

Figure 1

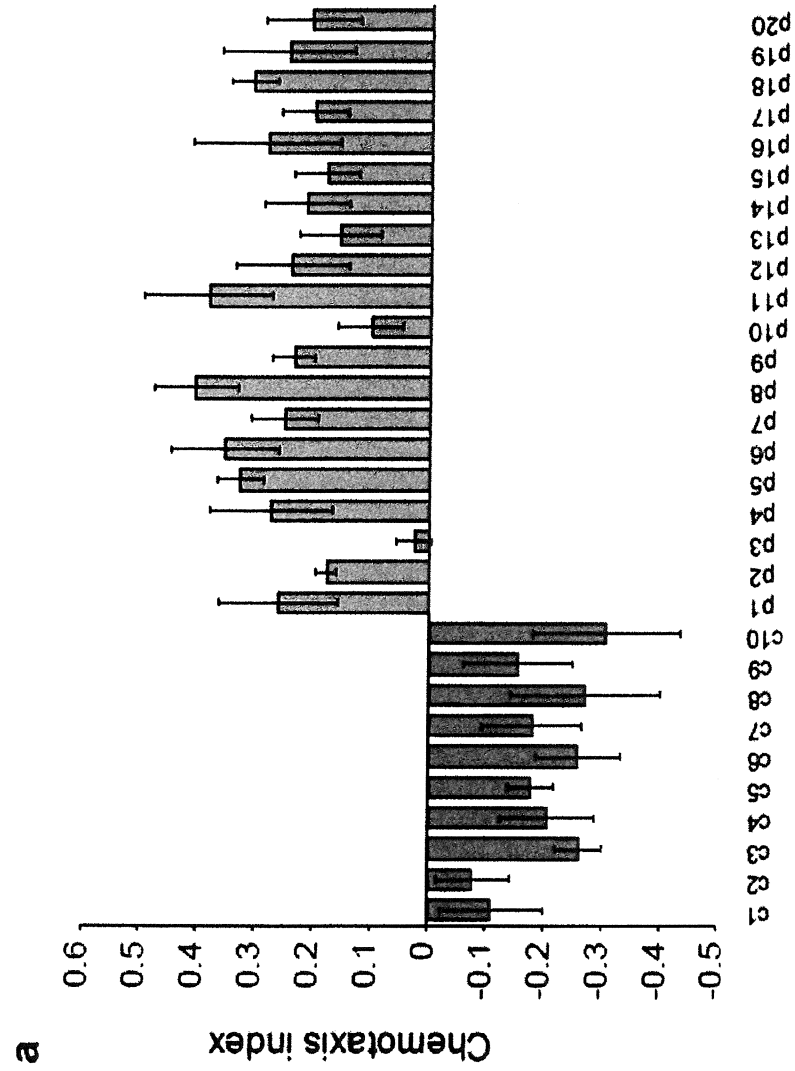


Figure 2

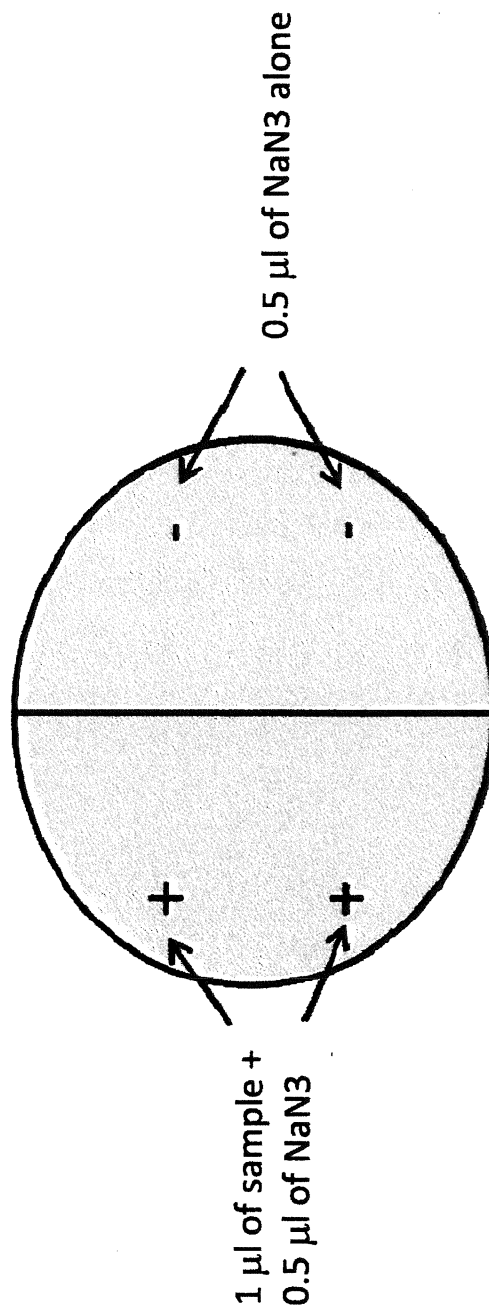


Figure 3

