BUCK VS. BELL CONTINUED

Circuit Court should have entered. There can be no doubt that so far as procedure is concerned the rights of the patient are most carefully considered, and as every step in this case was taken in scrupulous compliance with the statute and after months of observation, there is no doubt that in that respect the plaintiff in error has had due process of law.

The attack is not upon the procedure but upon the substantive law. It seems to be contended that in no circumstances could such an order be justified. It certainly is contended that the order cannot be justified upon the existing grounds. The judgment finds the facts that have been recited and that Carrie Buck "is the probable potential parent of socially inadequate offspring, likewise afflicted, that she may be sexually sterilized without detriment to her general health and that her welfare and that of society will be promoted by her sterilization," and thereupon makes the order. In view of the general declarations of the legislature and the specific findings of the Court, obviously we cannot say as matter of law that the grounds do not exist, and if they exist they justify the result. We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence. It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes. Jacobson v. Massachusetts, 197 U.S. 11. Three generations of imbeciles are enough.

But, it is said, however it might be if this reasoning were applied generally, it fails when it is confined to the small number who are in the institutions named and is not applied to the multitudes outside. It is the usual last resort of constitutional arguments to point out shortcomings of this sort. But the answer is that the law does all that is needed when it does all that it can, indicates a policy, applies it to all within the lines, and seeks to bring within the lines all similarly situated so far and so fast as its means allow. Of course so far as the operations enable those who otherwise must be kept confined to be returned to the world, and thus open the asylum to others, the equality aimed at will be more nearly reached.

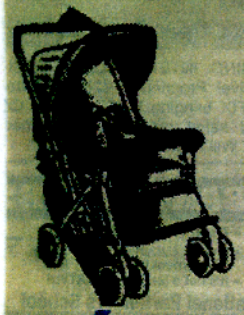
Judgment affirmed.

MR. JUSTICE BUTLER dissents.

This is Eugenics!

21st Century Style!

EGG DONOR NEEDED



Caucasian Egg Donor Needed For Loving Family

You Must Be At Least 5' 7"

Have A 1300+ Sat Score

Possess no major family medical issues

Free Medical Screening **All Expenses Paid**

$50,000.00

For More Information
Please Email Darlene:

TomEsquire@aol.com

Of fax inquiries to: 1-619-234-8881

Hitt & Pinkerton, Attorneys at Law
(1-800-264-8828)

(2)

But don't we "all" do this.??!!

LIMITATIONS OF CLASSICAL BREEDING/Engineering

1. Limited to genes of ORGANISMS that interbreed & severe Ethical issues with "Man"

2. Only CAN Make new gene combinations with existing genes --- genes created by "natural" mutations. CAN'T predict outcome

3. Can't make existing genes "better" - just better combinations of existing genes — new combinations of gene forms/alternatives.

4. Only useful for obvious traits -- one's that can be observed VISUALLY (e.g., seed size)

5. Time -- Limited by generation time of organism to introduce "wild" forms of a gene into a crop or farm animal -- slow

e.g. — crops & domesticated animals bred over 100's & 1000's of years!

Using DNA Technology to Genetically Engineer Organisms Has Unlimited Potential

(1) Any gene from any organism can be used in any organism -- No Breeding Barrier!

(2) New Genes can be created --- Genes that produce new proteins or that work better

(3) Existing Genes can be switched on in "places" they are normally off & vice versa! Gene regulation can be altered! Gene pathways can be controlled!

(4) Speed - can happen within a generation --- very quickly (e.g., Human ADA engineering or gene therapy)

(5) Genes or Pieces of genes can be used FROM any Genome/organism - only Limited by rules of Life! & the gene's chemistry!

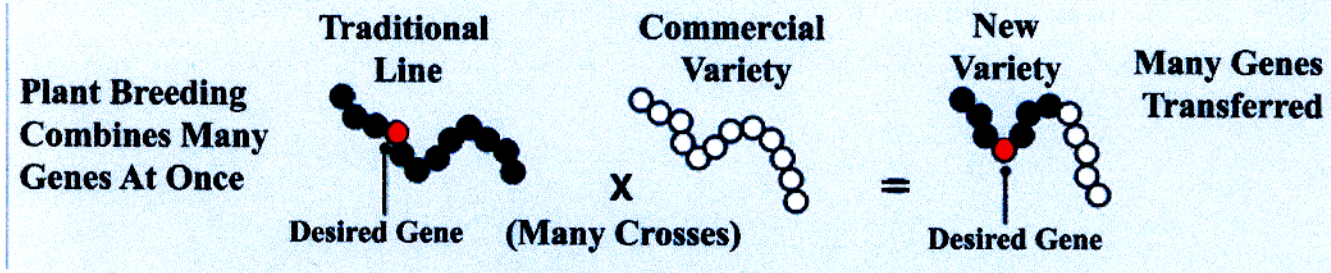
(6) Ability to change, alter, manipulate, control the genetic "blueprint" of any organism —

NO Biological Limitation — Follow Rules of Biology!

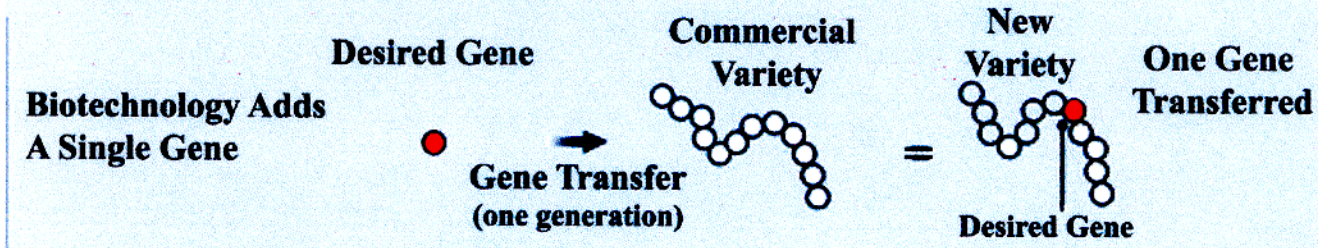
Classical Breeding Combines Many Genes with unpredictable Consequences

↳ Karpechenko!

