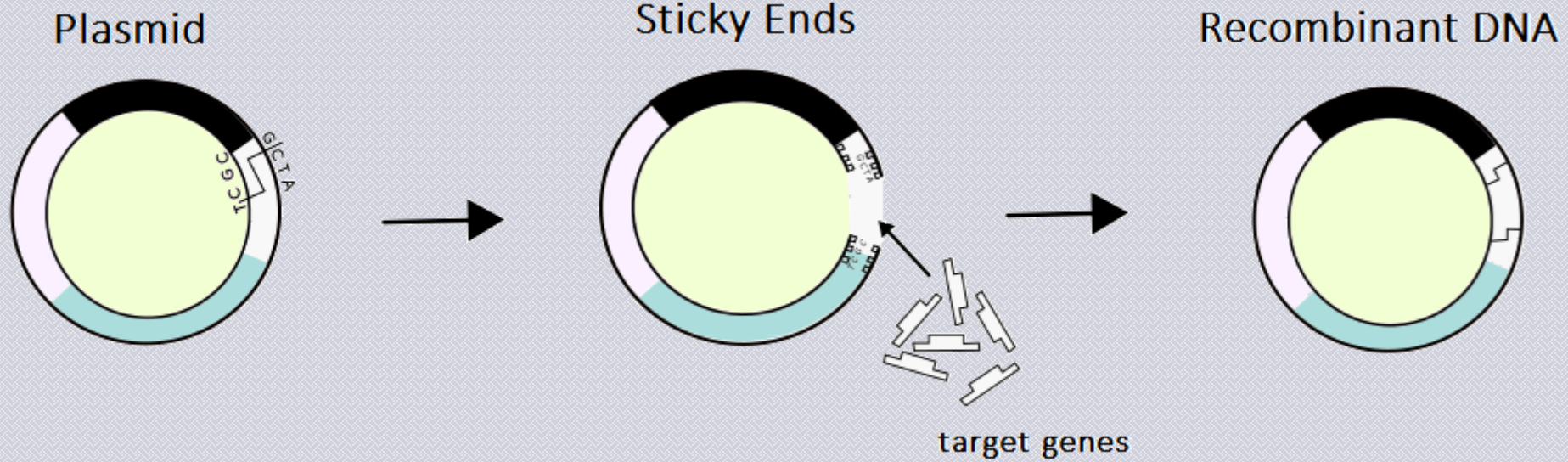


Recombinant DNA

by Martin Perez Comisso
& Esmerelda Parker

HSD 501
July 8th, 2017

Recombinant DNA



Applications

- human insulin
- agriculture
- gene therapy



human insulin

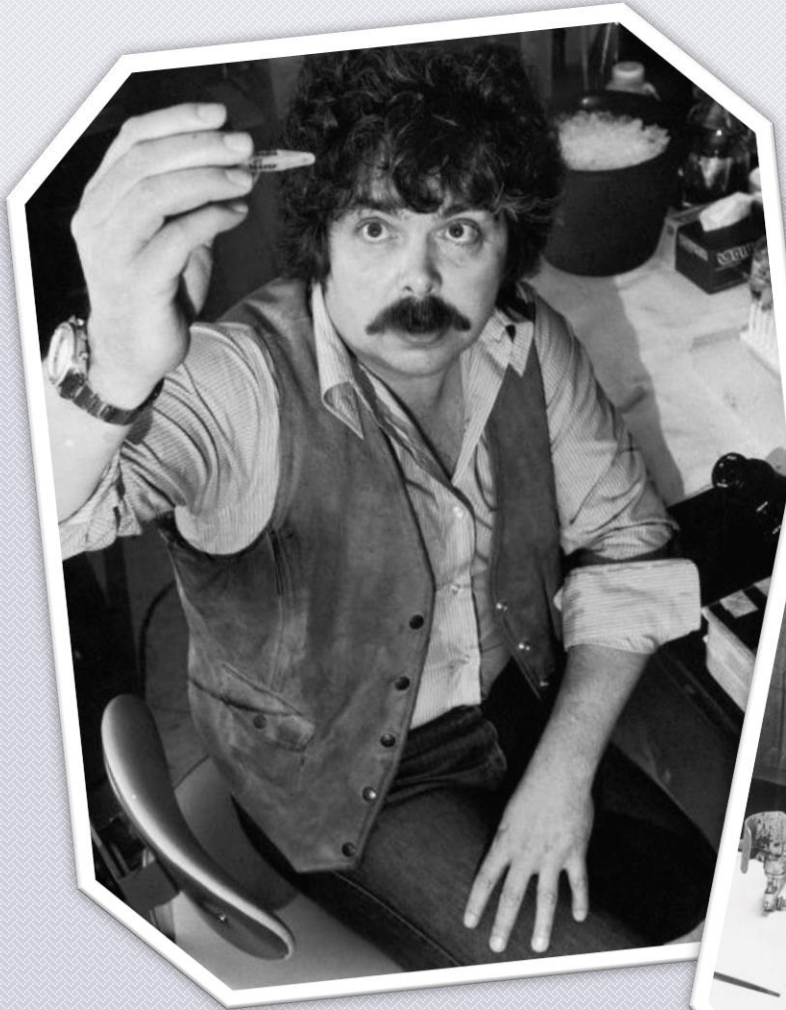
Key Players

Paul Berg



Maxine Singer

Key Players



Herbert Boyer



Stanley Cohen

Genentech

Stanford