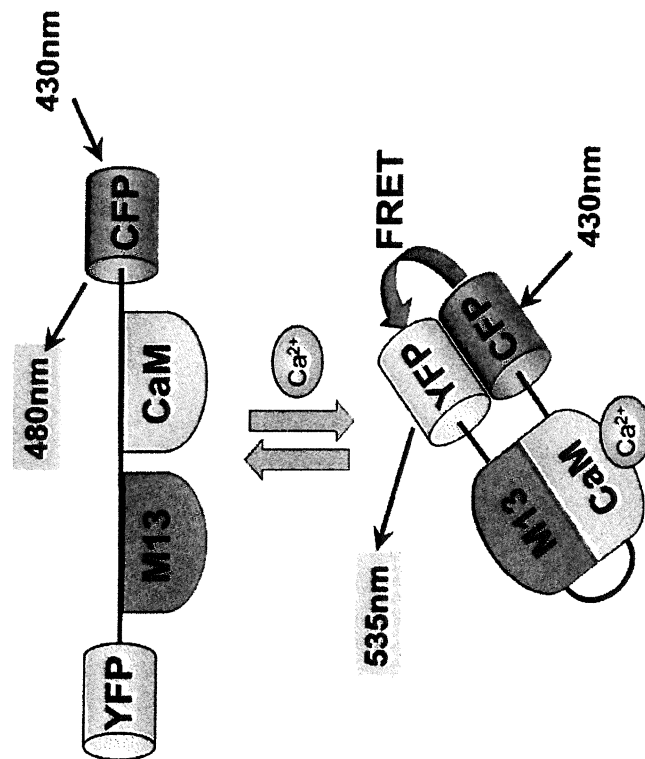
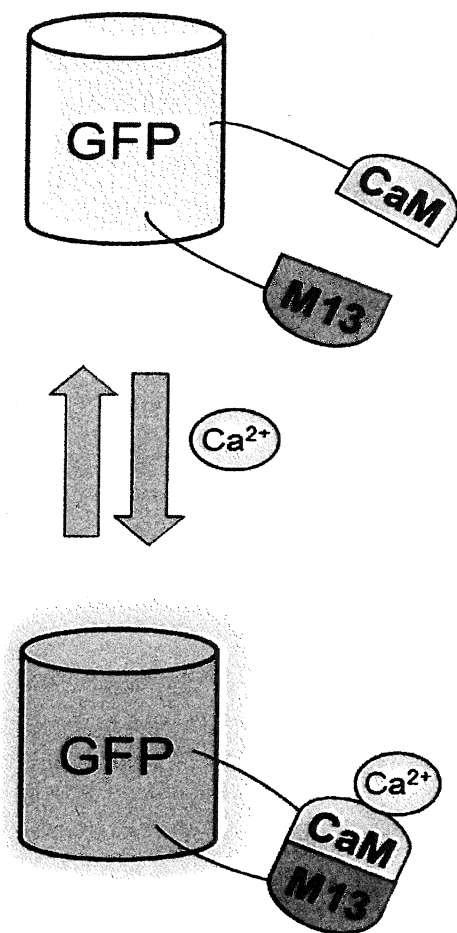
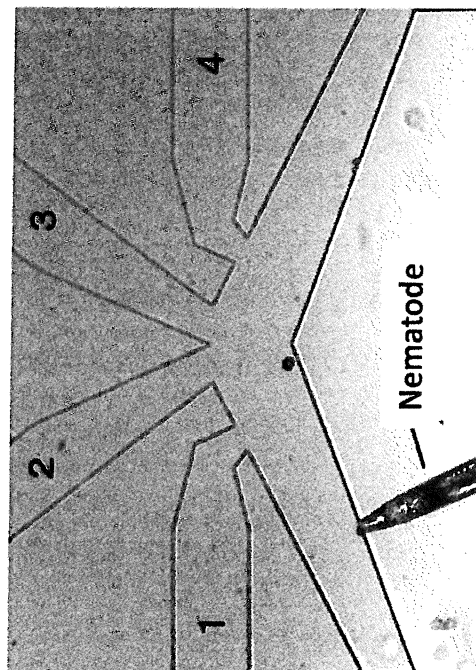