TRADITIONAL PLANT BREEDING



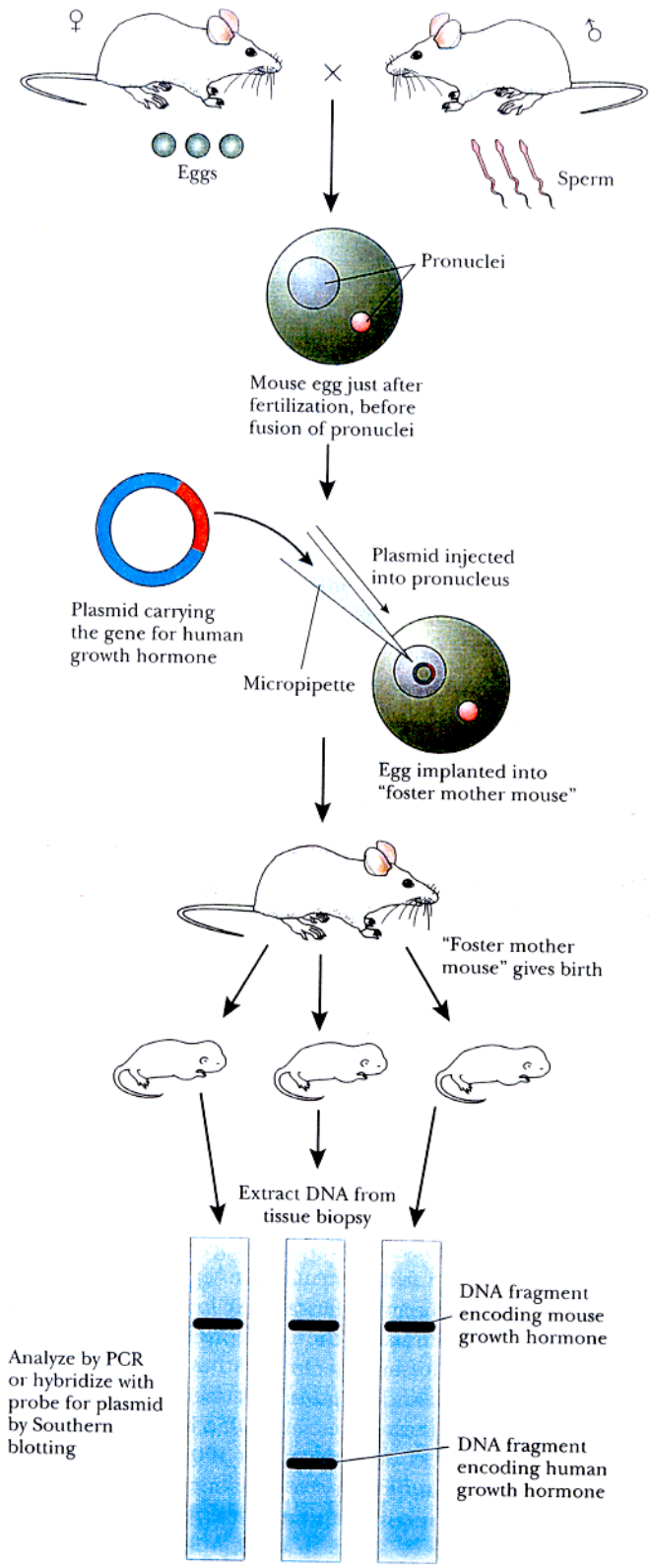
PLANT BIOTECHNOLOGY



Molecular Breeding / Engineering is controlled & uses one characterized Gene & Process at a time!

Examples of the "Power" of Gene Engineering Technology

Human Growth Hormone Gene CAN BE ENGINEERED into A Mouse



TO produce ?

