Radford, A. Concise linkage maps of Neurospora crassa.

Loci are listed in order in linkage groups, running down the page from left to right ends. Numbers 1-126 ore on linkage group I, and for all other linkage groups the first digit of the three-figure number indicates the linkage group. (The numbers are purely arbitrary and ore used to facilitate the designation of limits in cases where the exact location remains to be established).

The starred loci are unequivocally ordered on the bores of 3-point crosses. The limits of position of less precisely mapped loci are shown in parentheses after the locus symbol. The information in parentheses giver the loci between which the locus is situated, or the percentage recombination with a second locus. "L" is the left tip, "C" the centromere, and "R" the right tip. A superscript "l" or "r" after the percentage recombination indicates position to the left or right of the locus against which the recombination frequency is given.

References are not cited. However, most may be found in earlier linkage maps by Barratt and Radford published in this newsletter. A complete version of there maps occurs in C.R.C. Handbook of Biochemistry, 3rd Edition, G.D. Fasman (ed.), Chemical Rubber Company, Cleveland, Ohio, (in press). • • • Department of Genetics, The University of Leeds, Leeds LS2 9JT, U.K.

Linkage Group I

1* fr
2* un-5
3' nit-2
4* leu-3
5 acr-1 (I-C)
6 cyt-1 (4-10)
7* leu-4
8* cyr-5
9 aza-1 (I-28)
10 cys-11 (0% cyr-5)
11* ser-3
12* un-3
13* mt
14 or-4 (4-28)
15 aza-2 (2% mt)
16 acr-3 (13-50)
17 exo (nr. mt)
18 acr-4 (5% ocr-3)
19 atr-1 (13-34)
20 to (13-21)
21* suc
22 upr-1 (13-28)
23* phe-1
24 rec-3 (13-28)
25 ror-4 (23-28)
26 ylo-2 (23-28)
27* ad-5
28* arg-1
29* eth-1
30* arg-3
31 sn
32 pat (13-C)
33 mo(M193-1) (0% sn)
34 un-2 (30-43)
35 un-16 (13-C)
36 mo(M184) (0% his-2)
37 rg (30-50)
38 su(mtr) (30-50)
39 amyc (27-C)

CENTROMERE (30-40)

40 met-10 (C-44)
41 aro-7 (C-44)
42 ti (30-R)
43' his-2
44* his-3
45* cog
46 cys-13 (2% his-3)
47 mo(P1798) (6%' his-2)
48 col (D5) (30-54)
49 nuc-1 (jl ad-3A)
50* ad-3A
51* ad-3B
52 lys-4 (42-54)
53 sor(15)+(13-83)[c]
54* nit-2
55 col (P2615) (30-83)
56 mo(AR5) (30-84)
57 st (50-67)
58 mo(P1417)
59* cr-1
60 tyr-2 (0% cr-1)
61 mo(NM216s) (5% nic-2)
62* un-1
63 ssu-2 (34-83)
64 ssu-3 (34-83)
65 slo-1 (62-67)
66 cys-9 (59-67)
67* thi-1
68 uvs-6 (59-83)
69 cr-3 (59-72)
70* met-6
71 or-3
72 cr-2
73 bs (62-86)
74 csh (67-78)
75 dot (67-R)
76* ad-9
77 mig (1% tre)
78 tre (54-83)
79' "it-l
80 cyh-1 (76-86)
81* fls
82 T (50-83)
83* al-2
84* or-5
85* arg-6
86* al-1
87 su(met-2,met-7) (1% al-2)
88 cys-12 (76-R)
89 hom (86-R)
90 can (83-R)
91 lyr-3 (83-92)
92* nic-1
93* or-l
94* arg-13
95* so
96' aro-8
97* R
98* un-18

also on I:

99 lys^R
100 acu-4 (83-R)
101 col-7 (nr. C)
102 col-12 (L-C?)
103 mo-1 (L-C?)
104 mo-5 (C-R?)
105 ro-6 (nr. C)
106 smco-1 (L-C?)
107 rmco-2
108 smco-3
109 smco-5
110 spco-11
111 spco-12
112 en-pdx (L-13?)
113 nd (C-R)
114 mo(NM203)
115 mo(D301) (5% al-1)
116 un-7 (C-86)
117 ty-2
118 uc-4
119 uc-2
120 sf
121 c
122 flm-2 (L-C)
123 un-7 (nr. 83)
124 un-16 (13-C)
125 we-3 (98-99)
126 ure-4 (44-50)

'Possibly allelic with sor-4, "25 above.