Scientific Concerns

harmless microbes → human pathogens

- antibiotic resistant
- toxin producing
- cancer causing

SCIENCE

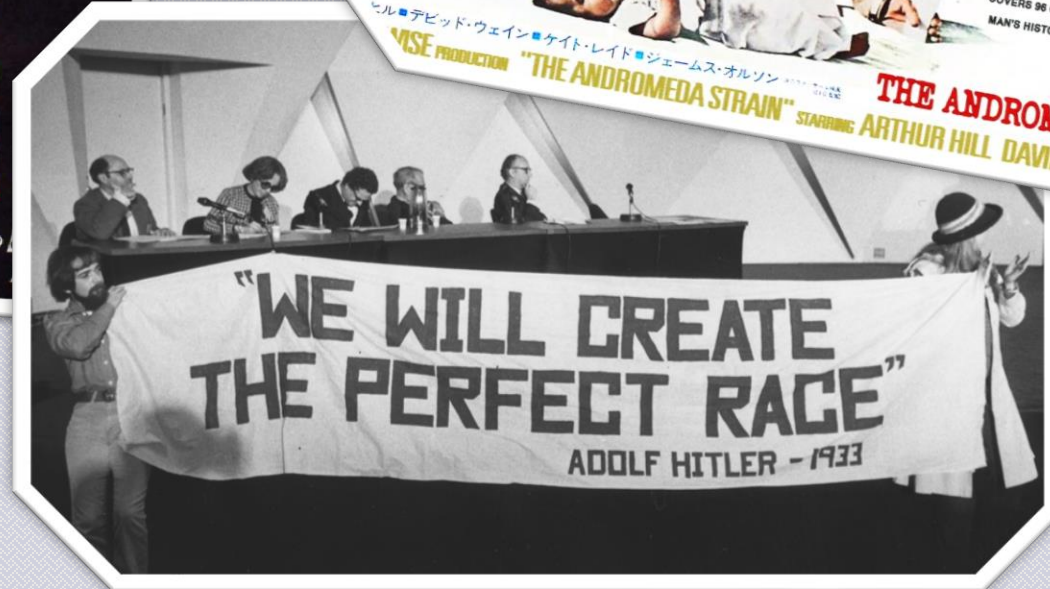
26 July 1974

Vol. 185, No. 4148

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

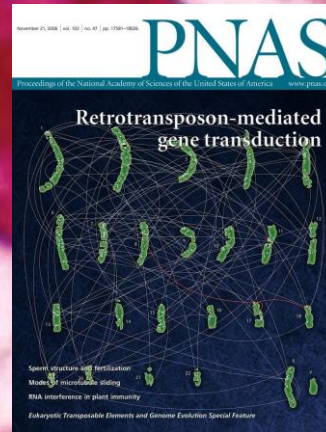


Public Fears



Moratorium of 1974