nature
Vol 300 No 5893 16–22 December 1982 £1.80 $4.50

GIGANTIC MICE- FROM EGGS INJECTED WITH GROWTH HORMONE GENES

Animals can be Genetically Engineered with New Genes that Specify New Traits

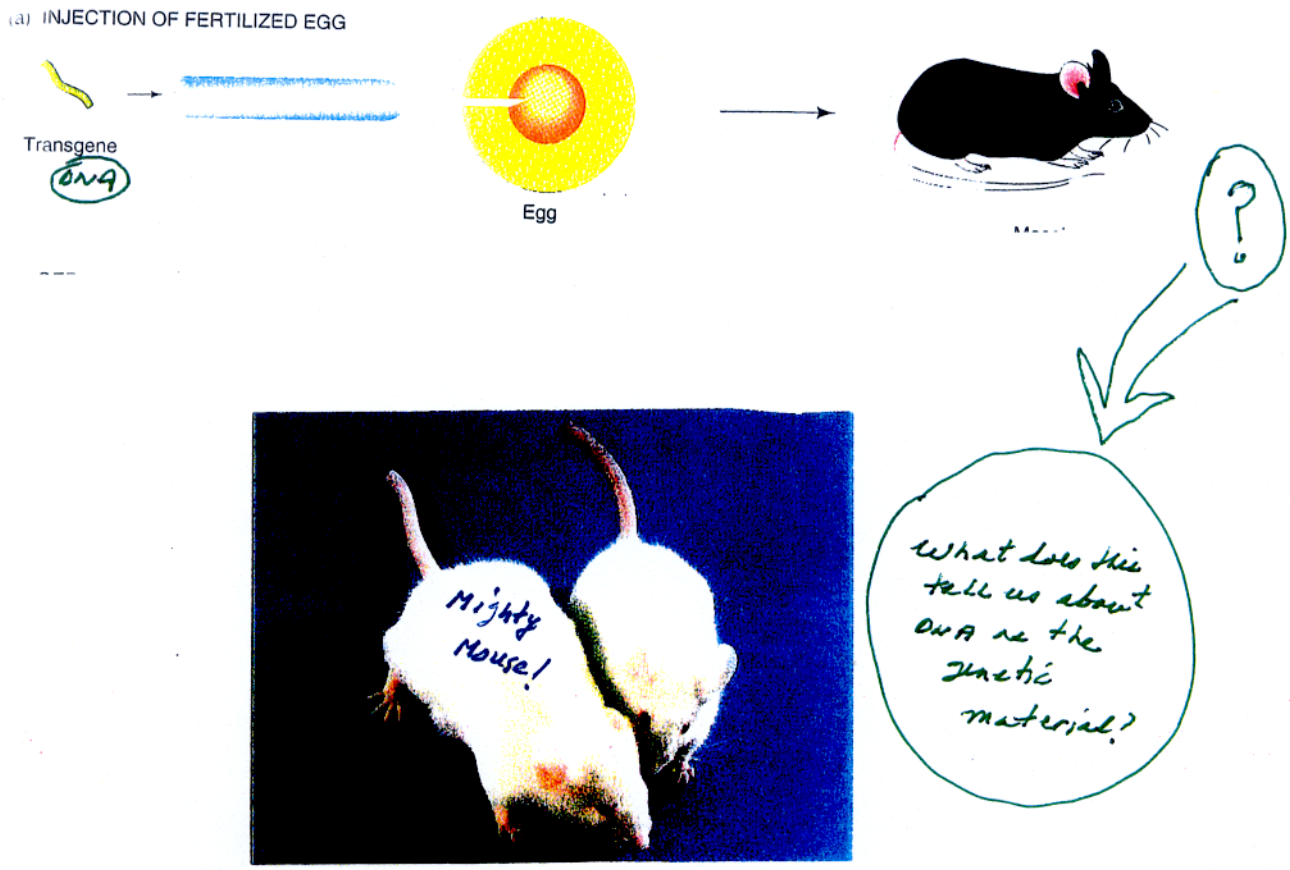


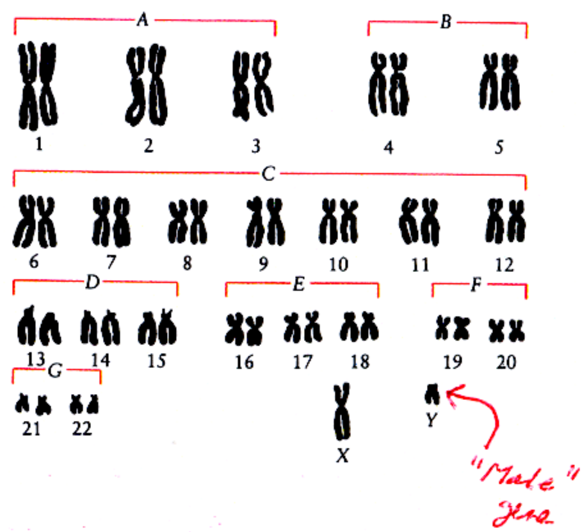
Figure 15-31 Transgenic mouse. The mice are siblings, but the mouse on the left was derived from an egg transformed by injection with a new gene composed of the mouse metallothionein promoter fused to the rat growth hormone structural gene. (This mouse weighs 44 g, and its untreated sibling 29 g.) The new gene is passed on to progeny, in a Mendelian manner, and so is proven to be chromosomally integrated. (R. L. Brinster)

We ARe Entering the ERA of "Designer" ORGANISMS!

ALGO → GLO Fish, AND SAME TECHNOLOGY!!!

Males + Females Differ by only the Presence or Absence of the Y chromosome (simplistically!)

19–2 *The normal diploid chromosome number of a human being is 46, 22 pairs of autosomes and two sex chromosomes. The autosomes are grouped by size (A, B, C, etc.), and then the probable homologues are paired. A normal woman has two X chromosomes and a normal man, shown here, an X and a Y.*



What Genes are on the Y chromosome?

How do you "naturally" obtain a XY ♀?

XX → ?

The Human Gene For Maleness

CAN - - - - - - - → ?

Make A "Female" Mouse Be A Male!

nature

INTERNATIONAL WEEKLY JOURNAL OF SCIENCE

Volume 351 No. 6322 9 May 1991 $6.95

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What does this say about human & Mice ??

MAKING A MALE MOUSE

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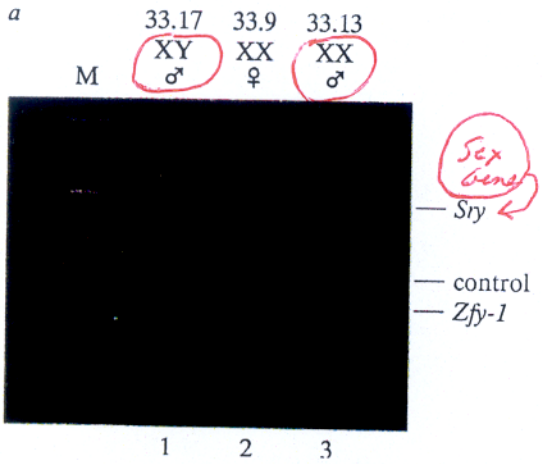
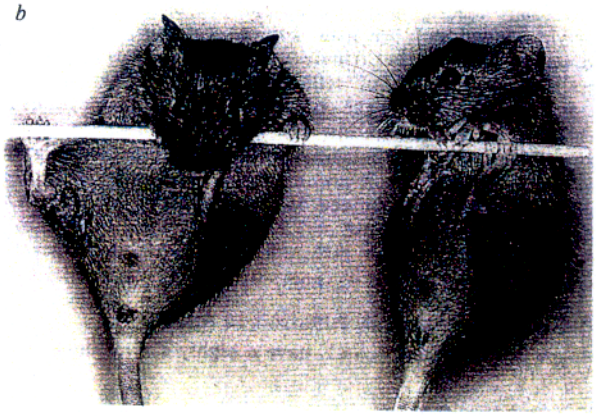
The Human Sry Gene Can Make a Female (XX) Mouse into a Male!



