

IMPACT

2021



Lab | Central

WELCOME



EXECUTIVE TEAM



Gretchen Cook-Anderson
ED, Ignite



Johannes Fruehauf
Co-Founder & CEO



Mike LaRhette
CBO



Maggie O'Toole
COO & EVP



Peter Shanley
CFO

Coming out of the COVID pandemic, we are excited to launch into 2022 with renewed optimism and excitement. The exercise of looking back at the past 12 months through our 2021 Impact Report allows us to see the incredible productivity and ingenuity of our scientist teams and startups, and we hope to share with you some of that wonder.

Since our launch in 2013, LabCentral has served as the vanguard accelerating innovation and expanding R&D in the biotech and life sciences industries. 2021 was a year of unparalleled growth and progress for LabCentral, our residents, alumni, and our community of partners and stakeholders.

As a physician, I'm especially excited to see our companies make progress in the development of new therapeutics and in 2021 we saw twelve new LabCentral companies starting clinical trials for the drugs they invented here. In total, our companies enrolled a total of 5,717 participants this past year in studies to improve outcomes for cancer, diabetes, and many other diseases.

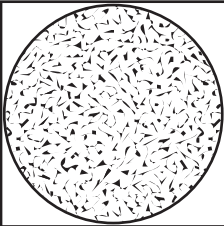
LabCentral supported resident companies in the creation of 1,449 new jobs in Massachusetts in 2021, and resident companies expanded their facilities across 1.3 million square feet of research space in Greater Boston.

We continued our own growth to provide innovators with better environments, and we opened Phase 1 of LabCentral 238. Purpose-built to support cell and gene therapy companies, LabCentral 238 represents the next step in the (r)evolution of the life sciences industry.

Additionally in 2021, we appointed Gretchen Cook-Anderson as the Executive Director of LabCentral Ignite, our platform aimed at establishing a robust pipeline of diverse, qualified talent in the biotech industry. LabCentral Ignite demonstrates another important way in which we strive to support the unmet needs of our industry.

To our sponsors, partners, and the incredible LabCentral team who made 2021 such a landmark year, I extend my deepest gratitude. What we accomplished in 2021 is attributed to our shared commitment to create the opportunities that empower innovation by building community. I look forward to seeing you again soon - this time in person!

Sincerely,
Johannes Fruehauf
Co-Founder & CEO



5,717

PARTICIPANTS DOSED IN 2021
422% increase from 2020
6,917 enrollees since 2013

4.3 YEARS

**ON AVERAGE FROM STARTING
AT LABCENTRAL TO ENTERING
CLINICAL TRIAL**

16

**NEW PATENTS ISSUED
IN 2021**
91 total since 2013

35

NEW CLINICAL TRIALS
78% increase from 2020
80 total since 2013

31

**TOTAL COMPANIES
ACTIVE IN THE CLINIC**

1,449

DIRECT NEW JOBS CREATED IN 2021
97% increase from 2020
4,608 total since 2013

5

COMPANY IPOs in 2021
18 total since 2013

**LabCentral 2021
IPO Companies**
Xilio Therapeutics
TransCode Therapeutics
Generation Bio
Cyteir Therapeutics
Compass Therapeutics

