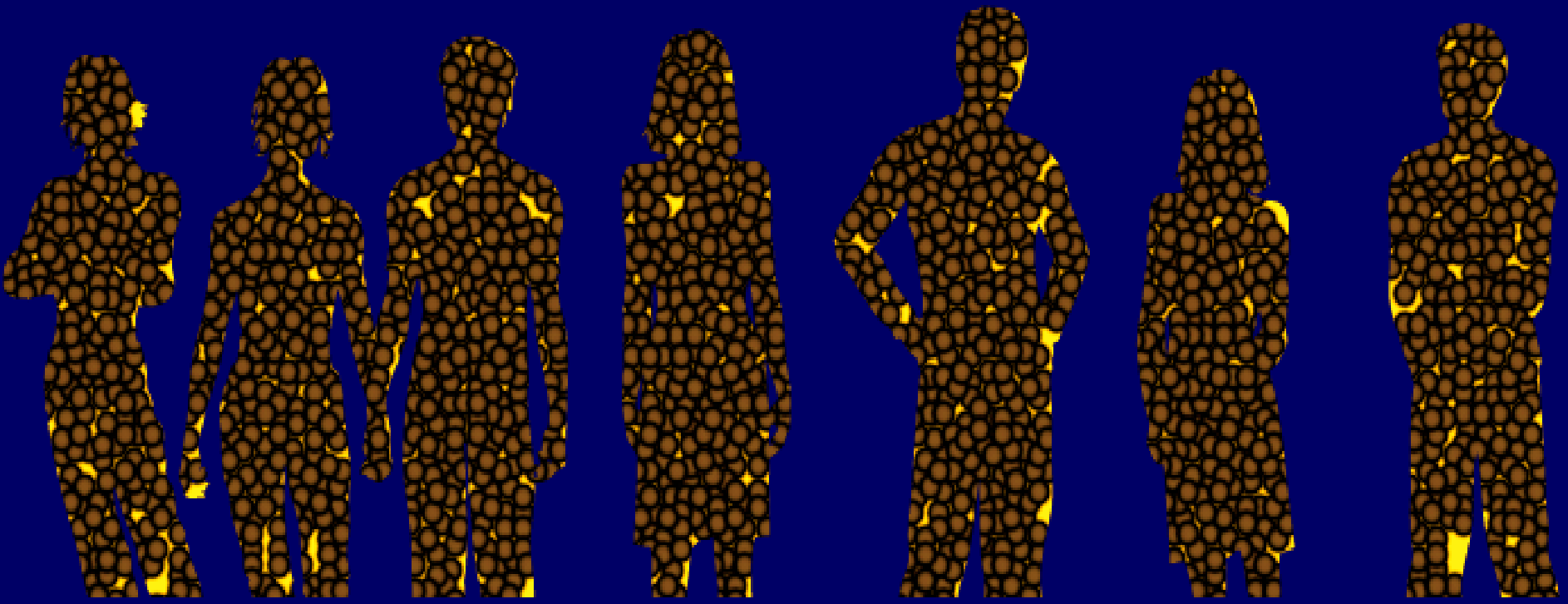
Public Health and Genomic Medicine:
How do we get from here to there?



Key Areas

- Enhancing genomic literacy for all health care practitioners, and their patients (S. Cox)
- The promise of genomics in clinical practice: Separating fact from fiction (D. Koeller)
- Create policy that wil integrate genomics into public health designed to ensure that the public is protected from a spectrum of possible ethical, legal, and social issues
- (C. Bradley)

Oregon House Bill 2348

Creates a Task Force on Future of Public Health Services to study regionalization and consolidation of public health services in Oregon in order to make recommendations for legislation.

