

IMPACT

2020

Lab | Central

annual report

welcome



Dear Friends,

2020 was an incredibly difficult year. A global pandemic brought sorrow and pain, and social and economic upheaval laid bare the reality of racial inequity and injustice that persist to this day. Although it taught us important lessons, we are really glad that 2020 is over!

Looking forward to the future, we are moved to act in response to those learnings. This year's report highlights the changes we've already made and those yet to come, as well as the people behind the technologies driving innovation forward.

2020 brought into stark relief just how connected we all are and the breadth of the challenges we face in human health. We saw LabCentral resident and alumni companies respond with urgency to the pandemic, in many cases pivoting their programs to develop novel solutions for rapid testing, vaccine development, and therapeutics. We partnered with Biolabs and E25Bio to develop our own COVID19 testing consortium (CCRCT) and offered rapid tests for our community.

Our companies continued to develop their groundbreaking technologies at LabCentral. I'm grateful to the LabCentral team who helped us keep the labs open and functional throughout this pandemic so that our resident startups were able to continue to make advances. In this report, you will see the progress that companies have made with their therapeutic programs, the growth of their teams, and the incredible amounts of money they have raised for their science.

With many of us receiving the first vaccine doses now we look forward to making 2021 a year of renewed community, with a new focus on people and connections in the real world, as well as expansion into new areas.

We look forward to seeing you soon. Be safe,

Johannes Fruehauf, MD, PhD
President and Executive Director

the humans of labcentral

Behind the success of each of our resident and alumni companies are real people, pushing forward to meet milestones and informing the science taking place at the bench. Supporting them still is our team; all remarkable human beings with their own stories to tell, driven by a passion for innovation and supporting the next generation of powerhouse life-sciences companies. These individuals act as nodes and their relationships form the connections that make up the LabCentral ecosystem.

Lynn Walder LabCentral | Business Development

Enjoys: Reading, mentoring, watching cartoons with her children

"With a young son who was recently diagnosed with Type 1 Diabetes, my passion for the important role that LabCentral plays in the life-sciences innovation ecosystem has exponentially amplified. For my son, and the his future potential, science = hope, and time is of the essence. LabCentral plays a critical part in delivering on that hope by creating an environment for more efficient and innovative discoveries. I see now, more than ever, that all the people that make up what we call the LabCentral ecosystem (employees, resident companies, sponsors, government partners, etc.) are my partners in hope."



Yusuf Erkül, MD Kernal Bio | Co-Founder & CEO

Enjoys: Skiing, woodworking, and spending time with family

"As a physician, I have witnessed the burden and horror that cancer brings to patients and their families. Terminal patients and pediatric patients in particular pull on my heartstrings. My eyes still tear up when I think about all the cancer heroes who fought the battle hard but unfortunately still passed away. At Kernal, we're working on mRNA 2.0 immunotherapy for cancer. With a novel insight into cancer ribosomes, we're building upon the experience of mRNA 1.0 companies to redefine what it means to have cancer. Our team aspires to develop drugs that we would like to be treated with if or when we get sick."



"science = hope, and time is of the essence"

« “the realization...that I could affect positive change in the lives of those suffering is what drives me”



Dan Elbaum, PhD QurAlis| CSO

Enjoys: Cooking, going to the beach, sailing

“One of my college roommates, went on to medical school. In December of his first year, he woke up one morning and could not see. He was diagnosed with a slow growing tumor in his visual cortex. I went to visit him in the hospital during a chemo round and was convinced there had to be a better way. My very first project that made it to the clinic was in oncology. It was the realization the night I visited Jordan, that I could affect positive change in the lives of those suffering that drives me. Jordan made it through that bout with cancer, finished medical school and practiced medicine in western MA for a number of years. He died in 2004 after a second diagnosis”



Jules McCoy LabCentral | Operations

Enjoys: Peloton, making movies, supporting the local music scene

“I would have never guessed that I'd be utilizing my background in film production to create instructional videos on COVID-19 safety protocols for the community. The videos we made were crucial in ensuring scientists could remain safely at work during those early days of the pandemic. In that project, I was able to marry my passion for the creative process with a passion for people. Working in operations at LabCentral 610, I'm fortunate to be able to interact with the human behind the scientist, and I greatly enjoy getting to know these vanguard innovators on a personal level.”