Figure 4



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Figure 5



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Figure 6

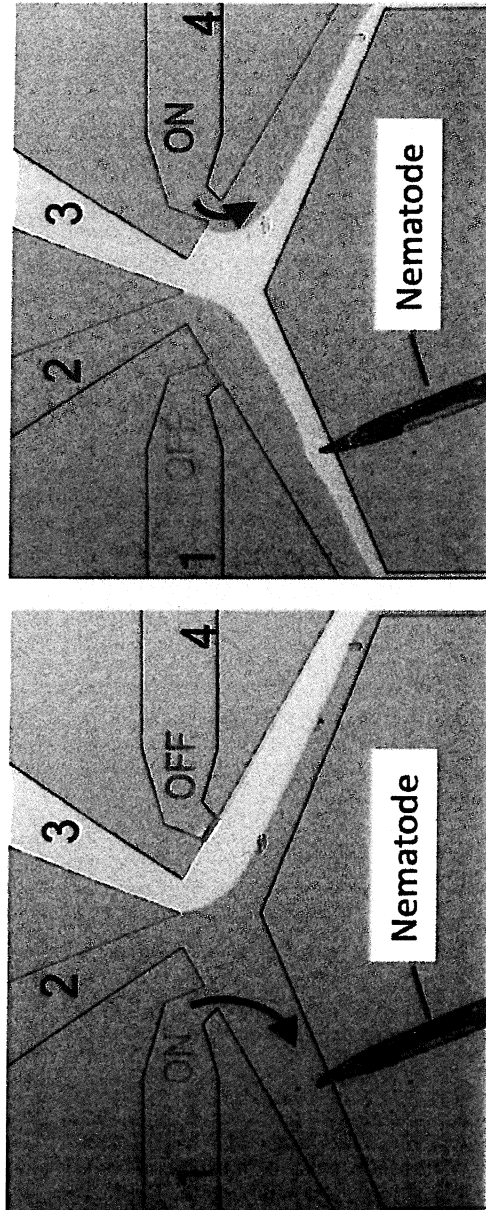


Figure 7

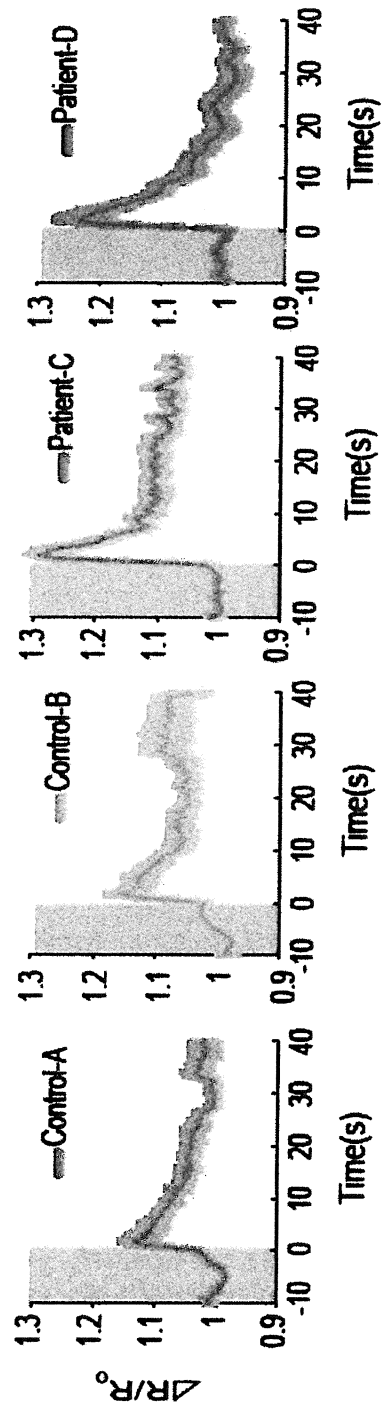


Figure 8

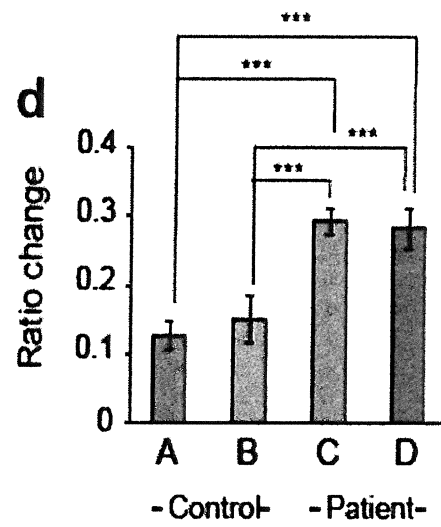


Figure 9

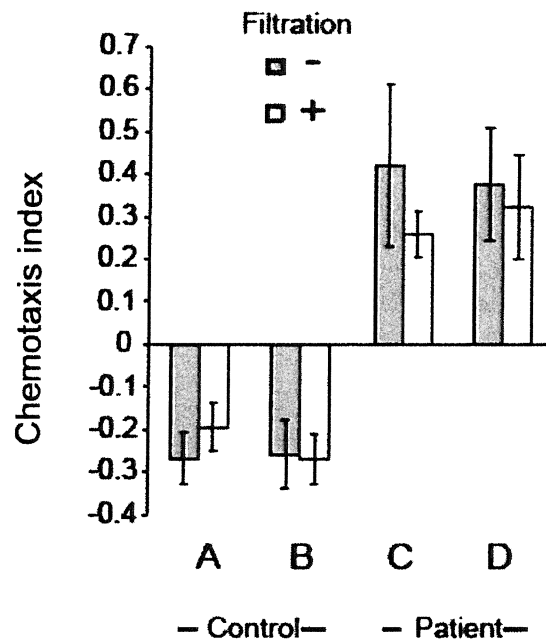
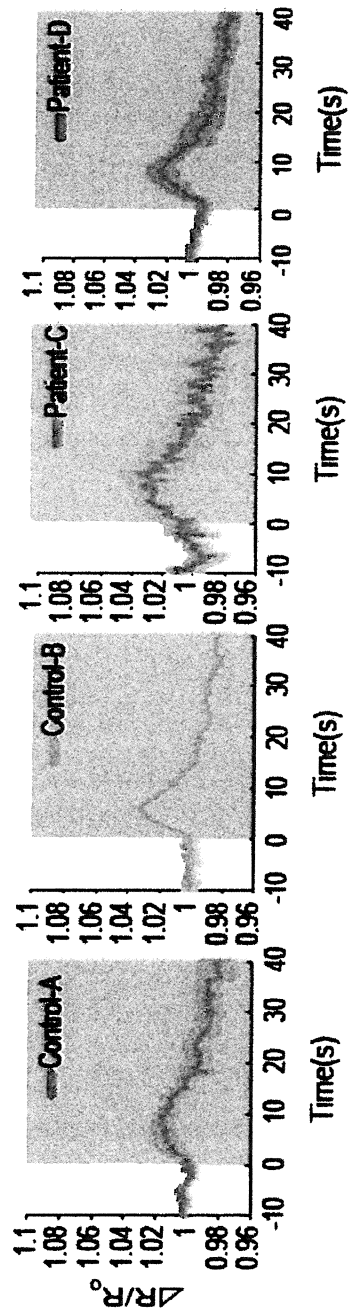


