EVOLUTION
SEARCH PARTNERS

INSIGHT REPORT
Predictive Talent Dynamics – November 2022

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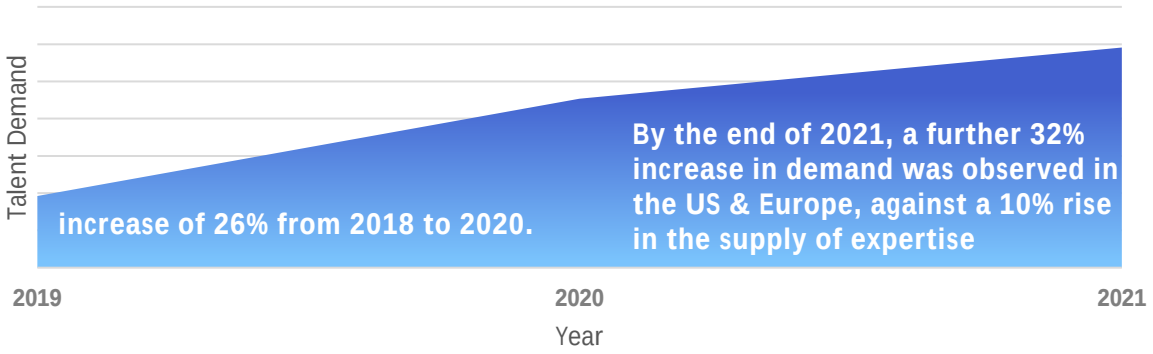
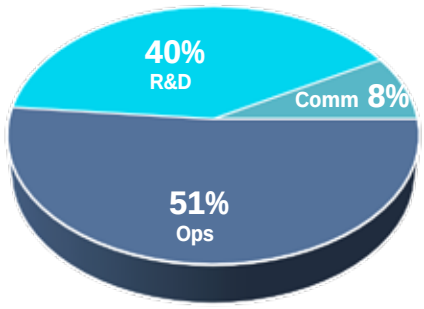
Executive Summary

Biomanufacturing Hiring:- Yearly Average



Role Postings: By Role Type



Top 3 Companies:

Largest *Annual* Talent Demand Increase

Normalised versus employee no.

SUTRO BIOPHARMA

WACKER

AVID BIOSERVICES

2022

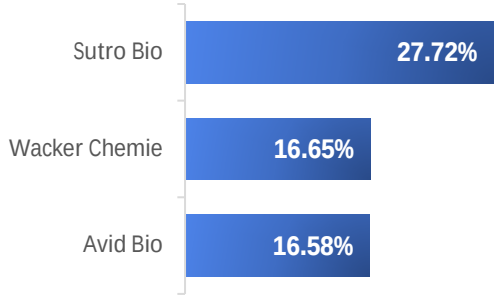
Monthly *Hiring Demand* Change

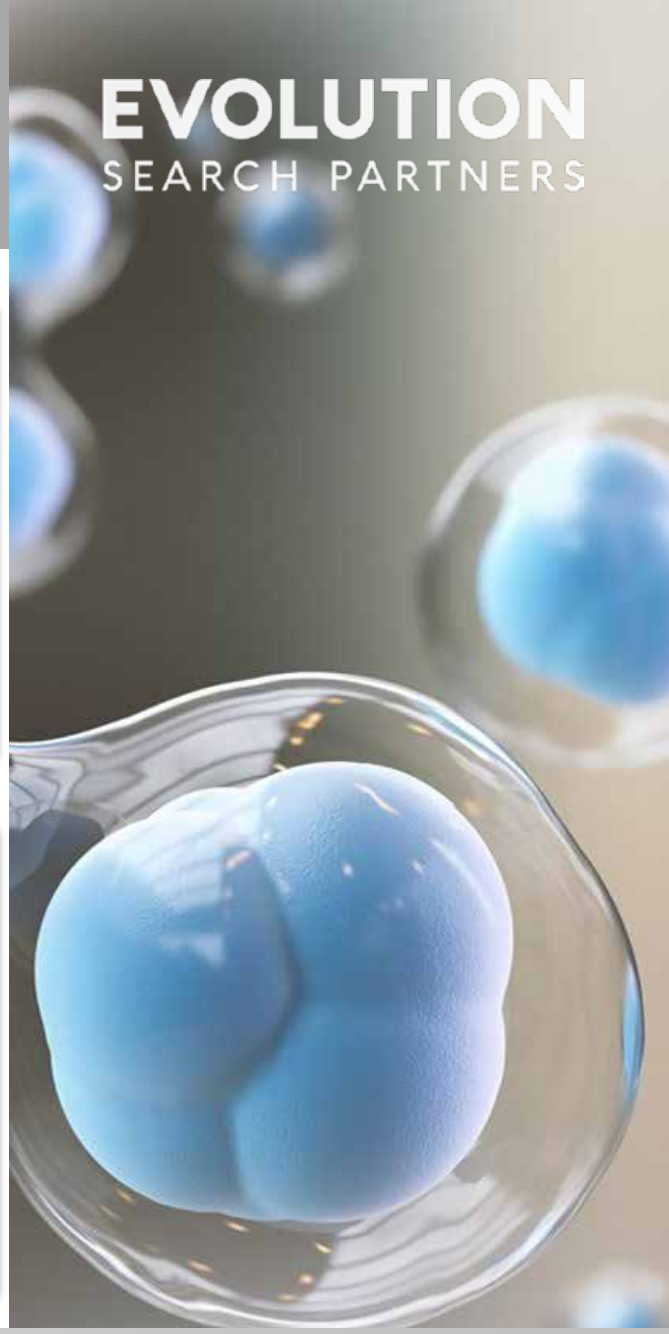
▼ -12%

Top 3 Companies:

Largest *Monthly* Talent Demand Increase

Normalised versus employee no.



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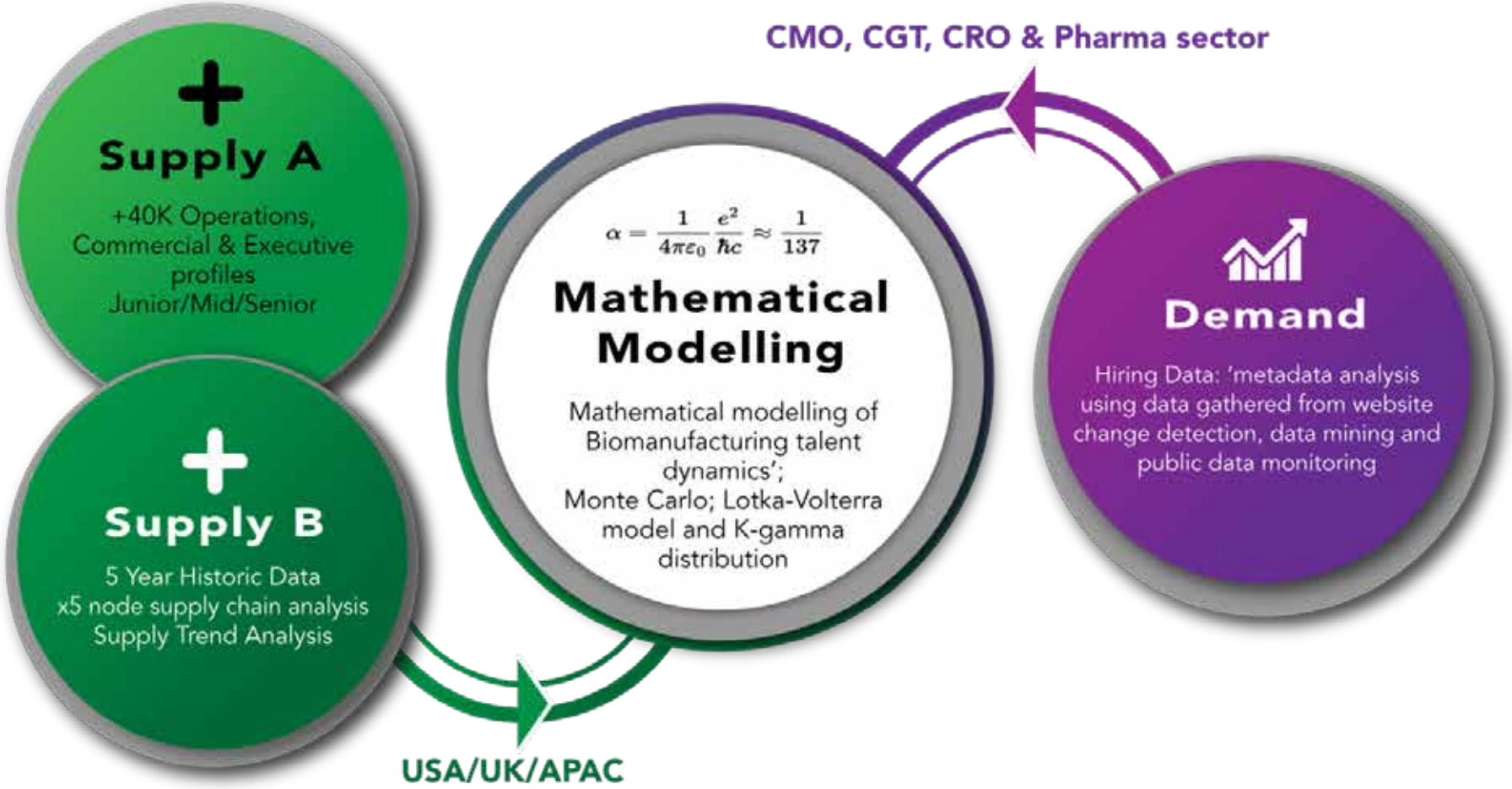
Introduction and Methodology

Introduction & Methodology



Introduction & Methodology

Aim

To measure, model and predict 'supply versus demand' of Biomanufacturing talent across the global **CMO, CGT** and **Pharma** sectors.

