

**Molecular markers to identify genes, which code targets of strain-specific protective immunity in *Plasmodium chabaudi***

The murine malaria parasite, *P. Chabaudi* is available as number of different wild-caught "strains" to which protective immunity is partly "strain" - specific. Identifying genes for "strain"-specific antigens, an important step for vaccine development, is the aim of this study. The approach is to make a genetic cross between two antigenically distinct parental "strains" of *P. chabaudi* and to place the recombinant progeny under "strain"-specific immune selection in mice made immune to one or the other parental "strain". The immune-selected progeny would be screened for "strain"-specific markers lost under selection.. These markers should, in principle, be linked to the genes for "strain" - specific immunity. We have used Amplified Fragment Length Polymorphism (AFLP) to generate molecular markers for two parental strains, AS and CB. Two restriction enzymes, EcoRI and MseI, were used to digest the genome of each "strain" of parasites and then ligated to oligonucleotide adapters matched to the digested ends. PCR amplification was performed using primers designed to match the adapters. One to three arbitrarily selected nucleotides were added to the 3' end of the primers for the selective amplification of DNA fragments. One PCR primer is radio-labeled allowing markers to be identified in auto-radiograph after separation on acrylamide gel. We were able to develop more than 150 AS-specific and 200 CB-specific markers.