

# ARTHUR L. EDGE III

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## SUMMARY

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**Strategic leader with over 15 years of broad-based experience in Healthcare, Biotechnology, and Sustainability.** Team “whisper” with the know how to navigate the technical and human challenges that arise across a dynamic product development lifecycle. Accelerated complex projects through concept scouting, research, development, tech transfer, launch, and commercial operation. Motivated to close the gap between customer need, business capability, and innovation. Masters in Engineering and trained Lean Six Sigma Greenbelt.

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## EXPERTISE & TECHNICAL SKILLS

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New Venture Due Diligence • Market Research • Intellectual Property Evaluation • Innovation Planning  
Project Management • Risk Analysis • Capital Planning • Techno-Economic Analysis • Business Intelligence  
Team Management • Product Development • Manufacturing • Process Improvement • Modeling  
MS Teams • MS SharePoint • MS Project • Power BI • MS Office 365 • MS Visio • Asana • Minitab • JMP SAS • STATISTICA

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## PROFESSIONAL EXPERIENCE

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**AstraZeneca, Gaithersburg, MD** ..... July 2020 – Present  
*Global, science-led biopharmaceutical business and our innovative medicines are used by millions of patients worldwide.*

**Global Supply & Strategy Directory, Oncology** Nov 2022 – Present  
Reporting to Executive Director, Oncology, Global Supply Chain & Strategy. Accountable for brands from clinical development (Phase II/III) through to the end of the life cycle. Matrix leader responsibility for delivery across 50+ member teams.

### Highlighted Achievements to Date

#### Supply Strategy

- Global Supply Team lead for **IMFINZI®** driving strategic decisions for supply chain investments, supply chain design, regulatory variation management, cost, and sustainability improvements to create capacity and supply flexibility for expected growth volatility of >300%. Global Supply Team lead for **IMJUDO®** managing successful approval and launch in December 2022. Global Operations Lead for clinical phase **Antibody Drug Conjugate** portfolio to enable launch acceleration, partner selection, and enterprise network strategy.
- Sponsor value steam management (VSM) process to identify lead time and inventory reduction opportunities across 14 unique end-to-end supply lanes with 10 internal and external nodes. Determine make between nodes to ensure business continuity and optimize overall cost of goods manufactured.
- Manage transformation road map to build new supply chain resilience and design capabilities. Focus on business process establishment, digitalization, and modality segmentation to launch 20 new products by 2030.

**Product Champion & Director, Global Technical Operations, Biologics** July 2020 – Nov 2022  
Reporting to Executive Director, New Products and Technology, manage activities from drug development through regulatory submission, launch, commercial manufacture, and life cycle management of biologics programs across the Respiratory & Immunology, Oncology, and COVID-19 product pipelines. Matrix leader responsibility for delivery across 120+ member teams.

### Highlighted Achievements

#### Technical Strategy

- Global CMC Team Lead (Chemistry, Manufacturing, & Controls) for **FASENRA®** driving all major Operations activities: change implementation, process improvement implementation, and variation management for **75+ approved markets**. Identified and drove yield and cost initiatives at **>\$10 MM/year savings** while maintaining supply during pandemic.
- Collaborated with commercial organization to achieve **\$1 billion in annual product revenue** and increase brand's competitive advantage. Led life cycle management (LCM) initiatives (e.g. Autoinjector, new indications, label updates, new technologies) and CMC related regulatory filings in several international markets.
- Established alliance joint-CMC team structure for commercial biologics, including team charter, membership, and goals. Manage partnership with Amgen to support early launch and expansion of combination device product, **TEZSPIRE™** for severe asthma. Managed partnership with Horizon to deliver **UPLZINA®** supply for rare nervous system disorder.
- Developed Data Analytics initiative for collection of process data from new external supply chain nodes to enable decision making and accelerate regulatory filing and approval for **EVUSHELD™** COVID-19 program.

#### Pipeline Development

- Represent Operations in Global Product Team (GPT) to translate overall product strategy into key deliverables for Operations for accelerated early phase Oncology assets. Guide process development teams for **bispecific** by preparing business case and implementation roadmaps and by identifying key gaps in manufacturing process design.

