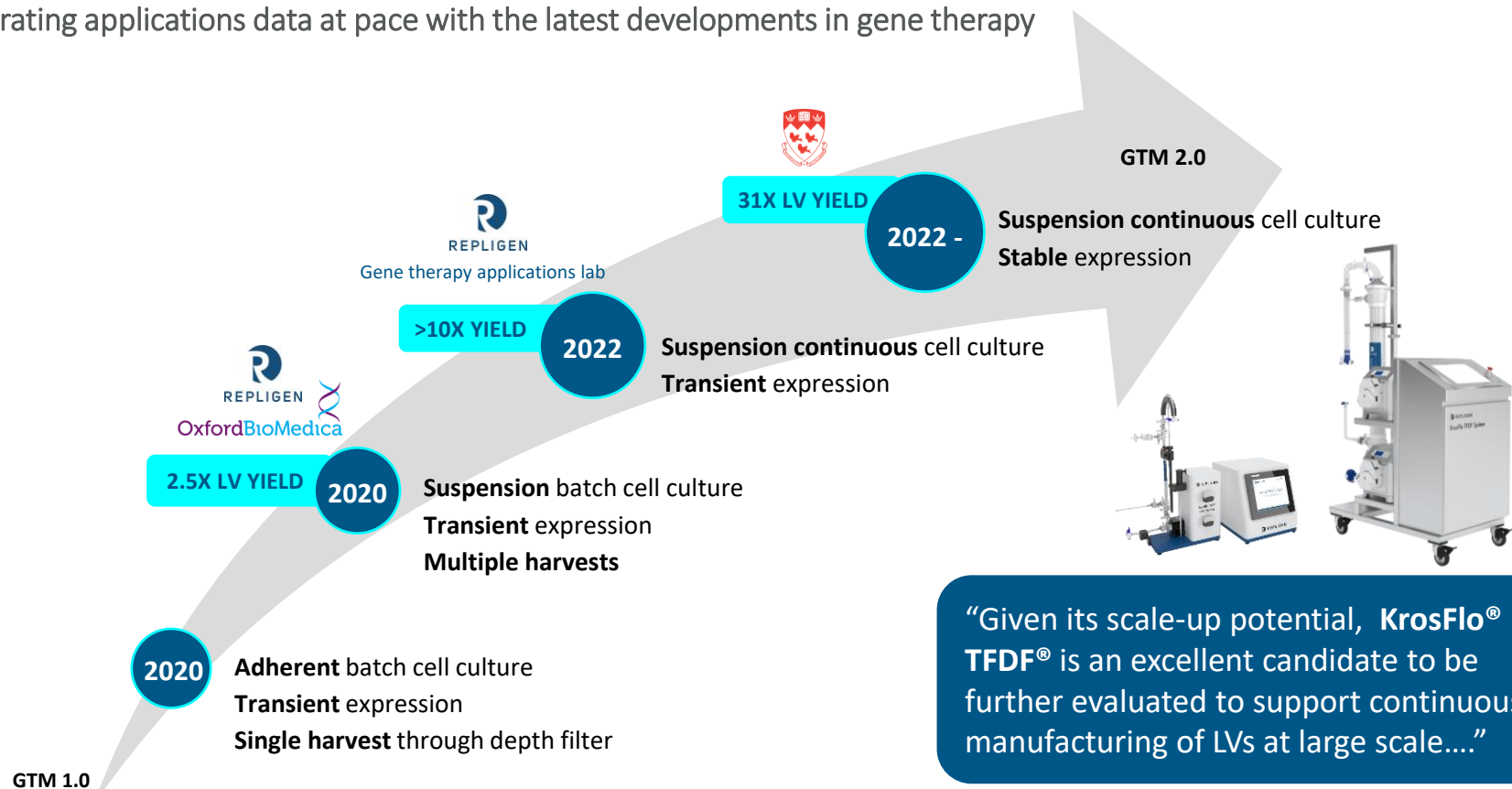
KRM™ Chromatography System including OPUS® LS