Sex Gene



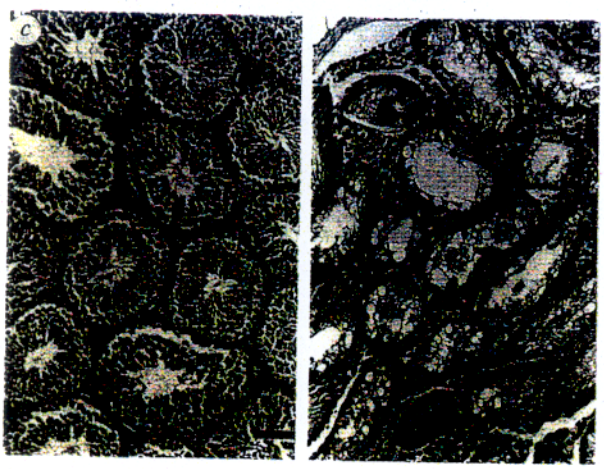


FIG. 3 Analysis of adult sex-reversed transgenic mouse m33.13. *a*, PCR analysis of genomic DNA from m33.13 (lane 3), showing *Sry* and control (myogenin) bands. No band corresponding to *Zfy-1* was seen, demonstrating the lack of a Y chromosome; this result was confirmed by Southern blotting using Y-chromosome probes Y353B (ref. 40) and Sx1 (ref. 41) (not shown). Normal XX female and XY male littermates (33.9, lane 2 and 33.17, lane 1) are shown for comparison. M, marker bands (1,018, 510, 396, 344, 298, 220, 201, 154 and 134 base pairs). *b*, External genitalia of mice 33.17 (left) and 33.13 (right). *c*, Histology of testis sections from mice 33.17 (left) and 33.13 (right). Bar, 90 μm.

METHODS. For PCR analysis, 0.1 μg genomic DNA was added to a 50-μl reaction mixture containing 1.5 mM each dNTP, 50 mM Tris–HCl, pH 9, 15 mM ammonium sulphate, 7 mM $MgCl_2$, 0.05% Nonidet P-40, 0.5 U *Taq* polymerase (Anglian Biotec) and 500 ng each oligonucleotide primer. Amplification consisted of 30 cycles of 94 °C for 5 s, 65 °C for 30 s and 72 °C for 30 s in a Techne PHC-2 thermocycler. An 8-μl aliquot was electrophoresed on a 2% agarose–TBE gel. Primers for *Sry* were (5′–3′) TCATGAGACTGCCAACCACAG and CATGACCACCACCACCACCAA (indicated as triangles in Fig. 1) and for *Zfy-1*, CCTATTGCATGGACTGCAGCTTATG and GACTAGACATGTCTTAACATCTGTCC; myogenin primers corresponded to nucleotides 656–675 and 882–901 of the rat complementary DNA sequence[42]. PCR products were 441, 180 and 245 bp, respectively. Testes were processed for histological examination as described in Fig. 2 legend.

?

How work?

The "ground state" of human development is a Female! Need ONE gene to switch development into a Male

∴ Eve had to have lost a Y chromosome from Adam's Rib! or Eve gave rise to Adam!

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Mice Can Be Engineered to be Obese!

nature

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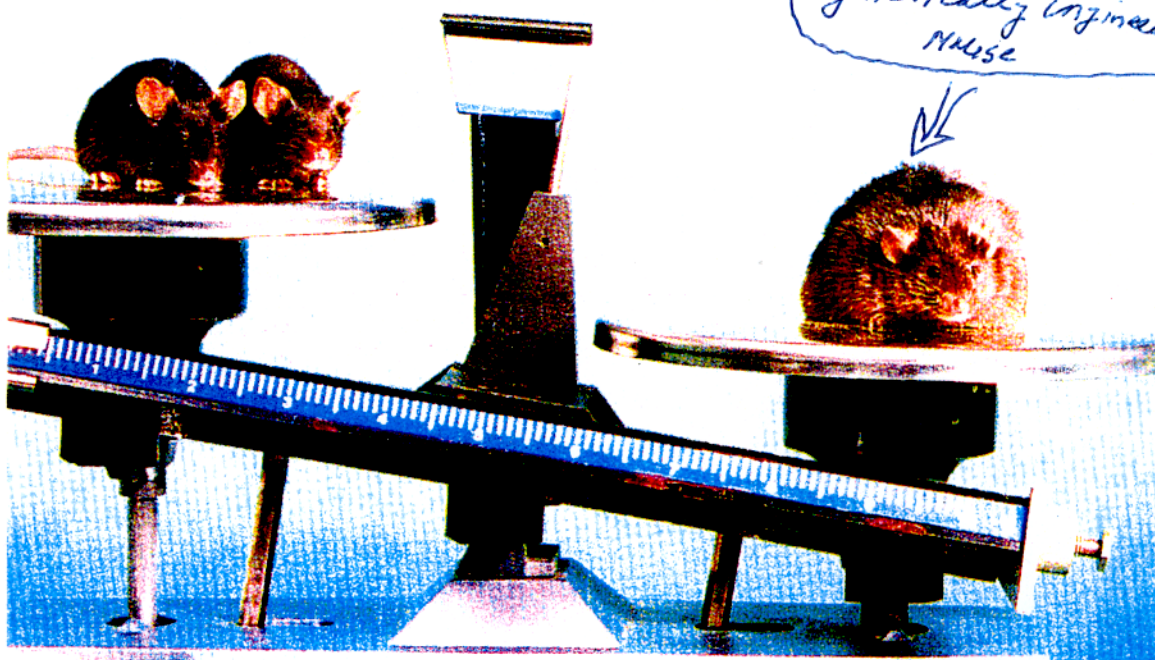
Volume 372 No. 6505 1 December 1994 $8.50

