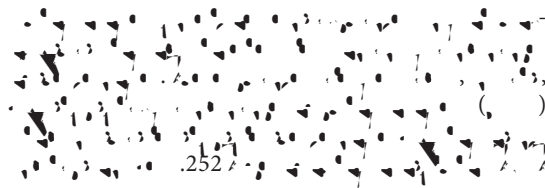


A - J. \* , A F. S. - \* B J. - - \*

Abstract | Condensin and cohesin complexes act in diverse nuclear processes in addition



.252 B 0.015 , 9.2 0 0 9.2 142.2992 218.252 , 12( )-25(-)9( )11

a a  
DNA. Ca a  
a  
a

0

)



)



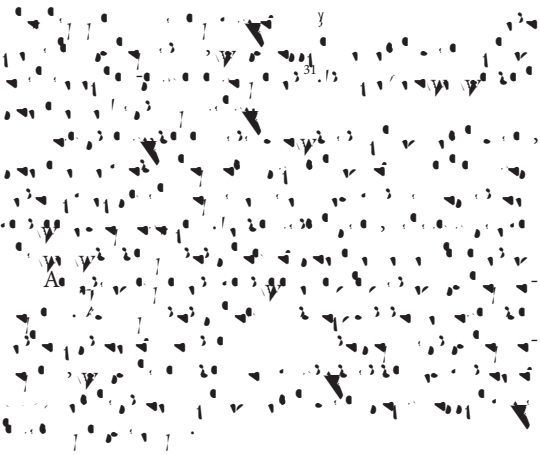
A a a a ya  
y . l a  
a a a y  
RNA y a la III.  
T a y a  
a y a a  
a a

MCI MCS

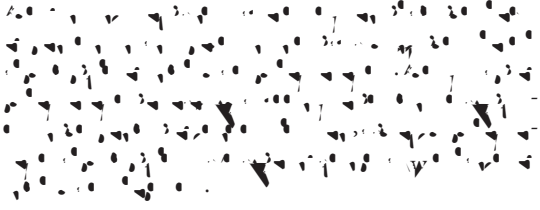
(BOX 3)

HM 19 3

DNA  
a y a a  
a y  
a DNA  
T a DNA a a  
a ( )  
( a ) a



**SMC complexes in gene expression**



\_\_\_\_\_



---

Va a a a

. y a y  
a  
y  
a .

- i + v • a a a  
E



b A e... ecfcc... a... a... ed IGF2 H19 g.



Cohe in in imm ne-cell differen ia ion. (A) 4 (5) (IF 5)

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T a y a y

A a a a y ya a

L a a

A a a a a ya a



Page 1 of 2

AE assembly\*†  
and DSB  
formation†

CO  
recombina

---

A a a



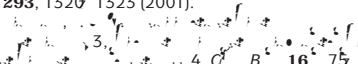
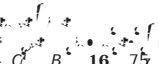

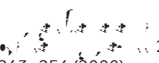
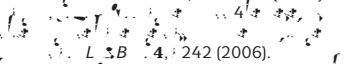
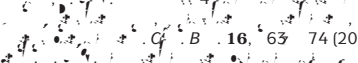
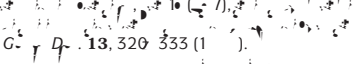
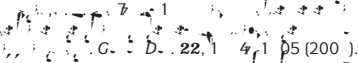
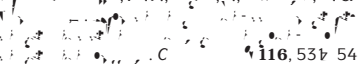
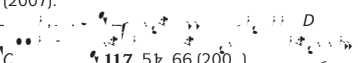
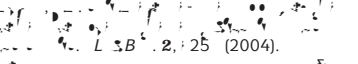
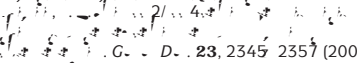
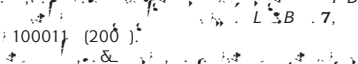
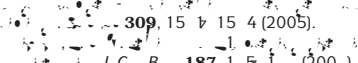
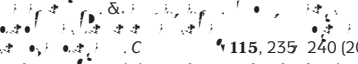
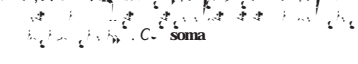

y a a a a  
a .

A y a a  
a

*Condens in loading.* (BOX 1).  
C. (FIG. 1),

1. ... *C* ... 17, 254-263 (2007).
2. ... *A* ... *G* ... 43, 525-55
3. ... 17, 137-144 (2007).
4. ... *C* ... *B* ... 7, 317-322 (2006).
5. ... *C* ... 132, 422-433 (2007).
6. ... 451, 76-81 (2007).
7. ... *A* ... 105, 307-314 (2007).
8. ... *H191* ... *E B J* ... 27, 654-666 (2007).  
References 5-8 identified extensive overlaps between the chromosomal binding sites of cohesin and the mammalian insulator protein CTCF, and showed that cohesin contributes to the gene regulatory functions of CTCF.
9. ... *E B J* ... 28, 77 (2007).
10. ... *H191* ... 1 // #. 312, 267-272 (2006).
11. ... *C* ... 137, 114-1211 (2007).
12. ... *IF G* ... 460, 410-413 (2007).
13. ... 3657-3656 (2010).
14. ... *E B J* ... 28, 1234-1245 (2007).
15. ... *IGF2 H19* ... *L S G* ... 5, 100073 (2007).  
References 12-15 studied the effects of cohesin depletion in cultured cells on interphase chromosome looping and transcription.
16. ... *C* ... 17, 207-214 (2007).
17. ... *G* ... 10, 2010 (+ 10.1101/100047.10).
18. ... 462, 57-64 (2007).
19. ... *H* ... *D* ... 13, 67-70 (1).
20. ... *H* ... *C* ... *B* ... 28, 1241-1245 (2007).
21. ... *G* ... 42, 53-61 (2010).
22. ... 60061251112202 2.0047. ... 6006235.76 6.0047.

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88.  &   
293, 1320 1323 (2001).
89.  3,  4. *C. B.* 16, 75 1  
(2006).
90.  2  
 4. *C.* 5, 243 254 (2000).
91.  4  
*L. S. B.* 4, 242 (2006).
92.  4  
*C. B.* 16, 63 74 (2006).
93.  7  
*G. D.* 13, 320 333 (1 ).
94.  1 &  
*G. D.* 22, 1 4, 1 05 (200 ).
95.  &  
*C.* 116, 53 544  
(2007).
96.  *D*  
*C.* 117, 5 66 (200 ).
97.  *L. S. B.* 2, 25 (2004).
98.  2/4 &  
*G. D.* 23, 2345 2357 (200 ).
99.  *I. B. L.*  
100011 (200 ). *L. S. B.* 7,
100.  &  
309, 15 15 4 (2005).
101.  *J. C. B.* 187, 1 5 1 (200 ).
102.  &  
*C.* 115, 235 240 (2006).
103.  *C.* soma