

# Presentation by Pamela Sankar

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on Race, Medicine, and Public Policy

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# Does Race Exist? I

Race as an explanation for human biological variation is dead.

Alan H. Goodman, 2004

# Does Race Exist? II

All pharmacogenetic polymorphisms studied to date differ in frequency among ethnic and racial groups.

Source: Evans, Science v286 n5439, 1999

Race is a social construct,  
not a scientific classification.

Source: Schwartz, NEJM v344 n18, 2001

# Does Race Exist? III

I am a racially profiling doctor.

Sally Satel NYT

Nobody would make clinical decisions based on a racial profile. Race is a very crude predictor of any sort of differential response to medication.

Bruce Pollock UPitt, 2002

# Does Race Exist? IV

Our results show that this is not the case, and we see no reason to assume that “races” represent any units of relevance for understanding human genetic history.

Source: Serre, Genome Research v14, 2004

“Using a homogenous sampling strategy and a model in which allele frequencies in the different inferred populations are allowed to be independent, we find a stable and reproducible representation of human genetic diversity in which the extent of admixture between individuals in Eurasia and the Americas changes continuously with a geographical distance without any major discontinuities. ....

In light of these results, and in a agreement with extensive studies of classical genetic markers (Cavalli-Sforza et al 1994), it seems that gradual variation and isolation by distance rather than major genetic discontinuities is typical of global human genetic diversity.”

Source: Serre, Genome Research 14, 2004

“Comparing just the SNPs that are polymorphic in African- and European-Americans ( $n = 50,736$ ) and defining a common SNP as one with a minor allele frequency of 10% in one or both populations, we found 20,409 common SNPs (7,776 common only in African-Americans and 2,802 common only in European-Americans). Of these SNPs, 4,704 (23.1%) were private (that is, population-specific) in African-Americans, and 585 (2.9%) were found only in European-Americans. Only 9,831 (48%) SNPs were common in both populations, and of these SNPs, 4,015 (41%) had significantly different ( $|Z| > 1.65$ ,  $p < 0.05$ ) allele frequencies.”

Source: Bamshad et al, Nature Reviews Genetics 5, 2004

# Does Race Exist? V

The MeSH descriptor Racial Stocks, and its four children (Australoid Race, Caucasoid Race, Mongoloid Race and Negroid Race) have been deleted from MeSH in 2004 along with Blacks and Whites. Race and ethnicity have been used as categories in biomedical research and clinical medicine. Recent genetic research indicates that the degree of genetic heterogeneity within groups and homogeneity across groups make race per se a less compelling predictor. 2003 NLM Technical Bulletin

