TABLE 4A.2 Repressive Control of the Enzymes of the Isoleucine—Valine—Leucine Pathway (See Fig. 4A.1)

Enzymes	Corepressor
d, e, f, g, h	Isoleucine + valine + leucine
i, j, jj, k, l	Leucine

SUGGESTIONS FOR FURTHER READING

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PROBLEMS

4.1. Consider the aspartic acid pathway shown in Fig. 4A.1. Assume you have been asked to develop a high-lysine-producing mutant. What strategy would you pursue? (That is, which steps would you modify by removing feedback inhibition, and what changes in medium composition would you make over a simple mineral salts–glucose base medium?)

4.2. Why is *m*-RNA so unstable in most bacteria (half-life of about 1 min)? In many higher organisms, *m*-RNA half-lives are much longer (> 1 h). Why?

4.3. What would be the consequence of one base deletion at the beginning of the message for a protein?