The values of this expression can be found in Pearson's Tables of the incomplete β-function. The survival curves obtained from this formula are similar to those of Blau and Altenburger, although it is difficult to decide upon the values of n and of r from the experimental curve. Such an attempt has been made, for example, by determining the ratio of the doses required for 10% kill and for 90% kill.

If we put $n=1$ and $r=0$ in (1) or in (3), the survival curve is an exponential. For $n>1$ and $r=0$, an exponential curve is also obtained. This case is known as multitarget, not multihit. Finally, the case $r=n-1$, $n\geqq 2$ corresponds to clumping, and a sigmoid curve is obtained.

If we consider delayed division of the cell rather than lethal action, then r or r/n will vary with the stage of the cell (for example, prophase) and will therefore be a function of the time of irradiation: $r/n=F(t)$. Thus the hypothesis that has been advanced in this paper makes it easy to understand the concept of the cumulative dose as formulated by D. E. Lea.

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Comments and Communications

A Citizen's Duty

EVERYONE should vote in our national and local elections. The votes of the readers of this journal, who represent a group of the highest intelligence, are especially desirable. Yet those who are responsible for arranging national meetings of scientific, technical, and trade associations apparently have no regard whatever for election day. Last election day the country was flooded with technical meetings ranging from the National Academy of Sciences and American Petroleum Institute to countless trade organizations. In very few states is it possible to vote *in absentia* or by letter. Many technical people, therefore must choose between their duty at the polls and their presence at a society meeting. Why not recognize our obligations as citizens and, throughout the country, arrange all association meetings on dates that will not conflict with voting?

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Flash in Photomicrography[1]

A MAJOR problem in photomicrography is the elimination of vibration in the apparatus or in the building housing the apparatus. This problem becomes acute whenever long exposures or high magnifications are required. Photomicrography in this laboratory has been relatively difficult because the framework structure contains vacuum pumps and compressors, which may be in operation throughout the working day. Although several methods were used to eliminate vibration in the photomicrographic equipment, none was completely successful. The introduction of flash lighting eliminated the effects of vibration and yielded excellent photomicrographs (*1*).

A microscope lamp (Spencer #735A) with a 100-w coil filament, bayonet base projection bulb was aligned and adjusted to provide "Köhler illumination" (*2*). After the desired field had been selected and brought into critical focus, the projection bulb was replaced by either a Westinghouse speed midget (SM) or G-E #5 flash bulb. The SM flash bulb was ideal for photomicrography because of its speed and safety. It should be noted that the flash bulb must be fired with a d-c voltage of not more than 6 v. Illumination may be controlled by neutral density filters, crossed polaroid disks, or a ground-glass filter. Should the illumination prove insufficient, as could be the case with oil immersion objectives and long bellows extension, a faster film may be used.

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[1] This work was supported by a contract between the University of California and the Office of Naval Research.

[2] The opinions and assertions contained in this report are the private ones of the writers and are not to be construed as official or reflecting the views of the Navy Department or naval service at large (Art. 1252, *U. S. Navy Regulations* [1948]).

Reservist Reaction

THE comments by Charles G. Wilber, entitled "Mobilization of the Reserve," which appeared in SCIENCE, December 7, 1951, merit reply. . . . No mature reservist expects to avoid performance of duty very long merely on the basis of personal preference. Similarly, the scientist-reservist does not expect blanket deferment, hoping merely that when he is called to duty the position to be occupied will permit him to perform optimally in a professional capacity. Surely, and rightly so, the medical profession would