Letters

High Priority Scores

Daniel E. Koshland, Jr.'s, editorial "Modest proposals for the granting system" (19 July, p. 231) states that the generally higher priority scores assigned to National Institutes of Health (NIH) grants are due to "grade inflation" and that this phenomenon has compressed many applications into the same priority range. This, in turn, has led administrators to superimpose their own systems for deciding how to allocate grant resources. He argues that peer review panels should return to "realistic evaluations" in order to discourage the manipulation of priority scores by administrators.

Koshland is correct about the problem, but I do not believe it is primarily due to priority score inflation. Study sections, as a collective body, do assign realistic priority scores. Except in occasional instances, they have not departed from what most feel are realistic evaluations. The problem is that the quality of grant applications is plainly higher than it was 15 years ago. Many promising and well-trained investigators have been produced by and now populate the system. It is inevitable that this causes an increase in the average priority scores because those scores are earned. I would even suggest that, for a given priority score, the quality today is higher.

The most serious problem is that the compression of scores has given administrators a rationale to discount them and to weigh heavily other considerations in their decisions as to who obtains funding. It is no longer true that there simply is a priority score cut-off or "pay-time" for funding, although this is still widely believed. The prize does not necessarily go to the fastest or the best. Among other factors, as Koshland points out, investigators with lower scores may get funded over those who have earned higher scores but who have other funding (even if it is for a different project). In what academic institution could we tell students who earned A's that they were to receive B's because they had earned A's in other courses, and worse, that their A was to be assigned to a student who earned a B? This is what is happening at NIH today.

The system bred an army of excellent investigators who now earn higher priority scores. I believe that the past success came by no-nonsense emphasis on quality as defined by the grading of grant applications by study sections. In those days, an A was an A. Everybody understood that funding lines had to be drawn somewhere and then adhered to. When you missed the funding line by a point, you missed. But you could aim and try again because the target was defined and not subject to manipulation. The danger today is not from the clustering of high priority grant applications with similar scores. The danger is that well-intentioned administrators, in the face of a difficult challenge, assume more and more power in the allocation of resources. And that, in the end, we forsake the rigorous standards and straightforward dealing which breeds success.

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Antimalarial Etymology

In his article "*Qinghaosu* (Artemisinin): An antimalaria drug from China" (31 May, p. 1049), Daniel L. Klayman provides a brief historical introduction in which he refers to the earlier use of an antimalarial natural product, the bark of the cinchona tree (from which the alkaloid quinine was subsequently isolated in 1834). He then goes on to discuss the recently isolated antimalarial drug artemisinin, derived from the herb *Artemisia annua*. Perhaps of interest, although not mentioned in Klayman's review, is the fact that the cinchona tree (and the genus *Cinchona*) is named in recognition of the contribution to the progress of medical science made by the Countess of Cinchón (or Chinchón), a member of the Spanish nobility who lived in Peru during the 1600's and who was instrumental in bringing this natural medicinal material to the attention of Europe (*1, 2*).

Coincidentally, the genus *Artemisia* is named in honor of Artemisia of Caria, a noted woman botanist, medical researcher, and scholar who lived around 400 B.C. in southwestern Anatolia, in present-day Turkey (*1, 3*).

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References

1. K. C. Hurd-Mead, *A History of Women in Medicine from the Earliest Times to the Beginning of the Nineteenth Century* (Haddam, Haddam, Conn., 1938).
2. H. J. Mozans, *Woman in Science* (Appleton, New York, 1913; republished by MIT Press, Cambridge, Mass., 1974); M. Lipinska, *Histoire des Femmes Medicin dupuis l'Antiquite jusqua nos Jours* (Librairie G. Jacques, Paris, 1900).
3. *The New Encyclopedia Britannica* (Encyclopedia Britannica, Chicago, ed. 15, 1974).

The derivation of the names of the genera *Cinchona* and *Artemisia* has provoked much interest and speculation. But, alas, there is hardly enough agreement on Herzenberg's version of the contribution to medical science by the Countess of Chinchón to warrant giving her a secure place in the malaria chemotherapy hall of fame.

The legend of the Countess takes several forms, the oldest having originated in 1663 with the Italian historian Sebastian Bado (*1*). According to his account, the first European to learn about "quina bark" (*quinaquina* in Quechuan means "bark of barks") was the Jesuit missionary Juan López. The bark, which came to be known as Peruvian bark, Jesuit bark, and *Cascarilla de Chahuarguera*, was used to cure the Spanish Corregidor of the city of Loxa of his intermittent fevers. In 1638, the Corregidor, having heard about the fevers of Doña Francisca Enriques de Ribera (*2*), the 39-year-old Condesa de Chinchón, wife of the Viceroy of Peru, Luis Geronimo Fernández de Cabrera y Bobadilla, Conde de Chinchón IV, sent her some bark and directions for its use. Under the guidance of the Condesa's physician, Juan de Vega, she drank an infusion of the bark and was cured rapidly of her tertian fever (*vivax* malaria). Two years later, the Conde and the Condesa, on their return to Spain, included a considerable amount of the wondrous bark with their baggage. This new cure was dispensed by the Condesa to the malaria-afflicted subjects of her husband's realm centered around Chinchón (about 24 miles southeast of Madrid). Because she spread the word of its therapeutic properties, it became known as the Countess' Powder (*Polvo de la Condesa, Pulvis Commitissae*). Kentish (*3*) relates essentially the same story but says the bark was brought back to Europe in 1649 by Cardi-