Research Partners

Evolution Search Partners, **University of Dundee, University College London (UCL)**

Purpose

To provide analytical, strategic intelligence to industry leadership to allow future facing workforce planning, aligned to support capital expansion project decisions, recognising the value of human assets for the economic success of the firm.

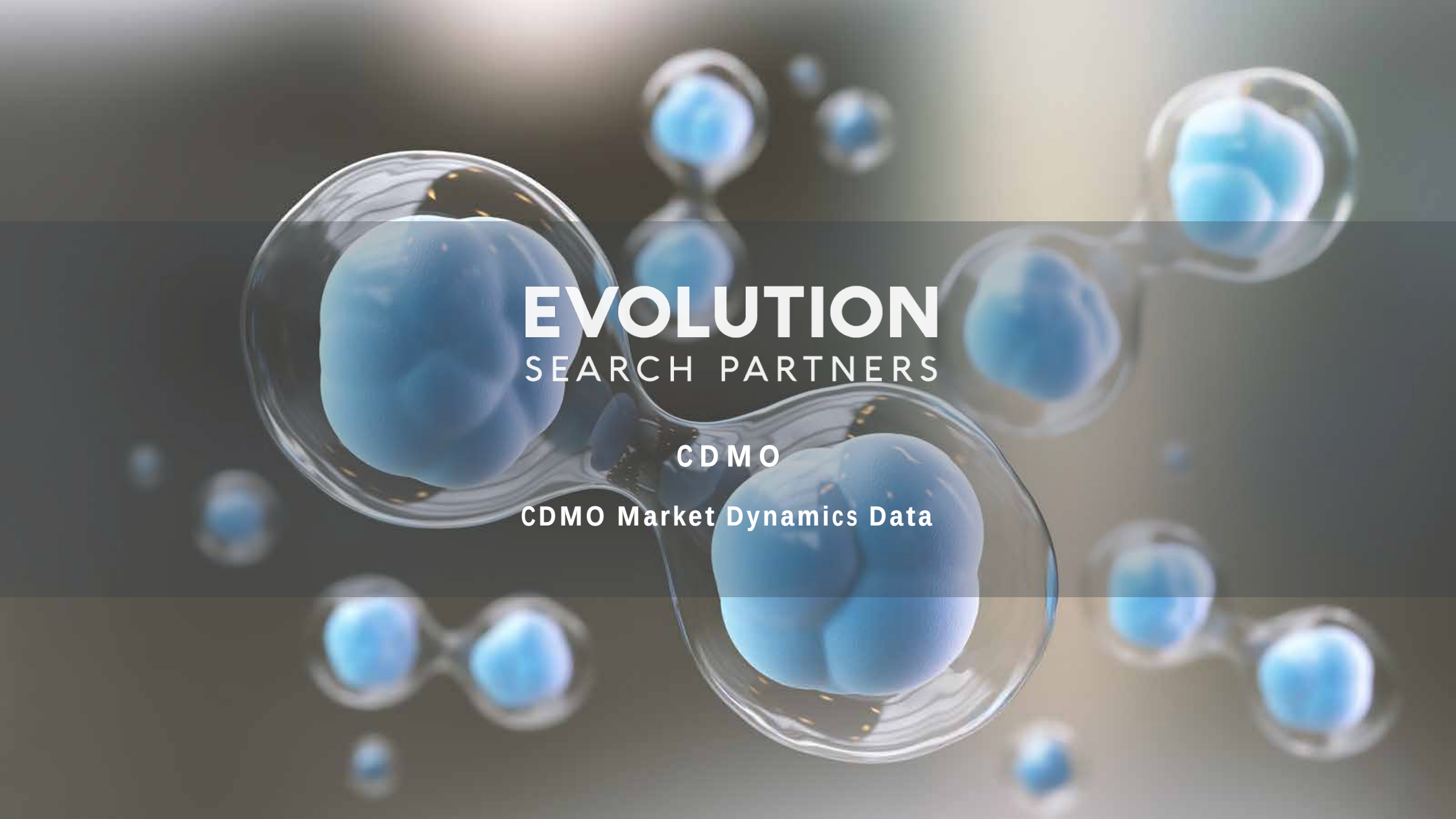
The outcome data aims to allow specific planning, where required, on creative talent acquisition, specific to segments of biomanufacturing workflows

Short Term

There is evidence that the bioprocessing sector is experiencing operational and staffing problems directly related to an increase in activity and demand. All sectors are experiencing an increase in R&D, manufacturing, and production, with a shifting of resources towards pandemic response. Most bioprocessing-related industrial activities are considered 'essential' and continue largely unaffected in terms of operations and output, while many are planning to ramp-up R&D and manufacturing. While there are many near-term changes in onsite staff management, broader business plans are generally not affected in the near-term.

Long Term

Specific to Biomanufacturing talent, CMO and Pharma companies can no longer wait to develop talent strategies. They already have job openings they cannot fill, and the gap is widening as megatrends disrupt and transform biomanufacturing. Adopting talent management programs and processes will help manufacturers attract and retain workers with the desired skill sets. This is a challenge that requires flexibility and insight. And the stakes are high. Manufacturers with an engaged and skilled workforce will be more likely to enjoy a successful and sustainable future.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CDMO Market Dynamics Data

Industry Sub-Sector


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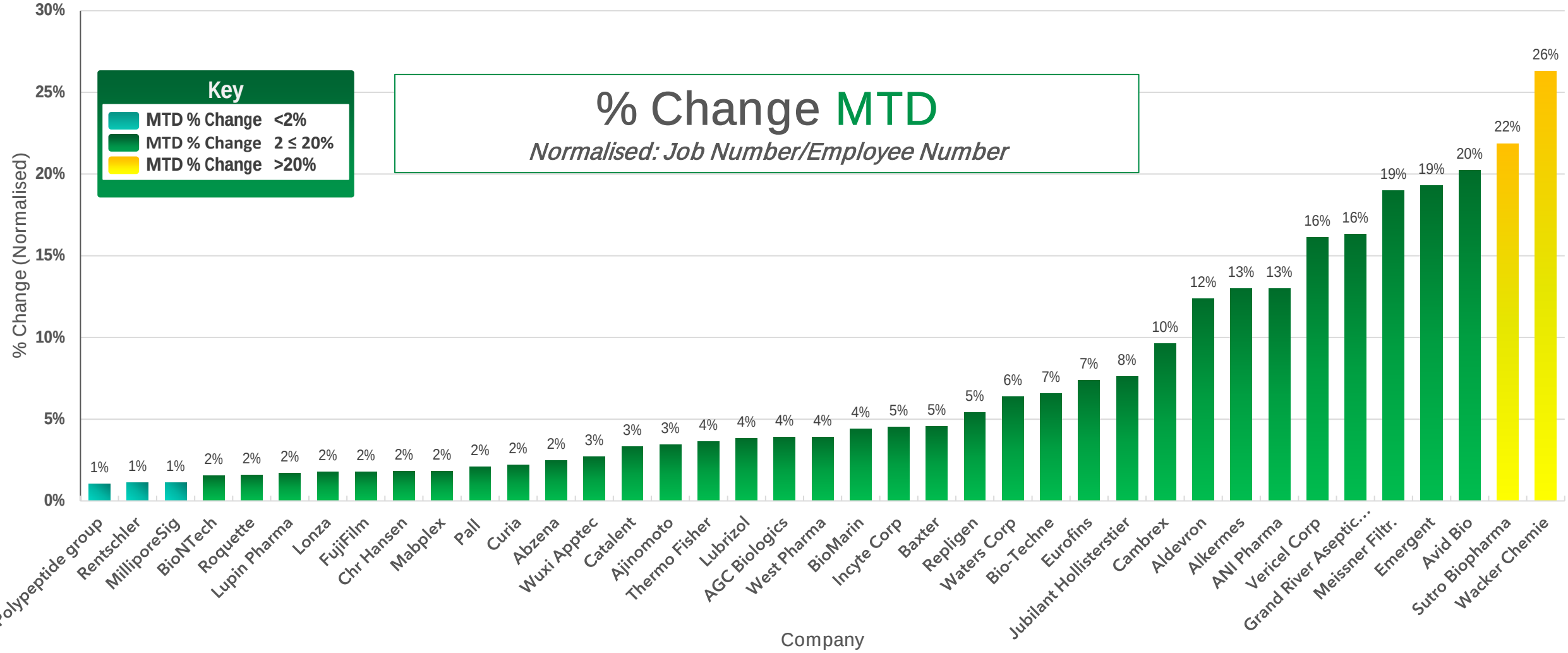
Assessment of Hiring Frequency by Job Number (Normalised)

