Glossary and Acronyms

ABRCMS: Annual Biomedical Research Conference for Minority Students AIMBE: American Institute for Medical and Biological Engineering AISES: American Indian Science and Engineering Society

ALL: Acute Lymphoblastic Leukemia ASH: American Society of Hematology

ATDC: Advanced Technology Development Center ATE: Advanced Technological Education

ATR-SEIRAS: Attenuated Total Reflection Surface Enhanced Infrared Absorption Spectroscopy AWS: Amazon Web Services

BM: Bone marrow

BM-MSC: Bone Marrow Derived Mesenchymal Stromal Cells Transplantation BMES: Biomedical Engineering Society

BLAs: Broad Licensing Applications

C-MSC: Cord Tissue - Mesenchymal Stem/Stromal Cells C2C: Center-to-Center

CAB: Commercialization Advisory Board CAR-T: Chimeric antigen receptor T cell

CBER: Center for Biologics Evaluation and Research CCRC: Center for Complex Carbohydrate Research CCRCB: Centre for Cancer Research & Cell Biology

CCRM: Centre for Commercialization of Regenerative Medicine CEED: Center for Engineering Education and Diversity

CIBMTR: Center for International Blood and Marrow Transplant Research CienciaPR: Ciencia Puerto Rico

CHOA: Children’s Hospital of Atlanta CM: Cardiomyocyte

CMaT: Center for Cell Manufacturing Technologies CMS: Center for Medicare and Medicaid Services COGs: Cost of Goods

COGS: Cost of Goods and Services COIs: Certification of Conflicts of Interest CPPs: Critical Process Parameters

CR; Complete remission

CREST: Centers of Research Excellence in Science and Technology CRISPR: Clustered Regularly Interspaced Short Palindromic Repeats CRF: Controlled-rate freezer

CTCs: Circulating tumor cells CQA: Critical Quality Attributes

CÚRAM: Centre for Research in Medical Devices CVPR: Clinical Cell and Vaccine Production Facility

D2P: Discovery to Prototype

DCC: Delgado Community College DOD: Department of Defense DSP: Dynamic sampling platform

EBICS: Emergent Behaviors of Integrated Cellular Systems EC: Executive Committee

ENGAGES: Project Engaging New Generations at Georgia Tech through Engineering and Science ERC: Engineering Research Centers

ERN: Emerging Researchers National

EV: Extracellular vesicles

EVEN: Educative, value-engaged approach EVPR: Executive Vice President for Research EWD: Engineering Workforce Development FDA: Food and Drug Administration

FRET: Fluorescence Resonance Energy Transfer FTIR: Fourier transform infrared spectroscopy GA Tech: Georgia Institute of Technology

GABC: Georgia Advanced Biomanufacturing Consortium GBM: Glioblastoma multiforme

GCMI: Global Center for Medical Innovation GIFT: Georgia Intern Fellowships for Teachers GLP: Good Laboratory Practices

GMB: Glioblastoma

GMP: Good Manufacturing Processes GRA: Georgia Research Alliance GSU: Georgia State University

GT: Georgia Institute of Technology

GTMI: Georgia Tech Manufacturing Institute GTRC: Georgia Tech Research Corporation HBCUs: Historically black colleges and universities NHLF: Human lung fibroblasts

HPLC-MC: High-performance liquid chromatography mass spectrometry HS: High school

HSPC: Hematopoietic stem and progenitor cell HUVEC: Human umbilical cord endothelial cells I2M: Innovation to Market

IACUC: Animal Care and Use Committee

IBB: Parker H. Petit Institute for Bioengineering and Bioscience I/DD: Intellectual and developmental disabilities

IDO: Indoleamine 2,3-dioxygenase IE: Innovation Ecosystem

ILO: Industry Liaison Officer IND: Investigational New Drug IP: Intellectual property

IPAB: Industry and Practitioner Advisory Board iPSCs: Induced pluripotent stem cells

iPSC-CM: Induced Pluripotent Stem Cell-derived cardiomyocytes iPSC-ECs: iPSC-derived endothelial cells