The committee was particularly concerned that introduced genes could change normally innocuous microbes into cancer-causing agents or into human pathogens, resistant to antibiotics or able to produce dangerous toxins.



Asilomar



Asilomar Conference
Feb 15th, 1975

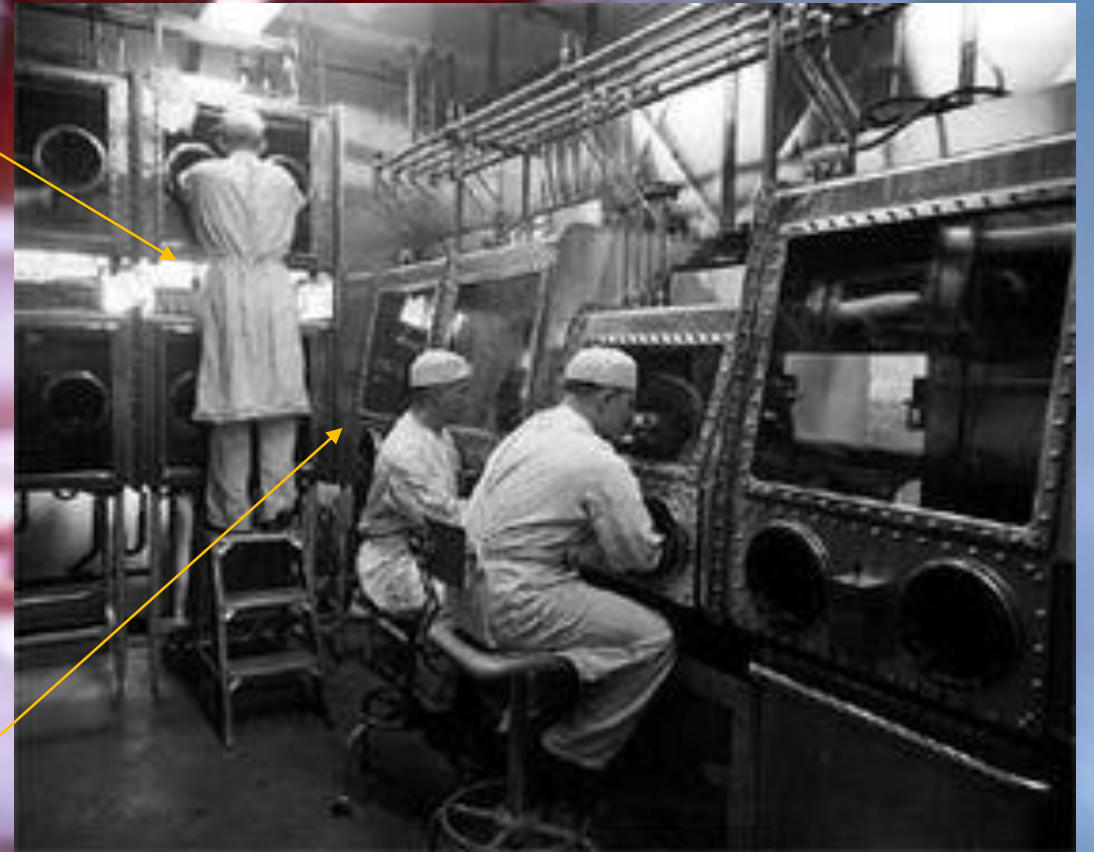
Maxine Singer,
Norton Zinder,
Sydney Brenner,
David Baltimore
Richard Roblin

Paul Berg (Stanford) + 140...