Figure 10



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Figure 11

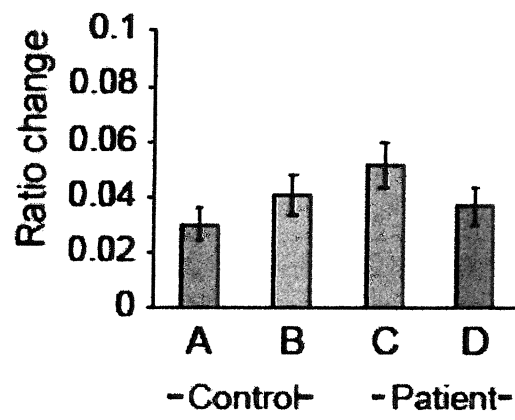
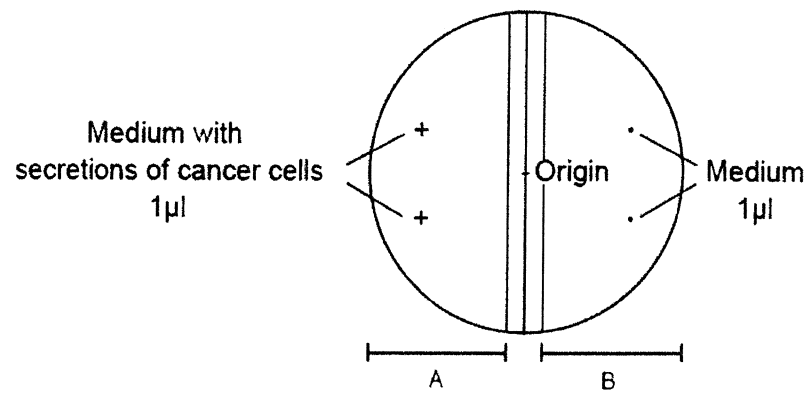