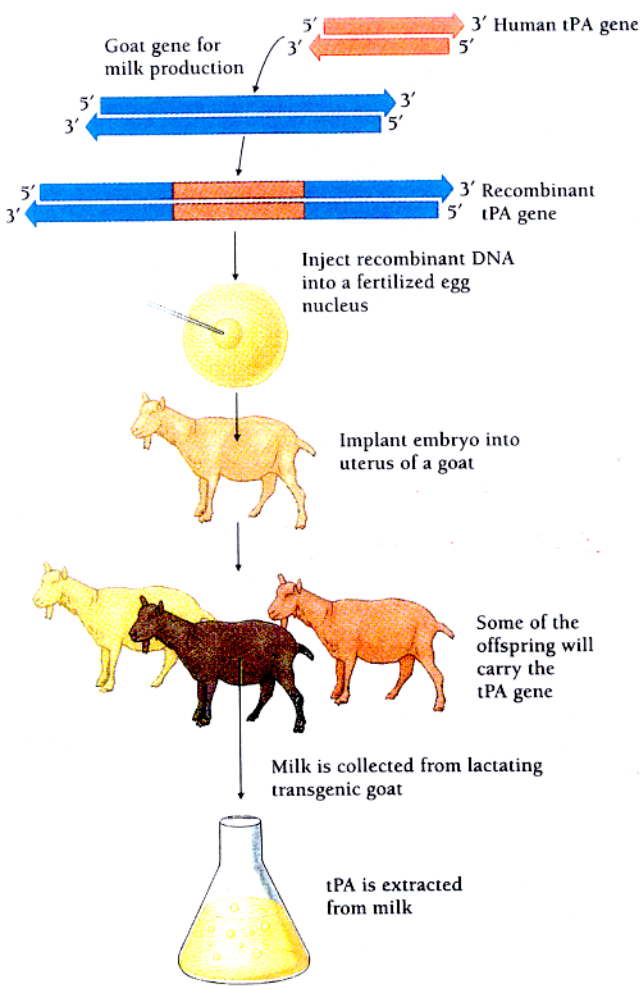
Genetically Engineered Mouse



Mouse weighed down by genetics

Implications?

Goats CAN Be TURNED into "FACTORIES" to PRODUCE Medically-IMPORTANT Human Proteins

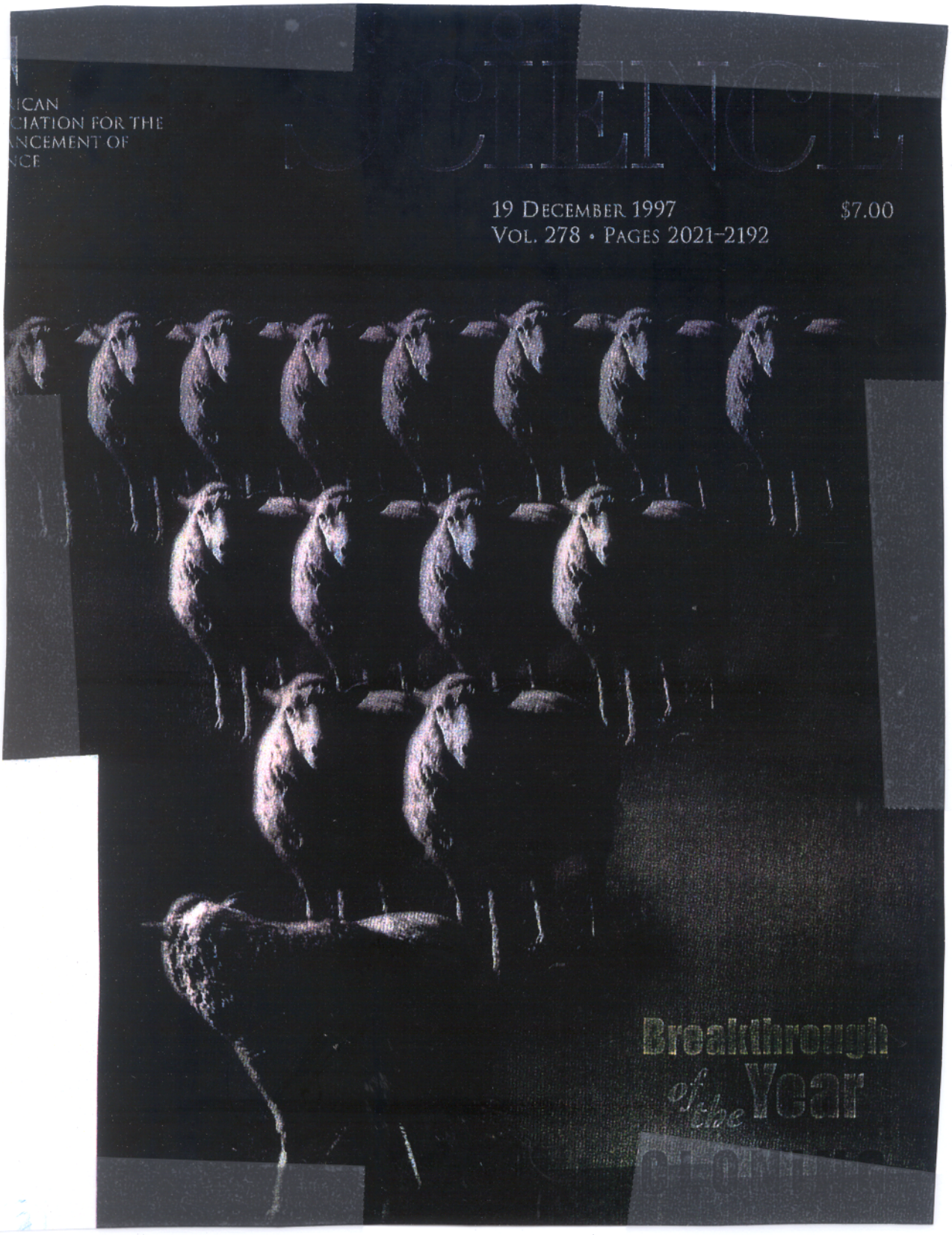


Natural?

Any Different than Breeding Cattle? Cows? For maximum "food" production?