NORMALISED DATA

JOB NUMBER/EMPLOYEE NUMBER

MTD

EVOLUTION SEARCH PARTNERS

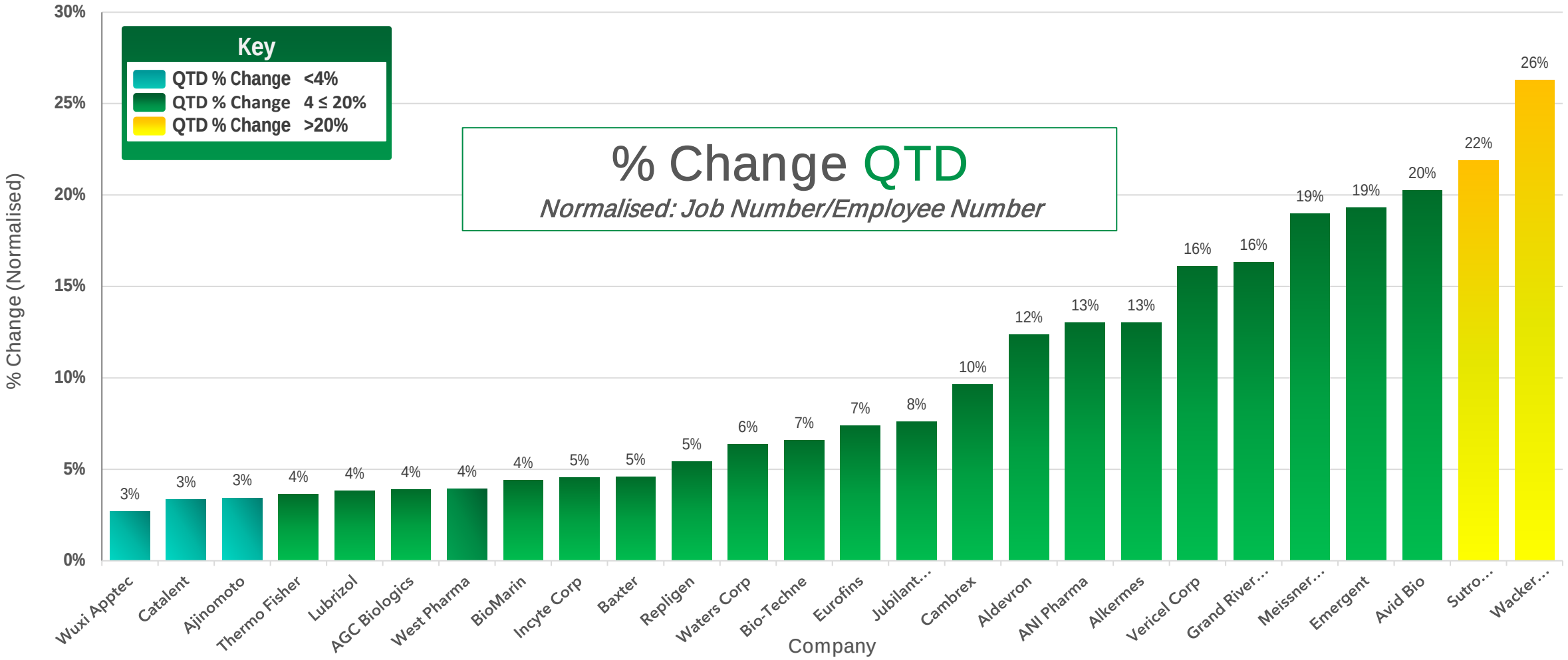


NORMALISED DATA

JOB NUMBER/EMPLOYEE NUMBER

QTD

EVOLUTION SEARCH PARTNERS

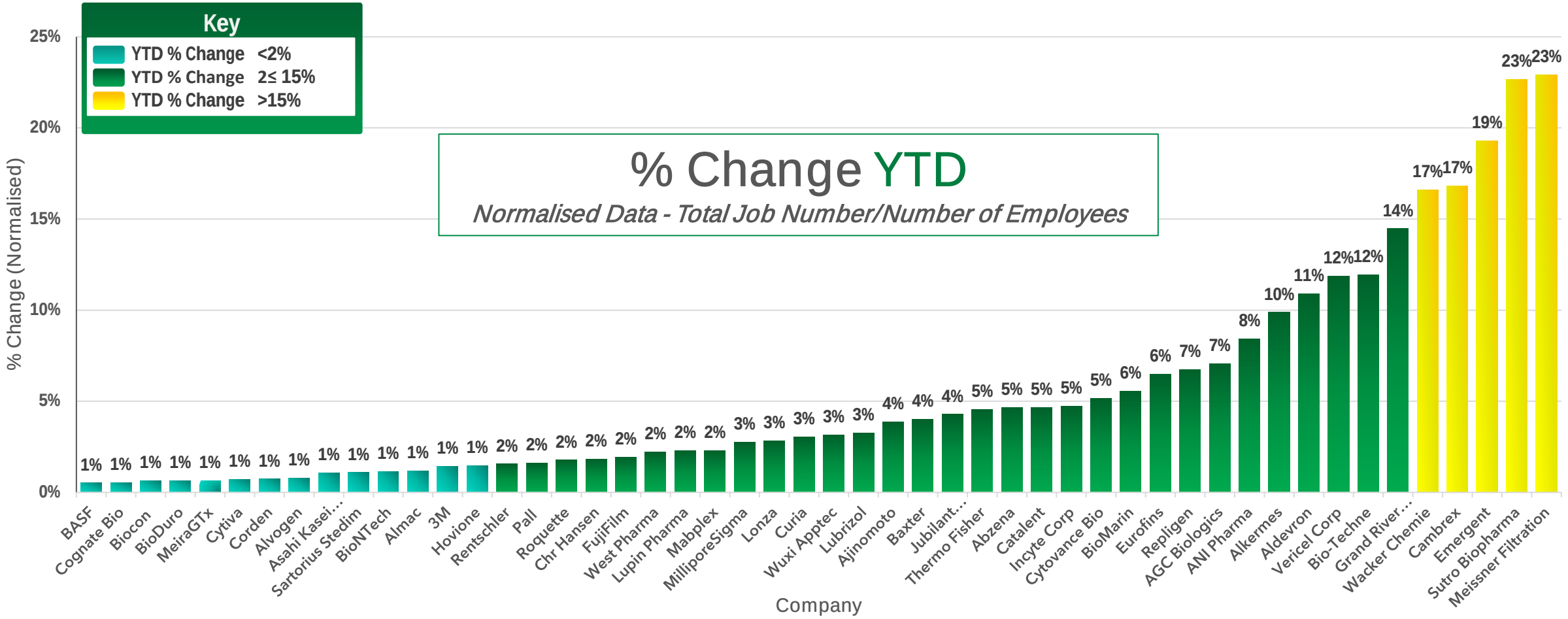


NORMALISED DATA

JOB NUMBER/EMPLOYEE NUMBER

YTD

EVOLUTION SEARCH PARTNERS

