KOLEKSI ARKIB UCAPAN
KETUA EKSEKUTIF

Penyampai : DATO' SERI DR. MAHATHIR BIN MOHAMAD
Tajuk : THE INTERNATIONAL CONVENTION ON BIOTECHNOLOGY 2002
Lokasi : PUTRA WORLD TRADE CENTRE, KUALA LUMPUR
Tarikh : 01-10-2002

I am honoured to be invited to address this International Convention on Biotechnology 2002. The life sciences are going to play a powerful role in the social and economic life of the human race. And Malaysia, which is bountifully endowed with biological resources by virtue of its tropical rain forest with its flora and fauna, is very keen to play a part and to contribute to this area of human knowledge and its application.

2. Like most of the sciences, biotechnology is not new. Even as far back as 500 B.C. the Chinese used molds from fermented soybean curd as an antibiotic to treat boils. The complete sequencing of the human genome under the Human Genome Project was an international effort to map all human genes. This was launched in 1990. When the first draft of the human genome sequence was completed and announced in February 2000 by Celera Genomics, the Biotechnology Revolution truly began. The complete sequencing of the Human Genome has opened the door to many new fields of studies including interaction of genes with genes, genes with proteins, protein with protein etc. This has facilitated rapid advances in genomic medicine, personalised medicine and gene therapy, and consequently in introducing vast economic opportunities and potentials.

3. Modern advances in Biotechnology has been made possible by the tremendous advances in I.T. of which the powerful super computers are the most significant. The millions of calculations required to work out the structure of the DNA would have taken decades without the powerful computative capacity of the ever more powerful computers. We have now advanced to the stage where we can simulate the movements and the reactions of the molecules as they interact chemically. With this we are set to design, study and simulate the various properties of new chemical structures which can play a role in overcoming the diseases and ensuring the health of living creatures including we humans.

4. Truly we are living in a very exciting age. Already animals are being cloned and some are trying to clone humans. It seems that we can now produce any number of Einsteins and also numerous Hitlers. The ethical scientist may not want to do this but there will be crooked scientists working under crooked regimes who may flood the earth with uncontrollable monsters.It seems like the stuff of science-fictions but it can become a reality if we do not keep a tight grip on the direction that biotechnology takes. It is fine to produce specific organs for transplanting in human bodies but we should not try to play God and think of populating this earth with creatures which may destroy us in

11. In the Eastern tradition knowledge is not usually shared. We know how various herbs are used in the treatment of diseases but there are hardly any record of the formula or the recipe. Frequently the recipe dies with the practitioner. At best the children of the practitioner inherit the recipe with the injunction not to reveal to anyone but their children and children's children.

12. The testing of the efficacy of the concoction is also not done, certainly not systematically and scientifically. No attempt is made to identify the actual active ingredient, the dosage, the side- effects and the contra indication.

13. Although we are now trained in science, some of the old culture of secrecy and belief in magic even remains. This is unfortunate because there are sufficient evidence that the old medicaments are often effective. As a trained practitioner of modern medicine I should not be saying this but I used to suffer from chronic intractable cough accompanied by running nose and lung infection. What we call modern medication took a long time to stop the cough. But persuaded by a Chinese friend, I took Chinese medicine and the cough stopped. When I had another attack I tried the medicine again, and again it worked. I tried to find out what the medicine is made of and I was told that it was tiger's milk. Obviously there is no willingness to divulge the secret.

14. So far no attempt has been made to analyse it, to identify the active ingredient, to test, and to produce on a truly commercial scale. In fact it was hinted that it would be given only to deserving people free of charge. One should appreciate being selected but one cannot help feeling that so many people are being deprived of this effective treatment.

15. Some of this quaint ideas about what is proper and what is not still remains within the culture of Asian people. We have a need to discard most of them if we want to see the world benefit from our scientific researches and the enormous biological resources we have been endowed with.

16. But we also do not want to see the kind of avarice as shown by the big drug companies. Admittedly, they spend huge sums of money on research and development. Not all that they discover at great expense are worth anything at all. Once in a while they would come across a fantastic cure. They would try not only to recover the cost but to make huge profits for themselves by pricing their drugs beyond the reach of those most in need of treatment.