Darrell Interest LabCentral | Facilities

Enjoys: Bike rides with family, brewing beer, tinkering with his vintage Jeep

“A scenario that is routinely repeated, though never gets old, is working with residents and our lab team to install a new piece of equipment. Not only do I get to learn how to integrate the technology into our facility, but I also get to learn why the equipment is important to the residents' process and research. While we have a ton of amazing shared equipment thanks to our sponsors, seeing a resident company acquire their own coveted, specialized equipment is proof of their own development and a milestone of their success.”



Jo Viney, PhD Pandion Therapeutics | CSO

Enjoys: Being a dance mom, decorating novelty cakes, live theater, mentoring the next generation of biotech rockstars

“Early in my career as an intern in a pediatric gastroenterology lab, I saw the devastating consequences of autoimmunity, and inflammatory bowel disease (IBD) in particular – the impact on patients, on parents and on other family members. After working for many years in large biotech, my passion to bring differentiated medicines to patients led me to co-found Pandion Therapeutics with Alan Crane of Polaris Ventures. I recruited Kevin Otipoby (head of immunology) and Nathan Higginson-Scott (head of biotherapeutics) and Pandion's research launched at LabCentral in June of 2017. Our vision was to develop a novel bifunctional antibody therapeutic approach; we want to bring better and safer drugs to patients with autoimmune diseases.”

landmark



Despite the challenges, 2020 was a **landmark** year in terms of securing funding for LabCentral resident and alumni companies. 2020 was a big year for biotech. In the United States, VC funding in biotech saw an increase of 57% over the previous year; **LabCentral companies in turn saw their VC funding increase 21%** as they matured into Series B and C stage work. Overall LabCentral companies raised \$1.45 billion in venture funding and \$3.68 billion from all sources in 2020. **This brings the grand total raised by LabCentral companies since our opening in 2013 to \$9.15 billion.**

\$3.68 billion raised in 2020

\$9.15 billion raised by residents and alumni since opening our doors in 2013



201 companies

supported since opening in 2013



1,794 members

in our resident and alumni community



1,200+ participants

in 42 active clinical trials with drugs developed at LabCentral, thousands more scheduled to enroll. Areas of study include:

- ACUTE KIDNEY INJURY
- C. DIFF INFECTION RECURRENCE
- COVID-19
- EPILEPSY
- FSHD
- ONCOLOGY
- PNEUMOCOCCAL DISEASE
- SCHIZOPHRENIA
- TRAUMATIC BRAIN INJURY
- TYPE 1 DIABETES



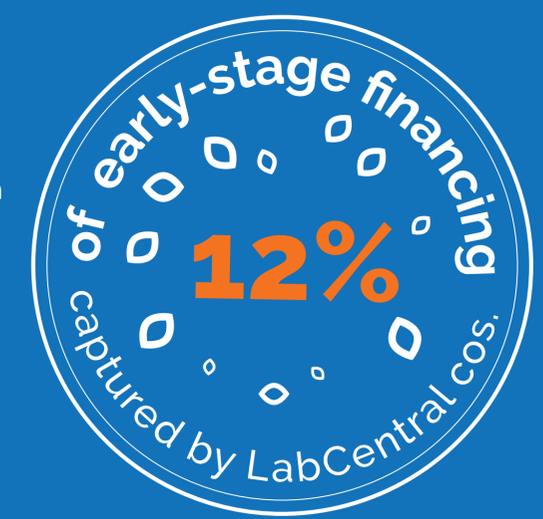
\$1.45 billion in venture capital secured in 2020



2020 early-stage financing rounds by location



In 2020 LabCentral companies secured \$449 million total in early-stage funding (seed and Series A), accounting for 12% of all the early-stage financing invested into biotech in the United States.

