Careers in Biotech
February 20 • Oregon State University

Agenda
5:00 p.m. Employer Panel
5:45 p.m. Q&A
6:00 p.m. Networking with students and employer

Student Check In QR Code

Hosted by the College of Engineering and College of Science in partnership with Oregon Bioscience Association

Oregon Bioscience Association

Oregon State University
Careers in Biotech

Thank You to All Participating Employers!

serán  Medtronic  Lazarus 3D
Operate with Confidence

Bristol Myers Squibb  TWIST BIOSCIENCE  HP

Genentech  AGC Biologics

Oregon State University
JOIN THE CLUB!

• Involve students interested in medical applications
• Multidisciplinary students welcome!
• Hands on Bioreactor Design Team
• Connect students to faculty, internship, and research opportunities
• Career and engineering workshops
• Sponsor members to BMES National Conference
Charla Triplett

Founder and President of Catalyze and Managing Director Suncoast Ventures

OSU BIOE Alumni

CBEE Industry Advisory Board Member

Founder and President of Catalyze, a Consulting Collective, bringing together expertise in Research, Design, and Strategy with a focus on Medical Devices and Digital Health and Managing Director of Suncoast Ventures, a VC firm focused on supporting early-stage healthcare startups.
Global CDMO Services for Biologics and Cell & Gene Therapies

AGC Biologics Company
Introduction
Our purpose is to **bring hope to life** by enabling life-changing therapies for patients around the globe, creating a healthier and happier tomorrow.
Our Core Values

**KNOWLEDGE** – We possess strong scientific and technical expertise

**TRUST** – We create positive experiences that our customers can rely on

**QUALITY** – We strive for excellence in our people, products and services

**INGENUITY** – We find creative solutions to difficult challenges

**ACCOUNTABILITY** – We follow through on our commitments

**TEAMWORK** – We put the success of the team above our own personal goals
Our Services — from Pre-Clinical to Commercial

Tech Transfer
Our collaborative approach ensures an efficient & successful transfer process

Process Development
We can apply existing processes or develop new, innovative processes

Analytical Development
Our methods ensure your product's identity, safety, purity, and potency

Formulation Development
We provide innovative solutions to the specific challenges posed by your individual protein or therapy

Process Validation
We help deliver a robust and cost-effective supply for commercial approval

cGMP Manufacturing
We offer capacity and technological ingenuity you can rely on at every stage, from clinical to commercial
AGC Biologics is Part of AGC, Inc.

- Founded in 1907
- Headquarters in Tokyo, Japan
- Net FY sales: 2,036 B Yen (~14.1 B USD)
- 57,000+ employees globally
- Strategic businesses driving revenue and future growth:

Benefits for AGC Biologics Customers

- Financial stability and backing of a global organization
- Long-term vision and strategic plan for AGC Biologics
- Access to capital to expand global capabilities and capacity
At Bristol Myers Squibb, we are driven by a single vision:

Transforming patients’ lives through science
Pioneering science for serious diseases with unmet needs

Leading medicines across four therapeutic areas

- **Solid Tumor Oncology**
  - OPDIVO
  - YERVOY
  - Abraxane

- **Hematology**
  - Revlimid
  - Pomalyst
  - SPRYCEL

- **Cardiovascular**
  - Eliquis
  - ORENCIA

- **Immunology**
  - CAMZYMOS
  - ZePOSIA

Continually seeking to discover and launch breakthrough therapies

- **Solid Tumor Oncology**
- **Cell Therapy**

- **Hematology**
- **Cardiovascular**
- **Immunology**

- **Recent new product launches**

Additional expansion opportunities across multiple assets
BMS Cell Therapy manufacturing footprint & network

- Bothell, WA
- Devens, MA
- Warren, NJ
- Summit, NJ
- Leiden, NL
- Libertyville, IL

- In operation since 2016
- Commercial production approved by FDA in 2023
- In development
- Under construction
- In-house viral vector factory
- External manufacturing partner

- Future viral vector manufacturing
- Focused on Investigational programs
- EU external manufacturing partner
- Japan external manufacturing partner
- In operation since 2018
- Commercial production approved by FDA in 2023

5 state-of-the-art cell therapy manufacturing facilities, 4,000+ employees, numerous strategic partnerships to meet global patient needs
Hillsboro Technical Operations (HTO) provides life-saving medicines to patients by serving as the sole commercial drug production site for North America.

Aside from manufacturing operations, HTO also includes a Tank Management Center (TMC) and Distribution Center (DC).
**Hillsboro Individualized Therapies**

- HIT is a full ITCT analytical and process development partner for our projects.
- Supply clinical Cell and Gene Therapies.
- Attract, develop and retain future focused workforce.
- Connect ATMP Manufacturing and Development Processes to Patient Outcomes using Technology.
Doing now what patients need next
HP Today

$53.7B
Revenue in FY23

~58,000
Employees

150,000+
Channel partners

185
Countries in operation

28,000+
Patents

#63
on the Fortune 100

#20
AXIOS
Axios Harris Poll 100 ranking of global companies reputation

Among America's Most JUST Companies for fifth consecutive year

Newsweek
Among the top five of America's Most Responsible Companies for the fifth consecutive year

1. HP ranking as of May 2023 - please see https://fortune.com/most-respectful/companies/2021/
2. HP ranking as of Dec 2023 - please see https://www.nasdaq.com/jrank/americas-most-responsible-companies-2024/
4. Axios Harris Poll 100 Ranking of Global Companies Reputation - please see https://www.nasdaq.com/jrank/americas-most-responsible-companies-2024/
Life Science Solutions Team

Leveraging HP Inkjet printing technology for high-value life science dispensing

Reagent Dispensing

Single Cell Dispensing

Reaching labs across various fields in the pharmaceutical industry, biotech, and academic research
Dr. Ward Shalash

Principal Scientist, Lazarus 3D
Lazarus 3D’s mission is to improve patient safety and outcomes in surgical care through personalized surgical tools that can help doctors operate with confidence.

