

Appendix

- **Nicotine patches on sale at cancer charity shops** (www.forces.org/evidence/pharma/pdf/patches.pdf)
- **FDA: Guardian Or Rubber Stamp?** (www.forces.org/evidence/pharma/pdf/fda.pdf)
- **Tobacco Dependence** (www.who.int/inf-fs/en/fact222.html)
- **"The Therapeutic State: The Tyranny of Pharmacracy"** (www.independent.org/tii/content/pubs/review/tir54_szasz.html)

Emerging Biomedical Uses of the Tobacco Plant

- “British researchers said Tuesday they had genetically engineered tobacco plants so they could remove explosives from soil. The plants could be used to clean up areas around weapons factories and munitions dumps, Neil Bruce of Cambridge University and colleagues reported in the journal *Nature Biotechnology*.” [“Tobacco Plants Might Remove Explosives From Soil,” Reuters, 4/18/99]
- “A vaccine for HIV—one of the deadliest viruses around—may lie in a plant that itself is blamed for millions of deaths each year: tobacco. Researchers at CropTech Corporation, a biotechnology firm here, are looking into ways to genetically alter the leaf to clone a protein found in two strains of HIV. When this protein...is given in a vaccine, researchers say it could prompt the body to develop a resistance to the disease.” [“Blacksburg researchers look to tobacco for HIV vaccine,” Raleigh News & Observer, 2/29/00].
- “A therapeutic vaccine produced from tobacco plants prevented the growth of non-Hodgkin’s lymphoma cells in laboratory mice and enabled the animals to survive the disease, Stanford researchers have found.” This work was supported by the NIH. [Company Press Release, BW Healthwire, “Tobacco Plant-Produced Vaccine Helps Mice Survive Non-Hodgkin’s Lymphoma, Stanford Researchers Find,” 1/20/99].
- “Scientists working in France reported on Wednesday they had coaxed human haemoglobin—the molecule that makes blood red—from genetically engineered tobacco plants.... They said their research opened up new possibilities for creating artificial blood free of infection from HIV, hepatitis or other viruses.” [“Forget nicotine—scientists coax blood from tobacco,” Maggie Fox, Reuters, 3/6/97].
- “It must come as no small surprise that tobacco, ‘may in time become one of the world’s principal sources of protein for human consumption and livestock feed.’ So stated no less an authority than the World Health Organization’s Farm and Agriculture Organization in 1981. Nevertheless, tobacco as a protein source has received so little publicity over the years that most of us are still largely unaware of its potential to feed a hungry world.” [“Food from Tobacco—A Well Kept Secret,” Dr. K.H. Ginzel, ACSH, *Priorities*, Vol 4, No. 1, 1992].
- Some of the research efforts underway using the tobacco plant:
“Cancer treatment: Large Scale Biology Corp., a California genetics company with a tobacco processing facility in Owensboro, is trying to develop a therapeutic vaccine for non-Hodgkin’s lymphoma that would use compounds created from tobacco.

“Other health benefits: Many researchers are focused on using tobacco to create new vaccines and antibiotics. [Ray] Long, [a crop sciences professor at NC State Univ.] for instance, is trying to use tobacco to create a vaccine for the human papilloma virus, which causes warts. His vaccine initially would be for dogs, but eventually could help prevent cervical cancer in women. At the University of Central Florida in Orlando, researcher Henry Daniell says tobacco could be used to produce insulin.

“ New plastics: Daniell also is using tobacco to create a new compound that could be used to make environmentally-friendly, biodegradable plastics.

“Cavity fighter: Planet Biotechnology, a California firm, is growing antibodies in tobacco plants that could be used to fight tooth decay if used in toothpastes or mouthwashes.”

[“Tobacco an ideal subject for genetic research,” Gail Gibson, Lexington (KY) Herald-Leader, 2/27/2000]

- Blacksburg, Va., 5/13/01: CropTech opens a transgenic tobacco processing plant and warehouse. It is the first site for the processing of tobacco to make human proteins used in a variety of medicines. [“Leaf farming’s future?” John Reid Blackwell, Richmond Times-Dispatch, 5/13/01].