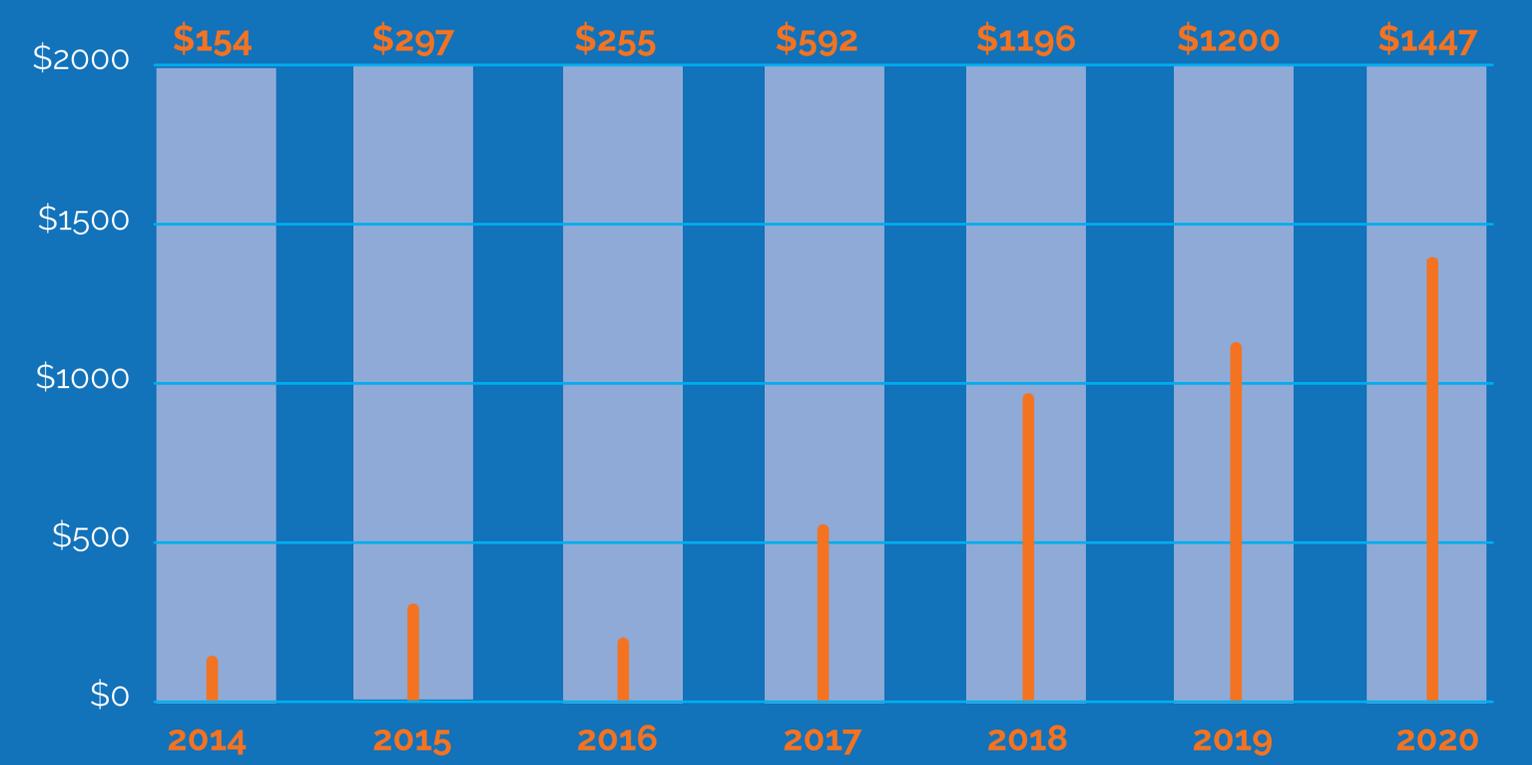


2020 produced the largest number of IPOs and exits for LabCentral companies. The seven companies that went public in 2020 are valued at a total of \$8.3 billion. Pandion shown below, IPO'd with a market capitalization of \$475.9 million and was later acquired by Merck for \$1.85 billion. To date LabCentral companies have had 13 IPOs.