Physical

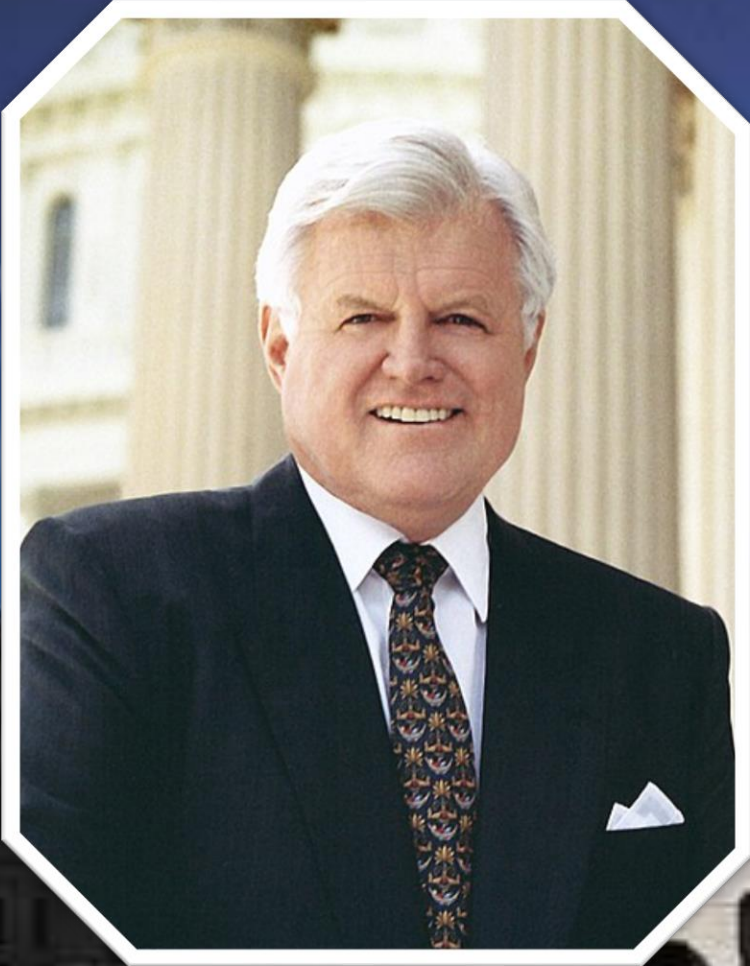
Biological



Containment

Berg, P., Baltimore, D., Brenner, S., Roblin, R. O., & Singer, M. F. (1975). Summary statement of the Asilomar conference on recombinant DNA molecules. *Proceedings of the National Academy of Sciences*, 72(6), 1981-1984.