AVIPure® AAV resins

Staying at the forefront of technology

Generating applications data at pace with the latest developments in gene therapy



Source: <https://www.frontiersin.org/articles/10.3389/fbioe.2022.887716/full>

mRNA programs are accelerating and diversifying; future market driver

COVID demand – including from the leading vax manufacturers – provides an mRNA entry point for Repligen

Leading COVID vaccine developers are advancing the greatest number of non-COVID mRNA programs

moderna

40+ programs
21 non-COVID

Pfizer

\$470M in mRNA-based vax,
Influenza,
Key partnerships

BIONTECH

25+ programs
13 non-COVID

UREVAC
the RNA people®

~20 programs
10 non-COVID

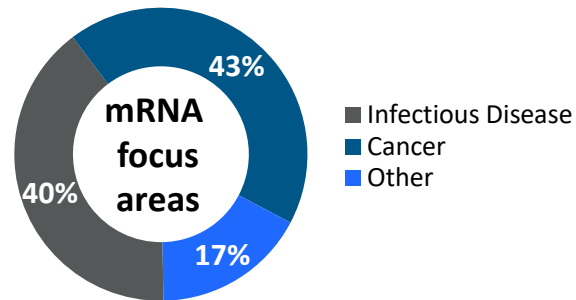
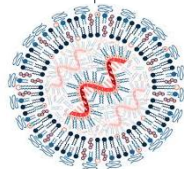
sanofi
TranslateBIO