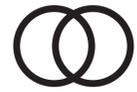
PANDION THERAPEUTICS
PAND NasdaqListed

total VC funding secured by LabCentral companies by year



Source: [1] Silicon Valley Bank: Trends in Healthcare 2021 [2] Pitchbook [3] Clinicaltrials.gov [4] US Patent and Trade Office

collisions



The LabCentral community, made up of current residents, Sponsors, alumni, and partner organizations, relies on physical proximity and “collisions” to create the serendipitous interactions that start-up miracles are made of. A friendly chat in the The Loft can lead to millions in funding, catching up with a bench neighbor can cause major breakthroughs, and grabbing snacks at the latest Chalk Talk can lead to a life-long connection. For this reason, in 2020 we formalized the creation of the Community Relations team. This team works specifically to facilitate those in-person collisions, by making introductions, hosting events, and liaising with our external community in the Port neighborhood. The COVID-19 pandemic meant pivoting to the world of virtual community building and asking the question of how could LabCentral continue to facilitate those chance encounters digitally, rather than in person.

The Community Relations team also curates and manages Gallery 1832, LabCentral's rotating gallery which to date has been home to 54 local artists and is also responsible for managing volunteer opportunities and other external community engagement events.

When outbreaks of COVID-19 began to surge across the United States, and as the impact of the virus became more apparent, LabCentral knew that reaching out to help our community and making a difference in this time would be vital. This year's Battle of the Benevolent focused on COVID. Through this initiative and with the help of our community, we were able to raise \$15,297 to support the work of CASPAR, a local Cambridge non-profit that assists those experiencing homelessness and others in need.



⤴ LabCentral team member, Jenry Garcia (Facilities Associate), is shown above assisting with the delivery of food and hygiene products for distribution to CASPAR (shown left also). The donated items in addition to cash were sourced directly from LabCentral resident community members to support the homeless community which was disproportionately impacted by the pandemic.



1,049 events hosted

since opening in 2013





INNOVATION & BIOTECH IN THE TIME OF COVID-19

- advice for startups facing uncertainty
- how are we pivoting
- what's happening on the front lines
- testing strategies
- re-opening
- public health
- lessons from phase 1
- real estate
- company creation and academia
- oncology
- startup stories
- fundraising for your startup
- lessons from space
- entrepreneurial journeys
- venture 101

In 2020, the Community Relations team developed the *Innovation and Biotech in the Time of COVID-19* webinar panel series, dove deep for guest author visits in the Literati book club, and with the help of Millipore Sigma, even threw a COVID-safe Halloween Party! LabCentral also developed various support groups to foster a sense of solidarity and support during the pandemic including meditation sessions, yoga for children, and a working caregivers group.



1,063 hours
of LabCentral content streamed on YouTube



6 author-hosted
Literati book clubs

INNOVATION & BIOTECH IN THE TIME OF COVID-19
episode ix: company creation

 MICHAL PREMINGER, Ph.D., MBA JOHNSON & JOHNSON INNOVATION	 MICHAEL FENN, Ph.D. HARVARD INNOVATION LABS
 AARON SCHWARTZ NOVO NORDISK	 JOHANNES FRUEHAUF LABCENTRAL



Caitlyn Clarke
LabCentral | Community Relations

Enjoys: Harry Styles, traveling, pop culture

"Starting fresh and joining the LabCentral team amidst the pandemic was an exciting yet daunting change for me. Sitting at the front desk, I'm often the first person people see as they come into the building. I feel responsible for setting a positive tone for our community, and welcoming guests with a smile makes me feel like I'm making a small change in someone's day. Also, as the Events Associate, I've been able to get a jump start on my dream career in event planning even while not physically being able to socialize with others in person and that leaves me feeling quite grateful. 2020 was tough, but I'm happy that it brought me to LabCentral and that I get to be a part of such a thriving community."



Daniel Fisher
Tevard Biosciences | Founder & CEO

"Being a part of a unique community is a central benefit of being at LabCentral. The wealth of connections, knowledge, and support that one receives here is hard to match."

⌄ **"welcoming guests with a smile makes me feel like I'm making a small change in someone's day"**

resilience



LabCentral pushed on. Following the declaration of the novel coronavirus as a public health emergency, we quickly instituted proactive response policies with the intent of maintaining basic operations on-site, while at the same time prioritizing the health and safety of our team and residents. Our Facilities team did a deep dive into our cleaning routines and chemicals, we reduced our staff on-site, instituted occupancy limits, provided N95s to our community and more. Events and programming rapidly went virtual, we defined contact tracing protocols, and eventually developed the Cambridge Consortium for Rapid COVID-19 Tests (CCRCT) in partnership with E25Bio and Biolabs. These safety measures as well as the handful of LabCentral resident companies who would pivot their work to address the global challenge of mitigating the spread of the virus, would garner the attention of the Baker-Polito Administration who visited LabCentral to learn about the technologies actively in development.

