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M. S. Islam Atomic Energy Centre

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Biochemical differences between mating types

Abstract

Biochemical differences between mating types

Islam, M. S. Biochemical differences

between muting types of N. crassq.

It has been observed that the fertility of the cross between Emerson A (Em A) and Emerson a (Em a) varies depending upon the protoperithecial strain and spermatial strain used in the cross and also on the amount of medium added to each plate. One could assume that the intensity of

fertility would increase with increase in amount of the medium, but differential results were obtained in the crosses (1) $Em A (P)_X Em a (s) and (2) Em a (P) x Em A (s) h aving 10 ml, 15 ml and 20 ml of medium. When Em A was used as the protoperithecial strain, then the intensity of fertility increased with the increase in the amount of the medium (10 ml <math>\rightarrow$ 15 ml \rightarrow 20 ml). But when Em a was used as the protoperithecial strain, the reverse was the case. Again, in general, crossing plates having Em A as the protoperithecial strain showed more fertility than did the corresponding crossing plates in which Em a MI grown as the protoperithecial strain.

From these results, one could possibly invoke an inherent biochemical difference between the two mating types of N. crassa. Howe and Prakash (1969 Can. J. Genet. Cytol. 11:689) postulated that fertility in Neurospora is being regulated by some inhibitory substance produced during the asexual process which acts at a distance from the site of origin. In our studies (Islam and Weijer 1969 Neurospora News) 15: 24) we have found definite evidence of sexual hormones controlling the different morphogeneitc steps of sexual reproduction in Neurospora and we could successfully isolate a group of them which were active on certain sexual morphogenetic steps. - - Atomic Energy Centre, P.O. Box 14, Ramna, Dacca, Bangladesh.