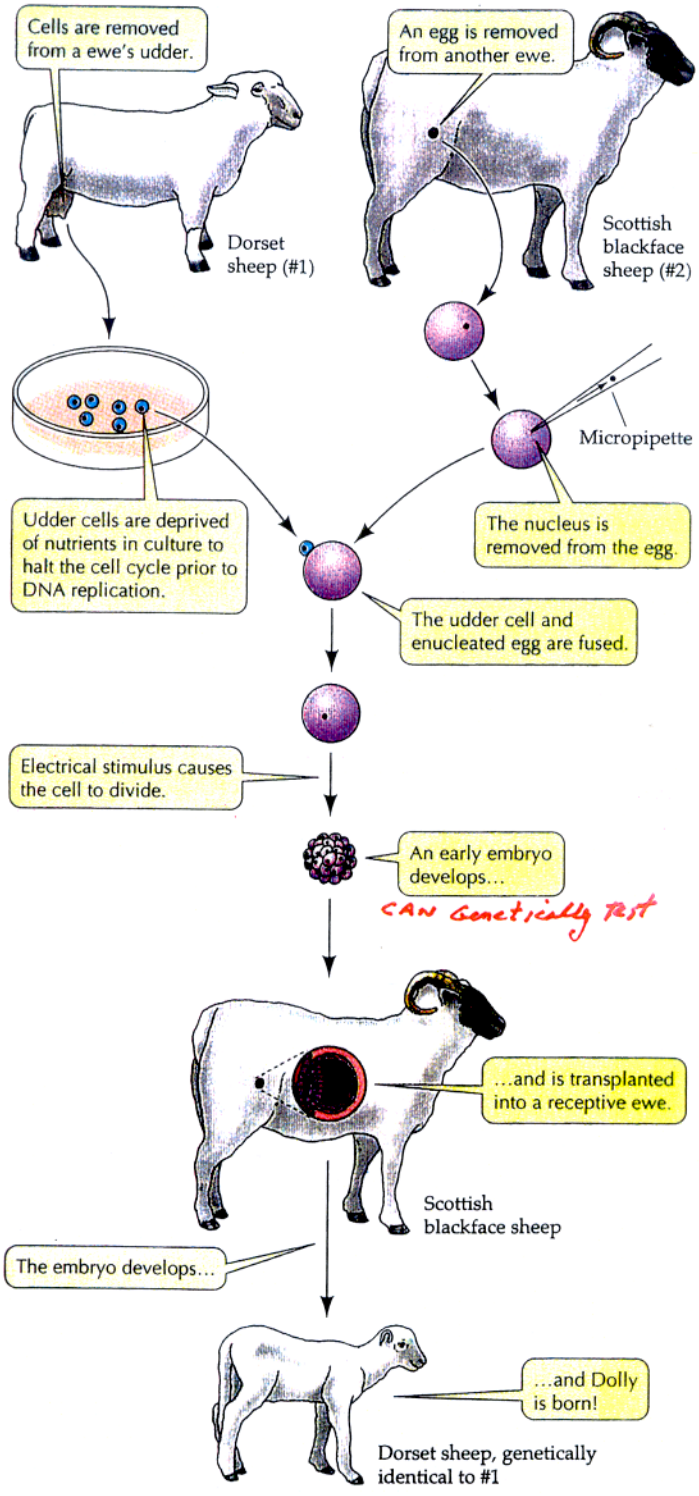
tPA = tissue PLASMINOGEN activator
↳ dissolves blood clots & prevents heart attacks!

We are Also in the Age of MAMMalian Reproductive Biology AND CLONING!



combined with Genetic Engineering & Genomics!!

The Genetically Engineered Goat (or Sheep) CAN BE Cloned!



15.4 Cloning a Mammal Dolly, a cloned sheep resulting from this experiment, has the same genes as the ewe that donated the udder cells.

∴ no need to pass tPA gene from generation to generation by breeding!

Implications?

?

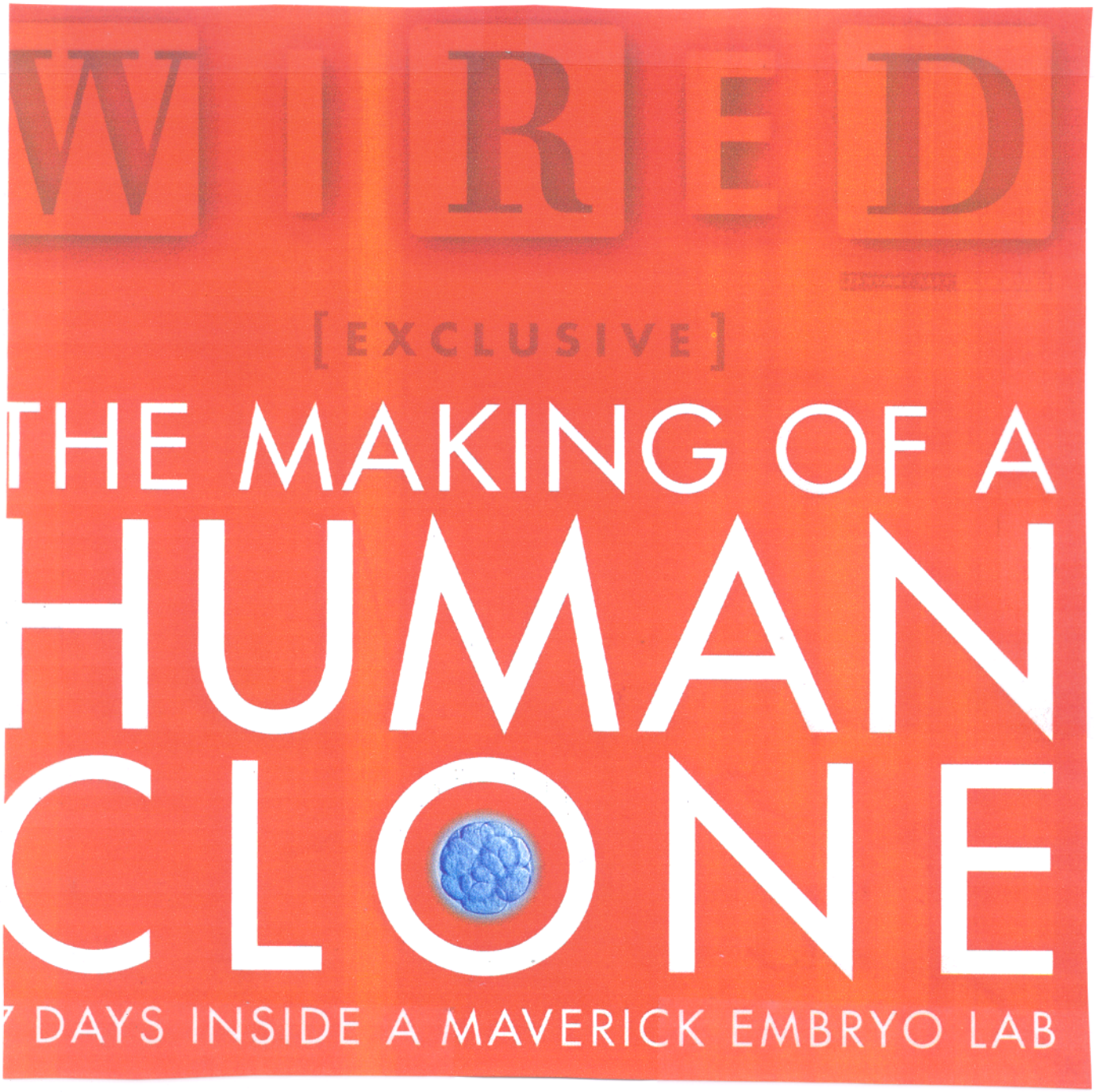
DOLLY the Sheep

ORGANISMS THAT HAVE BEEN CLONED

1. Plants
2. Frogs
3. Mice
4. Rats
5. Sheep (Dolly)
6. Goats
7. Mules
8. Cattle
9. Horses
10. Pigs
11. Cats (cc - copy cat)
12. Monkeys (ANDi - inserted DNA)
13. Humans ?!