We showcased the agility and resilience of our life-sciences companies as they've adjusted to address the challenge of the COVID-19 pandemic with new testing methodologies, vaccines, and diagnostic tools.

The CCRCT was formed in the fall of 2020. Its purpose is to combine resources for the validation of fast, affordable diagnostic assays to provide SARS-CoV-2 screening as part of a strategy for safely returning to work, school or other aspects of daily life. In addition to validating the efficacy of the Direct Antigen Rapid Test (DART) developed by E25Bio, the CCRCT allowed for LabCentral to continue to operate at near-normal levels.



6,442 COVID-19 tests

administered through the CCRCT



31 companies

that shifted focus to address COVID-19

ACCURE HEALTH • ADVIRNA • AFFINIVAX • ALDATU BIOSCIENCES • AQUINNAH PHARMACEUTICALS • AUXOCELL LABS
BRAIZON THERAPEUTICS • E25BIO • GC THERAPEUTICS (GCTX) • HELIXNANO • HIFIBIO • KERNAL BIOLOGICS
MICROQUIN • MITOLAB • NANTKWEST • NEUTROLIS • NOCION THERAPEUTICS • OCTAGON THERAPEUTICS
PHENOMYX • PINE TREES HEALTH • REKINDLE THERAPEUTICS • REPERTOIRE IMMUNE MEDICINES (TORQUE) • REVITOPE
RHOGEN BIOTECH • SENDA BIOSCIENCES • SENTIEN BIOTECH • SMARTPHARM THERAPEUTICS • TOTIENT
VAXESS TECHNOLOGIES • XGENOMES • YMIR GENOMICS



Steve Brugger Affinivax | CEO

Enjoys: Elton John, the ocean, being a NY Giants fan

"We were honored to be one of the first members of the LabCentral community when we started Affinivax in 2014. LabCentral immediately provided us a dedicated lab suite, critical front office and lab operations support, permitting and safety capabilities. This in turn gave us the ability to focus on hiring scientific personnel and advancing our MAPS™ technology platform while systematically building our company. As we grew, LabCentral gave us the opportunity to expand to have dedicated lab suites at both 700 Main and 610 Main, which were so key in advancing our lead pneumococcal MAPS™ into clinical trials. We look forward to staying closely connected to and supporting the LabCentral network as proud and grateful alumni."



0 hours

of interrupted service due to COVID-19



25,603 packages

delivered through loading dock at 700 Main Street in 2020 despite a global shut down



**CAMBRIDGE
CONSORTIUM**
RAPID COVID TESTS



Celina Chang
LabCentral | Scientific Operations

Enjoys: Live music, enjoying good food, rousing games of Table Tennis

"When the COVID-19 pandemic became a reality here in our community, we needed to ensure the safety of the facility and maintain operations in order to allow resident companies to continue developing their ground-breaking technologies. The creation of the Cambridge Consortium for Rapid COVID-19 Tests (CCRCT) was an opportunity to capitalize on the vast resources to which LabCentral has access: lab space, equipment, and most importantly a network of amazing scientists and companies already working hard to solve major human health issues. Human ingenuity allowed us to collaborate, network and innovate to pivot from our day-to-day work to try to affect change for the better during this global pandemic. The testing consortium had the dual functionality of not only keeping our community safe, but also providing key data and support to resident companies and alumni organizations in the validation efforts of two different diagnostic testing platforms. I believe, stepping into this moment and tackling this challenge as a community is one of LabCentral's proudest moments to date."

**"it's that person-to-person contact in a
COVID-19 safe way that has been so
meaningful to us"**



Courtney Ho
LabCentral | LifeLab

Enjoys: Running, cooking and drinking wine from around the world, dogs

"Working through the peak of the pandemic while others worked from home was not without its challenges. As the Lab Operations Associate, I was responsible for maintenance and upkeep of the labs; tasks like sending out pipettes for calibration, decontaminating equipment for lab turnovers, and giving equipment trainings to residents that seem minute, but are actually integral to the daily work that goes on here. To see our companies continue to grow and hit their milestones, illustrated that the extra efforts LabCentral spent to keep our facilities open was and continues to be worth it."

