

The Perfect Plan

by Raamesh Gowri Raghavan

Jacobi's plan was simple. He was going to genetically modify mosquitoes to carry botulinum toxin (botox). The most potent poison on earth, the mosquito-bit sized dosage of the venom would finish off a man before he could guess what hit him. And the agent — the mosquito — would breed easily in the tropical climes of the enemy country. Those Indians had never succeeded in eradicating the mosquito menace, in part because bleeding heart ecologists (bankrolled by American charities secretly bankrolled by the CIA) would never allow the wetlands to be drained.

His team set about working meticulously. Botox was a protein, so it could be genetically modified. It had to continue being toxic to humans, but not to the mosquitoes, in whose saliva it was to be produced. It had also to distinguish Caucasian from Indian blood. From earlier work in human genetics he knew that Caucasians had a gene slightly different from the Asian type. So if the botox gene was engineered to be specific for the Asian type...

In a year's time, the GM protein was ready. It had been cloned into a bacterium so that it could be made copiously. Tested on a few prisoners in Guantanamo Bay, it had proved effective. The 'unlawful combatants' dropped off like flies within minutes of injection while their White guards went about unconcerned, as if they had gotten a regular TT shot.

Now for making a GM mosquito. Jacobi knew that every gene has a little bit of DNA ahead of it called a promoter, which decides where the protein which the gene codes for is produced. All that was needed was to get hold of a saliva-specific promoter, and stick it ahead of the botox gene. Now introduced into the mosquito, it would create a deadly bite.

Using technology already in vogue for making transgenic fruitflies (used worldwide by universities doing harmless academic research), Jacobi's team started out making the mosquito they wanted. They kept the mosquito colony in a glass cage, with portholes to thrust their hands in. They watched with paternal feelings as the females fed on their own blood. Mosquito eggs were collected, and placed under an ordinary microscope. Then using an extremely fine glass needle which had been loaded with the DNA carrying the botox gene, they injected the eggs with extreme care. In one of a hundred eggs, the injected DNA would insert itself into the genome.

They screened the thousands of mosquitoes that hatched, and found a few carrying the botox transgene. In a few months time, several billion mosquitoes had been bred, ready for release. Now to wait for that diplomatic flashpoint, when war could be declared.

To Jacobi's luck, that event happened soon. Decades of outsourcing had led to the collapse of the American software industry, while India and other Asian nations had formed the Organisation of Software Exporting Countries (OSEC) to monopolise the supply of that precious item. As Americans thirsted for programmes to run their automated lives, OSEC raised software prices again. Negotiations to get a concession failed. Nothing but regime change would help.

The Americans discovered to their horror that their high-technology nuclear weaponry was useless against the Indians, who had scrambled all the controlling programmes. Now was the time to bring out the mosquito army.

Released across the borders from America's faithful ally, the mosquitoes proved to be as deadly as promised. Indians in fields, in offices, on streets, even in the halls of their parliament, dropped dead within minutes of being stung. As their cities emptied, pools

and lakes were frantically drained. The Indians became as afraid of water as a rabid dog. No amount of DDT fumigation could help; the mosquito species had naturally become resistant to these chemicals.

Now comes the twist. Though the mosquitoes were resistant to DDT, they were mutating. The new generations of mosquitoes were no longer deadly to the Indians. Instead, it was American soldiers who were now dying. The army of occupation, which had seized empty Bombay and Madras and was now advancing to Delhi, was thwarted. After an entire regiment perished in Bhopal, the army was withdrawn.

A few mosquito samples were despairingly analysed in Jacobi's lab. The botox, which had been designed to spare Caucasians, had been mutated by contact with DDT to now spare Indians and hit the invaders instead. Long after the world had banned DDT, India had persisted with the insecticide. And that was what had saved them now.

The mule had beaten the fox.

