• America’s biopharmaceutical companies are creating innovative new treatments to combat the diseases that impact many Kentucky families.

• These medicines address diseases once thought untreatable, saving and prolonging lives.
  – Currently, there are more than 250 biotechnology health care products and vaccines available to patients, many for previously untreatable diseases

• America’s biopharmaceutical companies contribute more than 811,000 jobs and $1.1 trillion in economic output

• Examples of these companies include:
  – Large Companies
    • Amgen, Genentech, Johnson & Johnson and Pfizer
  – Innovative Startups
    • Bexion, Appelis, Petides International and Kentucky Bioprocessing
America’s biopharmaceutical research companies are developing innovative and bringing to market innovative new cures.

- Our companies are developing new medicines to treat everything from cancer to heart disease. These medicines bring new hope to those suffering from chronic disease.

Biopharmaceutical companies are working with the Kentucky healthcare system to find cures for the hardest to treat conditions

- 886 Clinical Trials
- 15,575 Participants
- $113 million investment
- $252 million economic impact
INNOVATION ALSO = JOBS

• America’s biopharmaceutical industry is vast and complex, with a wide variety of jobs in various sectors.
  – The biopharmaceutical industry supports jobs in research, manufacturing, distribution, sales and many other fields across the country, including right here in Kentucky.
• The biopharmaceutical economic impact in Kentucky
  – 14,030 jobs
  – 1,212 companies
  – $72,151 average salary
  – $188 million in NIH research funding
  – $169 million in venture funding
  – $4.9 billion in economic output
Kentucky plays a unique role in America’s biopharmaceutical supply chain, thanks to its central location and strong logistics industry. As innovation creates medications to treat rare diseases, the medications become more complex, requiring special expertise and handling. Getting complex medications from the manufacturer to the patient is where Kentucky fits into this important process. Kentucky is THE hub for packaging and distributing medications to patients across America and the globe. Without the biologistics ecosystem in Kentucky, patients would not receive their medications when and where they need them. Kentucky Delivers Medicines to the World
• Biologistics is the often-unrecognized but absolutely critical piece of Kentucky’s leading position in the world of logistics.

• Biologistics is important for patients across the globe and the work being done in Kentucky ensures patients receive life-saving medications every day.

• Biologistics also boosts Kentucky’s economy:
  – 1,200 individual business establishments across the Commonwealth
  – 14,000 jobs for Kentuckians (increased 8.6% since 2016)
  – $72,151 average annual wage
• Feedstock and Industrial Biosciences: 435
• Bioscience-Related Distribution: 7,475
• Drugs and Pharmaceuticals: 1,470
• Medical Devices and Equipment: 1,264
• Research, Testing, and Medical Laboratories: 3,386
THE NUMBERS TELL THE STORY: INFRASTRUCTURE

• Feedstock and Industrial Biosciences: 21
• Bioscience-Related Distribution: 720
• Drugs and Pharmaceuticals: 27
• Medical Devices and Equipment: 73
• Research, Testing, and Medical Laboratories: 371
THE NUMBERS TELL THE STORY: WAGES

- Feedstock and Industrial Biosciences: $57,912
- Bioscience-Related Distribution: $79,762
- Drugs and pharmaceuticals: $80,634
- Medical Devices and Equipment: $51,064
- Research, Testing and Medical Laboratories: $61,361
Warren Olson
WHY KENTUCKY FOR UPS HEALTHCARE

• Over 1.7M square feet of healthcare-compliant warehouse space
• 5 buildings in our healthcare campus
• Over 20 years serving healthcare and life sciences manufacturers
• Over 1,000 employees trained in healthcare logistics
• Over 450,000 in new square footage opening in 2020…
• …Adding 200+ new jobs

Accredited as a 3PL by the National Association of Boards of Pharmacy® in the Verified-Accredited Wholesale Distributors® (VAWD®) program
IN KENTUCKY, OUR CLIENTS LOOK TO THE GEOGRAPHIC ADVANTAGES AS WELL AS OUR EXPERIENCE IN HEALTHCARE WAREHOUSING