Tom Lowery
Satellite Bio | CTO



flow



LabCentral does not exist in a vacuum; as our community grows, as new members join and then grow out of the space, they leave their mark and our community remains forever impacted and changed for the better. We see individual alumnus come-and-go, and then come back again, ready, fresh with a new idea and knowing LabCentral is the best place to get that idea off the ground. **The flow of people in and out of our space is a marked feature of LabCentral's culture and is what keeps our community as dynamic as it is.**

70% of alumni companies stay within

5 miles of 700 Main Street

» all LabCentral alumni

121 BIO · ABEXXA BIOLOGICS · ADVIRNA · AFFINIVAX · ALDATU BIOSCIENCES · AMATHUS THERAPEUTICS
APIC BIO · AQUINNAH PHARMACEUTICALS · ARKUDA THERAPEUTICS · ARSIA THERAPEUTICS · ASIMOV
AUDION THERAPEUTICS · AUXOCELL LABS · AXIAL BIOTHERAPEUTICS · BAYESIAN DX · CASMA THERAPEUTICS
CELLINO BIO · COCOON BIOTECH · COMBINED THERAPEUTICS · COMET THERAPEUTICS · COMPASS THERAPEUTICS
CONSTELLATION · CYTEIR THERAPEUTICS · DRAGONFLY THERAPEUTICS · DYNE THERAPEUTICS · DYN0 THERAPEUTICS
E25BIO · EGENESIS · ENBIOTIX · ENCLEAR THERAPIES · ENGITIX LTD · ENTREGA · EXO THERAPEUTICS
EXTEND BIOSCIENCES · FAIRBANKS PHARMACEUTICALS · FLUID-SCREEN · FULCRUM PHARMACEUTICALS
GENERATION BIO · GLYMPE BIO · GO THERAPEUTICS · HEPROTECH · HIFIBIO · HOLOBIOME · IKENA ONCOLOGY
KORRO BIO · KRONOS BIO · KYMERA THERAPEUTICS · LOGICBIO THERAPEUTICS · LYNDRA · MERCY BIOANALYTICS
MODALIS THERAPEUTICS · NANTKWEST · NAVITOR PHARMACEUTICALS · NOCION THERAPEUTICS · NOVOPYXIS
OBSIDIAN THERAPEUTICS · OTI (ONCOTHERAPEUTICA) · OUTERMOST THERAPEUTICS · PANDION · PHAROGEN
PHENOMYX · PINTOON THERAPEUTICS · PLATELET BIOGENESIS · POTENZA THERAPEUTICS · Q32 BIO · QURALIS
REPertoire IMMUNE MEDICINES · REVIVEMED · RING THERAPEUTICS · RIPARIAN PHARMACEUTICALS
RUBIUS THERAPEUTICS · SENDA BIOSCIENCES · SENTIEN BIOTECH · SMARTPHARM THERAPEUTICS · SUONO BIO
SURFACE ONCOLOGY · TANGO THERAPEUTICS · TIAKI THERAPEUTICS · TILOS THERAPEUTICS
TORPEDO DIAGNOSTICS · TOTIENT · TRAVERA · TRV51 (CEDILLA) · TRV53 (RHEOS MEDICINES)
TWENTYEIGHT-SEVEN THERAPEUTICS · UNUM THERAPEUTICS · VAXESS TECHNOLOGIES · VEDANTA BIOSCIENCES
VINCERE BIOSCIENCES · VIVTEX · VL33 · VL49 · VL50 · WNTRX · XILIO THERAPEUTICS
XTUIT PHARMACEUTICALS · YMIR GENOMICS · YUMANITY