Gregor Mendel (1900)

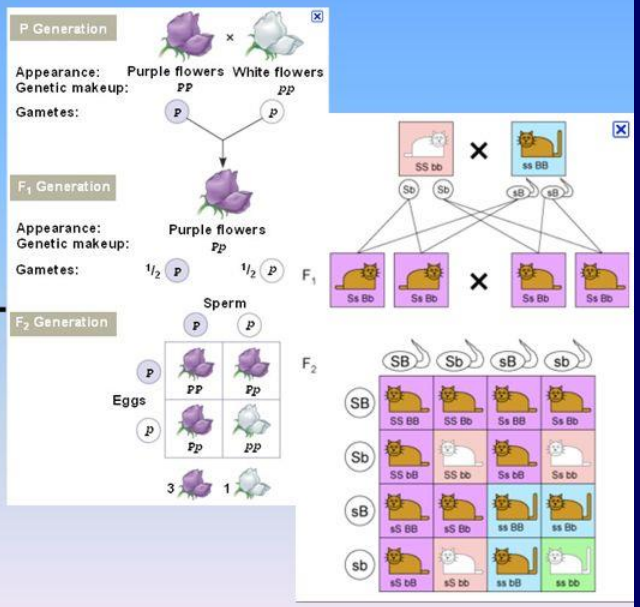
MENDEL'S 2 LAWS:

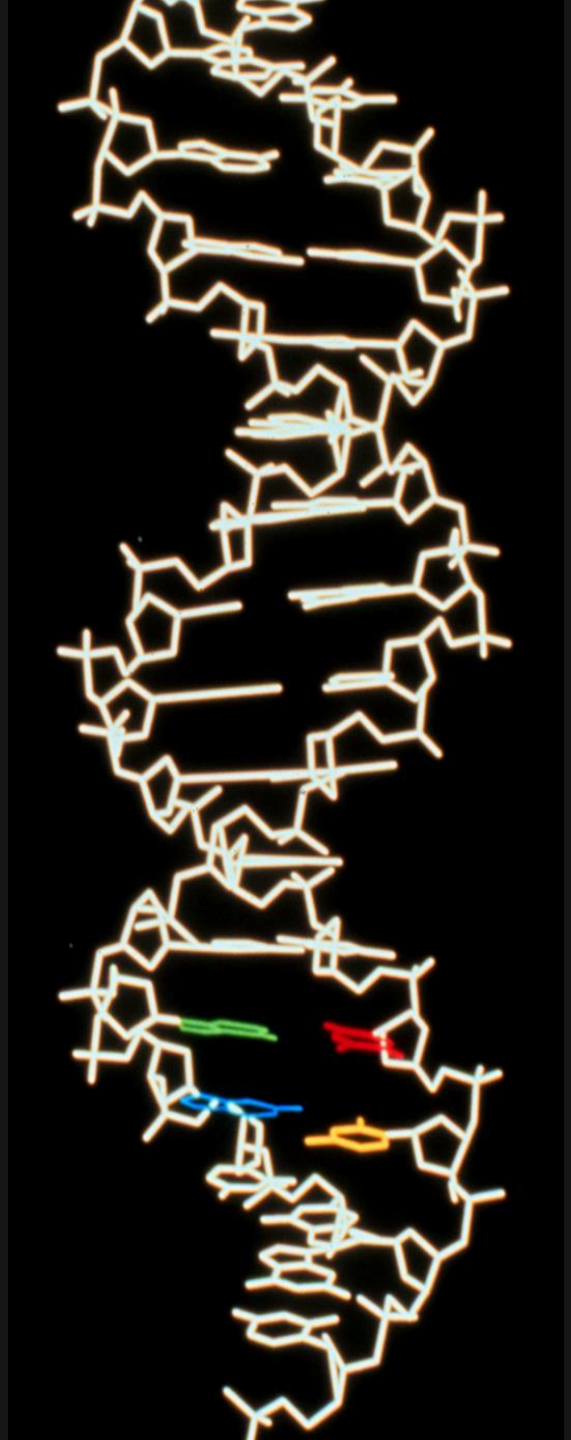
#1 LAW OF SEGREGATION:

- A pair of factors is segregated, or separated, during the formation of gametes.