Pre-Sure and Skill-Sure: Enabling Surgical Perfection

Now FDA Cleared for Diagnostic Use in All Surgical Procedures:
- Urology, - Cardiovascular - Neurosurgery - Musculoskeletal - Craniofacial - Respiratory - Pediatric
Career Opportunities at Lazarus 3D

- Summer Internships for 4th year undergrads/grads
  - Manufacturing
  - Material Science
  - Marketing
  - Anatomy Design
- Associate Scientist I
- R&D Biomedical Engineer
- Anatomy Design Engineer
- Quality/Regulatory Specialist
- Production Technician

Visit Lazarus3D.com/Careers to apply
## Cardiac Rhythm Management

### Key Technologies

- **Implantable Pacemakers**
  - Micra VR & AV Transcatheter Pacing Systems
  - Implantable Cardioverter Defibrillators (ICDs)
  - Cardiac Resynchronization Therapy Pacemakers & Defibrillators
  - TYRX Absorbable Antibacterial Envelopes
  - CareLink system for Remote Monitoring of patients

### Disease States Treated:

- Bradycardia
- Tachycardia
- Heart Failure
An Overview

**Founded | 2016**
- US-Based; Bend, Oregon
- First cGMP Supplies 2017

**Present | 2024**
- Specialists in engineered particle solutions covering essentially all types of biologic and small-molecule therapeutics
- Balanced portfolio of clients including biotechnology and pharmaceutical companies
- 190+ Employees with extensive biochemistry, pharmaceutical and engineering expertise

**Future**
- Support registration manufacture & Commercial manufacture
- Reducing to practice new technology innovations in solid nanoparticle and biologics drug delivery
Using our full analytical capabilities, we assess molecular properties with a drug product mindset & determine the best formulation and product development strategy to meet each program’s unique goals.

We enable the delivery of poorly soluble molecules through amorphous solid dispersions and particle engineering. Our team can develop batches as small as 100 mg all the way to 100 g & up to 50 kg.

We develop versatile solid dosage forms including capsules, tablets, mini-tablets, and multi-particulates, tailored for optimal in vivo exposure and scalability, and designed to support your program strategy.

Extensive material characterization and analytical capabilities to assess physical/chemical forms of crystalline and amorphous API and drug products. We have a fully-equipped QC Lab to support GMP method development, release testing, and stability assessment.

Our highly trained team of experts employ their decades of industry experience to create new advancements & find solutions to even the toughest drug delivery challenges.
Serán GMP Manufacturing Options

**Spray Drying**
- **0.1 - 30 kg**
  - SD-180 Custom Spray Dryer
- **10 - 100 kg**
  - SD-720 Custom Spray Dryer

**Secondary Drying**
- Binder Tray Dryers
- Bohle LM40 Bin Blender

**Blend/Sieve/Mill**
- Bohle PM 400 Bin Blender
- Gerteis Mini Pactor

**Granulate**
- Gerteis PolyGran

**Compress or Encapsulate**
- MG2 Labby Korsch XL-100 Natoli RD30
- Korsch XL-100 Korsch X3

**Film Coat**
- Ohara LCM10
- Ohara LCM50

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Vision

We make synthetic DNA to improve health and sustainability

Mission

We work in service of customers who are changing the world for the better. In fields such as medicine, agriculture, industrial chemicals and data storage, by using our synthetic DNA tools, our customers are developing ways to better lives and improve the sustainability of the planet.
Who We Are: about 1000 Employee Global Biotech Company

- Our people are what make Twist great
- We need the best Twisters to continue to drive our innovations and Twist forward
- As we grow, we don’t want to lose our passion, our grit and the start-up mentality that has made us successful
- We work by our four guiding principles:

  - **Grit**
    - Passionate Drive – Fierce Determination
  - **Impact**
    - Bold Ideas – Daily Incremental Contributions
  - **Service**
    - Always Ask – What Can I Do For You?
  - **Trust**
    - Vigilant Stewardship – Transparent Interactions

**Empowering Twisters to be bold**
Synthetic DNA Is the Future of Everything

- **Chemicals**
  - Sustainability

- **Food**
  - Food Security

- **Therapeutics**
  - Health

- **Diagnostic**
  - Precision Medicine

- **Data Storage**
  - Preserving Heritage

- **Partners**
  - Ginkgo Bioworks
  - Syngenta
  - Takeda
  - GRAIL
  - NFSA
  - Arzeda.
  - Berkeley Yeast
  - Vanderbilt University
  - Netflix