NEWS IN BRIEF

• **MARIJUANA AND ALCOHOL:** A statement by James L. Goddard, commissioner of the Food and Drug Administration, in which he equated the perils of marijuana and alcohol has resulted in a barrage of criticism and several demands for his resignation. Goddard, speaking at a press conference at the University of Minnesota on 18 October, said "whether or not marijuana is a more dangerous drug than alcohol is debatable—I don't happen to think it is." He added that he favored removal of all penalities for simple possession of marijuana, but not the complete legalization of the drug. He stated more research is needed on the chronic use of marijuana. The day following Goddard's remarks, Congressman Dan Kuykendall (R–Tenn.) called for Goddard's resignation, as did Robert W. Baird, director of a Harlem narcotics clinic. Kuykendall told the House that Goddard "should be prevented from using the prestige of a high federal office to encourage delinquency and the smoking of pot by others outside his family." While critics were assailing him, Goddard issued a statement of clarification in which he said, "The statement that marijuana may not be more hazardous than alcohol can be misleading to those who are not familiar with the hazards of alcohol. It is estimated that there are 11,000 deaths from alcohol each year—and most experts regard that as a conservative figure."

• **JOINT ENVIRONMENTAL INSTITUTE:** The Environmental Science Services Administration and the University of Colorado have formed a cooperative institute in the environmental sciences. The new institute is under the direction of a steering committee headed by George Benton, director of ESSA's Institutes for Environmental Research.

• **CELL SCIENCE CENTER:** Plans for the construction of a $1.8-million Cell Science Center at Lake Placid, N.Y., have been announced by the Tissue Culture Association. After completion in mid-1969, the facility will be the permanent center for the association's summer course in cell culture as well as for training activities, conferences, and seminars. A full-time staff of about 14 persons, including a director and two professional associates, is planned. Space in the laboratory will be available most of the year for visiting scientists. The center will be built on a 32-acre site donated by Mrs. W. Alton Jones, widow of W. Alton Jones, former chairman of the board of the Cities Services Company. Construction funds are being provided by a grant from the W. Alton Jones Foundation.

• **PEACE CORPS PHYSICIANS:** Because the new draft law no longer allows military deferments for Peace Corps physicians, the corps has started an intensive nationwide campaign for doctors to care for its overseas volunteers. Physicians previously were assigned to the corps by the U.S. Public Health Service (PHS). They could fulfill their 2-year military obligation with either the corps or PHS. "In the past, we had up to 400 doctors who were completing their internships who asked for this appointment," said Stanley C. Scheyer, director of the Peace Corps' Office of Medical Programs. "We've had over 400 inquires this year but now that the draft exemption is gone, we've been receiving letters from applicants saying they can't take two years out of their lives to serve in the Peace Corps and then another two years for military service."

• **UNIVERSITY BANKRUPTCY:** The nation's colleges and universities have failed to make their need for public funds known and as a consequence face "imminent bankruptcy." McGeorge Bundy, president of the Ford Foundation, made the remarks on 13 October during the American Council of Education's annual meeting in Washington, D.C. He asserted, "We have no choice but to seek a drastic increase in the levels of public support for both private and public institutions." He attributed the plight of the institutions to an absence of clearly stated facts and figures about the financial crisis and to the esteem in which universities have been held during a 20-year period of expansion. "We come before the country to plead financial emergency at a time when our public standing has never been higher," he stated. "It is, at least in one way, an unhappy accident of timing."

on the optic nerve of the horseshoe "crab" *Limulus*. The compound eye of this venerable animal, with its large photoreceptors and long optic nerve, was ideally suited for the study, and, in 1932, they were able to record—for the first time—the activity of single optic nerve fibers.

Their research showed that all impulses transmitted by an optic nerve fiber are essentially identical, and that information about the intensity of the light incident on the photoreceptor is coded in terms of *frequency* of the discharge of impulses, rather than in terms of the shape or amplitude of the impulses themselves. (Such "all-or-none" character is typical of the propagated impulses in all single nerve fibers.)

This technique also provided a method for studying the physical and chemical events in the photoreceptor that give rise to the nerve impulses. For example, in 1935 Graham and Hartline used it to determine the spectral sensitivity of the *Limulus* photoreceptor. The results obtained with this method and those obtained recently by Hubbard and Wald, who extracted the photopigment from the eye of *Limulus* and determined its spectral absorption by direct methods, agreed almost point for point.

These and numerous other experiments on the eye of *Limulus* had many implications for the study of human vision, which psychologists were quick to recognize, and on which they based parallel psychophysical experiments. They also "adopted" Hartline himself when they awarded him the Warren medal for his studies on light and dark adaptation, for the medal carries with it honorary membership in the Society of Experimental Psychologists.

Early extracellular records of retinal activity gave tantalizing glimpses of the "generator potential." But it was not until improved microelectrode and vacuum tube amplification techniques became available and were applied to this problem by Hartline and his associates at Johns Hopkins University—about 1950—that clear-cut records of the intracellular electrical activity could be obtained.

These techniques enabled them to study the photoreceptor as a biological transducer, relating nerve impulses to generator potential and generator potential to the light incident on the photoreceptor. Exactly how the photochemical events in the receptor give