Figure 12

a



b

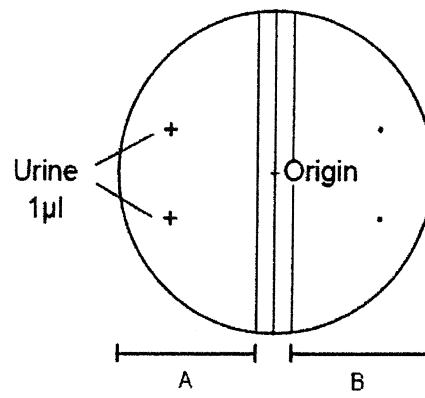


Figure 13

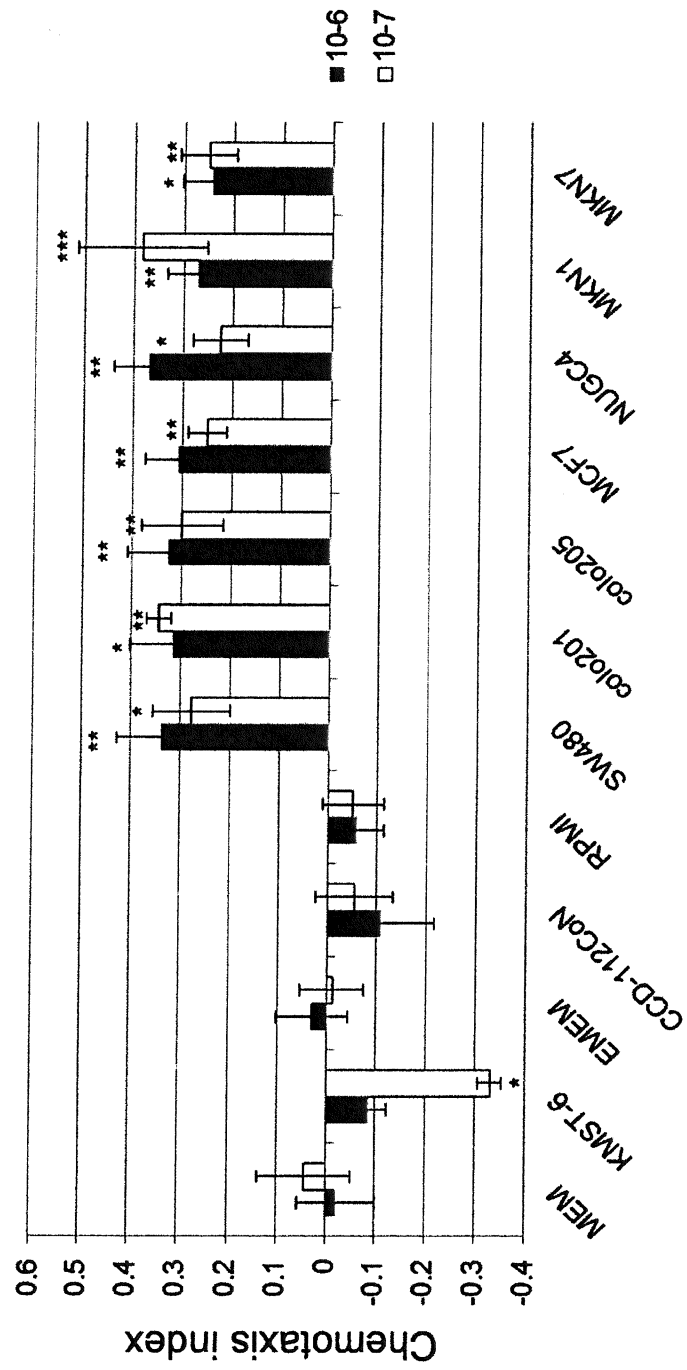


Figure 14