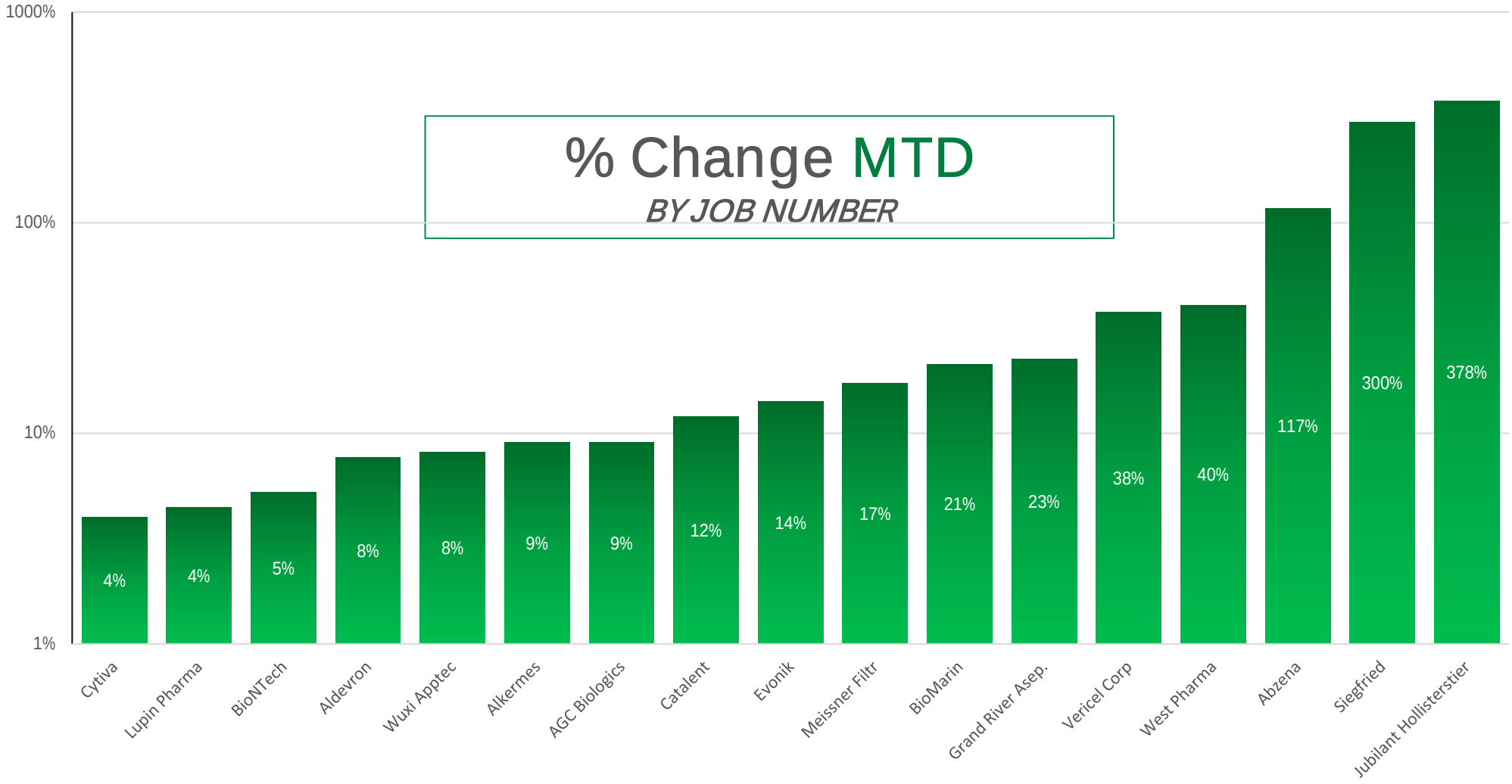


MTD

CDMO

BY JOB NUMBER

EVOLUTION SEARCH PARTNERS



Abzena

Siegfried

Jubilant Hollisterstier

IDT Biologika

Roquette

Vetter Pharma

QTD

CDMO

BY JOB NUMBER

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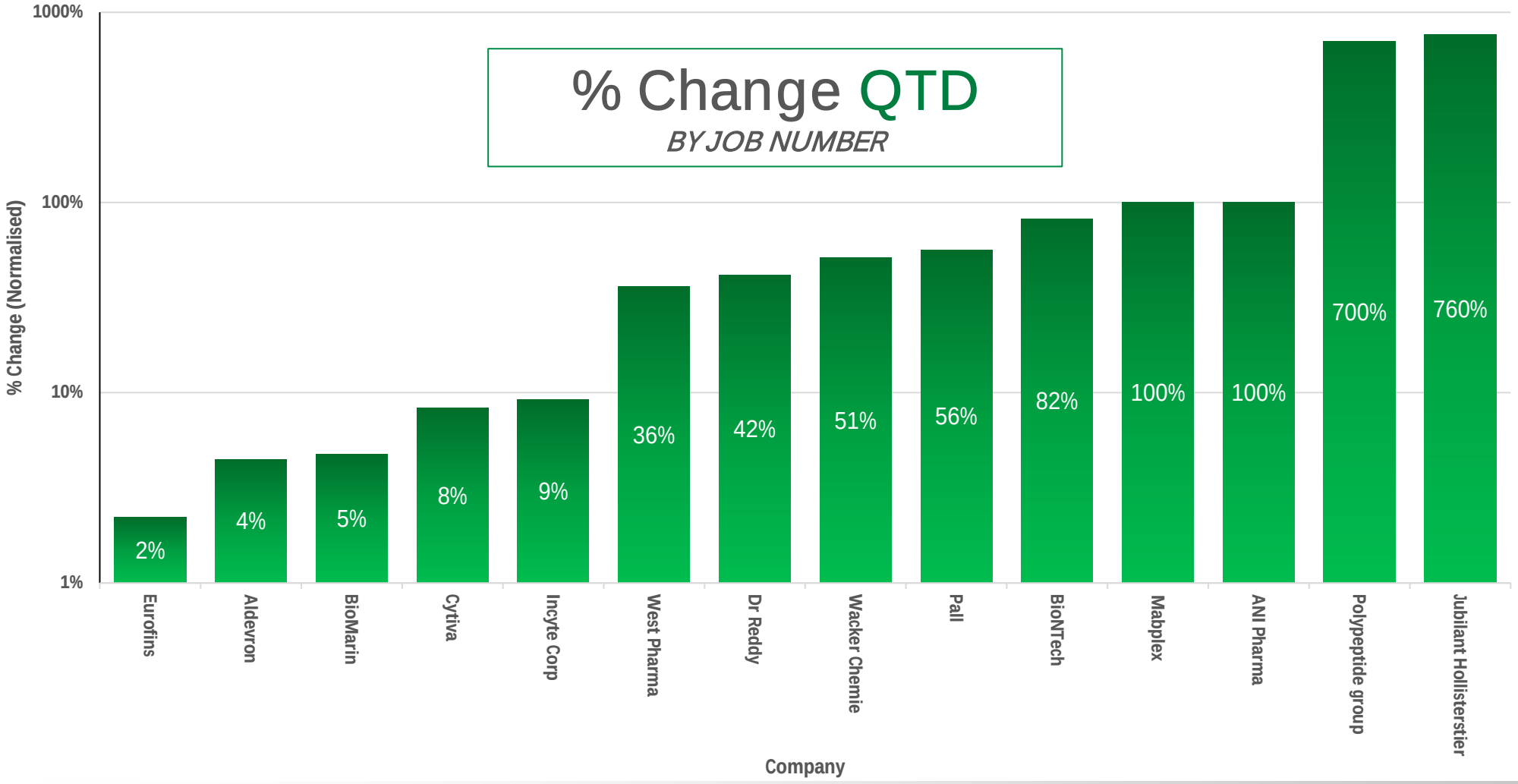