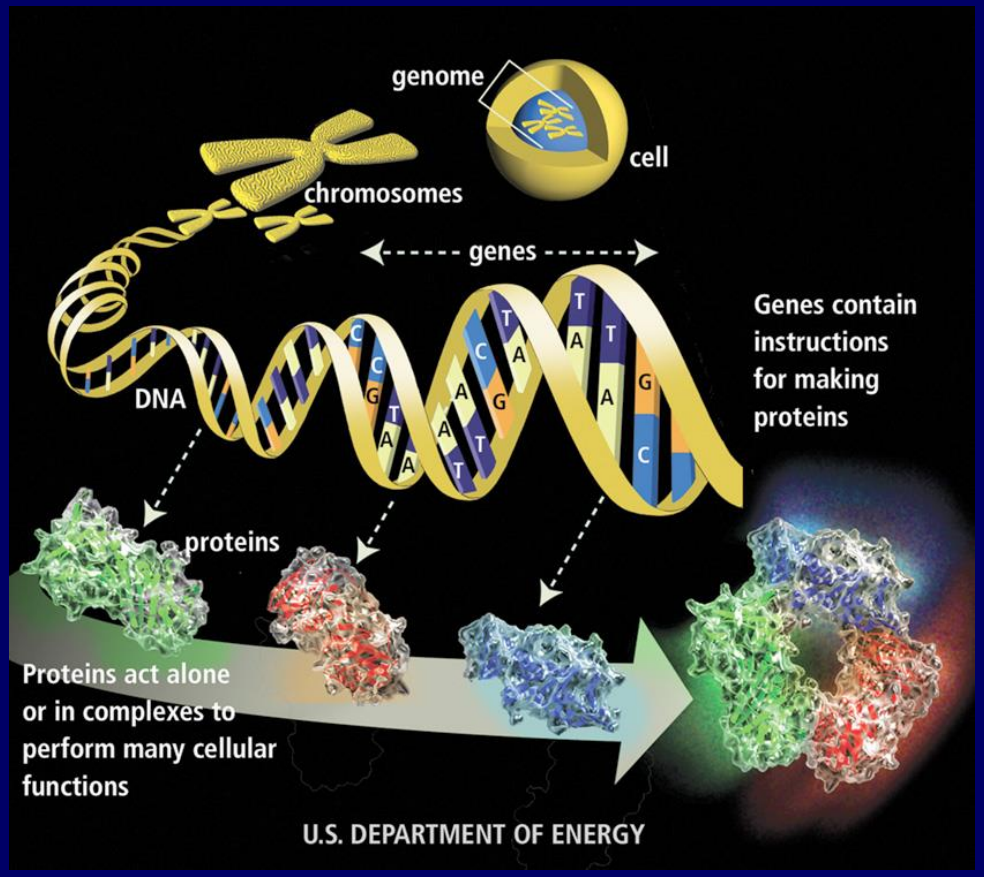
#2 LAW OF INDEPENDENT ASSORTMENT:

- Factors for different characteristics are distributed to gametes independently.

