

A laboratory setting with a pipette and test tubes. The background is a warm, orange-yellow gradient. A pipette is shown in the upper left, with a drop of liquid about to fall into one of the test tubes. Several test tubes are arranged in a row, some containing liquid. The overall scene is brightly lit, creating a professional and scientific atmosphere.

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INSIGHT REPORT
Predictive Talent Dynamics - December 2022

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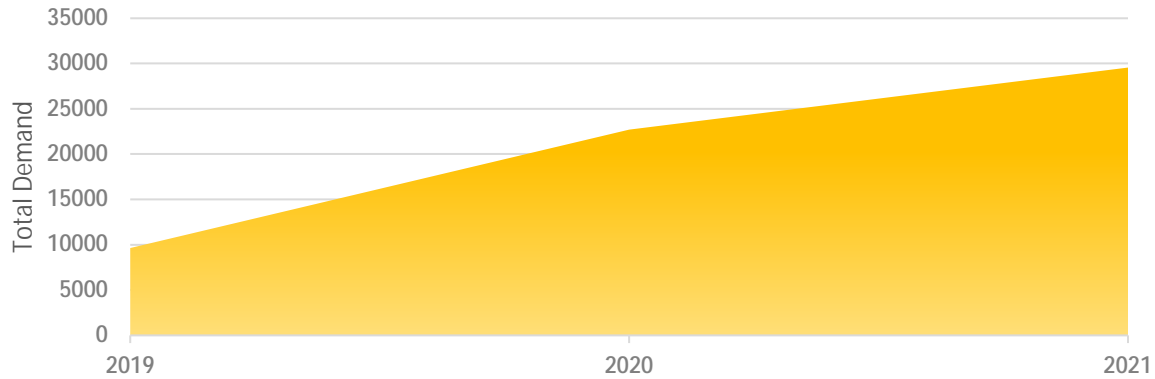
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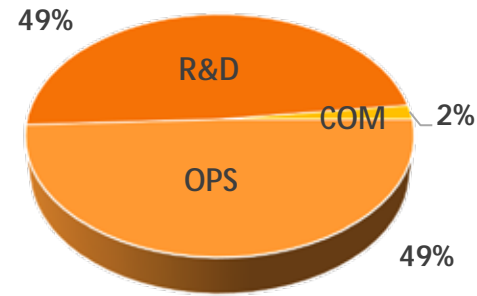
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Executive Summary

C> Hiring: Yearly Average



Role Postings:
By Role Type



Top 3 Companies:

Largest Annual Talent Demand Increase
Normalised versus employee no.



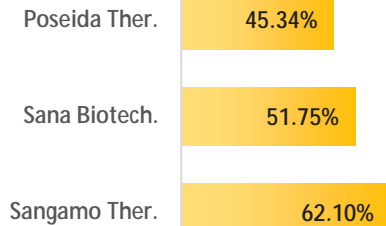
2022

Monthly *Hiring Demand* Change

+5.6%

Top 3 Companies:

Largest Monthly Talent Demand Increase
Normalised versus employee no.



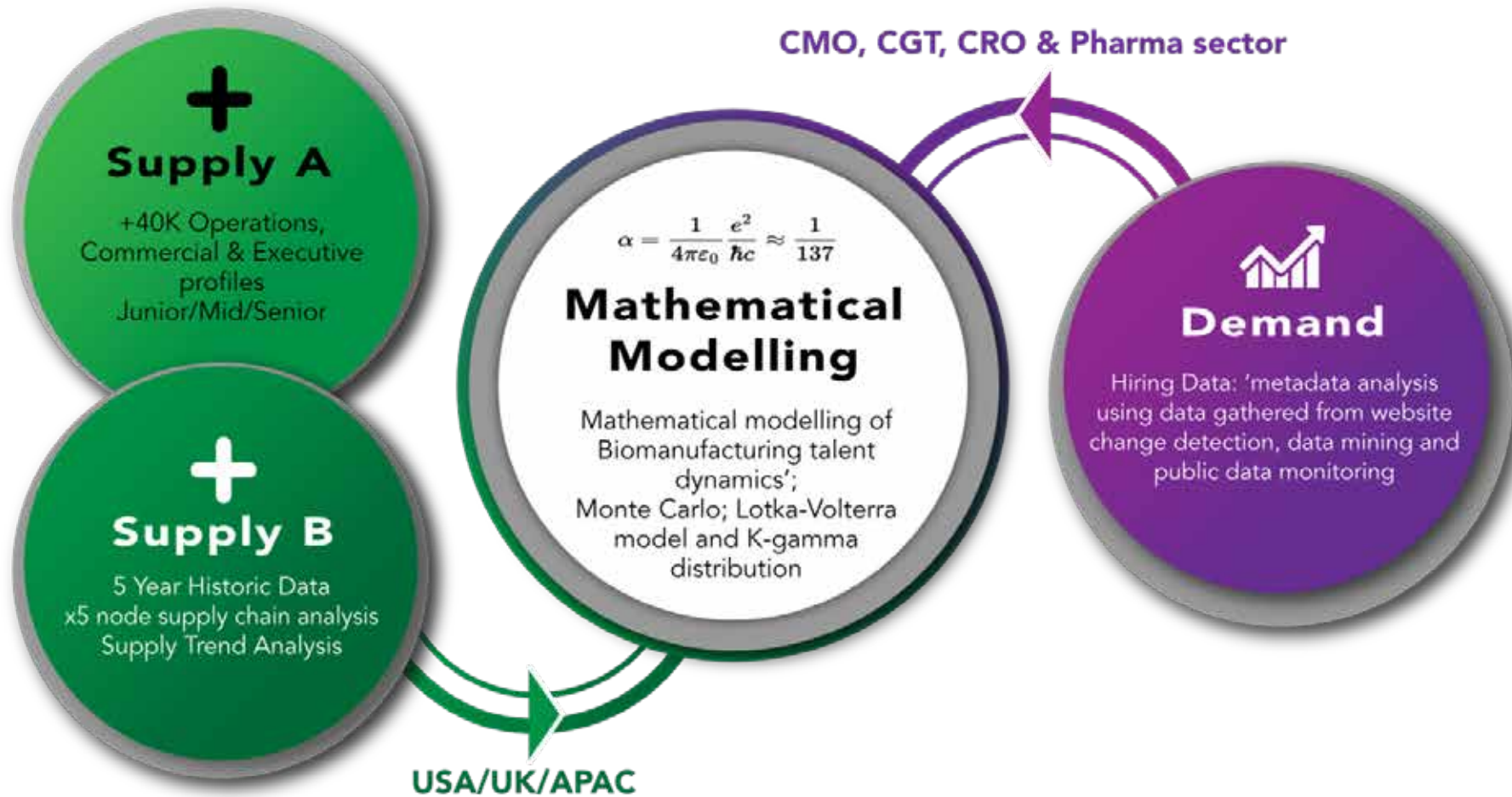
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Introduction and Methodology



Insight Report

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 in 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 & production, with a shifting of resources towards responding to the pandemic. 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.

