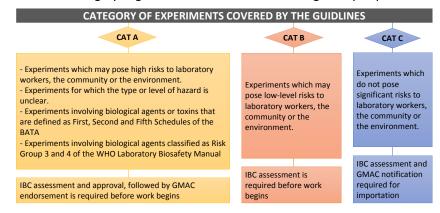
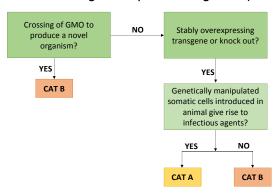
If your experiment involve genetic modification work, use the table below to decide the category of genetic modification work and regulatory requirements

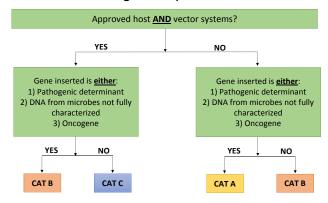


Generation of genetically modified organisms (GMOs):



For importation, submit a Category C GMAC proposal form to OSHE

Using vector systems:



For importation of viral vectors and other GM materials, submit a Category C GMAC proposal form

Approved host and vector system (Appendix 2 of GMAC guidelines 2013)

	Host	Vector
Bacteria	Escherichia coli K12 or E. coli B derivatives which do not contain conjugative or generalised transducing phages	Non-conjugative plasmids Bacteriophage - lambda - lambdoid - Fd or F1 (e.g.M13)
	Bacillus subtilis or B. licheniformis Asporogenic strains with a reversion frequency of less than 10-7	Indigenous Bacillus plasmids and phages whose host range does not include B. cereus or B. anthracis
	Pseudomonas putida Strain KT 2440	Certified plasmids: pKT 262, pKT 263, pKT 264
	Streptomyces-specified species: S. coelicolor S. lividans S. parvulus S. griseus	Certified plasmids: SCP2, SLP1, SLP2 PIJ101 and derivatives Actinophage phi C31 and derivatives
Fungi	Neurospora crassa (laboratory strains), Saccharomyces cerevisiae, Pichia pastoris, Schizosaccharomyces pombe	No restriction
Slime moulds	Dictyostelium species	Dictyostelium shuttle vectors, including those based on the endogenous plasmids Ddp1 and Ddp2
Tissue Culture	Mammalian (including human) cells	Non-viral vectors or defective viral vectors (including retrovirus or retroviral-helper combinations) that cannot infect human cells Advanced generation of lentiviral vector 3 (3rd generation and later)
	Avian cells	Avipoxvirus vectors
	Plant cell cultures	Non-tumorigenic disarmed Ti plasmid vectors in Agrobacterium tumefaciens and non-pathogenic viral vectors
	Insect cell cultures, such as Spodoptera frugiperda, provided the recombinants are also inclusion-negative (e.g. polyhedrin minus)	Baculovirus (Autographa californica nuclear polyhedrosis virus)

Based on The Singapore Biosafety Guidelines for Research on Genetically Modified Organisms (GMOs) 2013