2021 IMPACT

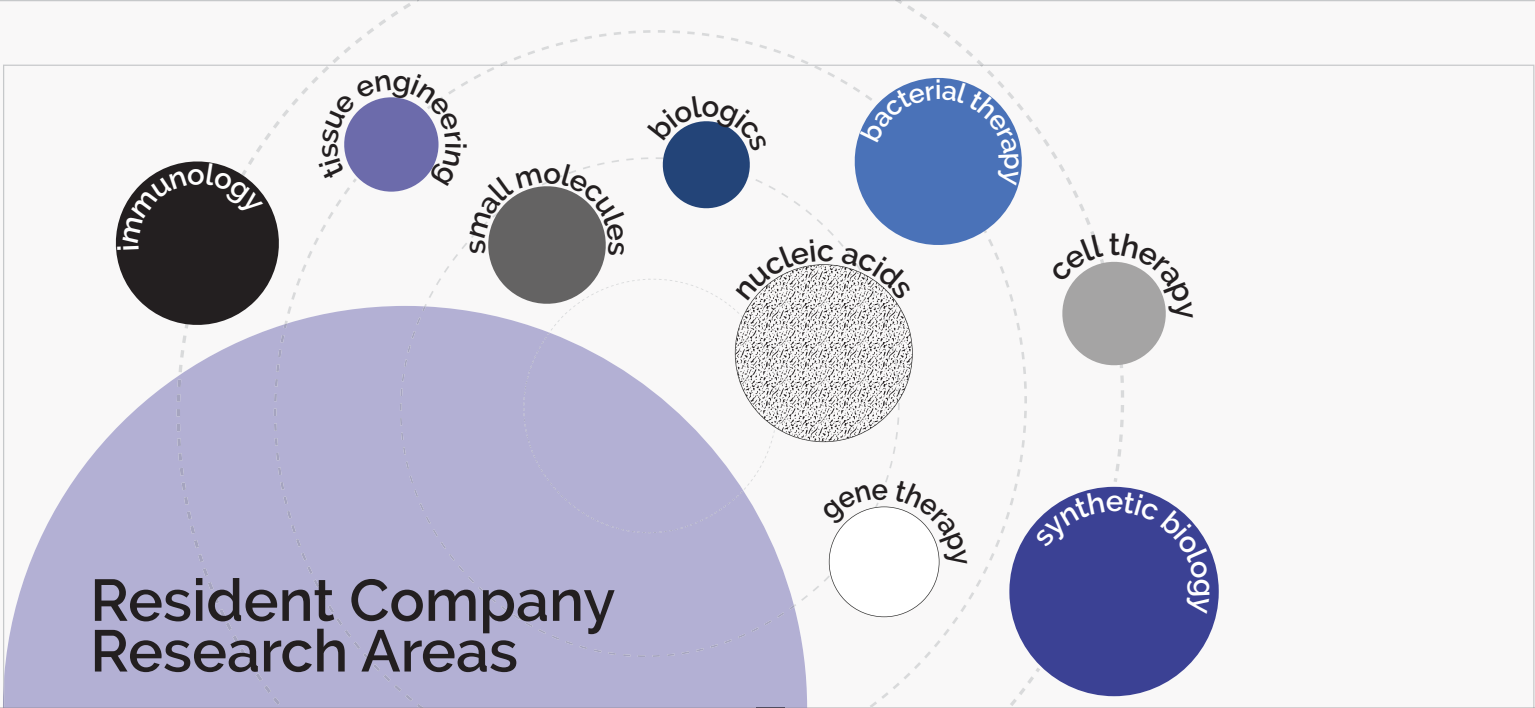
Next Generation Leaders

Science at the Forefront

LabCentral represents an alternative model to biotech and life sciences R&D. Our model works to decentralize the innovation pipeline and source the most inventive companies developing the most cutting edge technologies to maximally improve patient outcomes and save lives. LabCentral resident and alumni companies are pushing what we know to be possible in the life sciences, including within the emerging spaces of biologics manufacturing; diagnostics; drug discovery and computational artificial intelligence; and gene therapy.

91 active patents held by resident and alumni companies

50 new companies joined LabCentral's network in 2021



Resident Company Research Areas



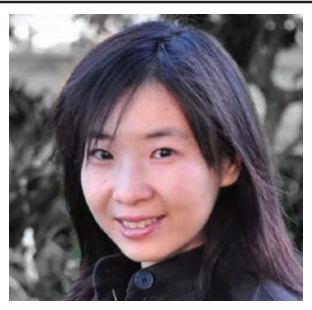
Kano Therapeutics

Launched in 2020

Floris Engelhardt, Ph.D.
CEO & Co-Founder

The COVID-19 pandemic made clear that there is a massive bottleneck associated with the use of long single-stranded DNA (ssDNA). Current chemical synthesis techniques are limited to short DNA strands called oligonucleotides, which are orders of magnitude shorter than the DNA required in multiple gene therapies, cellular engineering, and DNA vaccines. So far, all production methods for ssDNA above a length of 1000 nucleotides depend on costly components and lack scalability.

Kano Therapeutics' platform for gene therapies and biologics manufacturing harnesses the power of the bacteriophage life-cycle for ssDNA production that is scalable and cost efficient. **Their approach enables direct transfer into the clinic and speeds the development and delivery of vital new drugs and therapies to improve patient outcomes.**



Accure Health

Launched in 2016

Jessica Sang, Ph.D.
CEO & Co-Founder

When it comes to making critical diagnoses, time is of the essence and delays in detection can have deleterious effects, both physically and mentally.