# MEDLINE 2004

## **Race**

Continental Population Groups

**Negroid, Mongoloid, Caucasoid, Australoid**

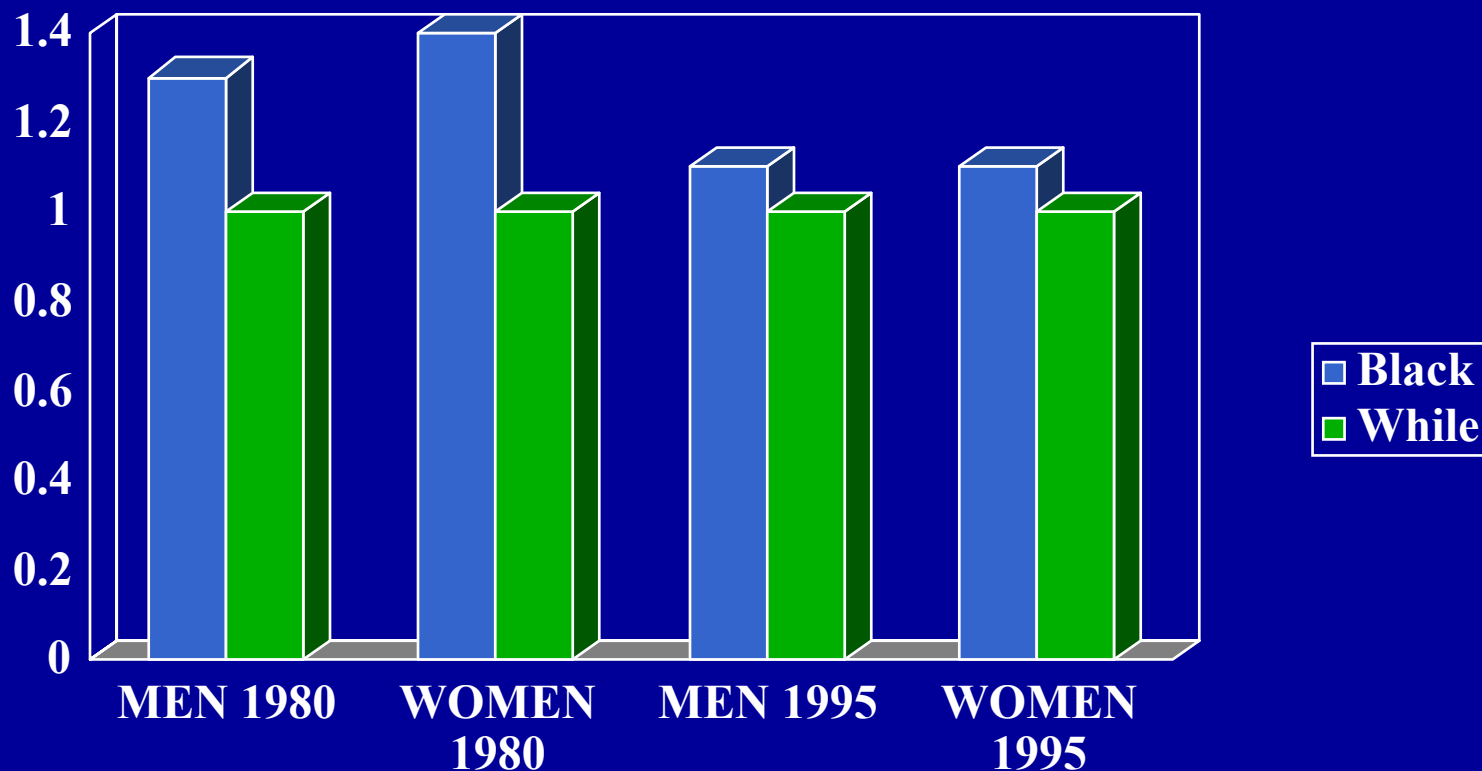
African Continental Ancestry Group

Asian Continental Ancestry Group

European Continental Ancestry Group

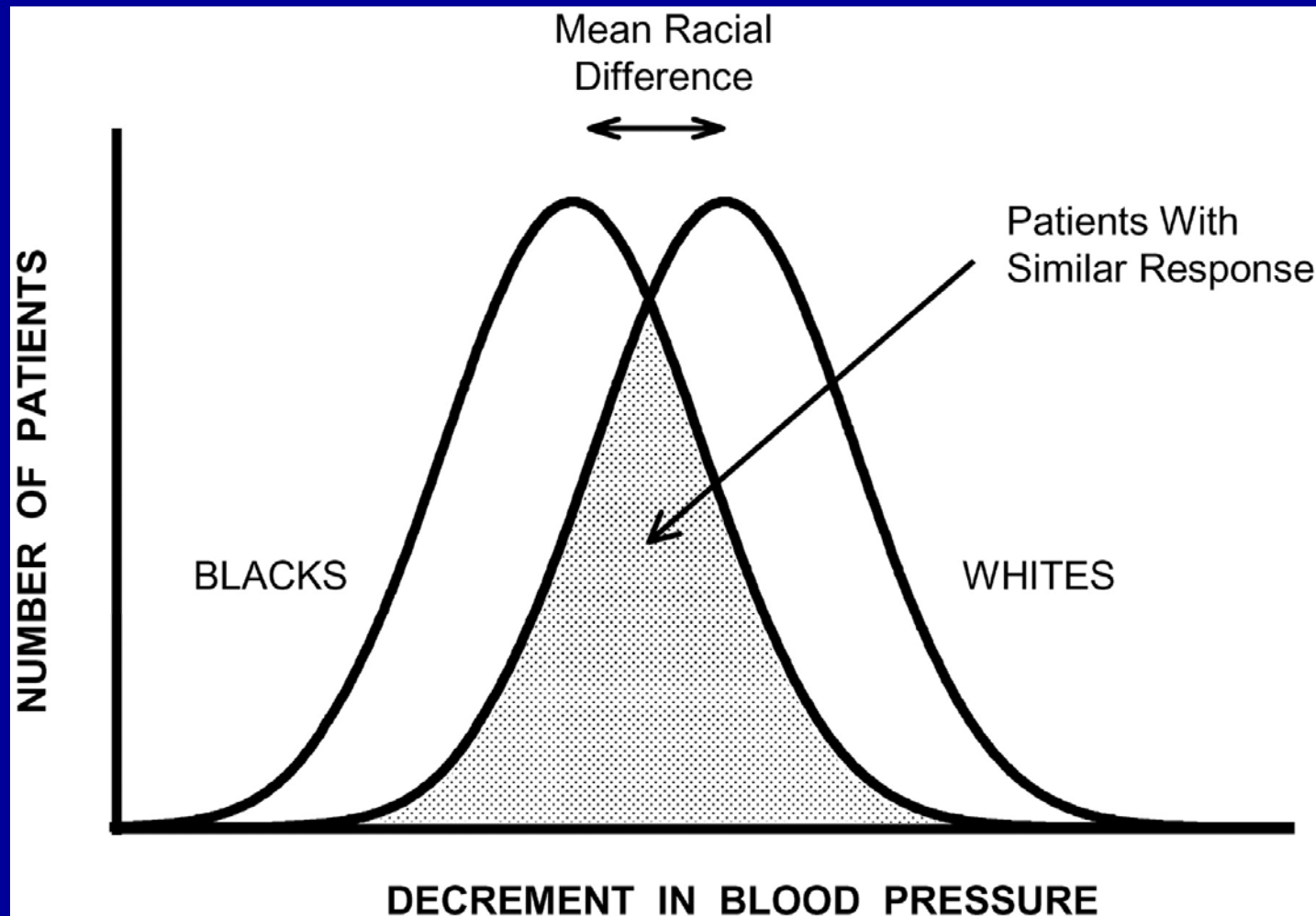
Oceanic continental Ancestry Group

# Black:White Death Rate Ratio Comparison 1980 - 1995



Source: CDC MMWR v47 n30, August 1998, p635

# Decrement in Blood Pressure Among Whites and Blacks After Administration of Antihypertensive Drug



# Authors' Financial Links with NitroMed

(NEJM 351, 20)

<b>Author</b>	<b>Financial Tie</b>
JN Cohn	Patent Licensee, Consulting, Paid Advisor
P Carson	Consulting Fees, Advisory Board
K Adams	Research Support
R D'Angostino	Consulting Fees (through Target Health)
M Sabolinski	Employee and Stockholder
AL Taylor	Research Support
M Worcel	Employee and Stockholder
C Yancy	Consulting / lecture Fees
S Ziesche	Research Support

## ACE inhibitors

### *Indications and Usage:*

In controlled clinical trials ACE inhibitors have an effect on blood pressure that is less in black patients than in non-blacks.

Physicians' Desk Reference, 2003

How a Drug Becomes “Ethnic”:  
Law, Commerce, and the Production of  
Racial Categories in Medicine

Jonathan Kahn, J.D., Ph.D.

Yale Journal of Health Policy, Law and Ethics IV:1, 2004