3,132 new jobs added

by resident and alumni companies as they grow



the pagliuca harvard life lab



15 ventures

currently in residence



\$154 million raised

in VC funding in 2020 by Life Lab residents



\$325 million raised

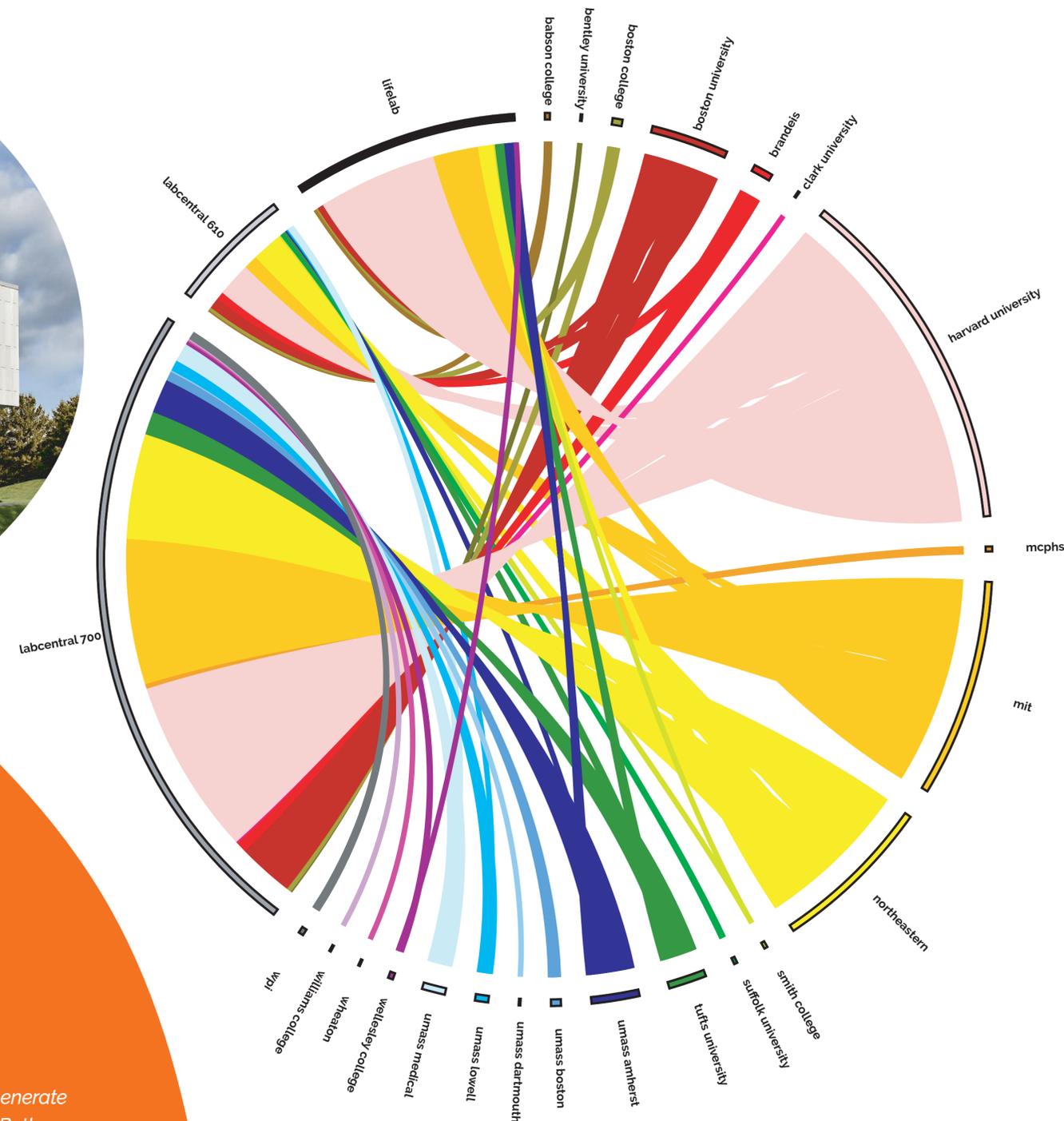
by Life Lab ventures since opening in 2016



Iain MacLeod, PhD Aldatu Biosciences | CEO

"2020 was a huge year for Aldatu. In March, using our Pan Degenerate Amplification and Adaptation (PANDAA™) platform we helped Beth Israel Deaconess Medical Center get up and running with the first hospital-based COVID-19 testing in New England. In addition to Quest and LabCorp, BIDMC processed the most COVID-19 tests in New England during the first two months of the pandemic. We doubled the size of our team to 20, and have since applied for FDA Emergency Use Authorization of the PANDAA qDx SARS-CoV-2 test and CLIA registration."