Accure Health focuses on developing integrated solutions that rapidly digitize liquid biomarkers into quantitative, actionable information to improve early detection and precision treatment of disease. Accure's TIMES technology integrates multiplex automation, electronic detection and machine learning into compact systems to accelerate biomarker discovery and testing. **Together with clinical and industry partners, Accure has developed unique solutions for cancer, neurodegeneration and other complex diseases.**



New Equilibrium

Launched in 2021

Virginia Burger, Ph.D.
CEO & Co-Founder

Proteins perform essential tasks inside our bodies, from providing structural support to passing signals, catalyzing reactions, and reading DNA. When proteins undergo a mutation or are misregulated, they can malfunction, causing a range of disease states. Scientists often utilize a structure-based approach to designing drugs that will specifically bind and interact with the chemical make-up of a protein's structure. Many proteins, however, fluctuate between a number of conformations making detailed structural information that could be utilized for drug discovery challenging to obtain.

New Equilibrium's platform combines big data, artificial intelligence, and biophysical experiments to accurately visualize intrinsically disordered proteins (IDPs) in 3D. Their structure-based drug discovery methodology results in better drug targeting, lower toxicity, and the restoration of normal cellular function.



STRM.BIO

Launched in 2019

Jonathan N. Thon, Ph.D.
CEO & Founder

Extracellular vesicles (EVs) are natural carriers of nucleic acids and proteins that hold tremendous promise as direct cell messengers for gene therapies due to their innate targeting, amenability to commercial manufacture, and low immunogenicity. STRM.BIO is developing EVs to deliver gene therapies in vivo and establish a new class of therapeutics for rare blood diseases.

STRM.BIO's unique EV platform has a natural tropism to hematopoietic stem cells, a large carrying capacity that supports both protein and nucleic acid delivery, and allows for repeat dosing.

STRM.BIO aims to democratize gene therapy and bring hope for patients fighting rare diseases worldwide.

BIOLOGICS MANUFACTURING

Advancements in biologics manufacturing have been slow to meet the pace of innovation in drug development. Biologics are large and increasingly more complex, requiring high investment and presenting procedural challenges. Novel approaches to biologics manufacturing show potential to decrease drug pricing, shorten the time it takes for drugs to come to market, and in turn, accelerate the speed with which patients receive treatment.

DIAGNOSTICS

Every body is different and advancements in diagnostics are integral in the push toward personalized medicine. Fast and reliable data from diagnostic testing, together with a patient's medical history and other factors empowers both patients and providers to aptly make decisions for better therapeutic and preventative care and eliminate trial-and-error inefficiencies and increased medical care costs.

DRUG DISCOVERY & COMPUTATIONAL AI

Computational AI is accelerating drug discovery by enabling scientists with the ability to quickly sort through and compare the properties of potentially applicable small molecules. Leveraging publicly available libraries, they are then able to focus their lead generation efforts. AI can also generate bespoke data on cellular behavior, helping to reveal insights and patterns that may be too subtle or complex for humans to detect.

GENE THERAPY & RARE DISEASES

Finding an effective pathway for a drug can be very challenging, as they can have multiple off-target effects. Gene therapies precisely leverage the power of natural processes by correcting the underlying genetic problem in a targeted and controlled way, rather than introducing complex large molecules with complicated pathways to recover genes responsible for disease development.

From Bench to Clinic

Accelerating the Development of Breakthrough Technologies

By empowering scientists and entrepreneurs, LabCentral is redesigning the innovation pipeline necessary to improve patient outcomes and save lives. In 2021 our platform for biotech and life science R&D saw 12 new resident and alumni companies enter their technologies into clinical trial. These trials represent not only our commitment to supporting innovators but also offer a ray of hope for the patients and families that one day may benefit from their success.



Vedanta Biosciences

Launched in 2010

Bernat Olle
CEO

Tell us about your company and the clinical trial you are in.

We are pioneering the development of defined bacterial consortia as oral therapies that modulate the human microbiome to treat disease. The human microbiome is comprised of trillions of bacteria, viruses, and fungi, living throughout the human body. Microbiome disruption has been linked to a wide range of diseases, including infections, immune-mediated diseases, cancer, liver disease, and neurological maladies. First-generation microbiome approaches use fecal donor material of variable composition as the basis for product candidates, resulting in inconsistent efficacy outcomes across different clinical studies. In contrast, we are developing reproducible product candidates based upon defined bacterial strains grown from clonal cell banks in a manner analogous to monoclonal antibody production. We believe that our targeted approach could offer consistent composition and quality attributes, provide more consistent clinical benefit, limit safety risk and enable greater scalability compared with fecal-derived approaches.