ANI Pharma

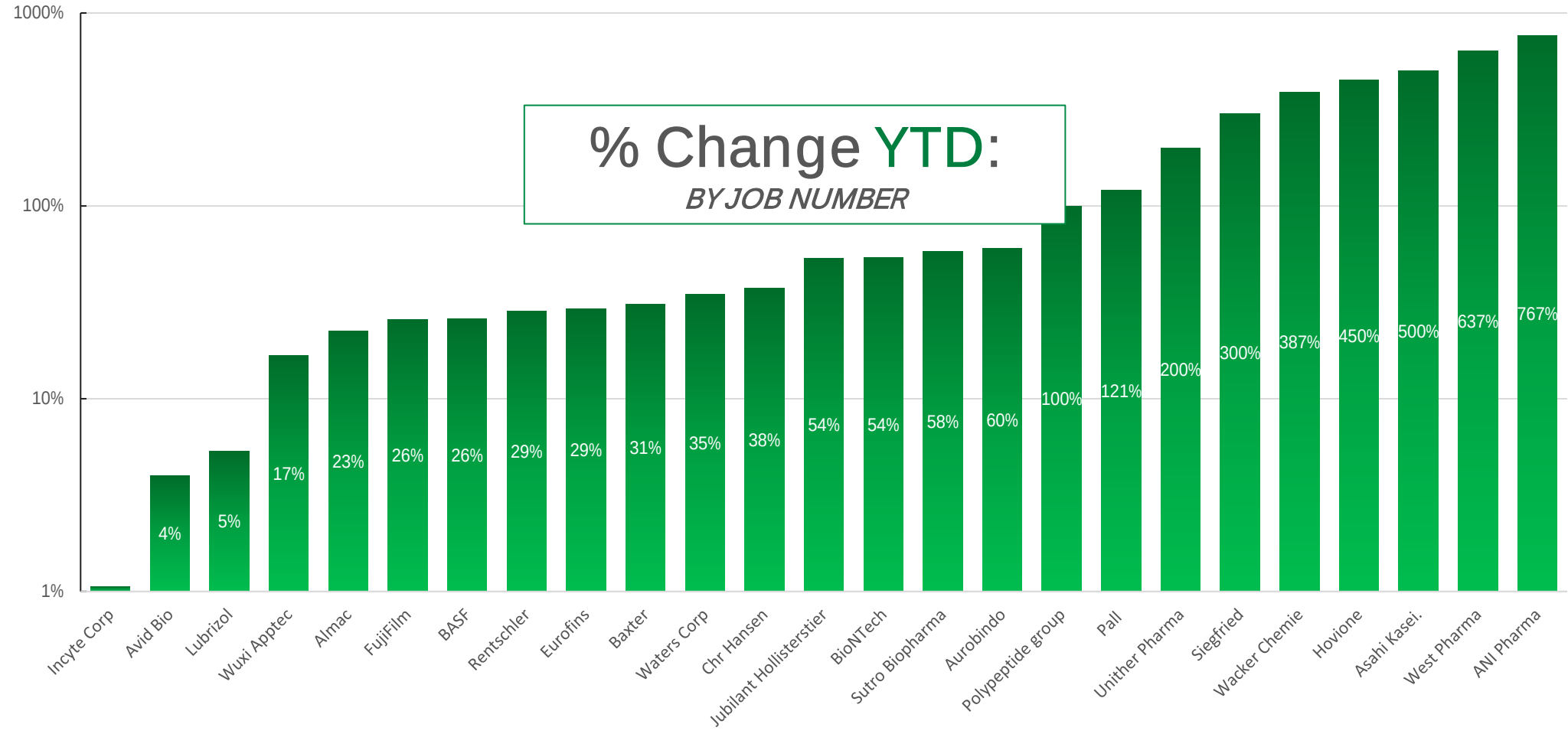
Polypeptide group

Jubilant Hollisterstier

IDT Biologika

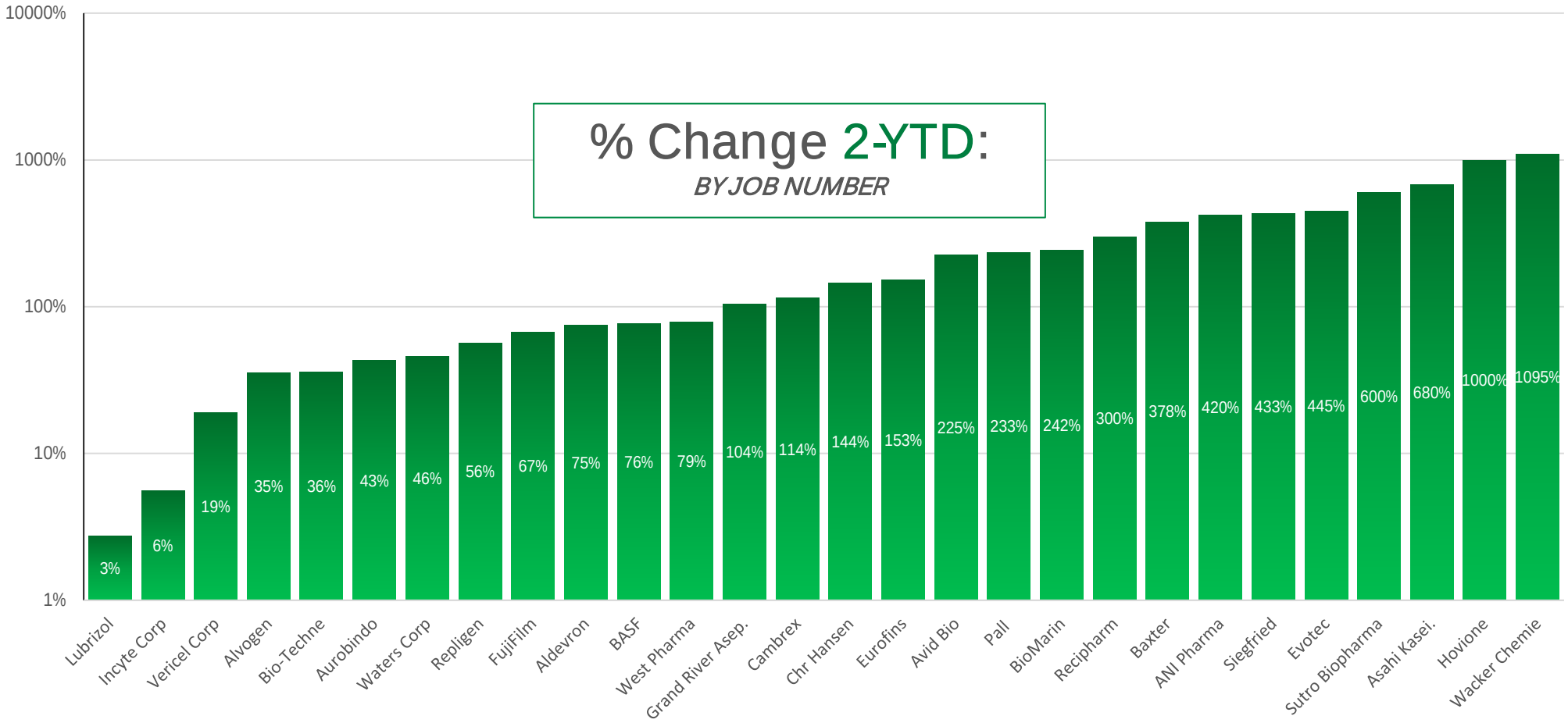
Roquette

BioDuro



Asahi Kasei
West Pharma
ANI Pharma

IDT Biologika
Roquette
BioDuro



Asahi Kasei.
Hovione
Wacker Chemie

IDT Biologika
Roquette
Vetter Pharma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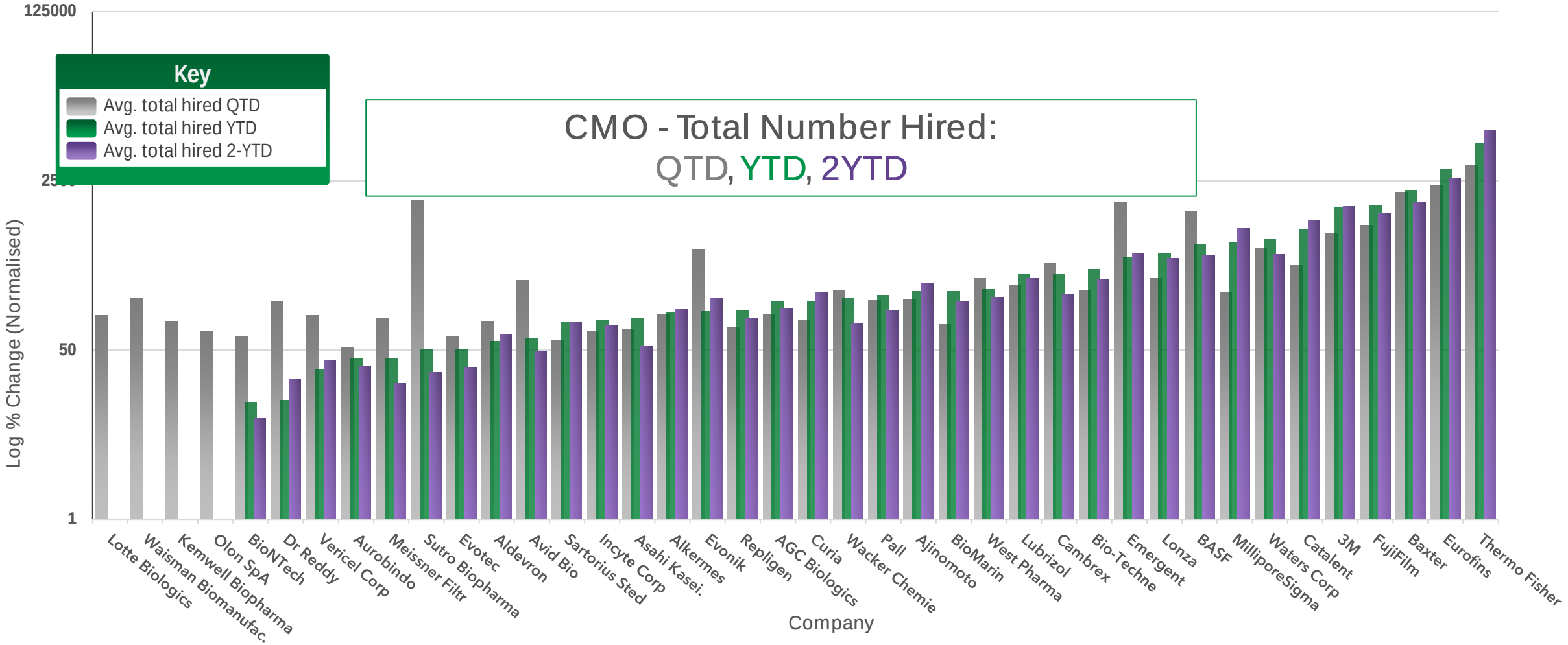
Assessment of Hiring Frequency by Job Number (Average)