Roche

gsk

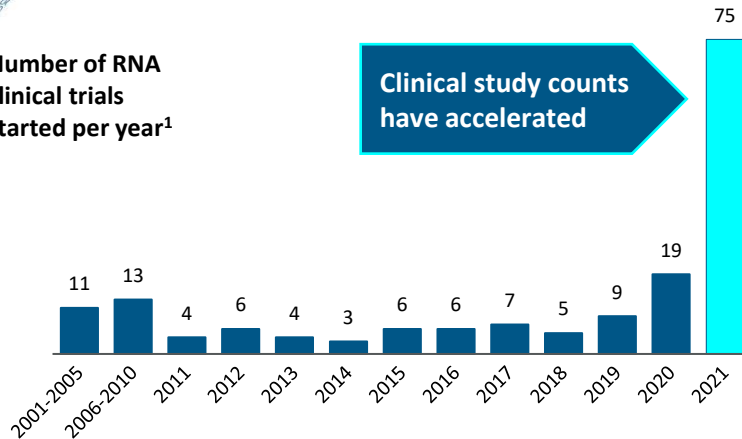
MERCK

Clinical trials of
RNA medicines
and RNA-
transfected cell
therapies¹



Number of RNA
clinical trials
started per year¹

Clinical study counts
have accelerated



mRNA market gaining strength – Strong product fit with Repligen portfolio

Repligen mRNA business growing at 35%+

Pain points

1

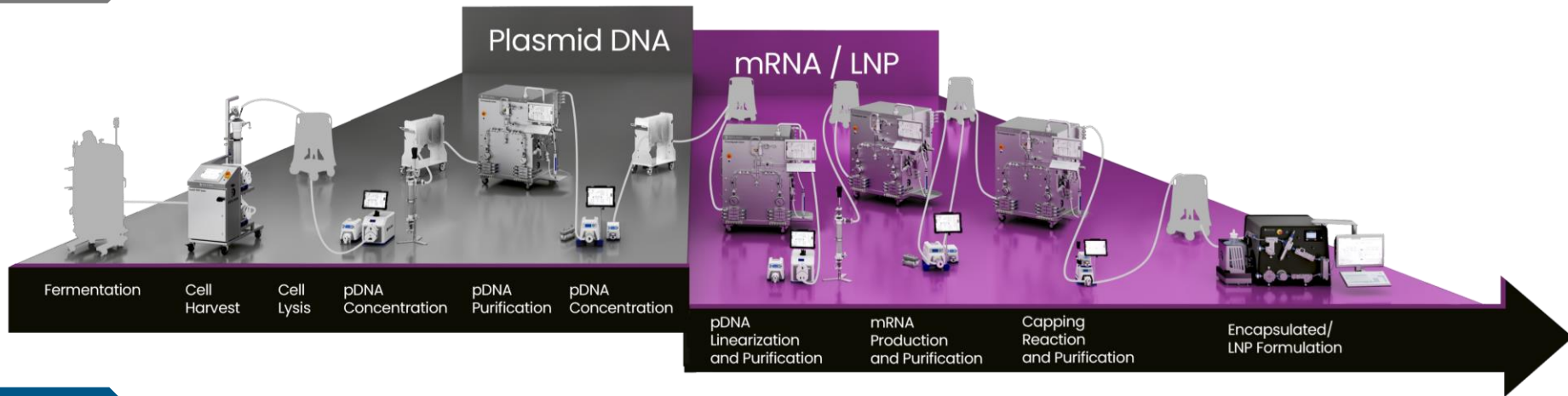
Complex workflow,
limited process knowledge

2

Low purification
recovery

3

Scale-up challenges



Repligen impact

Technologies enabling scalability
of pDNA raw material

Technologies enabling process development of
mRNA purification

How we win in Gene Therapy and related modalities

Single-use flexibility,
proven scalability

Best-in-class Systems:
product recovery,
low hold up volumes

Addressing pain points
across workflow;
improving titer and
yields

Continuous innovation:
disruptive products,
growing resin portfolio

Technology portability:
AAV, Lenti, Plasmids,
mRNA, more

Fluid Management
and PAT integration

Thank you



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 **REPLIGEN**



Appendix

2022 Guidance reconciliation

Net income and net income per share

REPLIGEN CORPORATION

RECONCILIATION OF GAAP NET INCOME GUIDANCE TO ADJUSTED (NON-GAAP NET INCOME GUIDANCE)

(in thousands)

	Twelve months ending December 31, 2022	
	Low End	High End
GUIDANCE ON NET INCOME	\$ 152,000	\$ 156,000
ADJUSTMENTS TO GUIDANCE ON NET INCOME:		
Acquisition and integration costs	12,327	12,327
Anticipated pre-tax amortization of acquisition-related intangible assets	26,317	26,317
Amortization of debt issuance costs	1,809	1,809
Contingent consideration	(4,295)	(4,295)
Tax effect of intangible amortization and integration	(7,801)	(7,801)
Guidance rounding adjustment	(358)	(358)
GUIDANCE ON ADJUSTED NET INCOME	<u>\$ 180,000</u>	<u>\$ 184,000</u>

Totals may not add due to rounding.

REPLIGEN CORPORATION

RECONCILIATION OF GAAP NET INCOME PER SHARE GUIDANCE TO ADJUSTED (NON-GAAP) NET INCOME PER SHARE GUIDANCE

	Twelve months ending December 31, 2022	
	Low End	High End
GUIDANCE ON NET INCOME PER SHARE - DILUTED	\$ 2.64	\$ 2.71
ADJUSTMENTS TO GUIDANCE ON NET INCOME PER SHARE - DILUTED:		
Acquisition and integration costs	0.21	0.21
Anticipated pre-tax amortization of acquisition-related intangible assets	0.46	0.46
Amortization of debt issuance costs	0.03	0.03
Contingent consideration	(0.07)	(0.07)
Tax effect of intangible amortization and integration	(0.14)	(0.14)
Guidance rounding adjustment	-	-
GUIDANCE ON ADJUSTED NET INCOME PER SHARE - DILUTED	<u>\$ 3.13</u>	<u>\$ 3.20</u>

Totals may not add due to rounding.