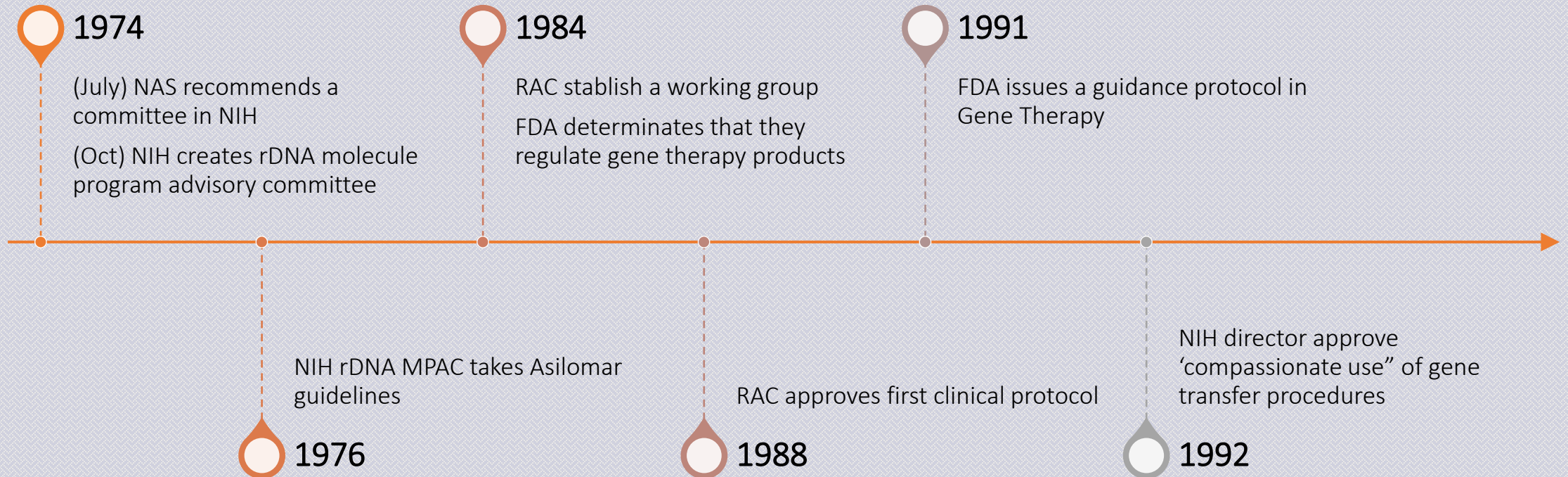
Legislative Reaction



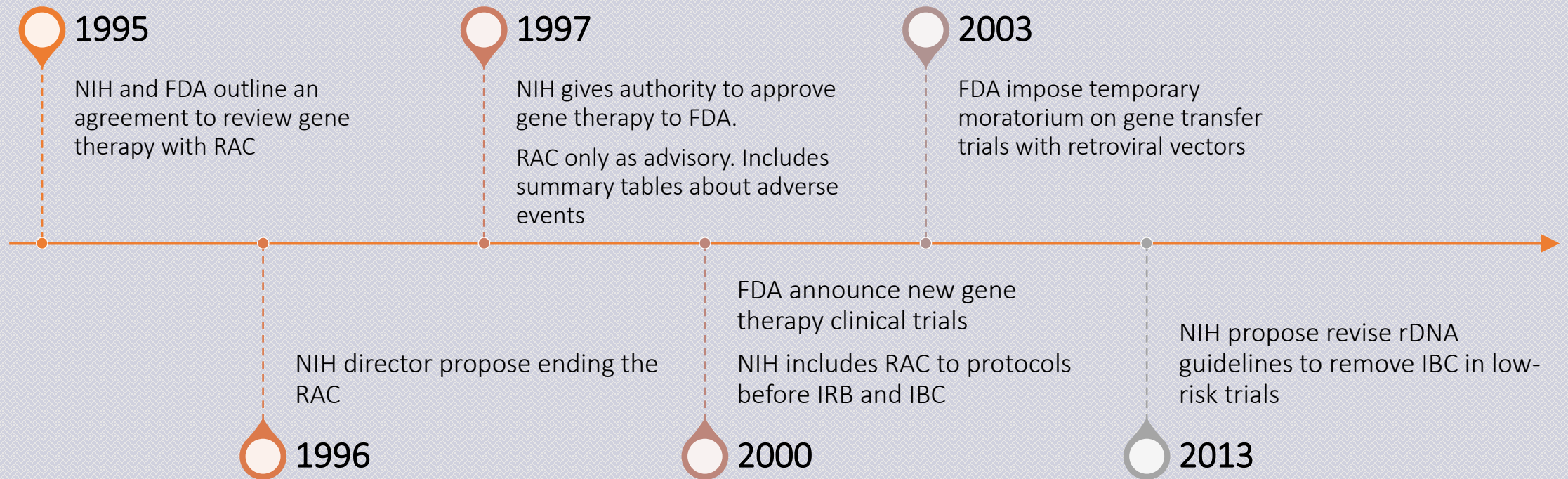
“The factors under consideration [at Asilomar] extend far beyond technical competence. In fact they were making public policy. And they were making it in private” (quoted in Culliton 1975, 1188)