QTD, YTD, 2-YTD

CDMO

AVG. TOTAL NUMBER HIRED

EVOLUTION SEARCH PARTNERS



Top 10: QTD, YTD, 2-YTD

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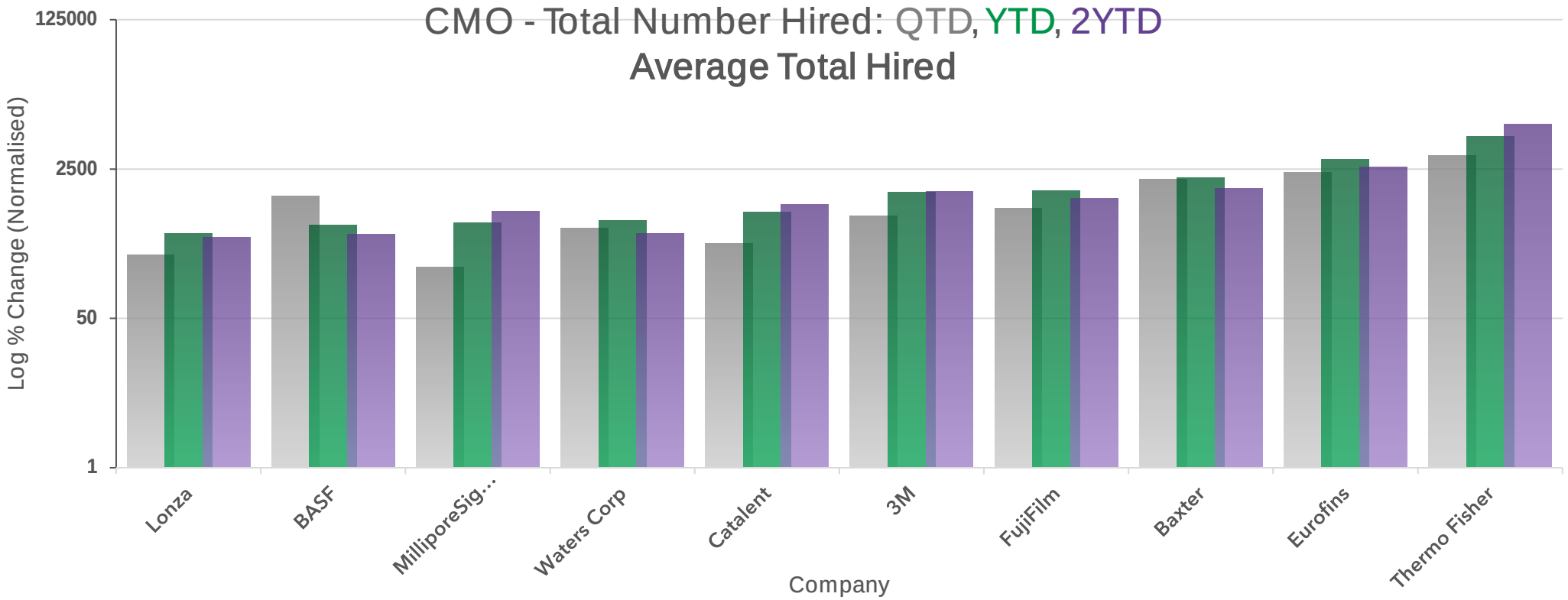
AVG. TOTAL NUMBER HIRED

EVOLUTION SEARCH PARTNERS

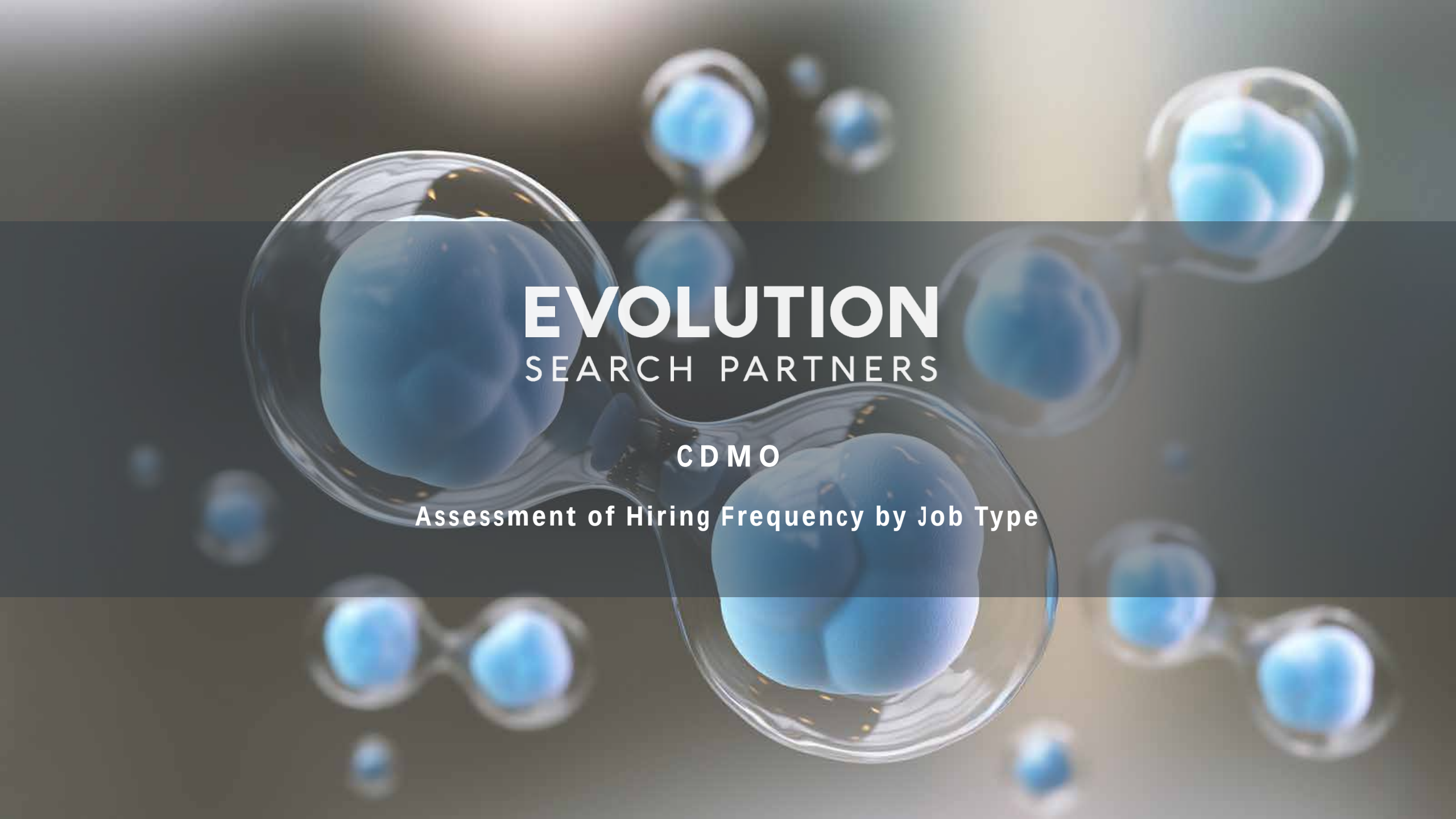


Key

- Avg. total hired QTD
- Avg. total hired YTD
- Avg. total hired 2-YTD

Thermo Fisher Scientific, Eurofins and Baxter

Largest increase **across QTD, YTD, 2YTD.**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Assessment of Hiring Frequency by Job Type