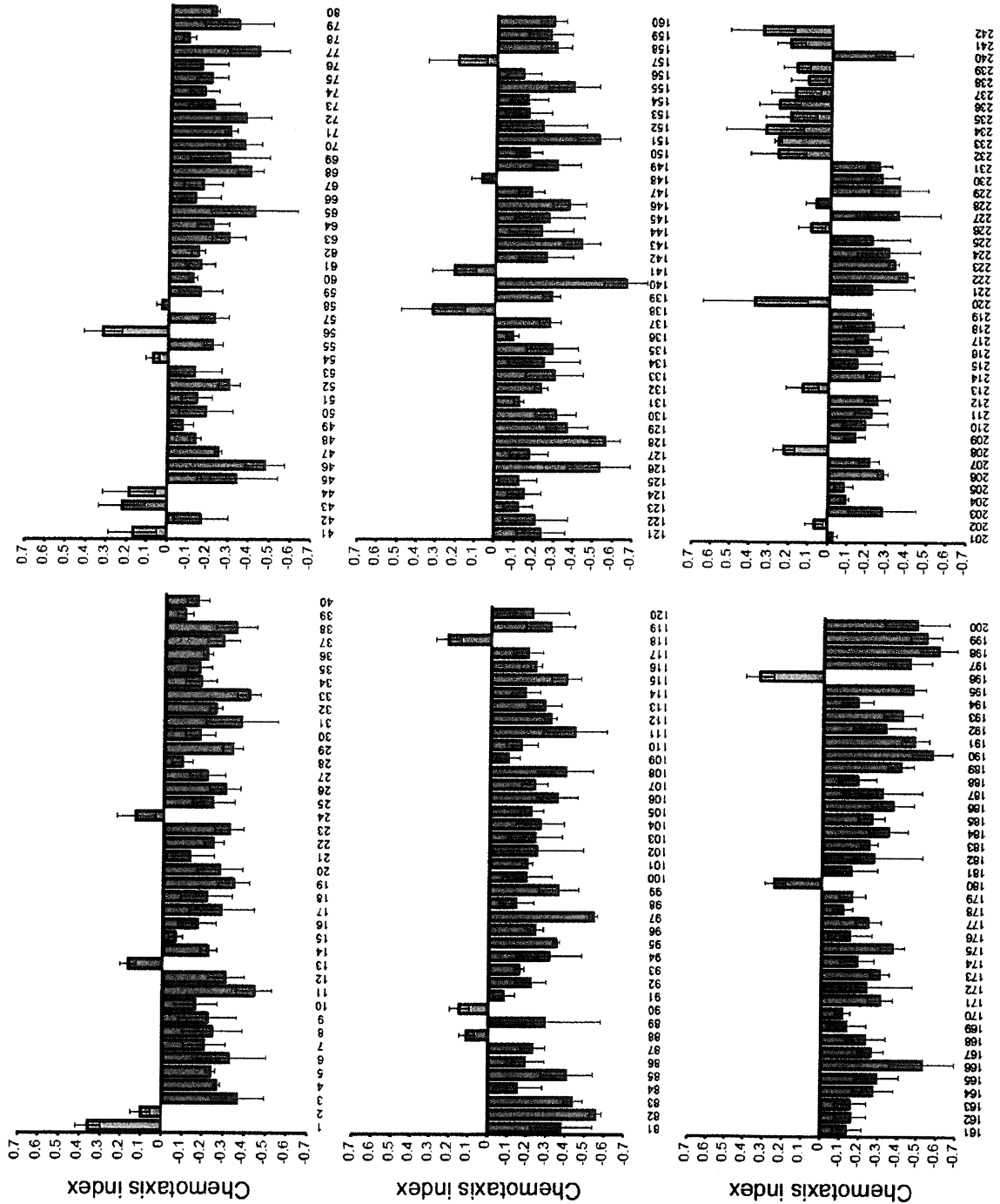


Figure 15

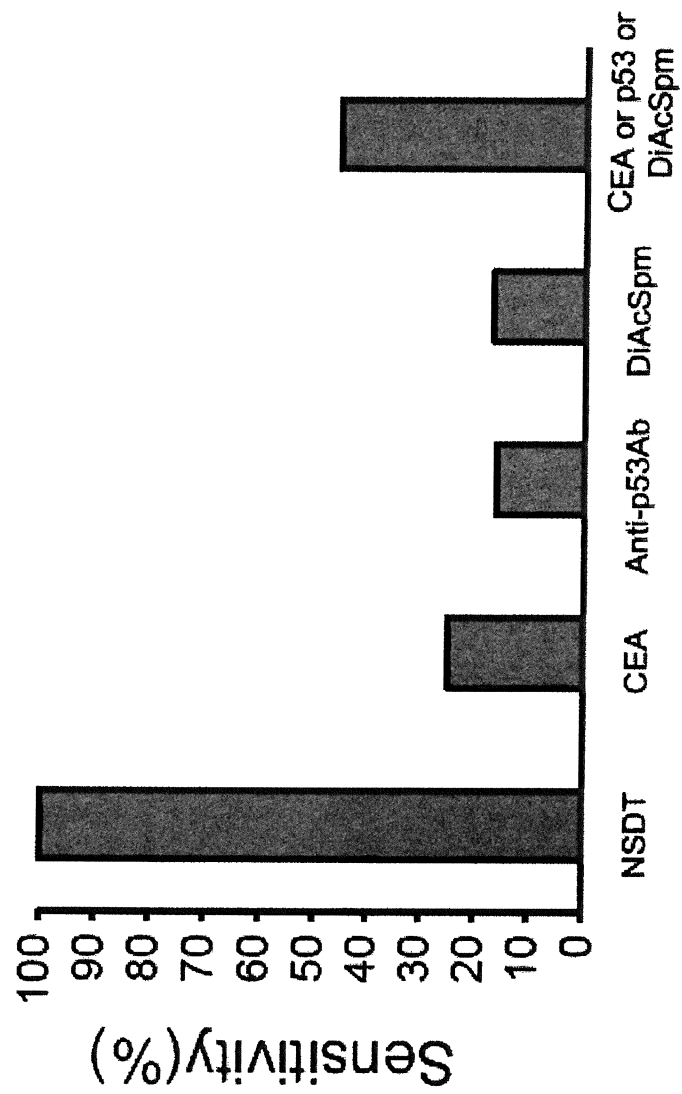


Figure 16A