- Business process owner for Operations early engagement with R&D. Drive capability build across platform teams for key activities including COGM analysis, manufacturability review for new modalities, site selection, and alignment of manufacturing network strategy for clinical and commercial needs to **achieve 50% reduction in launch cycle time.**

**GlaxoSmithKline (GSK), Rockville, MD** ..... December 2016 – July 2020  
*Science-led global healthcare company that develops innovative Pharmaceutical, Vaccine, and Consumer Healthcare products.*

**Technology Manager, Biopharmaceuticals, Pharma Supply Chain**

Reporting to Global Product Owner, provide technical oversight and product Life Cycle Management for immuno-inflammation therapies including risk management, change management, and knowledge management. M-ERP/ SAP Super User.

**Highlighted Achievements**

**Technical Leadership**

- Member of site Extended Leadership Team (ELT) with co-ownership of strategy. Accountable for technical decisions for **BENLYSTA®** (belimumab) autoimmune antibody product. SME for upstream operations. Member of Raw Material Board (RMB), Change Control Review Board (CCRB), and Biopharm QbD and Control Strategy Community of Practice.
- Led four engineers and matrix team of 50+ members/23 functions to achieve 40 metrics for on time manufacture and release of bulk drug substance at 20,000 L scale. Reduced deviations by 15% and achieved **93% batch success.**
- Built portfolio of artificial intelligence/machine learning and multivariate process models to optimize operations and prevent **\$15 MM/year** defects in manufacturing and quality attributes. Led projects across Informatics, Digital Data Analytics teams, and National University of Ireland-Galway with **\$200 K/year spend** to increase CPV maturity level.
- Drove technology transfer for **first product to launch in new \$139 MM retrofitted 10,000 L scale facility.** Facilitated relationships and confidentiality agreements with 10 suppliers to forecast, cost, and procure >50 materials.
- Headed up talent and recruitment initiatives to **improve engagement metrics** from 74% to 77%. Launched Career Growth Network ERG. Relationship manager for National Society of Black Engineers, Johns Hopkins Institute for NanoBioTechnology, and George Mason University Bioengineering Alliance.

**Emergent BioSolutions, Gaithersburg, MD** ..... May 2015 – December 2016  
*Specialty global biopharmaceutical company that develops medical countermeasures (MCMs) against biological health threats*

**Process Engineer (Senior), Process & Analytical Development, Bio-Defense Division**

Reporting to Director of Engineering and Operations, managed the introduction and transfer of prophylactic and therapeutic technologies between R&D, third party clients, and Contract Manufacturing Organizations (CMO).

**Highlighted Achievements**

**Budget Management**

- Managed complex tech transfer with HHS/BARDA for rapid scale up and delivery of three monoclonal antibodies for animal model (non-clinical) testing of **Ebola therapy.** Reported earn value on **\$19.7 MM procurement contract.**
- Customized and proposed innovation model to capture ideas for new products and business processes across division. Overhauled global procedures to improve tech transfer efficiency, providing maturity model for sites to gap assess.
- Spearheaded critical **capital projects >\$500 K;** Expanded site R&D labs, negotiated vendors, and acquired technologies to ensure operational flexibility and win external partnerships (Business, Government, University).

**Project Management**

- Communicated process map to define strategy and work packages for launching new drugs as part of Lean Product Development Team. Scoped R&D through Phase 3 for Chemistry, Manufacturing, and Controls (CMC).
- Advised teams on vaccine design and characterization via small scale models to de-risk **whole virion inactivated virus** platform in Vero cells for **Zika** and **modified vaccinia ankara** platform in avian cells on NIAID grant for **tuberculous.**

**DSM (formerly Martek Biosciences), Columbia, MD** ..... December 2009 – May 2015  
*Global purpose-led, science-based company in Nutrition, Health and Sustainable Living*

**Bioprocess Engineer, Biotechnology, Research & Development**

Reporting to Senior Manager, Biotechnology R&D, supported technical process and product development to convert microbial sources (yeast, microalgae, fungi) into products for Human Health, Animal Health, and Bioenergy global business units.

**Highlighted Achievements**

**Product Innovation**

- Developed omega-6 and omega-3 nutritional lipid products for **pregnant and nursing mothers, infants, and adults aged 55+** to support brain, eye, and heart development. Influenced health platform value proposition and discovered intellectual property opportunities via patent investigation, competitive intelligence scouting, and industry meetings.