MTD

CDMO

BY JOB TYPE

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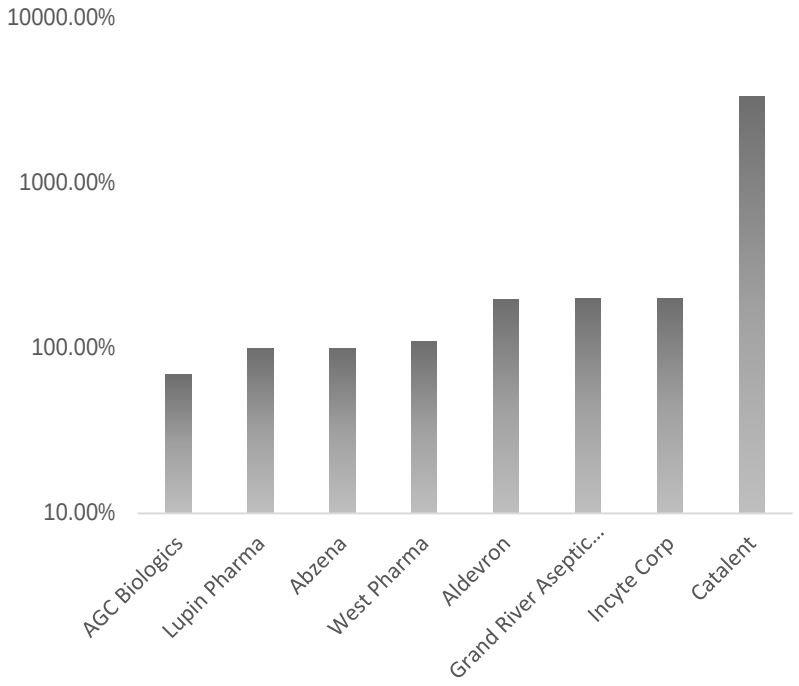
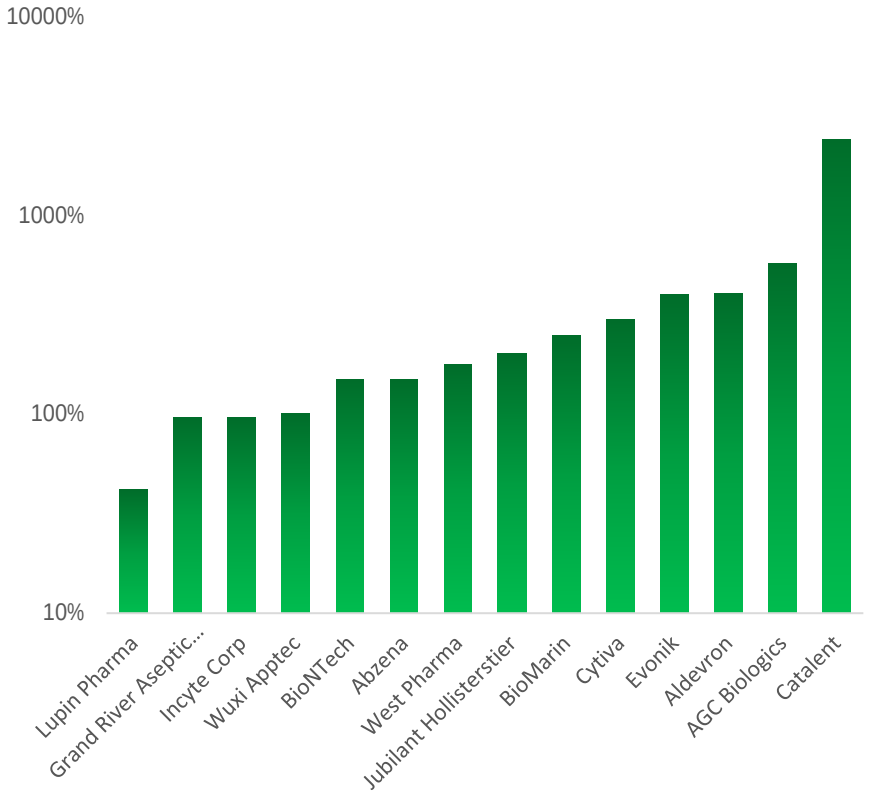
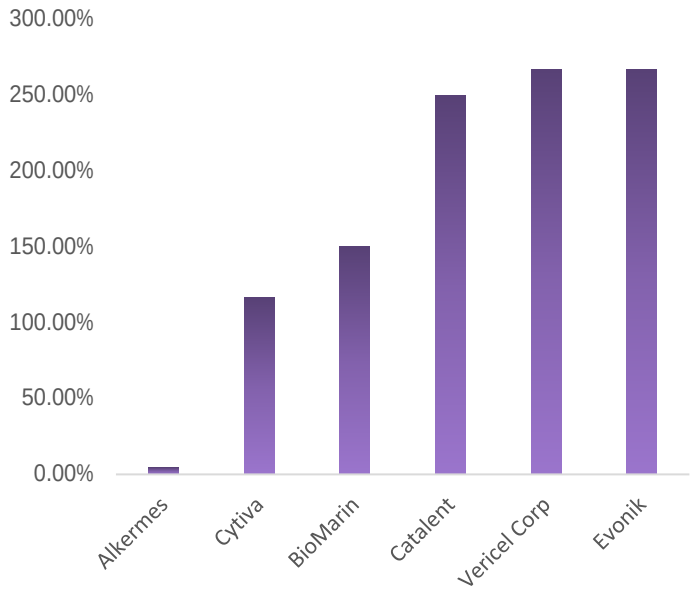
R&D



Operations



Commercial



OVERALL
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BY JOB TYPE

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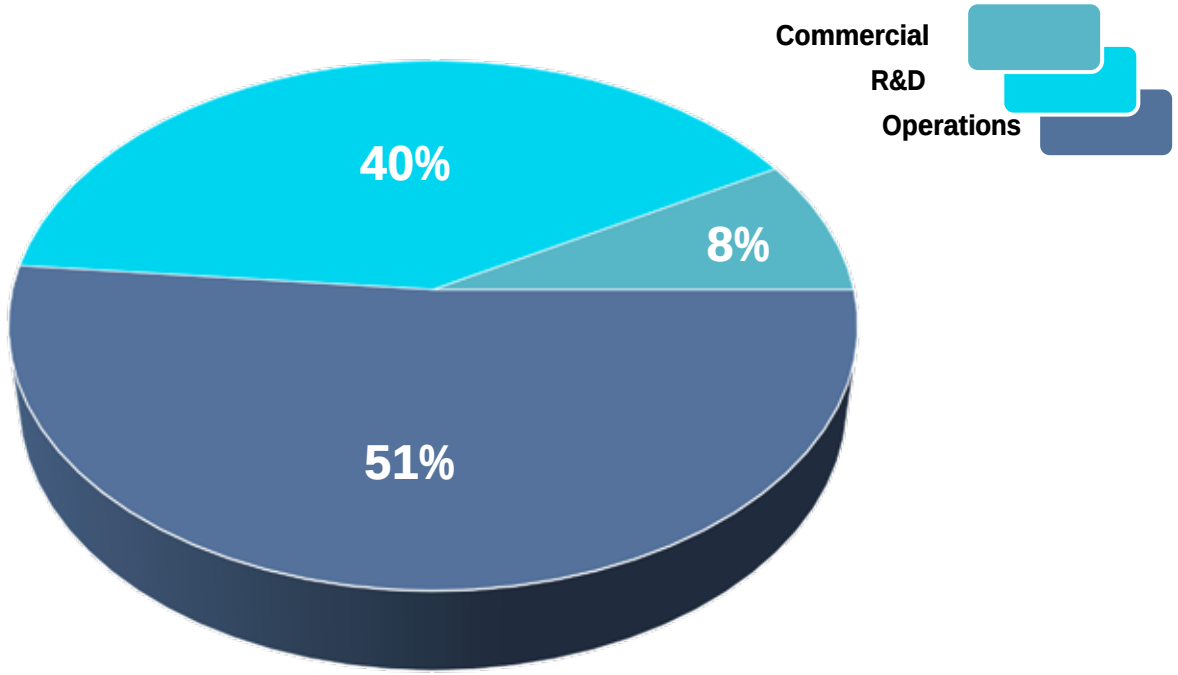
Breakdown of Roles Postings



YTD (Increasing)

Commercial:

Catalent
Vericel Corp

Operations:

Alkermes
West Pharma

R&D:-

Catalent
West Pharma

MTD (Increasing)

Commercial:

Vericel Corp
Evonik

Operations:

AGC Biologics
Catalent

R&D:-

Incyte Corp
Catalent

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Data Summary – Monthly Hiring Industry Insight

YTD CDMO BY JOB TYPE

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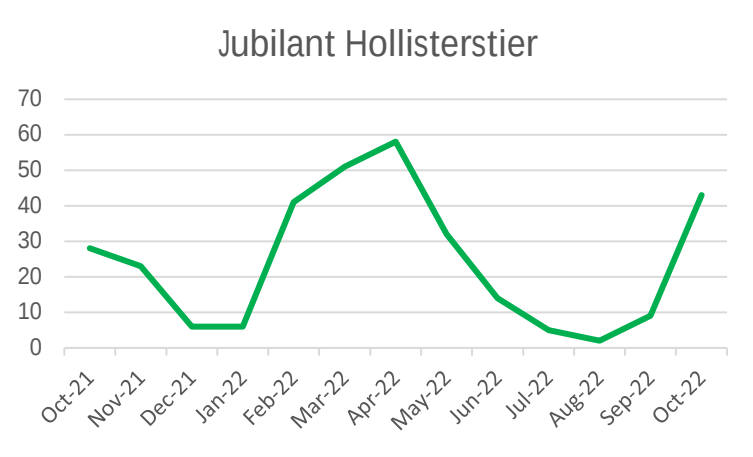
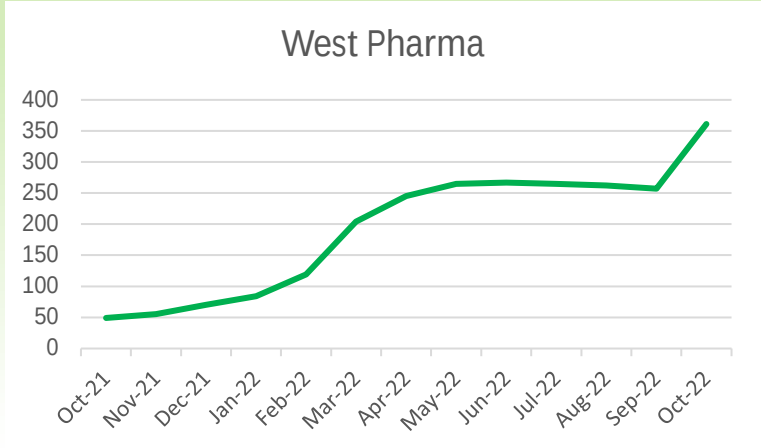
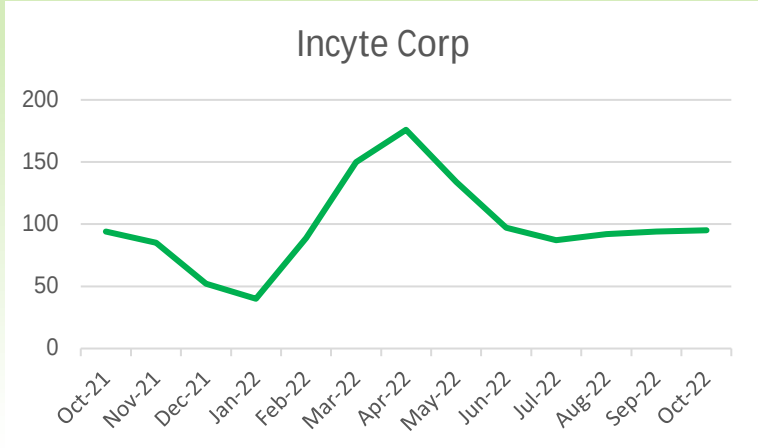
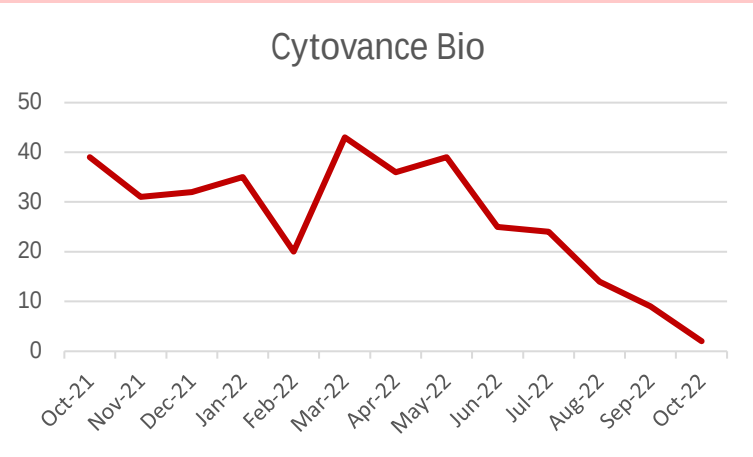
INCREASING