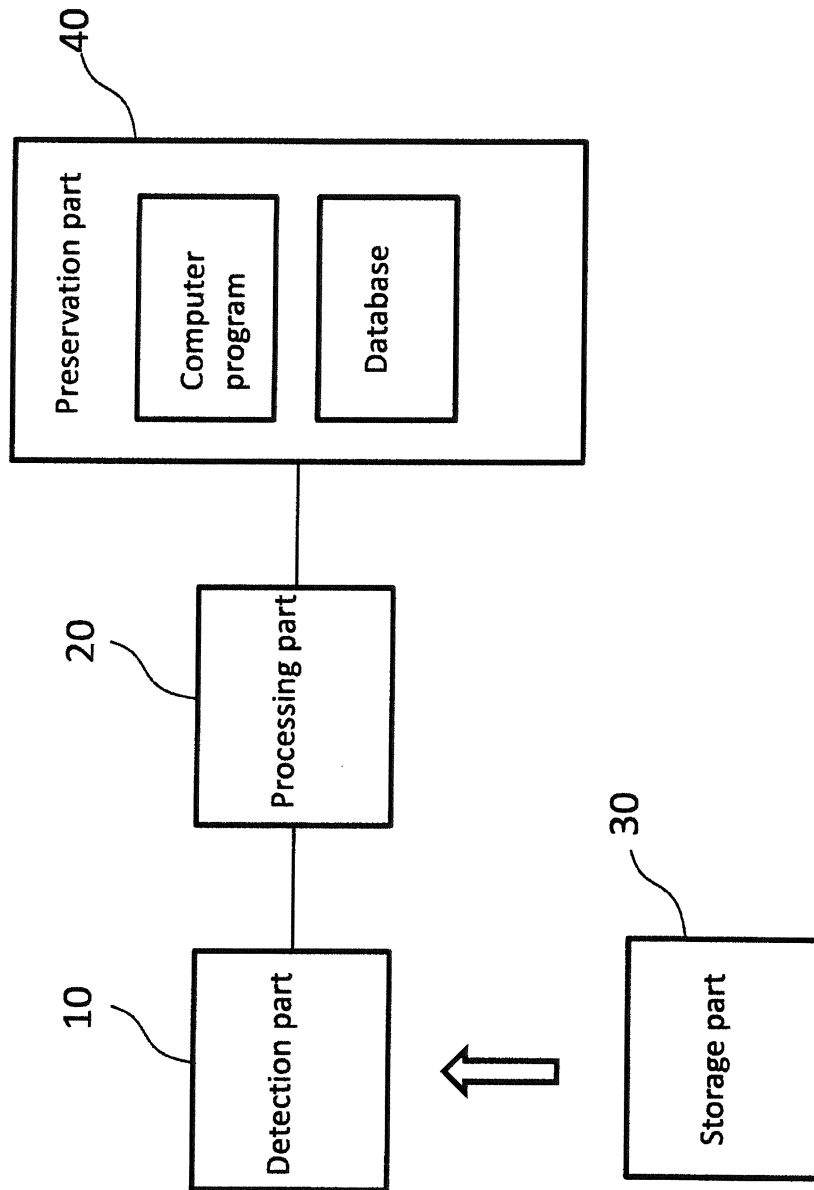


Figure 16B

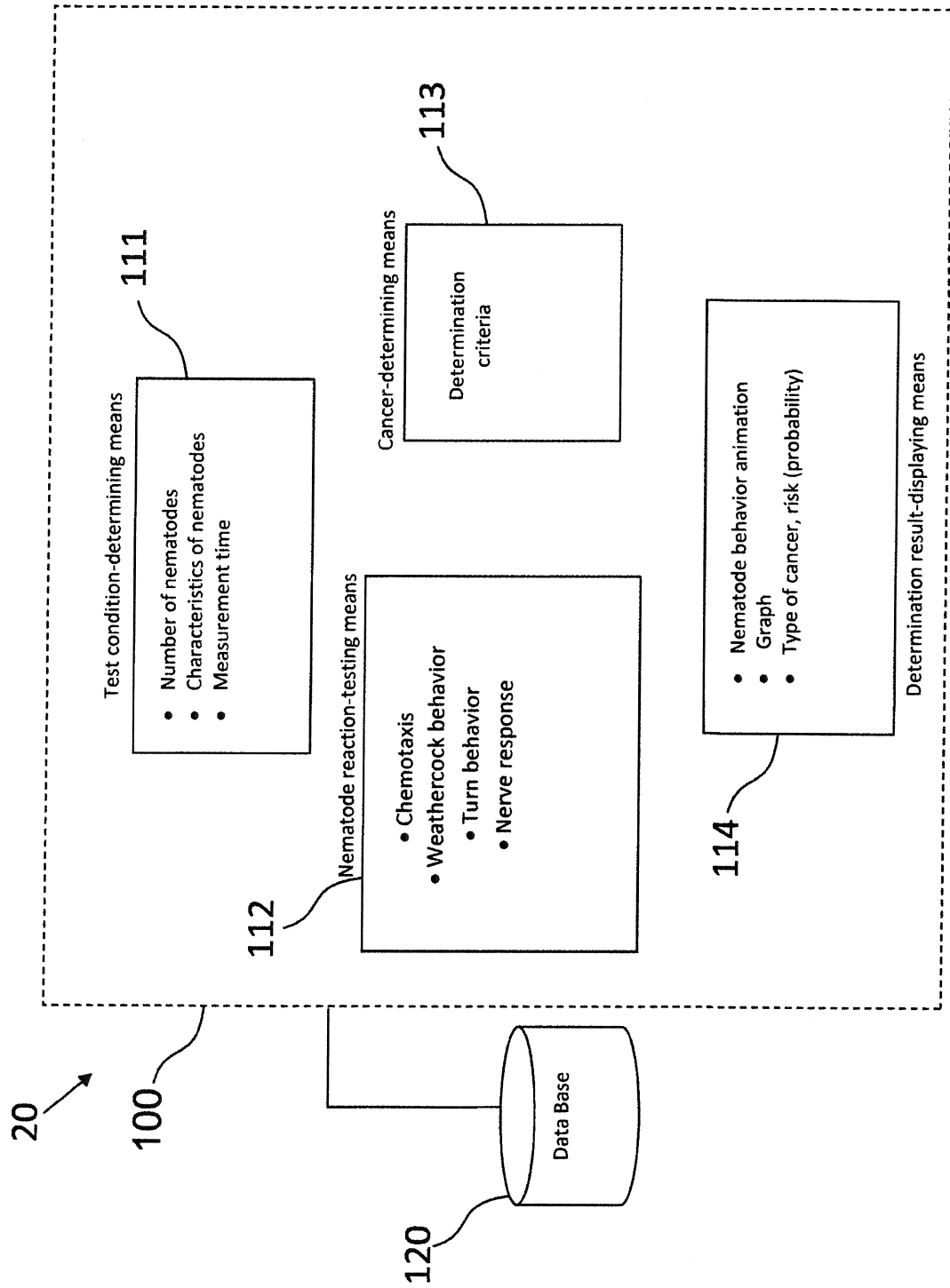
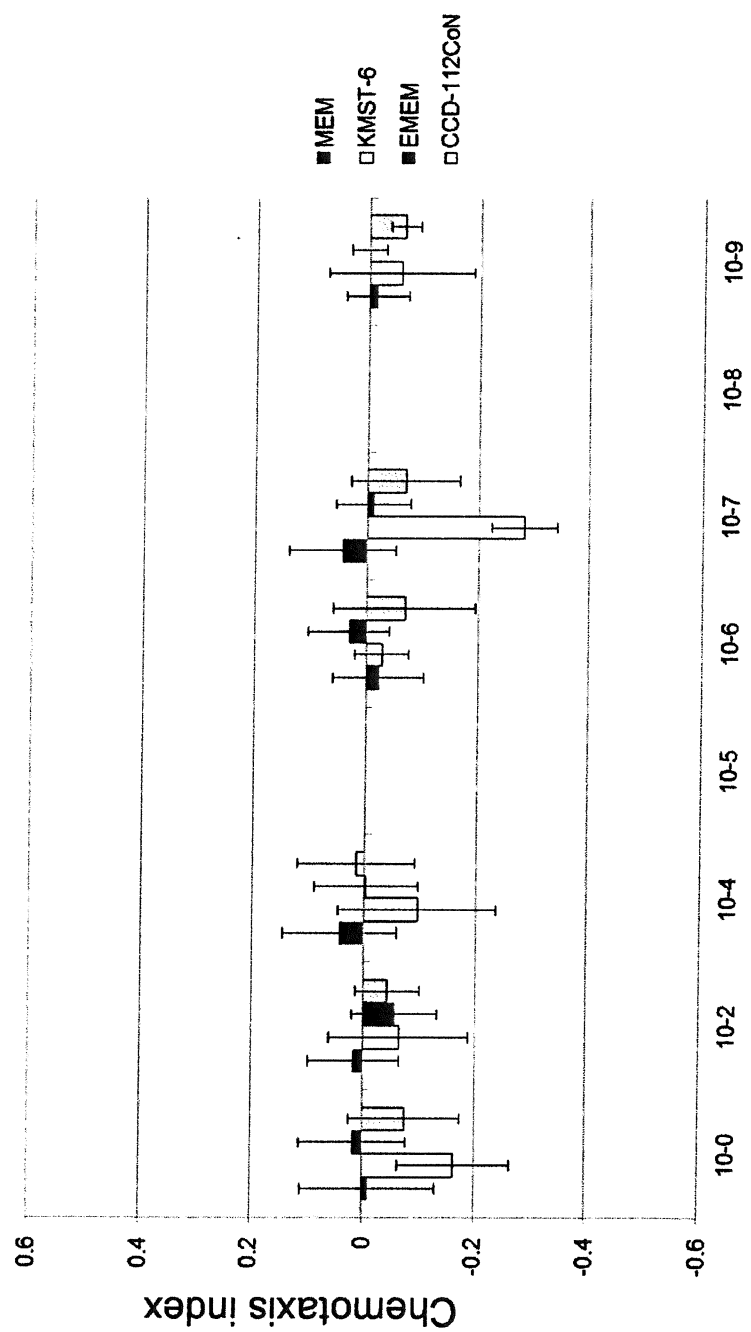


