

# A Special Message from University of Michigan Provost Nancy Cantor Regarding

Late last year, W.W. Norton & Co. published the book *Darkness in El Dorado*, by Patrick Tierney, which contained serious allegations regarding the 1960s research of the late geneticist James V. Neel, M.D., Ph.D., and anthropologist Napoleon Chagnon (Ph.D. 1966) among the Yanomami, an indigenous people of the Amazon River basin. Following is a statement, edited slightly for length, by University of Michigan Provost Nancy Cantor regarding the allegations and the findings of scholars who investigated those allegations. Supporting research was conducted by the offices of the Executive Vice President for Medical Affairs, the Vice President for Research, the General Counsel, and by faculty in the Medical School and the Department of Anthropology in the College of Literature, Science and the Arts. Complete text of Provost Cantor's statement can be found at:

<http://www.umich.edu/~urel/darkness.html>



The University of Michigan takes allegations of impropriety in research very seriously. When we first learned of the claims made in the book *Darkness in El Dorado*, we immediately convened a team of senior administrators, research staff and scholars to begin an internal inquiry. These individuals spent hundreds of hours over the course of several weeks conducting a careful and thorough review. Their efforts included interviews with individuals who had firsthand knowledge of the work of James Neel and Napoleon Chagnon, as well as medical experts on measles vaccination; review of James Neel's research logs and other published and unpublished writings; and research into other relevant literature and published materials.

The evidence uncovered by our review supports the conclusion that the claims are false. We are satisfied that James Neel and Napoleon Chagnon, both among the most distinguished scientists in their respective fields, acted with integrity in conducting their research, and that their medical care of the Yanomami and their attempts to halt the spread of a pre-existing measles epidemic through vaccination were humane, compassionate and medically appropriate.

We believe that Tierney did not consult important original source material that was readily available for review. Analysis of that material and other material from persons familiar with the expeditions, the measles outbreak and the measles vaccine refutes the allegations. The serious factual errors we have found call into question the accuracy of the entire book as well as the interpretations of its author.

The allegations were circulated widely throughout the academic community in September 2000 in an e-mail message from two reviewers, Terry Turner of Cornell University and Leslie Sponsel of the University of Hawaii. The e-mail message implied that the two had just learned of these allegations, but in fact they were interviewed for the book as early as 1995 and are credited in the 'Acknowledgments' section.

Below are listed some of the claims made in either the book or the e-mail message, and a description of our findings.

A handwritten signature in black ink that reads "Nancy Cantor".

Nancy Cantor, Ph.D.

U-M Provost and Executive Vice President for Academic Affairs

**CLAIM: Improper use of a vaccine initiated and exacerbated a measles epidemic that killed "hundreds, perhaps thousands."**

**OUR FINDINGS:** The measles outbreak occurred in November 1967. Measles was introduced into the region by a party of Brazilian missionaries before the January 1968 arrival of the Neel expedition. There is substantial evidence of the outbreak existing long before Neel left for Venezuela, so Neel could not have been the cause.

Previous studies in 1966 had indicated a substantial absence of measles antibody in the Yanomami. There were some individuals in Villages J and W with antibodies to measles, indicating there had been sporadic prior exposure but many individuals were not protected. Accordingly, in the fall of 1967, in anticipation of the January 1968 expedition, Neel initiated requests to pharmaceutical companies and obtained 2,000 doses of Edmonston B vaccine plus gamma globulin. He also consulted with a Centers for Disease Control expert on measles on the best way to administer the vaccine.

Upon hearing of the outbreak, Neel acted quickly and responsibly to stop the spread of the disease. The records show Neel spent at least two full weeks providing vaccine, antibiotics and medical care as needed. Forty Indians and Brazilians in the immediate area of the noted cases received vaccine and then Neel initiated an extensive program of immunization throughout the region. One thousand doses were administered by Neel; the rest were provided to and given by missionaries and medical auxiliaries of the Venezuelan government to "get ahead" of the disease. All doses, except for the original 40, were given with gamma globulin. At that time, administration of vaccine, with or without concomitant gamma globulin, was the accepted and recommended procedure. No death or serious untoward events resulted from use of the vaccine with or without gamma globulin.

Edmonston B vaccine, developed in 1958, was an internationally tested and safe vaccine. Samuel L. Katz, professor emeritus and chairman of Pediatrics at Duke University Medical School, was the co-developer of the vaccine (with John F. Enders) and he reports that its use was safe and appropriate in this population.

It is claimed that a "fatal" epidemic was "caused" or "greatly exacerbated" by the vaccine. Live attenuated vaccine has never been shown to be

# the Research of James V. Neel

transmissible from a recipient to a subsequent contact. Katz has studied the vaccine in developed and developing nations and never saw any transmission of vaccine to susceptible contacts. Moreover, death as a result of the vaccine is exceedingly rare in any population.