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.

Long Term

A laboratory setting with a pipette and test tubes. The background is a warm, orange-yellow gradient. In the foreground, a glass pipette is tilted, with a single drop of liquid hanging from its tip. Below the pipette, several glass test tubes are arranged in a row, some containing a clear liquid. The lighting is soft and focused on the pipette and the tubes.

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Industry Sub Sector

Industry Sub-Sector

10 | By Job Number – MTD /QTD/ YTD (Normalised)

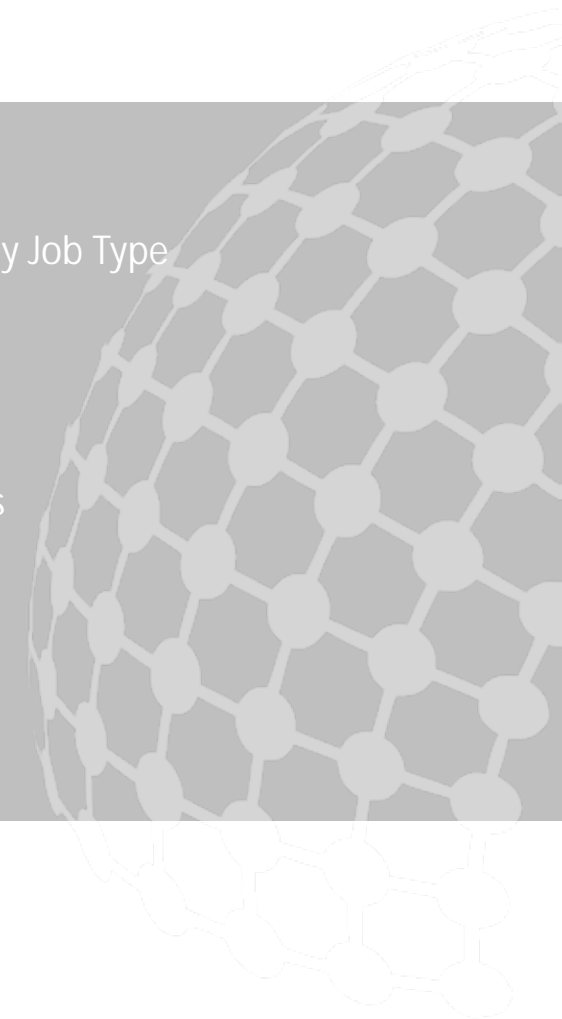
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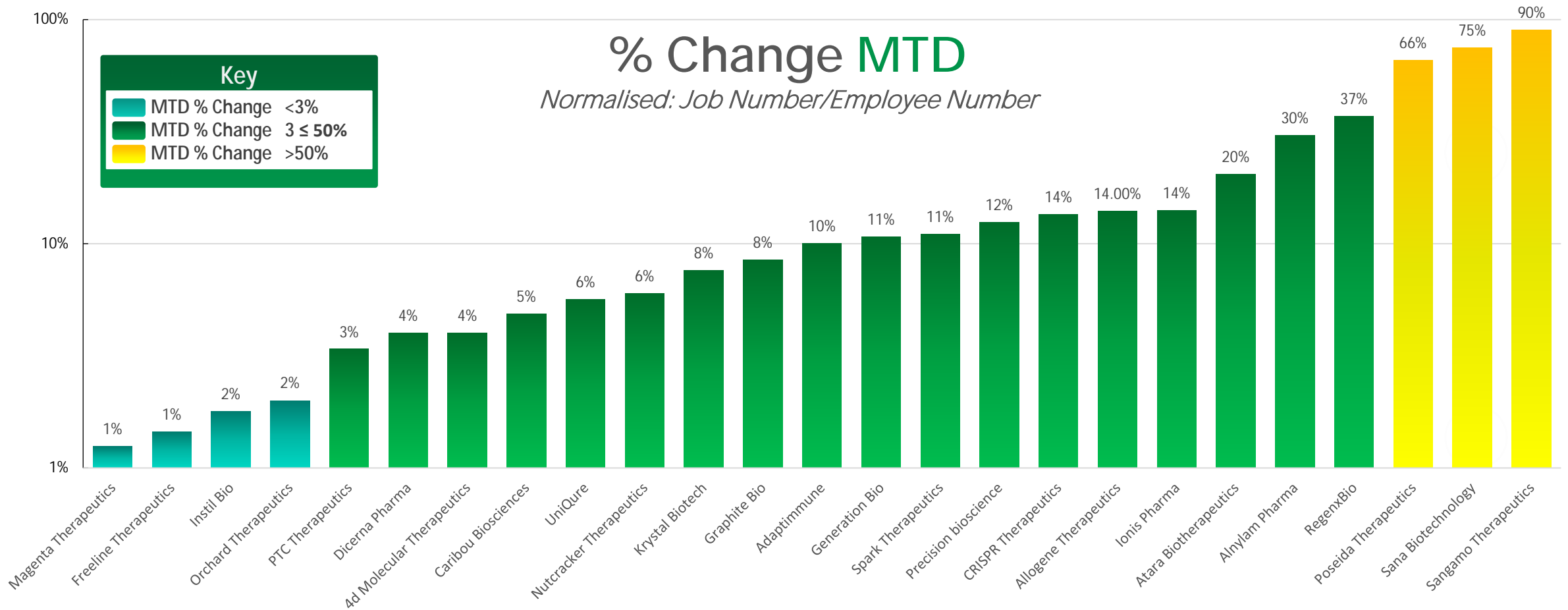
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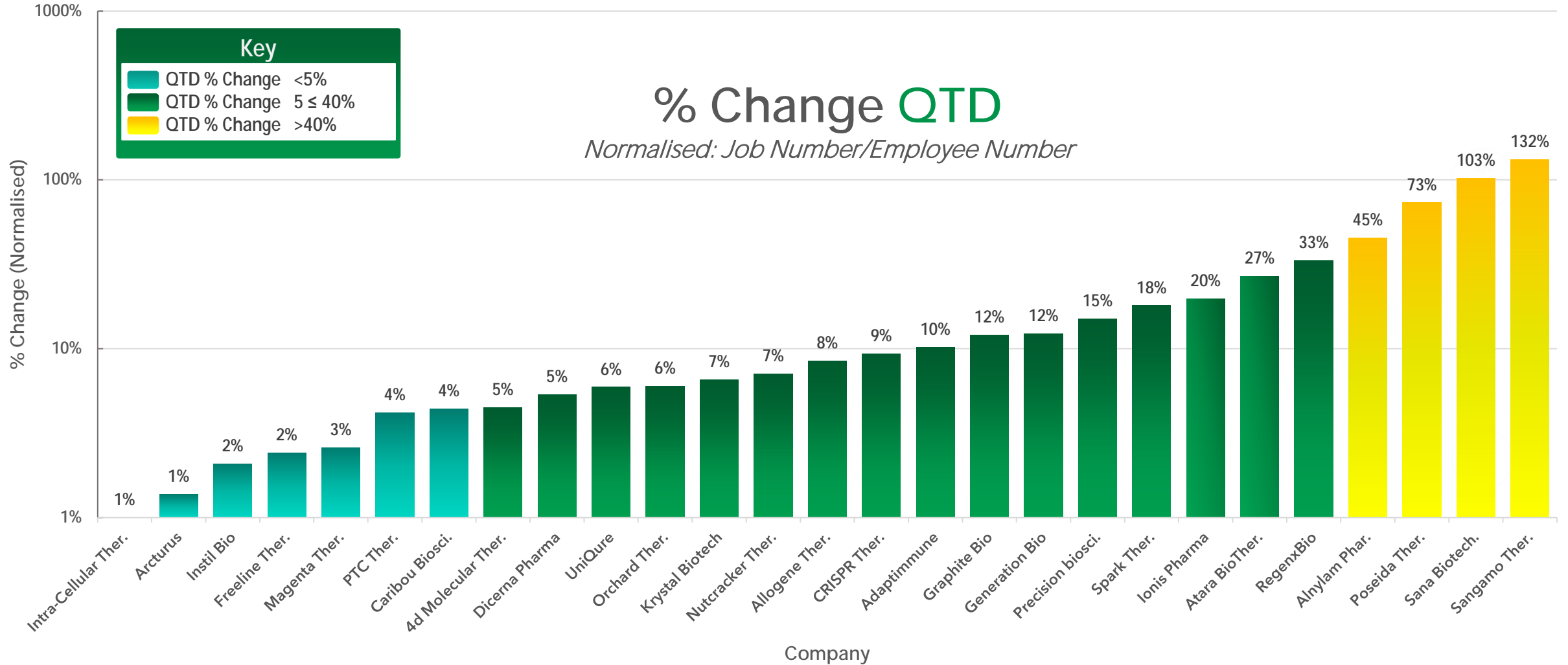
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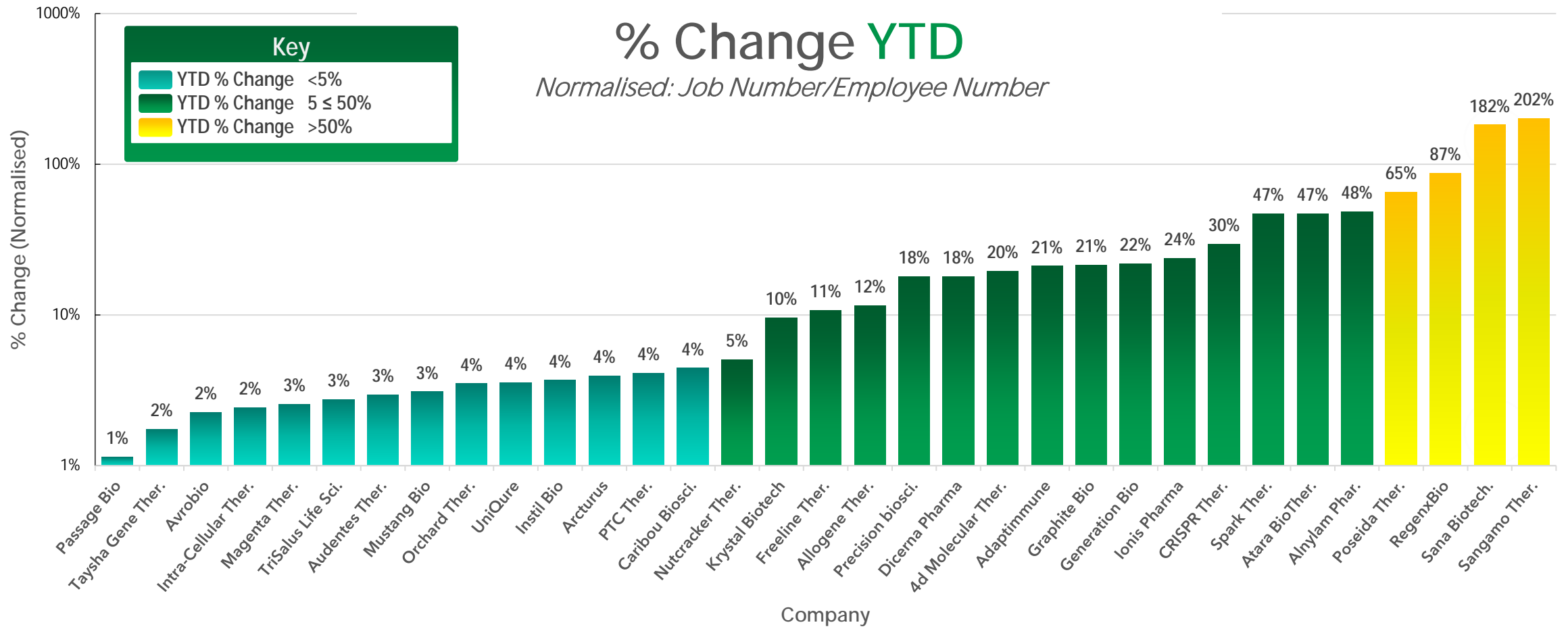
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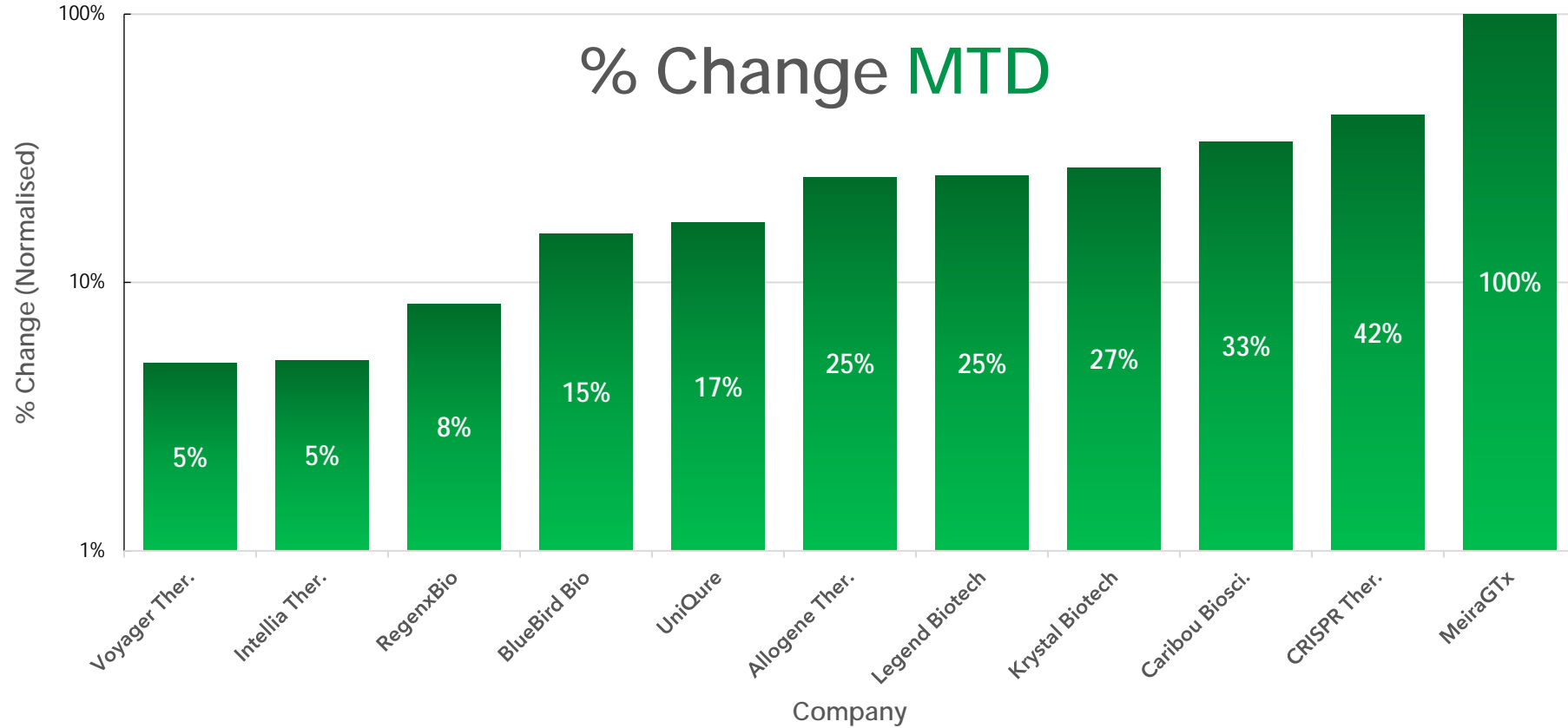
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Assessment of Hiring Frequency by Job Number (*Normalised*)