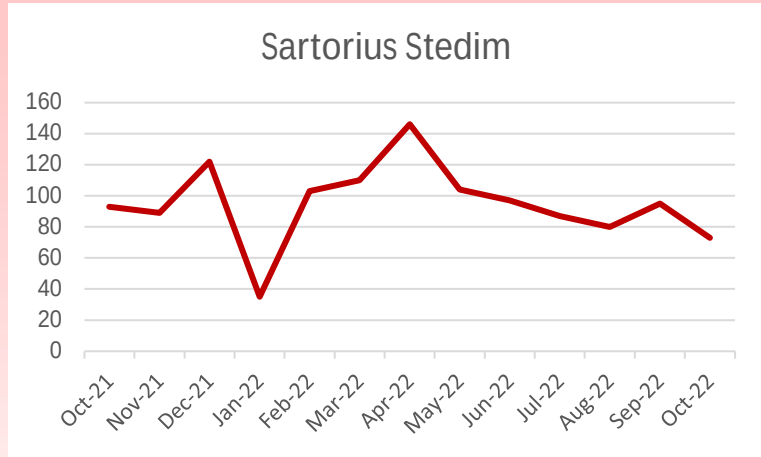


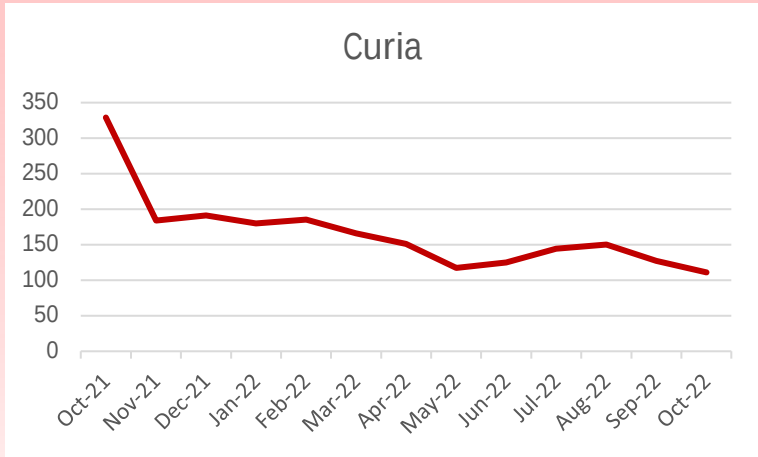




DECREASING







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Market Drivers

- In 2022, Sutro Biopharma entered a worldwide, strategic collaboration and licensing agreement with Astellas focused on the discovery and development of novel immunostimulatory antibody-drug conjugates (iADCs).
- Sutro initiated a collaboration and licensing agreement with BioNova Pharmaceuticals Limited (BioNova) to develop and commercialize STRO-001, a CD74-targeting Antibody-Drug Conjugate (ADC)
- Sutro initiated a collaboration and licensing agreement with Tasly Biopharmaceuticals Co., Ltd

- Wacker $200 million expansion to add another 200 jobs in Charleston, Tennessee

- Avid Bioservices Announces Launch of Analytical and Process Development Suites Within New, World-Class Viral Vector Development and Manufacturing Facility
- Avid Bioservices Announces Expansion into Viral Vector Development and Manufacturing Services for Cell and Gene Therapy
- Avid Bioservices, Inc. is expanding its CDMO service offering into the cell and gene therapy market: constructing a purpose-built 53,000 sq. ft. viral vector development and CGMP manufacturing facility in Costa Mesa, CA.


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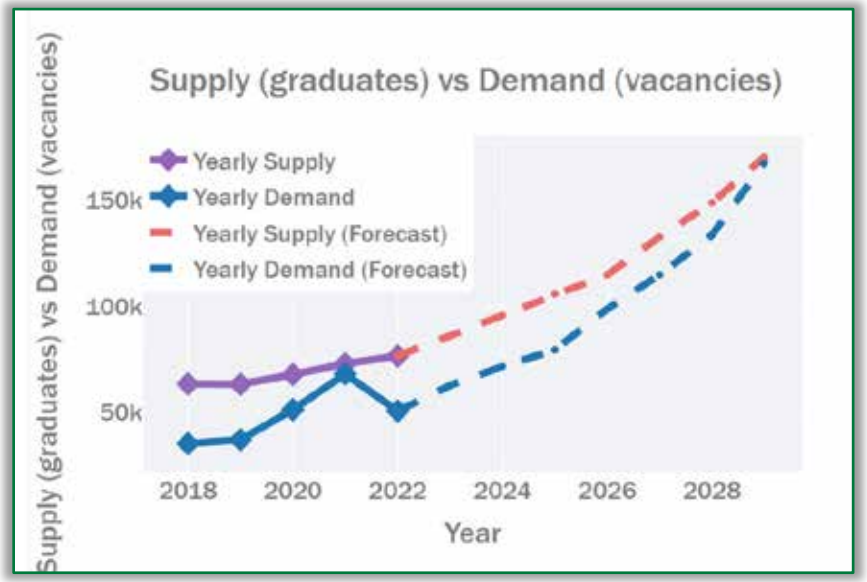
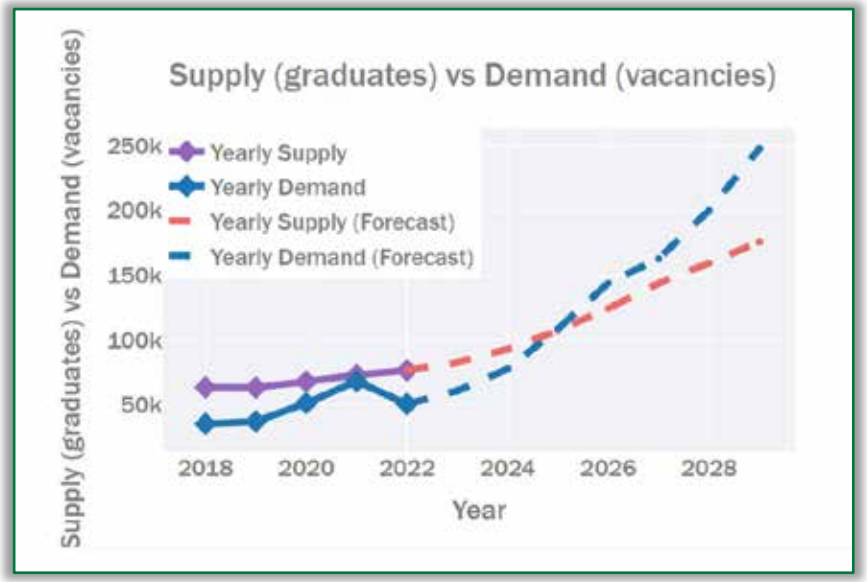
Predictive Talent Market Dynamics

Predictive Talent Market Dynamics

Various models presented below exemplify the 'Supply versus Demand' market growth assumptions:





USA Biomanufacturing Supply versus Demand modelling. Various market growth options. Talent Supply presented at 10% growth (median over 12 years); Talent Demand growth projected at 10% (left) and 20% (right) respectively. Intersecting lines illustrate where talent demand and supply are in equilibrium (Evolution, 2022). Supply refers to number of graduates and post-graduates entering Biomanufacturing industry; demand specific to Biomanufacturing job vacancies.