The Vedanta team

31

COMPANIES IN THE CLINIC

80

CURRENT CLINICAL TRIALS

What does this clinical trial mean to your company?

This has been the largest, most ambitious team effort by Vedanta in the clinic yet. The team overcame numerous technical and operational challenges and we were very pleased with the results of the study.

What does this clinical trial mean to you, personally?

It was very meaningful to see that patients benefited from our investigational drug. It was also, to my knowledge, the first time in the microbiome field that an investigational drug based on the new class we're developing (defined bacterial consortia) showed clear efficacy in patients.

Indication	Participants	PHASE I	PHASE II	PHASE III
Pneumococcal Disease	705			
Sensorineural Hearing Loss	135			
Autism Spectrum Disorder (ASD)	195			
Respiratory Syncytial Virus Infections	278			
Advanced Systemic Mastocytosis	140			
Locally Advanced Solid Tumors	96			
Cancers	320			
Her-2+ Solid Tumors	600			
SARS-CoV-2 Diagnostic	200			
Cystic Fibrosis	41			
Hypoparathyroidism	Open			
Sickle Cell Disease	424			
Immunotherapies for Cancer	24			
Bladder Cancer	93			
Acute Myeloid Leukemia	335			
Atopic Dermatitis	124			
Methylmalonic Acidemia	8			
Schizophrenia Schizo-Affective	32			
Metastatic Pancreatic Cancer	50			
Depression	486			
SARS-CoV-2	92			
Traumatic Brain Injury	64			
Melanoma	99			
Acute Kidney Injury	46			
Migraine Headaches	422			
IL-2 Trial in Oncology	264			