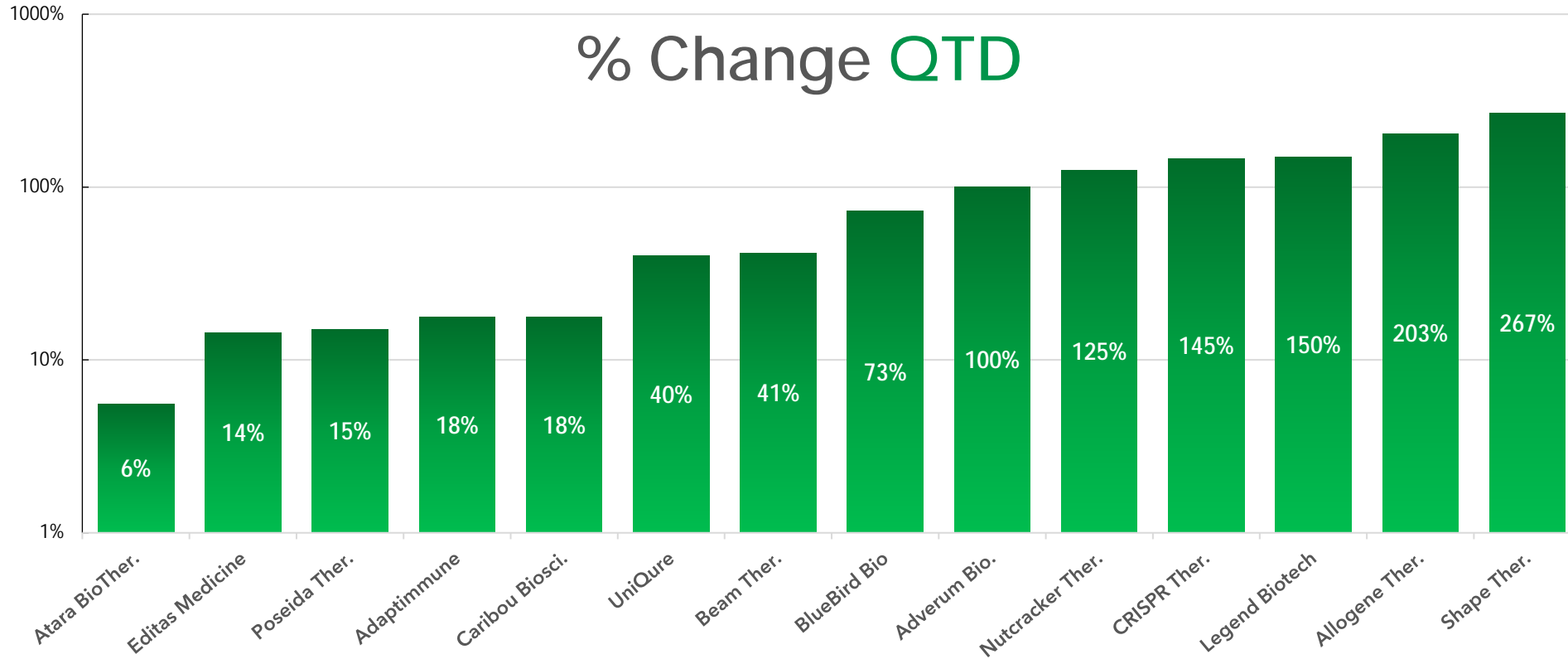


Caribou Biosci.
CRISPR Ther.
MeiraGTx



Arcturus
Biocytogen
CureVac

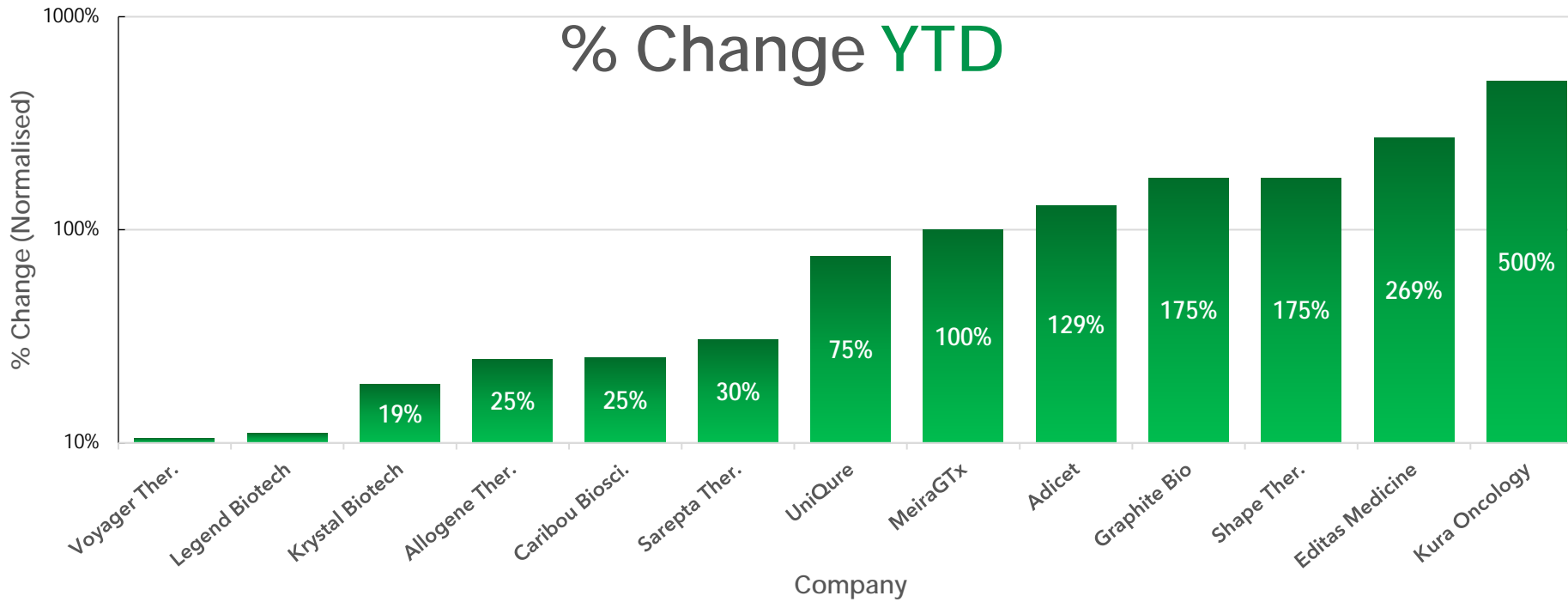
% Change QTD



Legend Biotech
Allogene Ther.
Shape Ther.