**CLAIM: Refusal of medical care so that Neel could observe an epidemic.**

**OUR FINDINGS:** William Oliver, professor emeritus and chair of Pediatrics at the University of Michigan Health System, was on several of the expeditions and reports that on every expedition a large quantity of medical supplies was brought in and used to treat the Yanomami. Neel's basic philosophy was to treat all illnesses before any scientific observations. Each day he would treat any new illnesses before starting the day's planned studies. Any medicines not used would be left with resident missionaries with detailed instructions for use.

In the case of the measles outbreak, the facts are clear. The predicted death rate from untreated measles is 30 to 36 percent; the most common complication is bacterial pneumonia. In this outbreak, the death rate was a very low 8.8 percent, showing clearly that proper medical care was provided. The records show that the research team systematically and aggressively treated every patient with all available medications. As indicated above, Neel stopped his research work so that he could provide medical care to the population.

**CLAIM: Secret radiation experiments were conducted.**

**OUR FINDINGS:** Neel did not conduct any radiation studies with the Yanomami. In 1962 and 1968 a physician named Marcel Roche conducted a population study of thyroid uptake in the lowlands of Venezuela and high in the Andes showing that at very high altitudes there was a uniformly higher thyroid radioiodine uptake. This study used proper doses of radioiodine (I-131). Radioiodine was then and remains today a commonly used diagnostic tool to measure pathological conditions including thyroid function.

Neel was well known for his extensive study on the aftereffects of atomic radiation on survivors of Hiroshima and Nagasaki and their children. A review of Neel's field journal and daily logs makes it clear that he never conducted any "secret radiation" studies.

**CLAIM: Neel held extreme eugenic theories.**

**OUR FINDINGS:** Neel's published works show that he was a critic of eugenics from his graduate student days in the late 1930s. Far from holding "eugenics" positions, Neel strongly supported maintaining the rich diversity of the entire human gene pool and urged "egalitarian control of population growth" to protect the future of our species. He championed the view that each individual be able to maximize genetic potential; this is a far cry from eugenic efforts to "improve" the species through reproductive theory and policy. His work with the Yanomami helped them survive the pre-existing measles outbreak and was a humanitarian act by a compassionate physician.

**CLAIM: Chagnon himself is directly or indirectly responsible for endemic warfare among the Yanomami.**

**OUR FINDINGS:** This claim is among the easiest to refute, especially since there is an extensive history on the topic. Warfare among Indian groups in South America goes back a minimum of 3,500 years. Abundant archaeological data show raiding, including the saving of trophy heads, throughout the pre-Hispanic periods called Chavin, Moche, Chimu, Wari and Inka. Warfare also was reported by the Spanish conquerors of the sixteenth century A.D.

In the specific case of the Yanomami, our first report about these people is from the mid-1800s, by Moritz Schomburgk (1847-1848). Then sometime between 1875 and 1910, we have reports that women had been acquired by Yanomami raiding (Peters 1998:167-168). In 1911 Theodor Koch-Grunberg (1923) described the Yanomami as 'very warlike people who succeeded in dominating several weaker tribes.' The year 1931 is given as the year a war occurred between two Yanomami subgroups, the Xilixana and the Macu; 1935 as the year of the war between the Xilixana and the Yekwana; and 1946 as the year of a major epidemic (Peters 1998:167-168). These and many other accounts make the claim that Yanomami violence began with Chagnon's arrival obviously false.

**CLAIM: Chagnon's characterization of the Yanomami as "fierce people" encouraged 40,000 invading gold miners to use violence against them between 1980-1987.**

**OUR FINDINGS:** We have already established that Chagnon was not the first author to describe the Yanomami as violent. In fact, critics who have accused him of this characterization forget that the Yanomami refer to themselves as waitiri, 'fierce and valiant.' What Chagnon did was translate the term into English.

Given that the behavior of miners toward indigenous people during 'gold rushes' in the 1850s and 1860s in places like California and Australia was similar to that seen in the 1980s in the Amazon, the idea that Chagnon is responsible for such behavior is not convincing. Published accounts of Yanomami violence had preceded Chagnon's arrival by a considerable length of time. Thus it seems much more plausible that the miners were familiar with sensationalized newspaper articles on Yanomami warfare than that they had spent time reading the anthropological literature.

**CLAIM: Turner and Sponsel learned of this "impending scandal" from reading the galley proofs of Tierney's book.**

**OUR FINDINGS:** While the e-mail letter to the American Anthropological Association by Turner and Sponsel leaves the impression that they had just learned of the accusations against Neel and Chagnon, there is published evidence that they knew about them long before. The first piece of evidence, according to sources who have seen uncorrected page proofs of the book, is that both Turner and Sponsel are thanked in the 'Acknowledgments' section of Tierney's book, which indicates that they read it long before the galley stage. A second piece of evidence is that Tierney's book cites a 1995 interview with Terence Turner.

Evidence leads us to believe that the accusations against Chagnon in Tierney's forthcoming book were known to both Turner and Sponsel long before that book reached the galley proof stage. Some allegations had already been made in print by Turner as far back as 1994, and others in print by Sponsel in 1998. The accusations are part of a long-standing academic feud that shows no sign of diminishing, rather than recent discoveries by an investigative reporter.