24

UNIQUE INDICATIONS

6,917

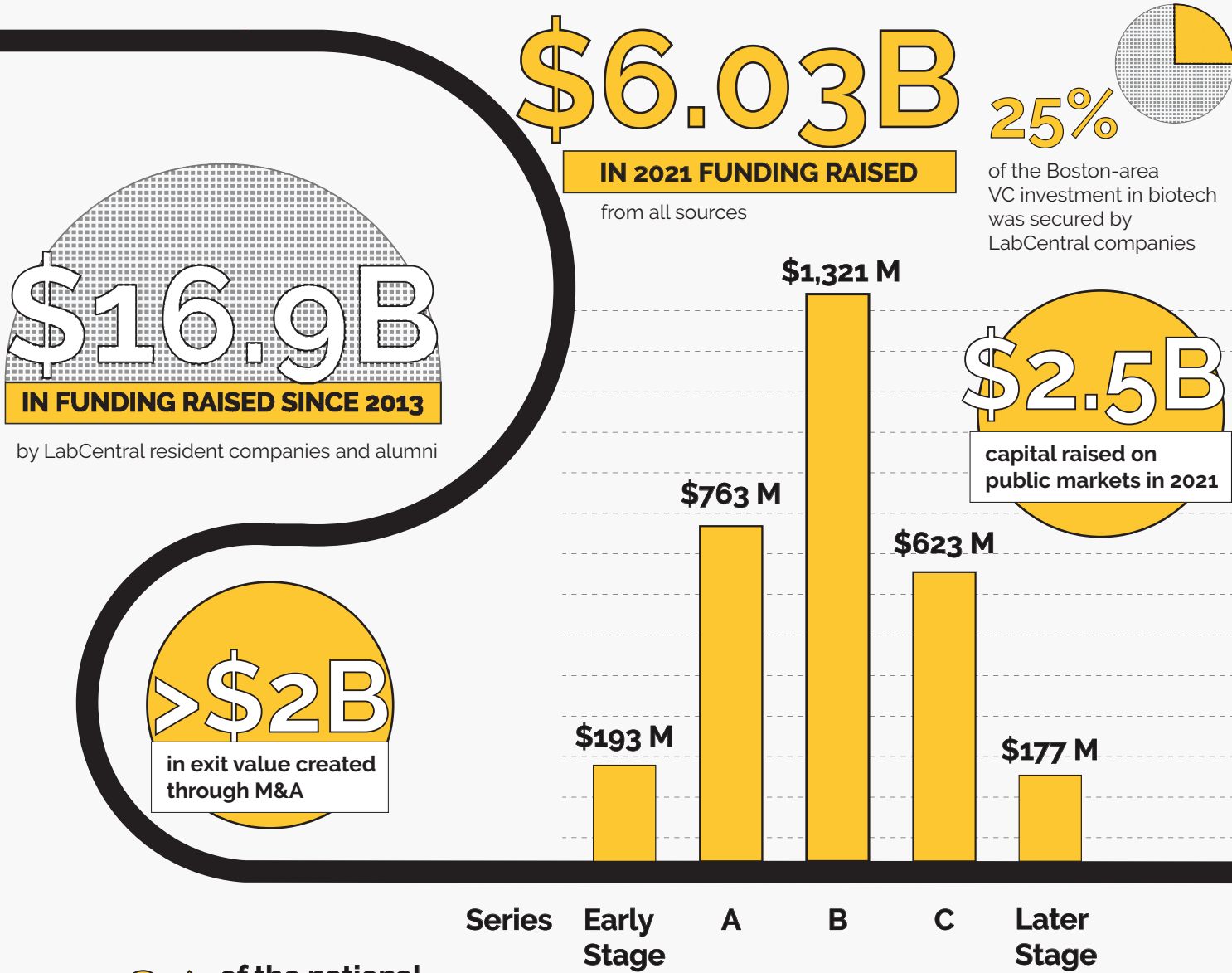
TOTAL PARTICIPANTS ENROLLED

The Financials

Raising Capital and Growing the MA Bioeconomy

The pandemic focused attention on the development of breakthrough science while fundraising in the life sciences reached a record high. Biotechs show continued promise in their performance and LabCentral companies were no exception. 2021 saw the biggest annual increase in resident fundraising in LabCentral's history. These investments will fund next generation research, accelerating lifesaving technologies as well as the growth of the Massachusetts economy.

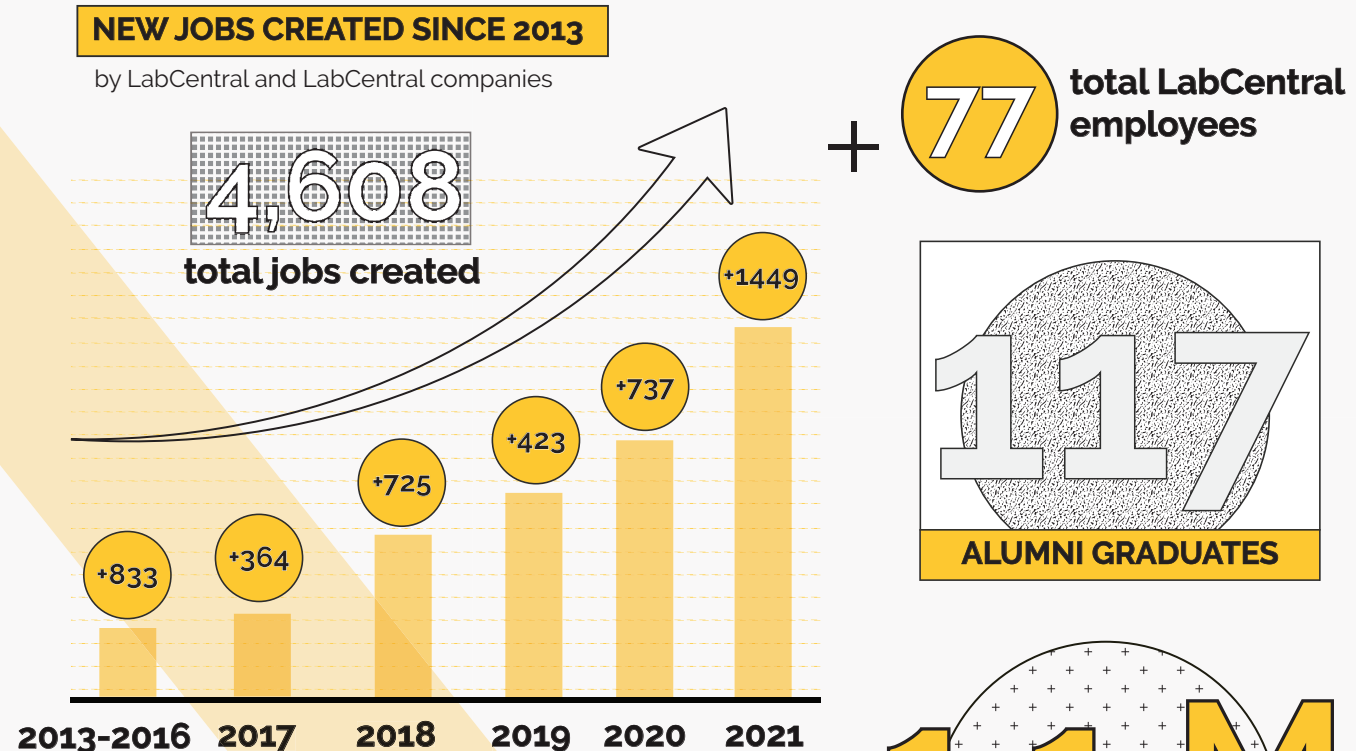
As a part of LabCentral's initial charter to support the development of a biotech sector in the state of Massachusetts, we pledged to help build 1000 new jobs in startups over a period of ten years. The growth and development of our resident companies and alumni has far exceeded our expectations. To date LabCentral companies **have created 4,608 new jobs** since we opened our doors in 2013.



