Date: Sat, 08 Aug 1998 14:10:45 -0700 (PDT)
From: David Perkins <perklab@leland.Stanford.EDU>
Subject: Re: Choline
X-Sender: perklab@popserver.stanford.edu (Unverified)
To: a.radford@leeds.ac.uk
Cc: fgsc@KUHUB.CC.UKANS.EDU
X-Mailer: Windows Eudora Pro Version 3.0 (16)

Al,

You are quite right to question whether chol-4 (S1089) may in fact be a recurrence of chol-1. There has been no direct allelism test. Assignment of chol-4 to a new locus was based solely on rhe fact that S1089 seemed to show high recombination (>30%) with cot-1, whereas chol-1 is close to ad-6 and therefore close to cot-1. But scoring of markers in the critical cross with S1089 was dubious and the numbers were small. The only information published on S1089 is Perkins and Pollard 1987 FGN 14:34. In view of your letter and of these facts, I think we should consider it a probable allele of chol-1 and cross-reference it as such:

"chol-4: choline-4. Mutant S1089 was originally listed as chol-4 on the basis of inadequate recombination data IVR markers (Perkins and Pollard 1987). It is linked in the same chromosome arm as chol-1. Although there has been no direct allelism test, S1089 is now thought probably to be a chol-1 allele."

You will need to put in the information about steps 2 and 3 being specified by a bifuntional gene (in what organism?), which would complete the Fig. 12 pathway without need for a fourth gene.

Unless you object, I'll ask Kevin (by copy of this letter) to delete the chol-4 listing from the FGSC Stock List and to designate S1089 instead as a probable chol-1 allele.

David

P.S. I've found another useful de Serres review reference for the ad-3 entry. In the third line of the last paragraph of my e-mail regarding the adenine pathway, please insert "1991 Mutat. Res. 250: 251-274," to precede the 1992 Environ. Molec. Mutagenesis reference. I'll include the full references in the insertion in the next reference list I send you (List 13).

At 12:27 PM 8/6/98 +0000, you wrote:
>David,
>
>Are you sure that chol-4 is real, and not allelic with chol-1? You
>presumably have some other reason than the vague mapping data on it.
>
>My query is because there are four steps in choline biosynthesis, and
>as steps 2 and 3 are normally specified by a bifunctional gene, we
>only need three genes. chol-1 encodes step 1, chol-2 steps 2 and 3,
>and a third gene step 4.
>
>Regards,
>
>Al
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>
>

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