<table>
<thead>
<tr>
<th>Facility Overview</th>
<th>Strategic Advantages</th>
<th>Services &amp; Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Over 1.7 million square feet of dedicated Healthcare space, including temperature and humidity controlled options – expanding to 2.2 million square feet in 2020</td>
<td>• Less than three miles from Worldport, UPS’s automated, international all-points air hub</td>
<td>• Extensive cold chain warehousing services</td>
</tr>
<tr>
<td>• Validated climate and humidity control for 20c – 25c and less than 60% relative humidity</td>
<td>• Orders shipped as late as 1 a.m. for UPS Next Day Air delivery</td>
<td>• Multi-carrier transportation</td>
</tr>
<tr>
<td>• FDA and Kentucky Board of Pharmacy Registered and Compliant</td>
<td>• Strong interstate road access, with two-thirds of the U.S. population within a one-day drive</td>
<td>• Robust inventory management programs</td>
</tr>
<tr>
<td>• Distribution of pharmaceuticals, medical devices, biopharma, and medical equipment</td>
<td>• Over 60% of the U.S. population accessible within two days via UPS Ground service</td>
<td>• Quality assurance evaluations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Expertise in people, processes, and technology with focus on the needs of healthcare manufacturers</td>
</tr>
</tbody>
</table>
CORPORATE SOCIAL RESPONSIBILITY

• **Connected Communities**
  - $4M donated each year to Louisville area charities
  - 623 Disaster Relief shipments coordinated across 29 disasters in 71 countries in 2018
  - 5,328 medical drone deliveries in 2018, including 10,472 units of blood
  - Special cargo moves – including a polar bear and a snow leopard for the Louisville Zoo

• **Economic Enhancement**
  - 5.2 billion packages delivered in 2018, connecting people in more than 220 countries and territories
  - 21,000 UPS employees in Kentucky
  - $2.4 billion invested in local capital projects over the last two decades

• **Empowered People**
  - Goal: 20 million volunteer hours donated by UPS employees, families and friends by 2020 – 18.7 million hours through 2018
  - Roughly 300,000 volunteer hours donated to local charities by UPS employees and family in 2018

• **Environmental Responsibility**
  - $1 billion invested in alternative fuel and advanced technology fleet since 2009 – 10,000 vehicles in our fleet today
  - Goal: 15 million trees planted around the world by the end of 2020 - *More than 12.5 million already planted*
It’s a Patient, Not a Package™
AMGEN USA
LOUISVILLE
DISTRIBUTION CENTER
Amgen Louisville Distribution Center (LDC)

- Operating since 1992
- Total square footage is 125,000 and 12 acres of available land
- Licensed to distribute Amgen’s commercial products to the U.S.
- Accredited by the National Association of Boards of Pharmacy® in the Verified-Accredited Wholesale Distributors® (VAWD®) program
- Manufacturer permit for Secondary Packaging
- $12 million original investment 1991 - 1992
- $9 million expansion and infrastructure upgrade in 2000
- $38 million expansion and infrastructure upgrade in 2006
- ~$25 million additional investment over past 4 years to achieve business priorities (i.e., secondary packaging, tornado shelter)
CONTINUOUS CHANGE FOR THE BENEFIT OF OUR PATIENTS

US Distribution
- Commercial & sample distribution
- Serialization Ready
- Shipments for International Markets

Primary distribution center for the US

Warehouse Capabilities
- Vendor Managed Inventory
- Risk Mitigation:
  - Commercial \ clinical cell banks
  - DS - Ivabradine
  - DSI – Epogen
- Serialization Ready
- Design allows for multiple packaging activities

Support growth; maximize assets utilization

Packaging Operation
- Secondary Packaging of Imlygic for US & ROW
- Serialization Ready
- Design allows for multiple packaging activities

Adapt to the evolving business environment
ALL AMGEN PRODUCTS FOR THE US MARKET ARE MANAGED THROUGH LDC

For additional information about Amgen products, including important safety information, please visit amgen.com
LDC ENGAGEMENT WITH THE COMMUNITY

- University of Louisville
- American Heart Association
- Kentucky Chamber of Commerce
- Greater Louisville Inc.
- Where Opportunity Knox
- Louisville Metro Parks

AHA Kentuckiana Walk
Logistics has become one of Kentucky’s signature industries
- Kentucky is within a day’s drive of 65 percent of the U.S. population
- More than 490 facilities, employing over 64,000 people

Biologistics is a critical but too often overlooked piece of Kentucky’s logistics puzzle

Kentuckians are delivering important medications to the world thanks to the continued growth of the biologistics industry
Q&A