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Dear Colleague,

This News Letter is the outcome of discussions which Dr. Käfer-Boothroyd, Dr. Pritchard and I had last year. We felt that there might be a need for some informal circular dealing with specialised Aspergillus data which was not yet ready for the press or even for Microbial Genetics Bulletin.

This first issue is devoted to brief notes on current research projects and to a list of publications dealing with Aspergillus genetics. For future numbers subscribers may wish to give details of new mutants, provisional locations, techniques and so on.

This number doubtless contains many errors and omissions, for which I apologise. Time does not allow a really meticulous examination of the typescripts and stencils. I should be grateful for a note of any gross omissions or errors which will be corrected in future numbers.

J. A. Roper,
Department of Genetics,
The University,
Sheffield, 10.

NOTES

Subscribers are doubtless aware that there are strains of A. nidulans derived from Glasgow, Birmingham and London stocks. Caution may be necessary in reading notes on new mutants, locations, etc. and in particular in asking another subscriber for a stock. The same situation may also apply to other Aspergillus species.

E. Käfer-Boothroyd, R.H. Pritchard and I are anxious to establish a system of numbering new mutant strains of A. nidulans derived from Glasgow stocks so that there is no possibility of confusion. Suggestions please.

ARLETT, C.F., Birmingham.

Induction and behaviour of cytoplasmic mutations and their interactions with wild-type and marked nuclei.

FAULKNER, B.S., Birmingham.

Resolution of the cytoplasmic contributions to differentiation patterns in a line carrying a mutant cytoplasm with a wild-type nucleus.

JINKS, J.L., Birmingham (Cal. tech. at present).

1. Induction and behaviour of cytoplasmic mutations.

2. Phenotype and stability of mixed cytoplasms.

3. Nuclear/cytoplasmic interactions.

4. Cytoplasmic differentiation and sexual reproduction.

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KAFER-BOOTHROYD, E., Montreal.

1. Analysis of mitotic recombination other than mitotic crossing-over (haploidization, non-disjunction and aneuploidy) using diploids with 18 and 26 markers resp. on all 8 linkage groups in repulsion and coupling. Genetics 1961

2. Analysis of "high frequency recombination" in conidia surviving extremely high doses of X-ray (50,000 r).

3. Analysis of translocations in the y; thi1;panto strain by means of mitotic and meiotic recombination.

4. Statistical analysis of the absolute frequency of spontaneous and induced mitotic recombination of various types under various conditions of selection.

KWIATKOWSKI, A.A., Wroclaw.

1. "Non-disjuctional" diploid segregation.

2. Mutations in diploids.

LILLY, L.J., Glasgow.

Development of a technique for the estimation of mutation rates in a colonial filamentous fungus.

PRITCHARD, R.H., London.

1. The influence of a duplication of part of chromosome 1 on recombination fractions in crosses involving strains carrying this duplication and normal haploid strains. The purpose is

to test the hypothesis that recombination fractions are a measure primarily of the frequency of contact between homologous chromosomes rather than the frequency of exchange between segments of chromosome in homologous contact.

2. The UV effect on recombination. The purpose is to determine
a) whether evidence can be found for more than one type of recombination (cf. Roman and Jacob, C.S.H. 1958);
b) whether the increase in recombination induced by UV is due to an increase in the frequency of effective pairing or to an increase in the frequency of exchange per effective pairing segment;
c) the distribution of recombination events in time along the chromosome.

ROBERTS, C.F., Glasgow.

Fine genetic analysis of regions (chromosomes I and III) concerned with galactose metabolism.

ROPER, J.A., Sheffield.

Analysis of extra-chromosomal variants.

SHANMUGASUNDARAM, E.R.B., Madras.

1. Influence of sulphanilamide and isonicotinic acid hydrazide on sterol production in niger and nidulans.

2. Isolation and characterisation of pigment produced in sulphanilamide toxicity.

3. Studies on thyroxine de-iodinase (niger and nidulans).

SIDDIQI, O.H., Glasgow.

Genetics of sulphanilamide resistant and p-ABA requiring mutants of nidulans.

TECTOR, A., Montreal.

Comparison of effects of Cobalt-60 irradiation on survival of haploid and diploid conidia. Analysis of diploids marked on each linkage group for translocations and lethals after high doses (about 40,000 r.) Science 1962

PUBLICATIONS CONCERNED WITH GENETICS OF ASPERGILLUS

(Subject matter stated briefly in brackets where no title supplied - some papers of review or non-experimental nature are listed).

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BRIAULT, P.G. (1956) Cytoplasmic changes associated with adaptation and differentiation. Nature, 178, 1223.

CALEF, E. (1957) Heredity 11, 265 (Selection of crossovers and effects on linkage maps).

ELLIOTT, C.G., Triploid Aspergillus nidulans. M.G.B. 13: 7 (1956).

ELLIOTT, C.G. Chromosomes in micro-organisms. Symp. Soc. Gen. Microbiol. 6: 279-295 (1956).

ELLIOTT, C.G. Effects of temperature and of selecting rare cross-overs on recombination in Aspergillus nidulans. M.G.B. 15: 9-10 (1957).

ELLIOTT, C.G. Non-localized negative interference in Aspergillus nidulans. (To be submitted to Heredity).

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FORBES, E. (1952) Use of SO_2 for selecting auxotrophs in filamentous fungi. M.G.B. 6, 26.

FORBES, E. (1959) Use of Mitotic Segregation for assigning genes to linkage groups in A. nidulans 13, 62

HEAGY, F.C. and ROPER, J.A. (1952) Nature, 170, 713. (DNA in n and 2n conidia).

HUTCHINSON, J.M. (1957) M.G.B. 15, 17. (Linkage in niger).

IKEDA, Y. (1958) Bull. Agr. Chem. Soc. Japan. 22, 233, (Kojic acid and oryzae mutants).

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ISHITANI C. and SAKAGUCHI, K. (1956) J. gen. and applied Microbiol. 2, 345. (Heterokaryosis, oryzae and sojae).

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