"we enabled the first hospital testing in MA"



➤ The above diagram, rendered in the style of a genomic ideogram, brings to life visually the connections between our resident scientists and entrepreneurs at LabCentral, LabCentral 610, the Pagliuca Harvard Life Lab, and the multitude of academic institutions located in Massachusetts. The graph illustrates the success of LabCentral in fulfilling its mission of supporting the development of a biotech economy in the state of Massachusetts by drawing the best and brightest talent and keeping it here in the state. There are 609 data lines, each representing individual members of our resident and alumni community.

Source: Krzywinski, M. et al. Circos: an Information Aesthetic for Comparative Genomics. *Genome Res* (2009) 19:1639-1645

evolution



LabCentral has grown through its response to the needs of our resident and alumni companies since opening in 2013. **In 2020 we formally announced two new initiatives that represent the next step in the evolution of the biotech industry in Massachusetts: LabCentral Ignite and LabCentral 238.**

Our regional industry is riddled with representation gaps and has demand for talent that is outpacing educational institutions and training programs. Simultaneously, the STEM Education, social services and workforce training sectors are filled with incredibly talented teachers, trainers and teams that work tirelessly to build educational opportunity and equity for marginalized and under-resourced members of our community. The goal of LabCentral Ignite is to convene and connect our community of industry investors, corporate partners, start-ups, and private donors to those organizations doing this impactful work. By amplifying their impact and working with them to bridge the gaps in resources and programs, we will broaden the talent base for biotech innovation. Looking towards 2021, LabCentral Ignite will recruit an advisory board and build tools to help understand the space where talent and training programs connect with our industry to make the most intelligent investments for our collective regional talent development efforts.

Those interested in joining this systemic approach to building talent should reach out to ignite@labcentral.org.



Lab Central
ignite



\$185,000

in grants awarded through Ignite

**“we are giving our biotech cluster visibility
into remarkable untapped talents”**



Harry Gerard
LabCentral | Ignite

Enjoys: Spending time with his boys, playing soccer, supporting international development work

“I compare LabCentral to a healthy human body (physiological system) where different essential parts come together to make it thrive. I’m motivated by the desire to seize on the opportunity to make this system/community of parts the best version of itself and believe Ignite to be the next iteration of that best self. With the LabCentral Ignite platform, we are giving our biotech cluster visibility into untapped remarkable talents, which we believe will drive innovation & strong DEIB culture.”

In 2020, LabCentral Ignite launched the Ecosystem Talent fund, investing \$185,000 in ten local nonprofit workforce training and STEM education organizations. These organizations are inspiring, creating opportunity, access, technical, and higher-order thinking competencies for the next generations of biotech workforce



GLOUCESTER
BIOTECHNOLOGY
ACADEMY



SKILLS . JOBS . CAREERS



MEDscience
HARVARD MEDICAL SCHOOL



STATION
SCIENCE AND TECHNOLOGY





Massachusetts
LIFE SCIENCES CENTER
The capital of scientific revolution.

ThermoFisher
SCIENTIFIC

Waters

» **LabCentral 238**
sponsors

» LabCentral President and Executive Director, Johannes Fruehauf, speaks to Kenneth Turner, President and CEO of the MLSC, and Yoshitsugu Shitaka, CSO and President of Drug Discovery Research (DDR) for Astellas.

LABCENTRAL

238

In 2020, we formally announced the addition of Astellas and the Massachusetts Life-sciences Center (MLSC) as Founding sponsors of LabCentral 238. ThermoFisher Scientific and Waters Corporation have since joined as sponsors as well. LabCentral 238, which is just down the street from our original location of 700 Main Street and our growth-stage space at 610 Main Street, is actively under construction and slated to open late 2021. This new facility will focus on bio-manufacturing and will provide development technologies that resident companies need to propel their science and take it to market in a sustainable and scalable way.

Early in 2021, LabCentral will be reviewing applications from growing startups interested in taking space at LabCentral 238.

\$22.4 million
in sponsorship monies raised



100,000 sq. ft
of space at completion



350+ new residents
to join the LabCentral community



thank you to our sponsors

founding sponsors



platinum sponsors



gold sponsors



general sponsors