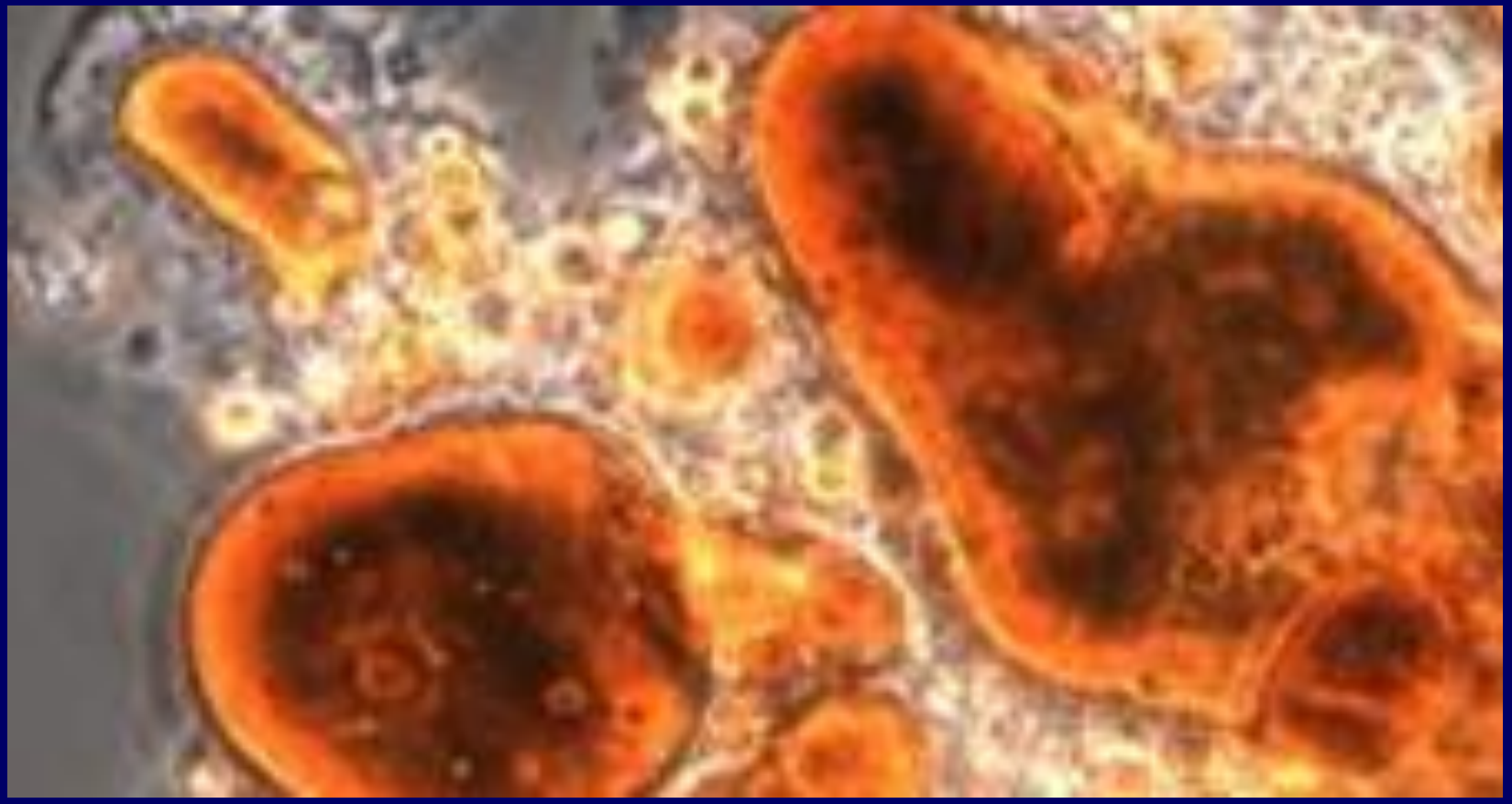




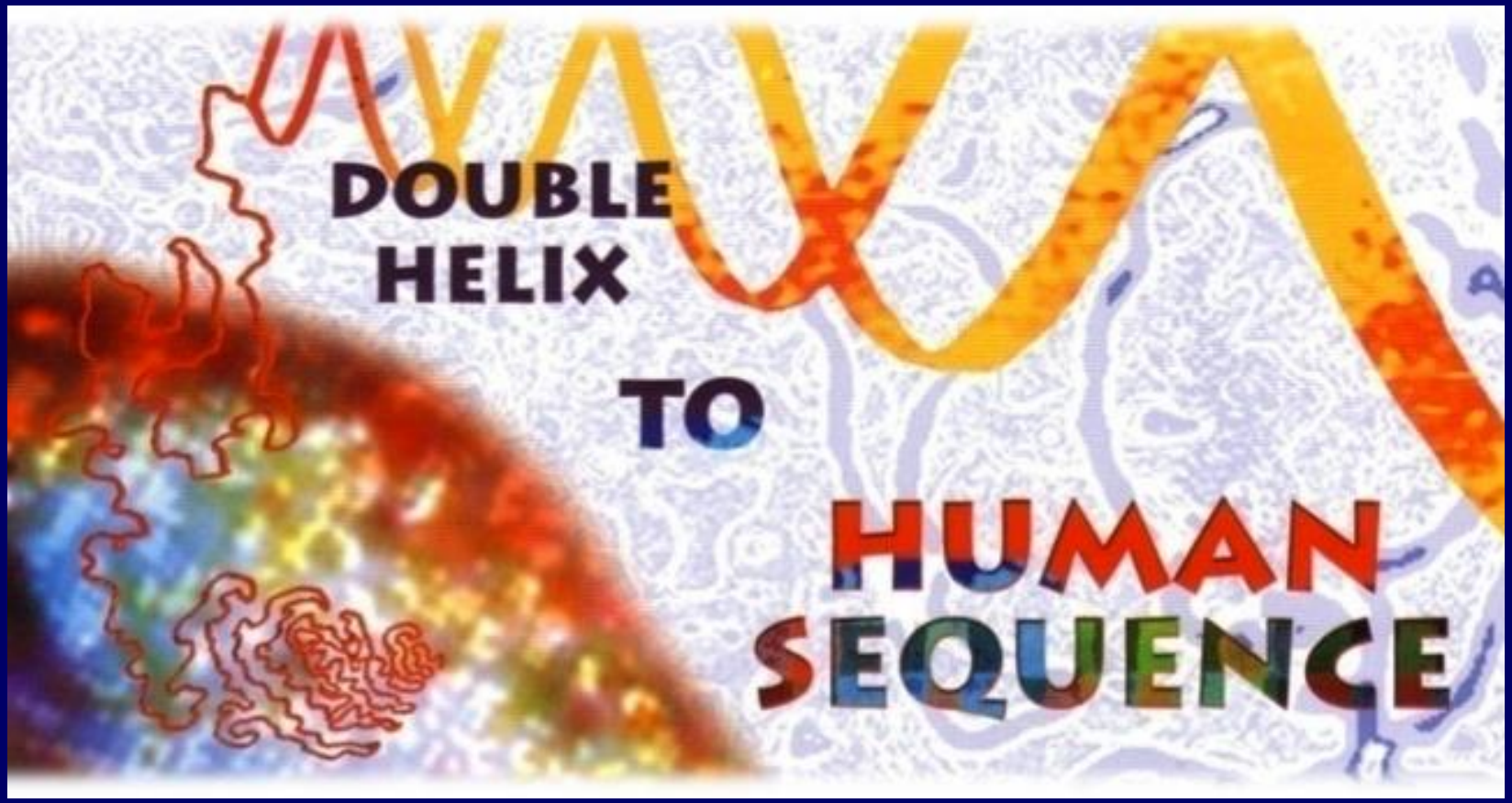
“The Central Dogma” of molecular biology (1957)



Genetic Engineering (1970)



Human Genome Project(1990)



~3,000 bp (0.0001%) of Human Genome Sequence

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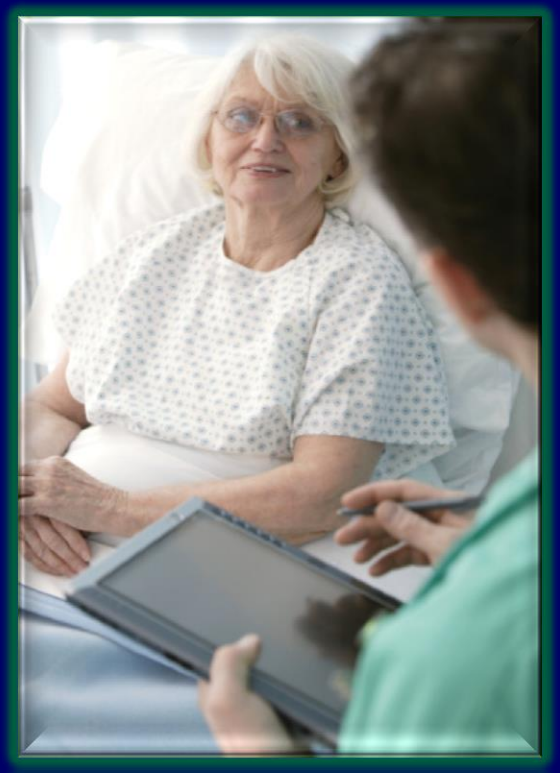
Genomic Medicine (2005)

Healthcare tailored to an individual based on genomic information



Genomics Challenge for the Healthcare Profession

"The biggest bottleneck to the realization of the genomics revolution in health care is the capacity of health professionals to make meaningful use of these new tools"

--E. Green, Director NHGRI (NIH)

Core Functions of Public Health

- Assessment: Monitor how genomic factors are contributing to health outcomes
- Policy Development: Establish policies and guidelines that support the appropriate use of genomics to improve health and prevent disease
- Assurance: Evaluate the usefulness of genomics to improve the public's health, ensure a competent health workforce that is knowledgeable in genomics, and make genetic services available.