

## Vivarium and Cell/Gene Therapy Project Experience

Cornerstone Commissioning was founded in 2001 to provide MEP Commissioning Services for biomedical research facilities, with a specialized focus on Vivarium and Biocontainment facilities. Since then, we have completed over 200 vivarium and over 300 biocontainment projects. That background has led to Cornerstone's participation in the growing field of cell and gene therapy facilities the last five-plus years.

Services Cornerstone provides for these types of facilities:

- Generation of project requirements and risk assessment content
- Special focus on facilities using viral vectors, including Risk Group analysis and application
- Design reviews focused on MEP systems, architectural features, compliance with cGMP, as applicable
- Development of commissioning and pre-validation documentation
- Site activities to prepare facilities for operation

VIVARIUM PROJECTS			
Client	Project	Location	Description
Amherst College	New Science Center	Amherst, MA	200,000 SF facility with vivarium for rodents and aquatics
Harvard University	Biological Research Infrastructure	Cambridge, MA	New 50+ room vivarium with cage wash
Howard Hughes Medical Institute	Janelia Farm Research Center	Ashburn, VA	Multiple vivarium fit-outs for new PIs
Iowa State University	VMRI Building 46 Central Lab Animal Res	Ames, IA	New ABSL-3 modular vivarium Renovation of rodent vivarium
Massachusetts Institute of Technology	Building 68	Cambridge, MA	Renovation of vivarium, including animal rooms, procedure rooms, cage wash
Merck	Boston Research Center	Boston, MA	Initial Qualification of 30 room vivarium On-going support of AAALAC accreditation.
National Institutes of Health	Building 33 and Building 35 Porter Neuroscience Research Center	Bethesda, MD	New 30 room ABSL-3 vivarium and New 100+ room rodent vivarium
National University of Singapore	Building M1	Singapore	New 50 room vivarium with cage wash
Novartis	5 Buildings	Cambridge, MA	Renovations and on-going AAALAC accreditation support
University of Massachusetts	Life Science Laboratory	Amherst, MA	400,000 SF facility with multiple vivarium suites, cage wash, ABSL-3
CELL & GENE THERAPY PROJECTS			
Client	Project	Location	Description
Generation Bio	New Manufacturing Facility	Boston, MA	
MaxCyte	Phase 1-3 Expansion	Rockville, MD	67,000 sq. ft. new headquarters with manufacturing, research, and process development labs.
Regenxbio	Phase 1 & 2 Expansion	Rockville, MD	132,000 sq. ft. headquarters with gene therapy cGMP, lab, warehouse, and support space.
Tonix	Project ADC	New Bedford, MA	45,000 sq. ft. with cGMP and BSL labs.
Takeda	Cell Therapy Manufacturing	Lexington, MA	24,000 sq. ft. R&D cGMP facility
United Therapeutics	Cell Therapy	Jacksonville, FL	75,000 sq. ft. facility with operating rooms, cGMP cleanrooms, and wet labs.