

IDENTIFICATION OF RAPD MARKERS FOR SILK PRODUCTIVITY, RESISTANCE AND SUSCETIBILITY TO BACULOVIRUS BMNPV IN *BOMBYX MORI*.

Zanatta, D.B., Bravo, J.P., Felipes, J., Fernandez, M.A. Departamento de Biologia Celular e Genética, Universidade Estadual de Maringá, Paraná, Brazil.

Bombyx mori is the most genetically well-studied lepidopteran model system. Productivity and resistance to diseases are the most desired characteristics by silkworm breeders. The Universidade Estadual de Maringá (UEM) holds a silkworm genetic bank whose content is little known. This way, eight Chinese and eight Japanese stocks, maintained in this collection, were analyzed for genetics characters of sericulture interest. RAPD markers UBC89 and UBC91, associated with productivity, and OPA-18 and OPY-11, associated, respectively, with resistance and susceptibility to silkworm baculovirus NPV (*Bombyx mori* nucleopolyhedrosis virus, BmNPV) were used. Analyses with UBC showed that the strains could be characterized as higher silk producers. For OPA-18 and OPY-11 individual and *en masse* silkworm samples, obtained from each stock, were used. In the *en masse* analysis with OPA-18 the specific polymorphic band was revealed by all stocks, but with OPY-11 only Japanese stocks showed the expected band. However the analysis with individual samples revealed that there are individuals without the expected marker amongst their population. The sequence analysis of polymorphic segments identified putative genomic segments that could be related to required genes for virus resistance. These results allow a preliminary assessment of the UEM's germplasm content and could be utilized in the management of selection programs and to obtain a commercial hybrid silkworm.

Keywords: *Bombyx mori*, silkworm, biological characterization, BmNPV, RAPD.

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