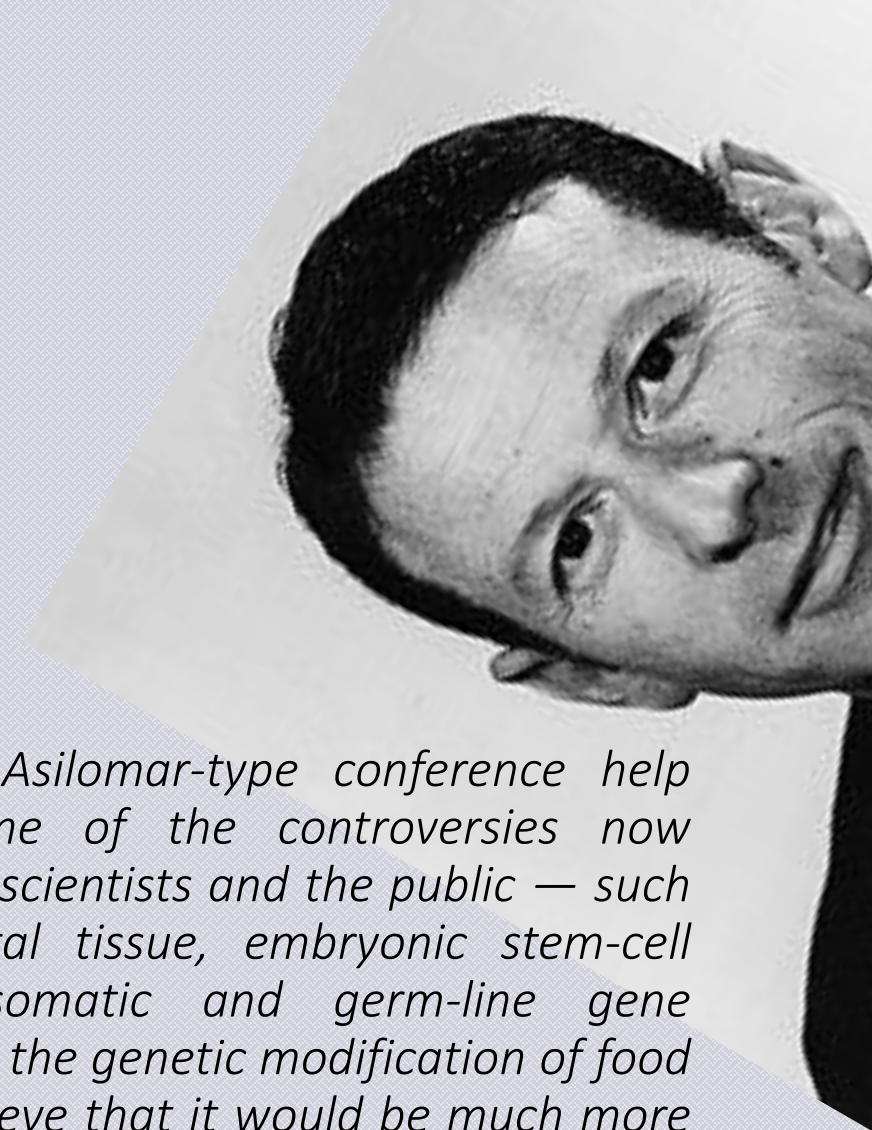
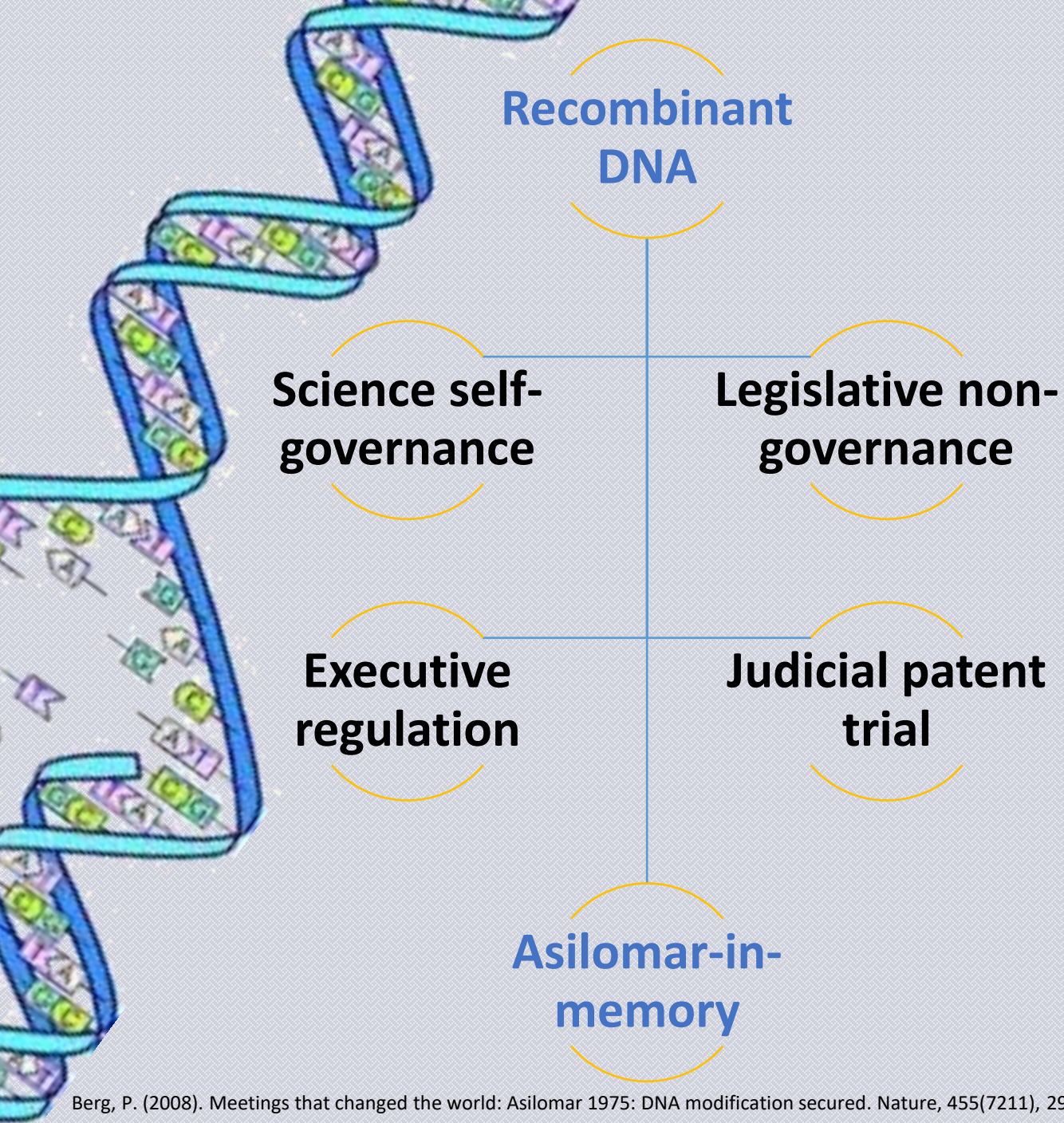
Senator Edward “Ted” Kennedy

Executive Governance After Asilomar



Executive Governance After Asilomar





“Could an Asilomar-type conference help resolve some of the controversies now confronting scientists and the public — such as over fetal tissue, embryonic stem-cell research, somatic and germ-line gene therapy and the genetic modification of food crops? I believe that it would be much more difficult to organize such an event today.”

Paul Berg