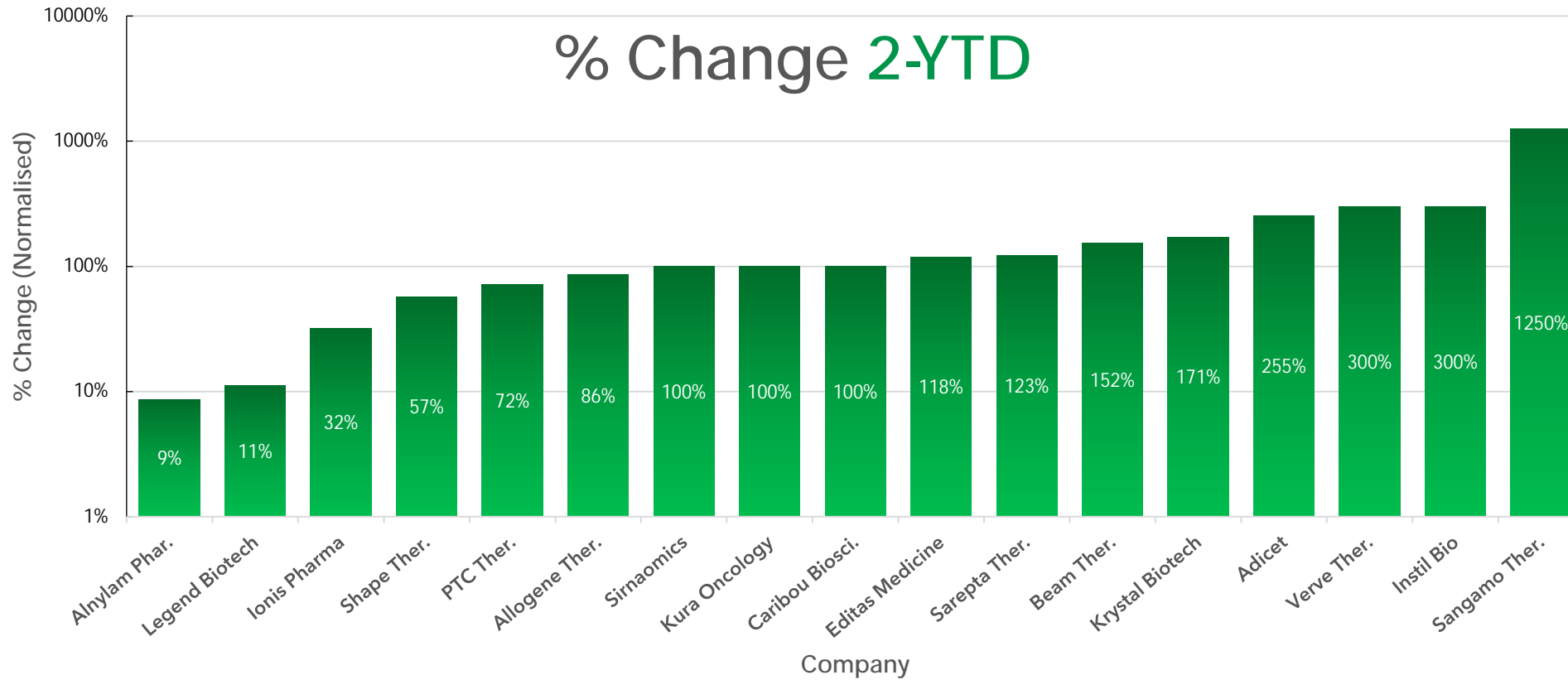
Arcturus
Biocytogen
CureVac



Shape Ther.
Editas Medicine
Kura Oncology



Arcturus
Biocytogen
Abeona Ther.



Verve Ther.
Instil Bio
Sangamo Ther.



Arcturus
Biocytogen
Abeona Ther.