15%

of the national early-stage and Series A investment in biotech

2021 VC FUNDING

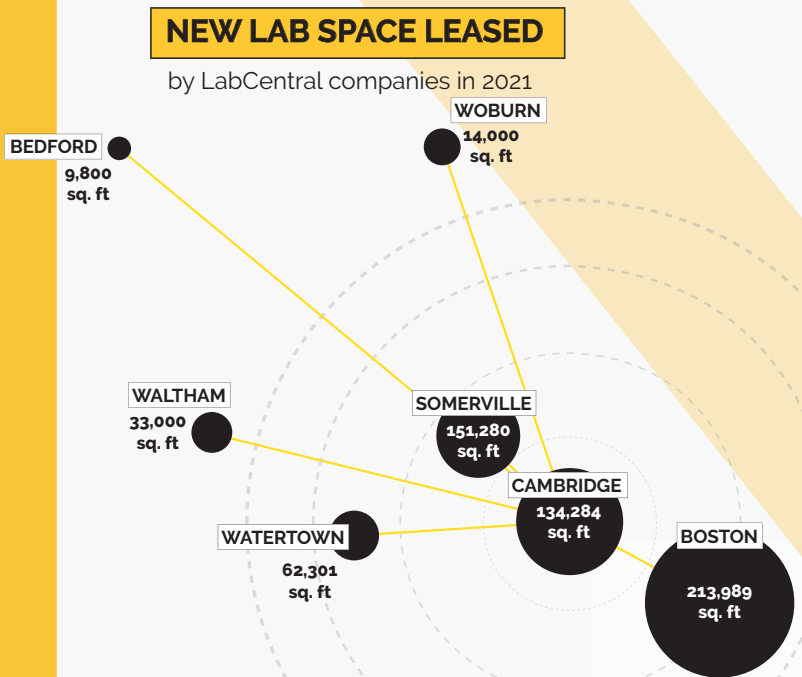


77

total LabCentral employees

117

ALUMNI GRADUATES



1.1M

SQUARE FEET OCCUPIED

by LabCentral alumni companies in lab spaces across Massachusetts

22

repeat entrepreneurs who returned to LabCentral to grow a second or third company

1.7

AVERAGE MILES

distance of LabCentral alumni spaces from our original site in Cambridge

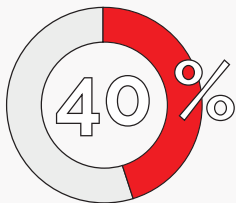


Igniting Change

Forging Bold, Inclusive Change

Ignite, powered by LabCentral, emerged in 2021 as **the only platform wholly dedicated to addressing systemic racial, gender and other underrepresentation in the life sciences and biotech**. Ignite is leaning in to lead, convene, connect, instigate, and inspire change that broadens diversity across life sciences career roles – connecting diverse talent to opportunity and learning at every step of the STEM journey from Kindergarten through Boardroom.

In 2021, LabCentral Ignite saw the returns of its \$185,000 grant-making initiative from 2020 and supported eleven program partners: funding scholarships, curriculum development, and training, impacting over 1000 students. Ignite also awarded two Ignite Golden Tickets for early-stage companies with diverse founders, and provided significant support to STEM education and biotech workforce training.