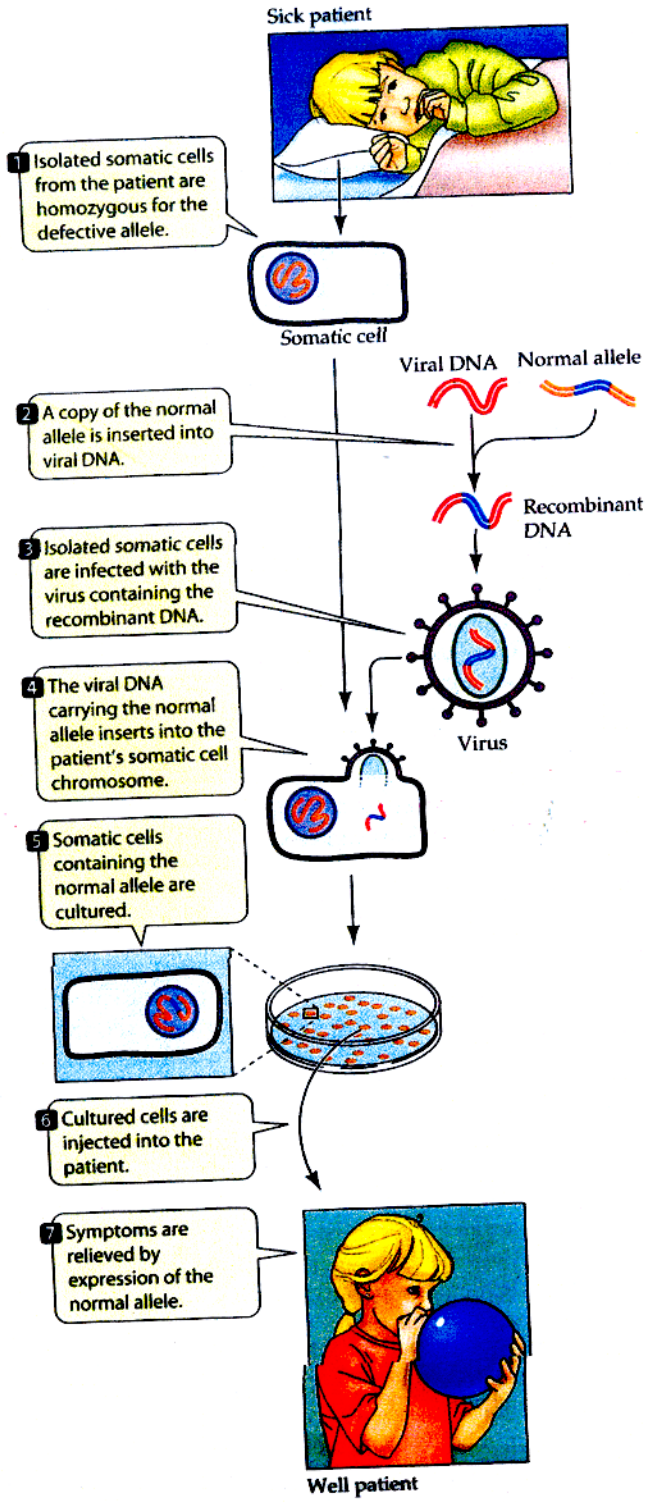
Leading to Ethical Issues & new opportunities (e.g., curing human disorders, saving endangered species, etc.)

What About Human cloning?



Embryos? Adult Human Beings?
Genetically Engineer Cloned Human Embryos?
Is a "clone" human?

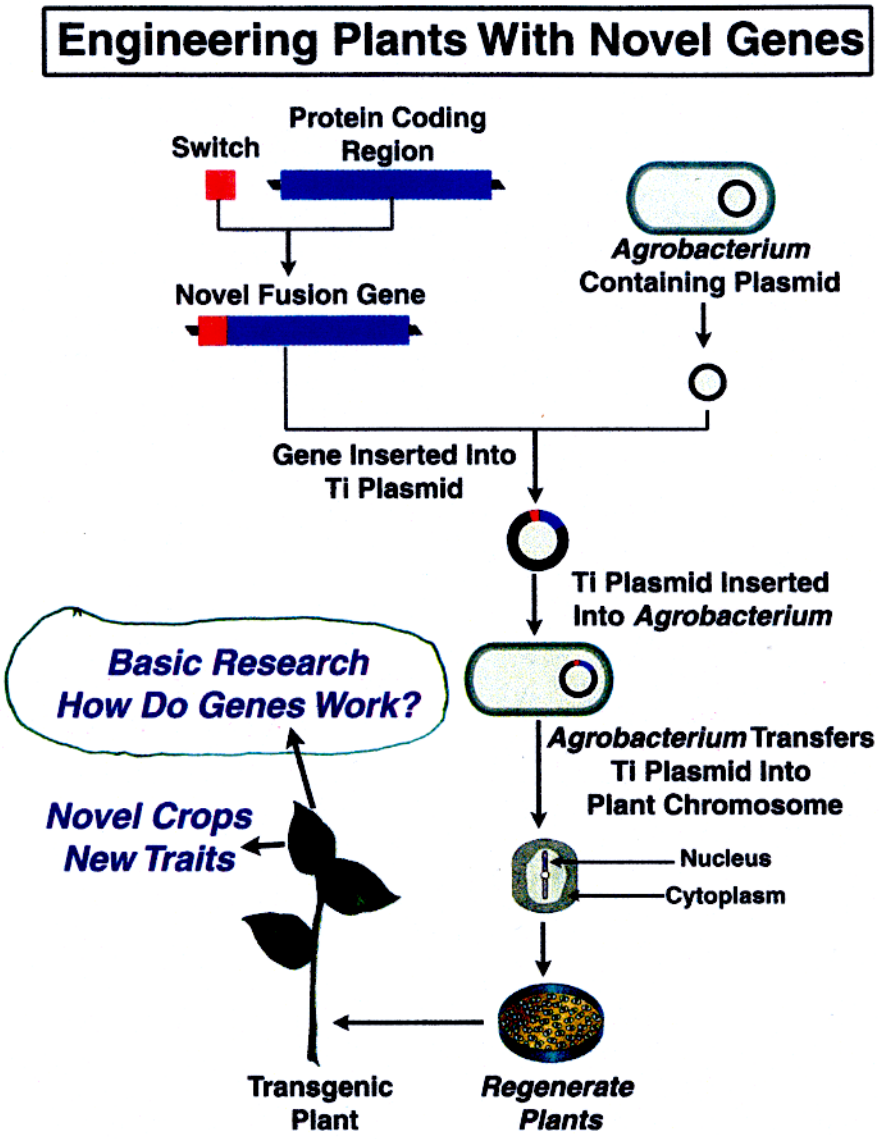
CORRECTING Genetic Defects in Humans using Genetic ENGineering



