Anthropology 455

Human Biology of the Pacific
Kuru

Kuru: “Laughing Disease”

- South Fore, Okapu Subdistrict, Goroka, E. Highlands, Papua New Guinea

Cannibalism & Kuru
Prion Disease
- Anthropology
- Gajdusek: Nobel Prize 1967

History of Kuru
1957
Carleton Gajdusek
Vincent Zigas
Transmission?

Laboratory Studies
- William Hadlow 1959
- Scrapie
Transmissible Spongiform Encephalopathies (TSEs)

Prion diseases

Misinterpretations of Kuru

- genetic disorder?
- slow virus?

Prion Diseases

Prusiner (Nobel Prize, 1997)

Prion: infectious particle that causes neurodegenerative disorders
protein, no nucleic acids "proteinaceous infectious particle"
mutated form of protein
Prion Diseases

- Transmissible Mink Encephalopathy
- Chronic Wasting Disease
- Feline Spongiform Ecephalopathy (mad cat disease)
- Exotic Ungulate Encephalopathy
- German-Straussler-Scheinker Syndrome (GSS)
- Fatal Familial Insomnia

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Prion Diseases

- Bovine Spongiform Encephalopathy (BSE) (mad cow disease)
- Scrapie in sheep and goats
- Chronic Wasting Disease in deer and elk

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Human Prion Diseases

- Creutzfeldt-Jakob Disease (CJD)
- Gertsmann-Straussler-Scheinker syndrome
- Fatal Familial Insomnia (FFI)
- Kuru
- Variant Creutzfeldt-Jakob Disease
Prions
infectious, inherited, or sporadic
human PrP gene
Scrapie

Symptoms of Kuru
Stages of Disease
Treatment?

Creutzfeldt-Jakob Disease
neurological
degeneration, with
dementia, and a
progressive
cerebellar syndrome
including ataxia,
gait, and speech
abnormalities.
Bovine Spongiform Encephalopathy-BSE

"mad cow disease"
Development of Therapies
antigene therapies
Amyloidoses