IRB: Institutional Review Board

ISCT: International Society for Cell & Gene Therapy ISO: International Organization for Standardization ITHS: Institute for Translational Health Sciences LC-MS: Liquid chromatography–mass spectrometry

LISELL-B: Language-Rich Inquiry Science with English Language Learners through Biotechnology LMS: Learning Management System

LSAMP: Louis Stokes Alliance for Minority Participation LSSS: Louisiana Student Science Standards

MC3M: Marcus Center for Therapeutic Cell Characterization and Manufacturing MALDI: Matrix-assisted laser desorption and ionization

MBRS/RISE: Minority Biomedical Research Support/Research Initiative for Scientific Enhancement MDSCs: Myeloid-derived suppressor cells

MM: Multiple myeloma MOAs: Mechanism of Actions MS: Mass spectrometry

MSCs: Mesenchymal Stem/Stromal Cells MSI: Minority Serving Institution

MTA: Material Transfer Agreement

MTEC: Medical Technology Enterprise Consortium

NAMEPA: National Association for Multicultural Engineering Program Advocates NASEM: National Academies of Sciences Engineering Medicine

nanoESI-MS: nano-electrospray ionization tandem mass spectrometry NCMC: National Cell Manufacturing Consortium

NERF: Non-exclusive, royalty-free license NIH: National Institutes of Health

NIIMBL: National Institute for Innovation in Manufacturing Biopharmaceuticals NIST: National Institute of Standards and Technology

NK: Natural killer

NMR: Nuclear magnetic resonance NPP: Non-provisional patent

NRMN: National Research Mentoring Network NSBE: National Society of Black Engineers NTAP: New Technology Add-On Payment NUI: National University Ireland

ORR: Objective response rate

OSTP: White House Office of Science and Technology Policy UG: Undergraduate

UO: University of Oregon

PATs: Process Analytical Technologies PCA: Principal component analysis PDL: Population doubling level

PDMS: Polydimethylsiloxane PFI: Partnership for Innovation PPC: Perfect Pitch Competition PPT: PowerPoint

PRTEC: Puerto Rico Technoeconomic Corridor QA: Quality assurance

QC: Quality control QbD: Quality-by-design

QUB: Queens University Belfast

RBC: Regenerative Bioscience Center REM: Research Experience for Mentors

REPP: Regent’s Engineering Pathway Program RET: Research Experiences for Teachers REU: Research Experience for Undergraduates

REVAMP: Research Experience for Student Veterans in Advanced Manufacturing and Entrepreneurship RCR: Responsible Conduct of Research

ROI: Regions of interest

SAB: Scientific and Clinical Advisory Board

SACNAS: Society for Advancement of Chicanos/Hispanics and Native Americans in Science SBIR: Small Business Innovation Research

SC: Supply Chain

SCB: Standards Coordinating Body

SECO: Small-Business/ERC Collaborative Opportunity

SEIRAS: Surface Enhanced Infrared Absorption Spectroscopy SERS: Surface-Enhanced Raman Spectroscopy

SHPE: Society of Hispanic Professional Engineers SLC: Student Leadership Council

SLS: Share and leverage strengths

SMART: Specific, Measurable, Adaptive and Achievable, Responsive and Realistic, and Transformative and Timely

SOP: Standard operating procedures

SSB: Strategic Planning and Sustainability Board STC: Science and Technology Center

STEM: Science, Technology, Engineering, and Mathematics STTR: Small Business Technology Transfer

SURE: Summer Undergraduate Research in Engineering SVT: Site visit team

SWE: Society of Women Engineers

SWOT: Strengths, Weaknesses, Opportunities, and Threats TCSG: Technical College System of Georgia

TI:GER: Technology Innovation Generating Economic Results TRL: Technology Readiness Level

UGA: University of Georgia

U-Wisc: University of Wisconsin – Madison UPenn: University of Pennsylvania

UPRM: University of Puerto Rico at Mayagüez URM: Under Represented Minority

UW: University of Wisconsin – Madison UWM: University of Wisconsin – Madison

WARF: Wisconsin Alumni Research Foundation WDAB: Workforce Development Advisory Board

WisCEL: Wisconsin Collaboratory for Enhanced Learning