Nearly 40% of all employment in the state of Massachusetts revolves around innovation industries. Despite this, just one in six high-school seniors say they are interested in pursuing a STEM career¹. A quarter of U.S. high schools that are majority Black and Latinx do not offer Algebra II, a gateway to most high-level STEM courses, and 65% of lower income Kindergartners test poorly on a general science knowledge test compared with 10% of affluent peers. By 8th grade 54% of those students are still struggling in science.

5 full-time employees dedicated to developing opportunity in biotech



9 events hosted in partnership with 8 organizations with over 400 attendees

33 interns placed through LabCentral Ignite

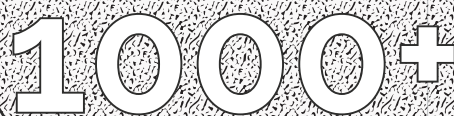


PROGRAM PARTNERS

Ignite Sponsors



STUDENTS SUPPORTED



Undergrad & Community College



IGNITE GOLDEN TICKETS

The first-ever Ignite Golden Ticket & Fellowship Program **supported by AbbVie**, selected two companies led by founders from historically underrepresented backgrounds, and whose works are in line with the greater mission of Ignite to not only increase representation but also to elevate and diversify the pipeline of technologies being developed in biotech. The winners receive the benefits of LabCentral's shared infrastructure, equipment, and services, as well as curated guidance and mentorship to grow their companies

2021 Ignite Golden Ticket Winners



Nanopath is a molecular diagnostics company disrupting traditional testing methodologies to equitably improve health outcomes for women.

Dr. Amogha Tadimety & Dr. Alison Burklund
Co-founders & CEOs, NanoPath



Harmony is using biotechnology to bring innovation to the heavily outdated baby nutrition industry.

Del Afonso
Founder & CEO, Harmony

Career Forge Supported By



CAREER FORGE

With support from Amgen, Ignite piloted the Career Forge program in fall of 2021, with the goal of assessing, developing, and placing diverse candidates into high-demand, entry-level, lab-based roles. Focusing on critical workplace competencies, this free program comprises a total of 80 hours of intensive in-lab technical training and skill-building, as well as professional development and coaching. Participants are then actively connected and recommended to hiring managers within LabCentral's network.



Career Forge at LabCentral was a very important step for my developing career. **The program offered exposure to lab and interpersonal skills that I did not receive in school** and taught me the basics of caring for cells. This was a great experience that taught me a lot about what it is really like working in a laboratory setting.

Michelle Oliviera
Student, Emmanuel College

A FUTURE LOOK FOR IGNITE

Ignite will increasingly harness community to lead, convene, connect, inspire and instigate ways to fill gaps and disrupt bias in the K to biotech boardroom career journey. To engage with and support Ignite's programs: hire a Career Forge alum, become a coach to one of our underrepresented founders, join and test the beta version of our bioDiversity Network, or lend your own story to our public education initiative to connect underrepresented communities to biotech careers.

labcentralignite.org

Board of Directors



In 2021, **Gretchen Cook-Anderson** came aboard as Ignite's inaugural executive director. Ignite is also guided by a growing group of formal and informal advisors, including former MA Governor **Deval Patrick**; Massachusetts Life Science Center president **Kenn Turner**; **Daniel Rios**, Principal Scientist, ROME Therapeutics; **Sunny Schwartz**, CEO, MassBio Ed; and **Susan Windham-Bannister**, LabCentral's Board of Directors rep to the Ignite Advisory Board.

(Shown from top to bottom).

¹Mass.gov, 2021

Resident Success and Community

Building Better Biotechs

In 2021, LabCentral introduced a new range of programming called "Resident Success" to formally engage the executive leadership of resident companies in their critical business-building initiatives. In 2021, Resident Success kicked off **CEO Roundtables**, small-group sessions designed to facilitate the sharing of best practices and to present panels on highly curated topics including "Public listings: Crossovers, SPACs, & IPOs" and "Recruitment Trends & Tactics in a Competitive Biotech Market". Resident Success also introduced the **Partnering Summit Series** and **Mentoring Cohorts** in addition to continuing to expand the **Golden Ticket** program.

CEO ROUNDTABLES

“The CEO Roundtables go beyond the bench and have offered me a chance to meet investors, lawyers, and other entrepreneurs and experts to help me think about how to raise capital, develop a team, and structure financing by using real-world examples from people who have "been there, done that.”