- Acquired **\$150 K** seed funding for business assessment on Centrient Pharmaceuticals beta-lactam antibiotics process. Investigated **co-product valorization**. Ranked options by competitive edge, tech maturity, and readiness to implement.

### Program Management

- Led work pages to advance **\$10 MM joint research program** with BP to create renewable biodiesel. Communicated experimental feedback to fermentation, cell physiology, and molecular teams to screen 22 microorganisms. Identified top 3, exceeded stage gate milestones, and generated biofuel for **2012 London Olympics BMW vehicle fleet**.
- Generated financial tool to equate cash flow changes to 1% improvements in project rate of return (IRR). Facilitated techno-economic analysis and down select from seven to two product and process designs with **>50% capital savings**.
- Represented North America on steering team for global employee resource group of 1,000+ early career professionals (DSM NEXT) with CEO as executive sponsor. As Operations lead, managed structure and goal alignment across six geographic regions to measure impact on company. Co-planned **strategy conference in Hyderabad, India**.

## TRAINING & DEVELOPMENT

Speaker, Leading Sustainability in Supply Chain, (USA Pharma Supply Chain & Logistics Innovation Programme), Oct 2023  
 Speaker, Building a Culture of Innovation in Manufacturing (American Pharma Manufacturing & Outsourcing Summit), Oct 2023  
 NSF ADVANCE Partnership Grant: Amplifying the Alliance to Catalyze Change for Equity in STEM Success (ACCESS+), Jun 2023  
 Illuminate™ Workshop, Communication Strategy Change Management (Duarte), Jan 2022  
 Leader, Big Data Workshop (National Institute for Innovation in Manufacturing of Biopharmaceuticals), Jun 2019 – May 2020  
 2019 ISPE Annual Meeting & Expo, Oct 2019  
 Design Thinking Bootcamp (DC Service Jam), Mar 2018  
 Speaker, Biotech Innovation, Johns Hopkins Innovation Factory Summit, Mar 2017  
 Situational Self Leadership (Emergent BioSolutions, Ken Blanchard), Sept 2016  
 World Vaccine Congress US 2016, Mar 2016  
 Facility Layout Design for Lean Operations, (Emergent BioSolutions, Maryland World Class Consortia), Feb 2016  
 Earned Value Management (Emergent BioSolutions), Jul 2015  
 Project Management Essentials Certification (DSM), Sept 2014 – Nov 2014  
 Lean Six Sigma Greenbelt Trained (DSM, Paloma Consulting), Jul 2012 – Nov 2012

## EDUCATION

**Master of Engineering**, Chemical and Biomolecular Engineering, Johns Hopkins University – Baltimore, MD  
**Bachelor of Science & Engineering**, Chemical Engineering, University of Michigan – Ann Arbor, MI

## SPECIAL ASSIGNMENTS

- Montgomery County Public Schools – Engineering Advisory Board, Chair** March 2016 – Present
- Multi-year appointment. Evaluating budget, engineering curriculum, recruitment and engagement initiatives to ensure student success in Montgomery College and Montgomery County Public Schools.
  - Develop data dashboards and assessed completion rate of five-course Project Lead the Way (PLTW) engineering curriculum with **5000+ student enrollment and \$200 K** annual spend. Advised Assistant Superintendent on organizational restructuring and multi-year strategic plan to equip students for college and workforce entry.
- National Society of Black Engineers – National Professionals Chair** May 2021 – May 2022
- Board Chairman, partnering with CEO and other board members to develop and deliver 5-year Game Change 2025 strategy. Managing organization wide business analytics scorecard and \$1.5 MM P&L for division.
  - Building relationships and communicating with funders, partners, and key membership stakeholders. Launched new in-person and hybrid programs to advance professionals across industry, academia, and government including the NSBE Pro Leadership Incubator and 11 x industry Special Interest Groups.
- Re-Nuble – Scientific Advisory Board, Member** August 2013 – Jan 2017
- Bio-agriculture startup converting food waste into non-toxic hydroponic nutrients via anaerobic digestion.
  - Reviewed and provided feedback regarding equipment selection, process design, and formulation approaches.