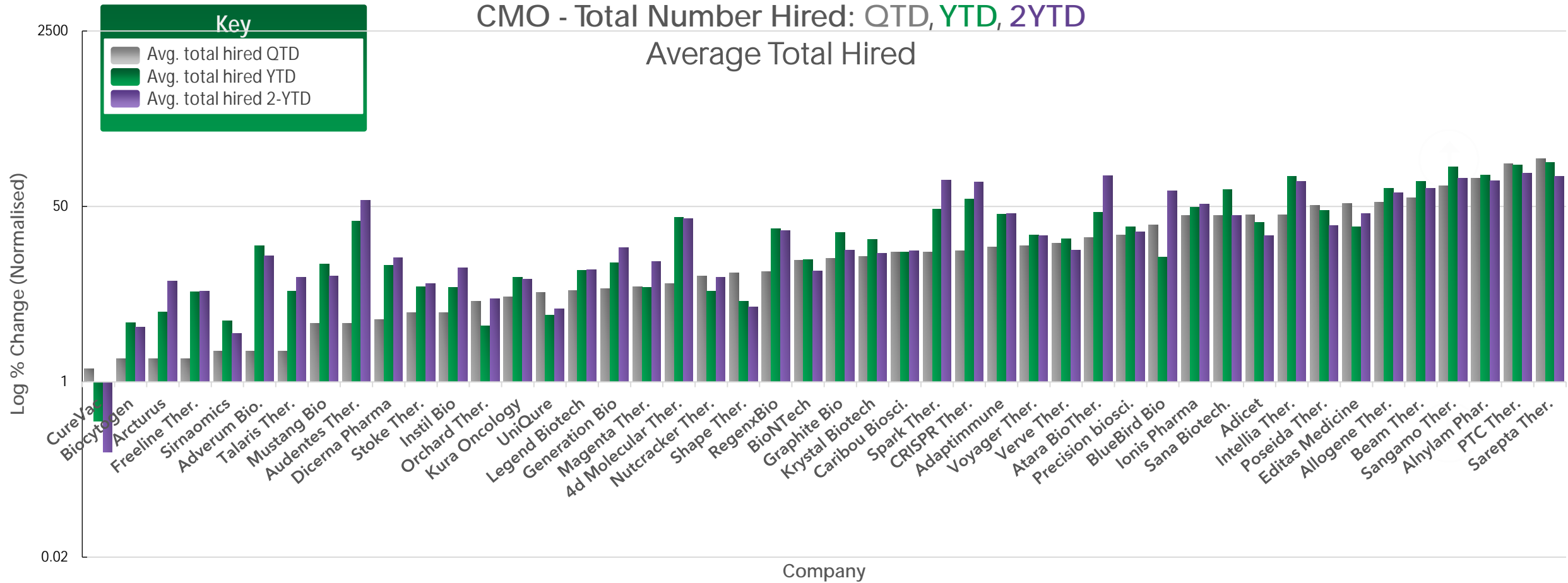
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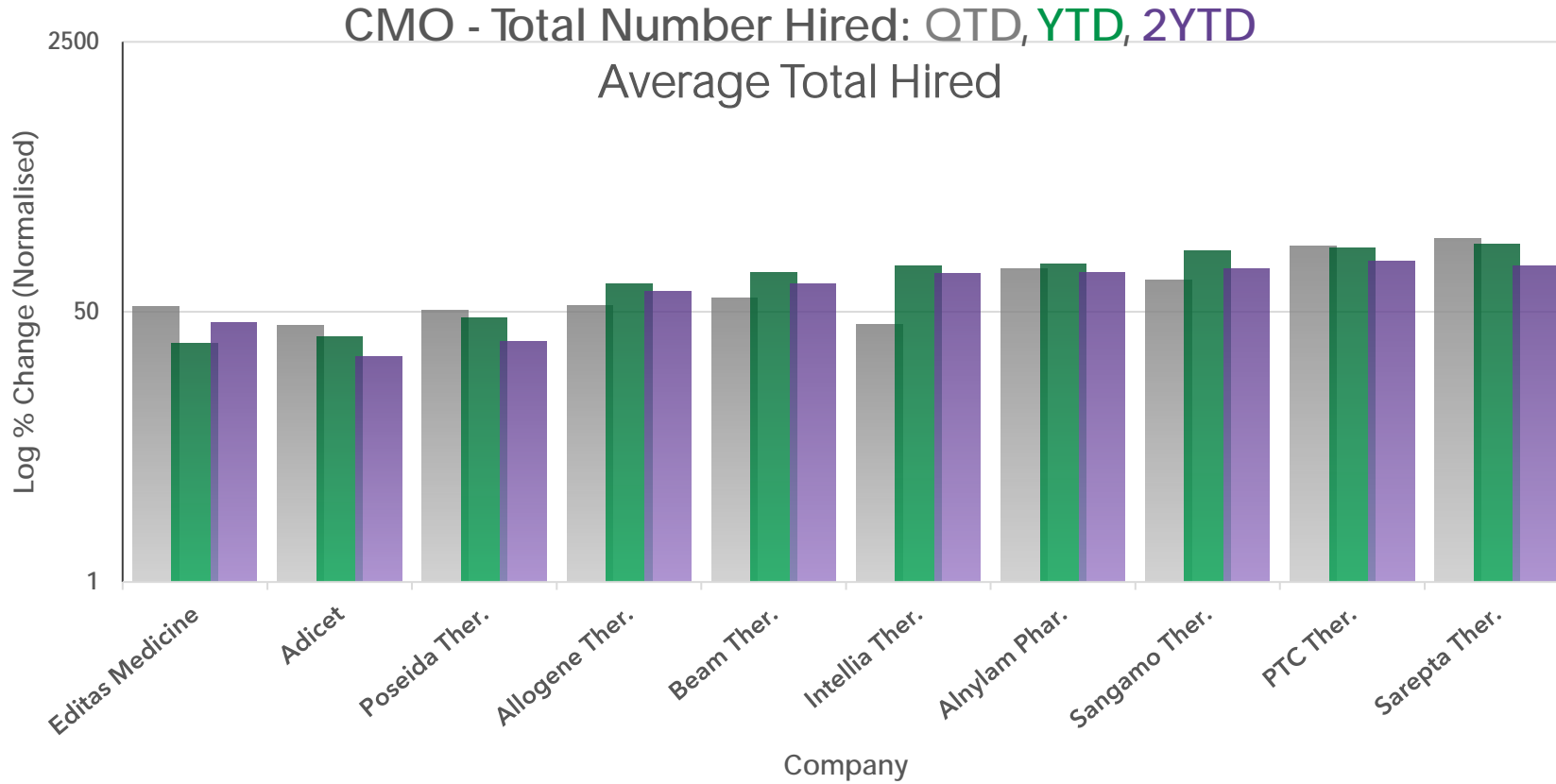
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Assessment of Hiring Frequency by Job Number (Average)





Key

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

Sarepta Therapeutics, Sangamo Therapeutics & PTC Therapeutics

Largest increase across QTD, YTD, 2YTD.