HUMAN Gene Therapy is a 10-year-old Technology

CORRECTING SCID - Severe Combined IMMUNO Deficiency

Even "Super Plants" Can Be Genetically Engineered - GMOs for short!



What issues & possibilities arise as a result of this technology?

Genetic Engineering of Plants is a TWENTY-YEAR-OLD Technology!!!

Genetically Engineered Traits

Improving Pest and Weed Management

- Herbicide tolerance
- Virus resistance
- Insect resistance
- Bacterial resistance
- Fungal resistance

→ Chemical Free Crops

Improving Agronomic Properties

- Altering cold sensitivity
- Improving water stress tolerance
- Improving salt tolerance
- Improving nutrient uptake

→ Crops in Desert & Drought

Improving PostHarvest Qualities

- Delay of fruit ripening
- Delay of flower senescence/timing
- High-solids tomatoes
- High-starch potatoes
- Sweeter vegetables

→ Longer Lasting Crops

Improving Plant Breeding

- Male sterility; production of hybrid seeds

Improving Nutritional Quality

- High-methionine and high-lysine seeds
- Forage rich in sulfur amino acids
- Vitamin-enriched grains
- Allergen-free seeds/grains

→ Healthier Crops

Molecular Farming

- Oils
- Starch
- Plastic
- Enzymes, Pharmaceuticals

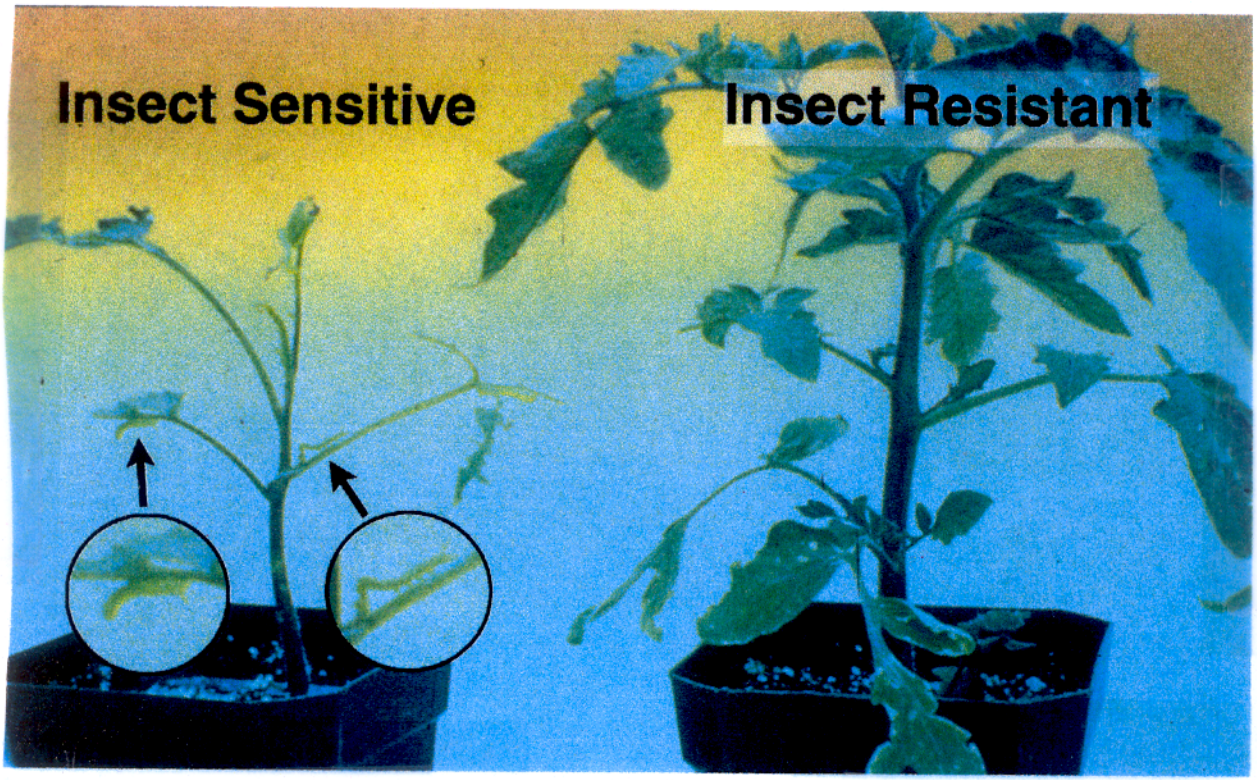
→ Crops as Factories & Vaccines

Detoxifying Contaminated Soils

→ Crops to Clean Environment

Similar technology is used to make drugs such as insulin and growth hormone.....

Genetic Engineering For Insect Resistance



How can this technology help improve the environment?