Ted Marple
CEO, Acworth Pharma

6
total panels

30
CEOs in attendance
from across our network of locations and 18 CEOs with multi-session attendance



GOLDEN TICKETS

24
golden tickets awarded
in partnership with 16 LabCentral sponsors

42
total sponsors engaged with our resident entrepreneurs

Golden Tickets represent the unique opportunity for our sponsors to directly partner with promising early stage companies by underwriting the cost of residency for one scientist and one lab bench for one year. In 2021, LabCentral partnered with 16 sponsors to award a total of 24 Golden Tickets; the equivalent of providing **\$1.2M in funding**.

100+
CONNECTIONS MADE
between sponsors and resident companies

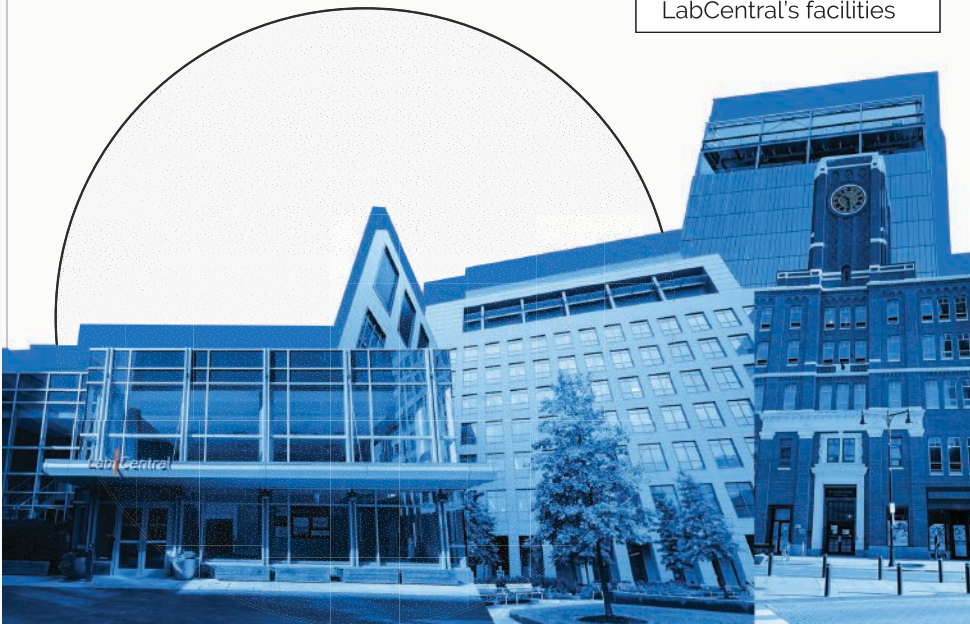
176
EVENTS HOSTED
ACROSS SITES
safely with COVID-19 protocols

9
LITERATI BOOK
CLUB MEETINGS
including four where residents were able to meet the author

15
LOCAL ARTISTS
FEATURED
in Gallery 1832



26
MONTHS STAY
on average of resident companies within LabCentral's facilities

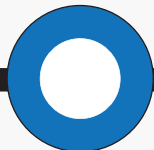


OUR SITES

In addition to providing resident companies with the tools to succeed and grow, our location places entrepreneurs amongst the best of their peers and within a community of driven change-makers. Our community programming is designed to inspire, connect, and facilitate relationships outside of the laboratory. In 2021, LabCentral hosted 176 events either virtually or in person, in accordance with COVID-19 safety protocols.

LabCentral locations are tailored to meet the unique needs of life-sciences companies at each stage of their development. In 2021, LabCentral celebrated the **Phase I opening of LabCentral 238**. LabCentral 238 focuses on bio-manufacturing and providing the process development support that companies need to quickly take their science to market. Phase II is slated to open Summer 2022.

In 2021, we were proud to host 91 early-stage companies and 570 scientists and entrepreneurs across our four locations. To date, **LabCentral has been home to 245 companies**.



700
main street

61 companies
261 residents
34 sponsors



610
main street

7 companies
138 residents
1 partnership



238
main street

8 companies
66 residents
6 sponsors

The Pagliuca
Harvard Life Lab
operated by LabCentral

15 ventures
105 members



THANK YOU TO OUR 2021 SPONSORS

FOUNDING



PLATINUM



GOLD



GENERAL



Lab | Central

610
Lab | Central

Lab | Central²³⁸

Lab | Central
ignite