Linkage Group II

201* **pi**
202 col-10 (1% **Pi**)
203* **c y r - 3**
204* pyr-4
205 het-c **(L-206)**
206* ro-3
207 ro-9 (nr. C)
208* **thr-2**
209 **thr-3** (nr. **208**)
210 acu-5 (j. l. C)
211 **da** (nr. **212**)
212 bal

CENTROMERE (206-213)

213* **arg-5**
214* aro-3
215* cpt
216 nuc-2 **(213-217)**
217* pe
218 arg-12 **(217-220)**
219* en-am
220* aro-1
221' **aro-9**
222* aro-5
223* aro-4
224* aro-2
225 mo(P2402t) (220-228)
226 ff-1 **(220-R)**
227* ace-1
228* fl
229* **trp-3**
230* het-d

also on II:

231 **cot-5**
232 lp **(206-R)**
233 ro-7
234 spco-14 (nr. C)
235 su(pe) (14-22% pe)
236 mo(NM218) **(15%** arg-5)
237 mo(NM220) (15% arg-5)
238 mo(D309) **(10%** arg-5)
239 mo(NM201f) **(10%** aro-1)
240 un-15 (228-R)
241 mo(P2402t) **(C-R)**
242 uc-1
243 scr

Linkage Group III

301* **ocr-2**
302 **mo-4 (L-C?)**
303 col-16 **(L-C?)**
304 col-14 **(L-C?)**

CENTROMERE (300-307)

305 spg **(0%** sc)
306 **thi-4 (0%** sc)
307" sc

309* ser-1
310* **pro-1**
311 ff-5 (310-313)
312* com
313* **met-8**
314* **ad-4**
315 **ror-3 (7% ad-4)**
316 uvs-4 **(4%'** ad-4)
317 ace-2 (C-leu-1)
318* leu-1
319 *trk (0% leu-1)*
320 su(mel-3) **(318-R)**
321* **his-7**
322* **thi-2**
323' **ad-2**
324* trp-1
325 ota **(314332)**
326 mo(M126) (1% **trp-1)**
327 arg-9 (322-328)
328* ro-2
329* vel
330 uvs-5 **(1%** vel)
331' **phe-2**
332* tyr-1
333* un-17
334 **col-13 (4% tyr-1)**

also on III:

335 **ty-1 (6%** tyr-1)
336 dow **(332-R)**
337 un-6 **(307-R)**
338 mo(NM211) (12%r un-6)
339 mo(B8) **(7%** trp-1)
340 mo(NM219) **(13%** trp-1)
341 col(B235r) **(5% trp-1)**
342 col(D302) **(10% ocr-2)**
343 mo(D308) **(32%** trp-1)
344 mo(P1710) ***(26%* trp-I)**
345 un-14 **(8% acr-2)**
346 **ocr-6**
347 mo(KH160)
348 aza-3

Linkage Group IV

401* cys-10
402 uvs-3 (nr. cys-10)
403* fi
404 col-6 (nr. C)

CENTROMERE (403-405)

405* pyr-1
406* pdx-1
407 un-8 **(C-413)**
408* pt
409 rol-1 **(0% odx-1)**
410 mtr **(406-413)**
411* **met-l**
412* oxD
413* **col-4**
414 *tol* **(416-423)**
415 mo(P1898) **(403-423)**
416 mo(NM213t) (403-432)
417 un-12 **(0% col-4)**
418* arg-2
419* **w - 3**
420 **rib-2 (418-R)**
421 **fld** (413-424)
422* **his-5**
423* **tro-4**
424* leu-2
425 **nit-5 (405-432)**
426 **thi-5 (424-432)**
427 **met-2 (423-432)**
428 acu-2 **(424-432)**
429 mo(D306) **(423-432)**
430 **od-6 (423-432)**
431 chol-1 (430-432)
432* pan-1
433 int **(0% pan-l)**
434 ro-1 (0% pan-1)
435 cel (nr. pan-1)
436 smco-9 **(2.5%** pan-1)
437 **bd** (1%r **pan-l)**
438 col-1 **(431-R)**
439 **nit-5 (432-R)**
440 *ilv-3* **(C-441)**
441* cot-1
442 mo(NM119) **(0% cot-l)**
443 **col-5 (1.5%'** cot-1)
444 le-1 **(441-R)**
445 **or-2 (4%' cot-l)**
446* **his-4**
447* **met-5**
448 **gul-3 (441-452)**
449 **med (447-R)**
450 mo(NM359) (441-456)
451 **nit-3 (441-452)**
452* pyr-2
453 **of (3.4% mot)**
454 **dn** (1.3% **mot)**
455* mat
456* **cyr-4**
457 uvs-2 **(441-R)**

also on IV:

