New *Klebsiella* Capsular Antigen, K82, and the Deletion of Five of Those Previously Assigned

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A new *Klebsiella* capsular antigen, K82, is established. K73, K75, K76, K77, and K78 are deleted from the scheme. K73 is a strain of *Enterobacter aerogenes*, and the others are identical to or in practice serologically indistinguishable from previously established K antigens. The deleted numbers will not be assigned by our laboratories to any new K antigen.

Seventy-two *Klebsiella* K antigens had been established by 1955 (1, 3, 5-7, 11). Antigens K73 through K80 were reported in 1962 (8) and 1963 (2), and K81 was reported in 1975 (10). This paper contains a description of a new capsular antigen, K82, *Klebsiella* strain CDC 3454-70.

This strain was isolated from a carpet during an epidemiological survey in the U.S. in 1970 and was classified as *Klebsiella pneumoniae* (4). Table 1 shows the biochemical pattern of K82. K82 does not react with any antiserum against previously established K antigens. K82 antiserum gives capsular quellung with K8 and K20, but at such low titer levels that absorptions have not been carried out.

Because of some confusion concerning the characteristics of capsular antigens K73 through K80, K82 was for some years mistakenly identified as K76 in the U.S. When these K antigens were reexamined in our laboratories, we found that only K74, K79, and K80 were actually new. K75, K76, K77, and K78 were identical to or so closely related to already established K antigens that it would be incorrect to call them new. K73 was a barely encapsulated strain of *Enterobacter aerogenes*. The cross-reactions of the above-mentioned types were as follows: K75 was identical to or very closely related to K68, as was K76 to K46, K77 to K39, and K78 to K15. The correction of these erroneous identifications left numerical gaps in the *Klebsiella* K antigen system. Since such gaps could be misleading, the Center for Disease Control laboratory used the numbers to document new types (previously designated as K74, K79, and K80 and strain CDC 3454-70) and assigned them K antigen listings of K73, K74, K75, and K76, respectively.

However, at present we agree that (i) any attempt to fill the gaps in the *Klebsiella* K antigen system created as described above is confusing since the numbers have all been widely used in the literature (2, 8, 9), and (ii)

TABLE 1. Biochemical reactions of *Klebsiella pneumoniae* K82

Test or substrate	Reaction ^a
Dulcitol	—
Adonitol, sorbitol, arabinose, maltose, xylose, rhamnose, salicin, inositol, lactose, sucrose, raffinose, sorbose	+
Mannitol	++
Glucose	++
Indol	—
H ₂ S	—
Gelatin	—
Ammonium glucose	+
Ammonium citrate	+
KNO ₃	+
Voges-Proskauer	+
Methyl red	—
Urea	+
D-Tartrate	—
Sodium citrate	—
Mucate	+
Malonate	+
KCN	+
Lysine decarboxylase	+
Arginine dihydrolase	—
Ornithine decarboxylase	—
Motility	—

^a Symbols: +, positive for sugars after 1 day; ++, acid and gas after 1 day; —, negative after 14 days.

our laboratories will designate the capsule antigens and strain numbers following K72 as follows: K73, deleted; K74, 371; K75, deleted; K76, deleted; K77, deleted; K78, deleted; K79, 325; K80, 708; K81, 370; K82, 3454-70.

REPRINT REQUESTS

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