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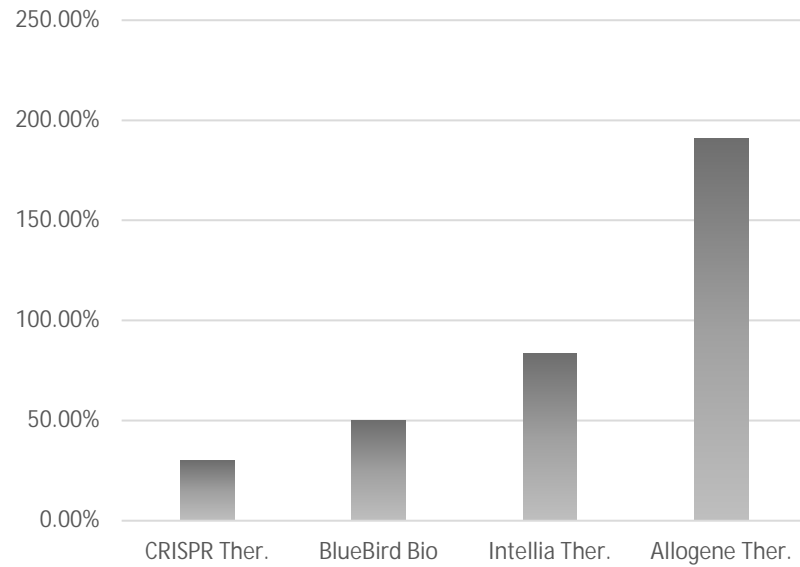
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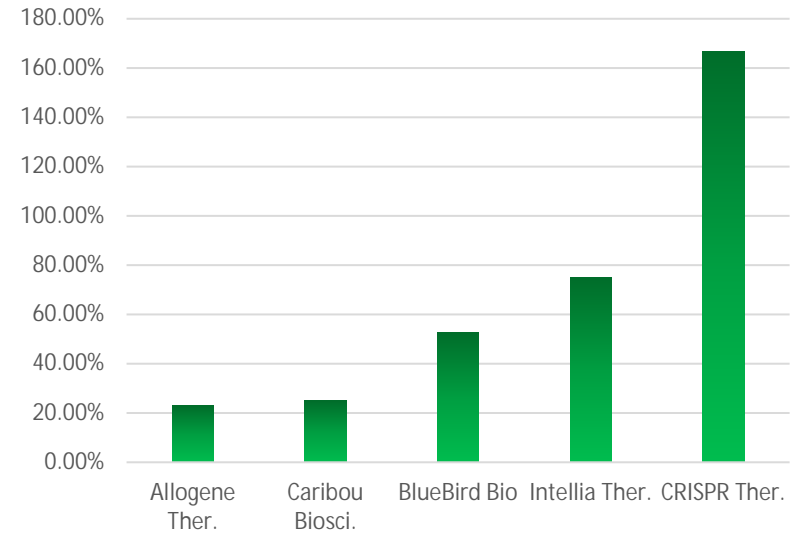
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Assessment of Hiring Frequency by *Job Type*

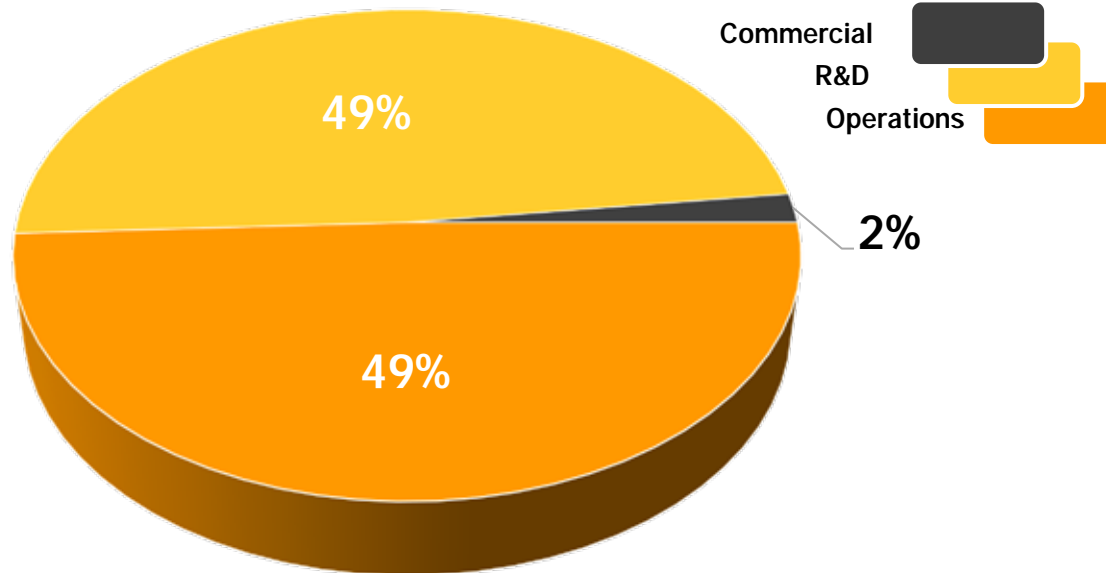
R&D



Operations



Breakdown of Roles Postings



YTD
(Increasing)

MTD
(Increasing)

Commercial:

Commercial:

-

-

Operations:

Operations:

RegenxBio
BlueBird Bio

BlueBird Bio
Intellia Ther.

R&D:

R&D:

Caribou Biosci.
Allogene Ther.

Intellia Ther.
Allogene Ther.