458 smco-4 **(7.5% pan-l)**
459 smco-8 **(7.1%** pan-1)
460 spco-8 (23% pan-1)
461 **nit-4 '451-R)**
462 col-8 (13% *pan*-1)
463 **cot-3 (C-R)**
464 **mod-rc**
465 met(35599) **(441-R)**
466 cys-14 **(25% cot-l)**
467 mo(D314) **(12% cot-l)**
468 grey (4% cot-1)
arg^{R} (452-R)
470 **fdu-2**

Linkage Group V

501* sat
502 lys-1 (nr. C)
503 at (0% C)
504 mo(D307) (nr. C)
505 asp (502-509)
506 mo(NM221t)(502-507)

CENTROMERE (501-509)

507* val
508' sh
509 ilv-1 (C-511)
510 ilv-2 (C-511)
511* lys-2
512* cyh-2
513* leu-5
514 md (508-519)
515 rmco-7 (509-516)
516 rol-3 (509-517)
517 cot-4 (516-519)
518 fpr (509-519)
519* sp
520 f (C-532)
521* ure-2
522* a m
523 rec-2 (519-522)
524* gul-1
525* ure-1
526* his-1
527 ssu-6 (4% his-1)
528 arg-4 (519-532)
529 spco-10 (519-532)
530 arg-8 (519-531)
531* i
532* inl
533 gln (2% inl)
534 ts (4% inl)
535* pab-1
536* met-3
537' bis
538 mo(R107) (0% bis)
539 ser-2 (532-R)
540 al-3 (nr. 532)
541 cl (1.5%' bis)
542 wa (538-551)

544 un-11 (0% al-3)
545' cot-2
546 rpco-9 (536-554)
547* col-9
548 ad-7 (537-550)
549 inv (3% pob-2)
550* ro-4
551* pob-2
552 rec-1 (548-554)
553 acu-3 (548-554)
554' asn
555 rmco-6 (554-R)
556 pyr-6 (554-R)
557* gran
558 un-9 (556-R)
559 pl (0% gran)
560 ro-8 (554-R)
561 acu-1 (554-R)
562* his-6

also on v:

563 trp-5 (nr. am)
564 nap (C-532)
565 caf-I (L-C)
566 mo(D315) (26% inl)
567 mo(D318) (21% inl)
568 scon (C-R)
569 un-19 (C-R)
570 erg-l (537-554)
571 erg-2 (C-532)

Linkage Group VI

601* chol-2
602* ad-8
603* cyt-2
604 aro-6 (602-605)
605* lyr-5
606 ssu-7 (602-613)
607 un(T51M154t) (0% lyr-5)
608' un-4
609 acu-6 (2%' cys-1)
610* cyr-2
611* cyr-1
612 ror-1 (3%' ylo-1)
613* ylo-1
614 mo(P1135) (0% ylo-1)
615 mo(36703-4-20) (0% ylo-1)
616 un-13 (2% ylo-1)
617* 5mt
618* ad-1
619 moe-2 (0% C)
620 spco-7 (nr. C)
621 rpco-13 (5% C)

CENTROMERE (618-623)

622 mod-5 (1.5% C)
623* rib-l
624* pan-2
625' del
626* trp-2
627* ws-1

also on VI:

628 gul-5 (10% trp-2)
629 w-2

Linkage Group VII

701* het-e
702* rpco-4
703 do (1% rpco-4)
704 odh (0% do)
705* nic-3
706* thi-3
707 mo(NM226) (705-716)
708* sfo (0% C)
709 ssu-4 (705-716)

CENTROMERE (706-725)

710* b n
711 rlo-2 (705-712)
712 col-2 (C-716)
713 col-3 (0% met-7)
714* su^{td201}
715 ars (706-716)
716' met-7
717' met-9
718* thr-I
719 WC (3.5% met-7)
720 ssu-1 (716-728)
721* for
722 mo(P1163) (721-725)
723 aga (nr. for)
724* arg-11
725* arg-10
726 hlp-1 (708-728)
727 hlp-2 (708-728)
728' nt
729* sk

also on VII:

730 spco-6 (5.2% C)
731 spco-5 (3.2% C)
732 rol-2 (5% C)
733 mo-3 (4.5% nt)
734 col-17 (14% nt)
735 moe-I (5% nt)
736 le-2 (7% met-7)
737 mo-2 (17% C)
738 gul-4 (17% nic-3)
739 ror-2 (31% nt)
740 mel-1 (27% thi-3)
741 mo(P1718) (5% nt)
742 qo-1 (nr. met-7)
743 un-10 (719-R)

745 fdu-1
746 qo-3 (<1% qa-1)
747 qa-4 (<1% qa-1)
748 qo-2 (<1% qa-1)