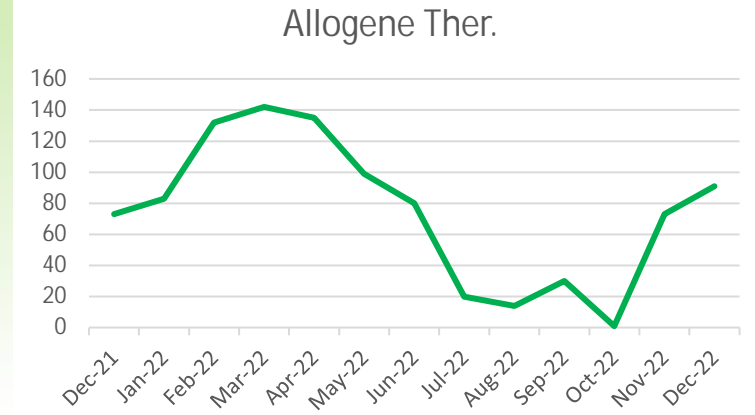
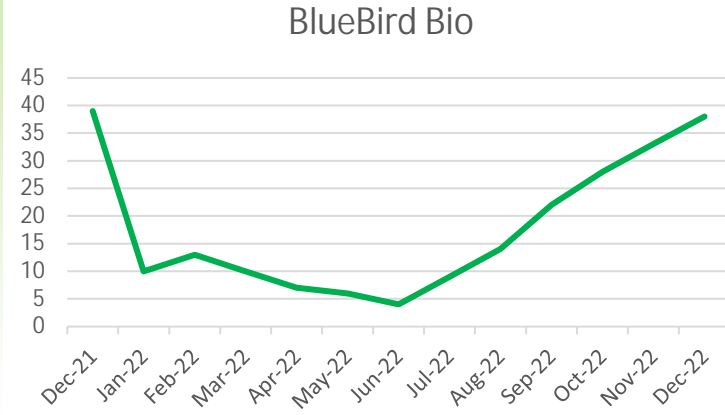
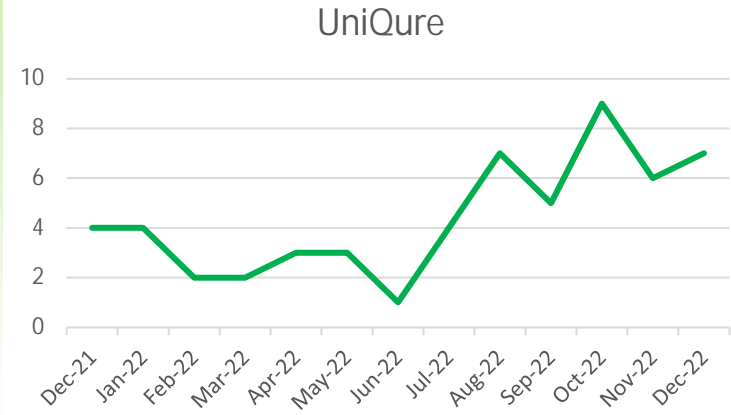
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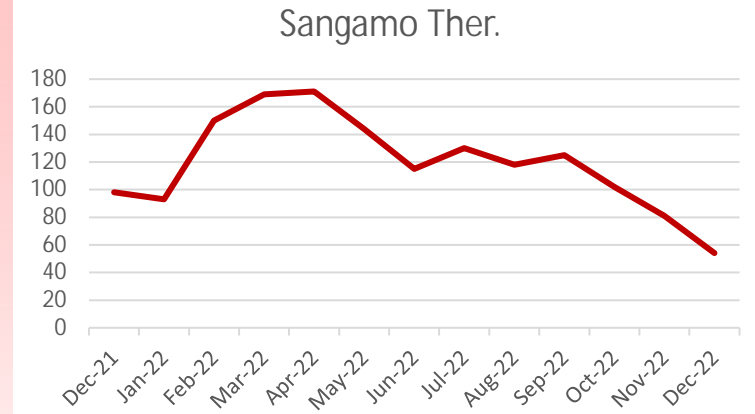
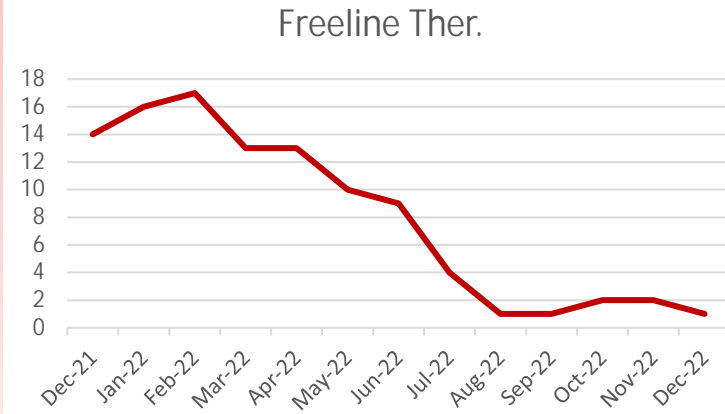
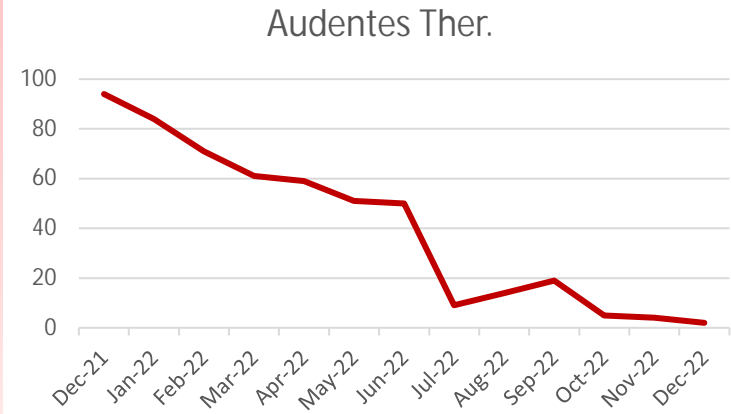
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Data Summary – Monthly Hiring Industry Insight

INCREASING



DECREASING



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Market Drivers



Regenxbio opens state-of-the-art gene therapy manufacturing facility: \$65 million invested in new facility, enabling end-to-end control of gene therapy manufacturing in Montgomery County, Maryland



This has been a year [2022] marked by progress across our pipeline. In the third quarter, we continued to advance our clinical trials and preclinical activities
Pfizer and Sangamo Therapeutics announce phase 3 trial of investigational gene therapy for hemophilia a has re-opened recruitment



Expect cash runway into 2025, enabling multiple data readouts across platforms for lead programs, driven by significant cash savings from manufacturing facility move to Bothell, Washington as well as research prioritization

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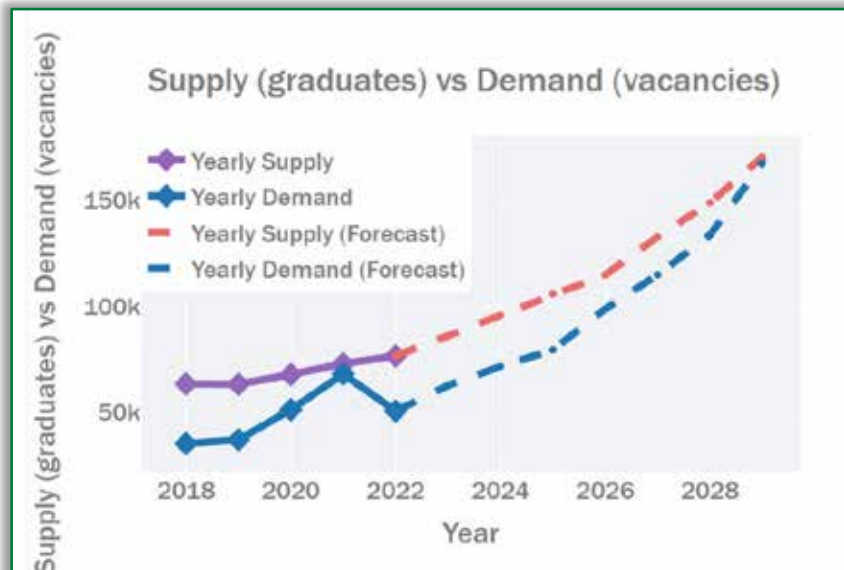
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Predictive Talent Dynamics

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.