Figure 17



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Figure 18

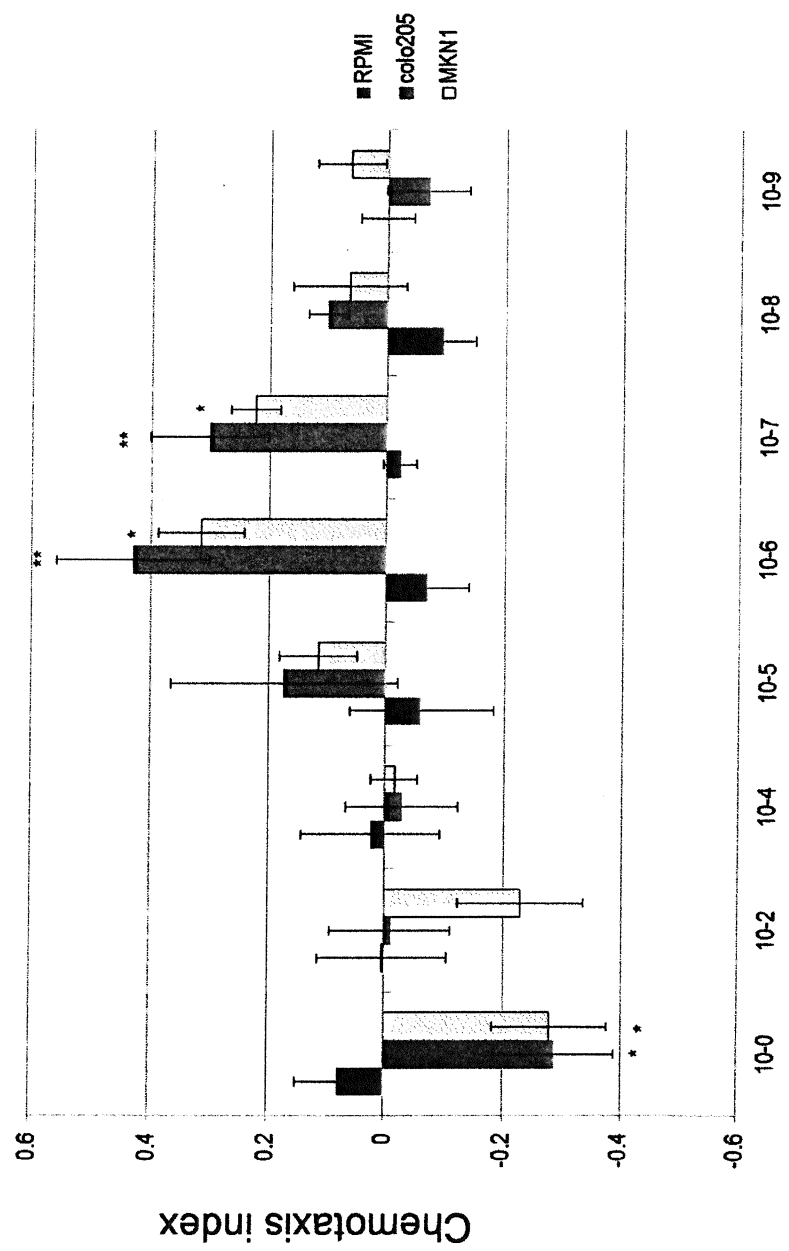


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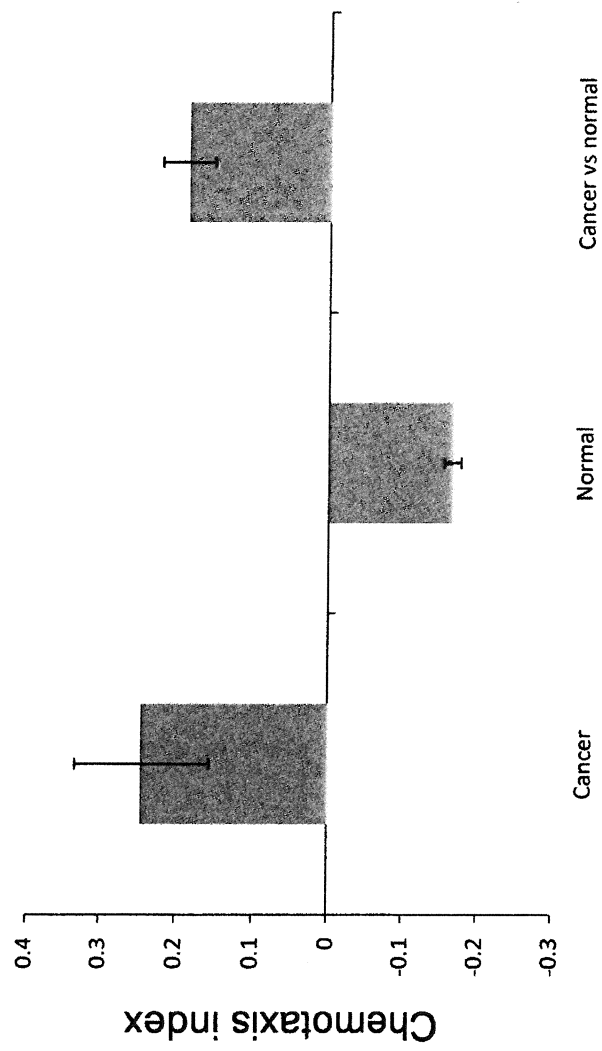


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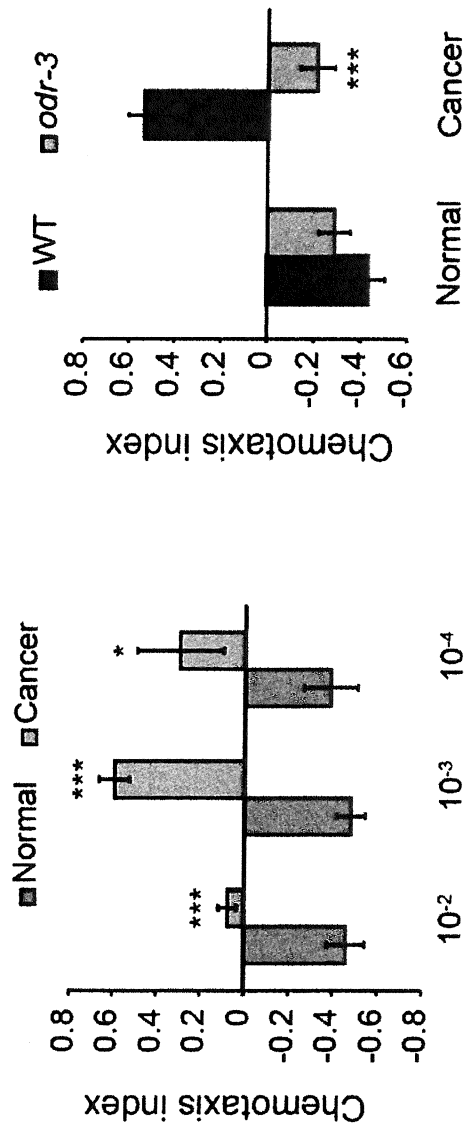


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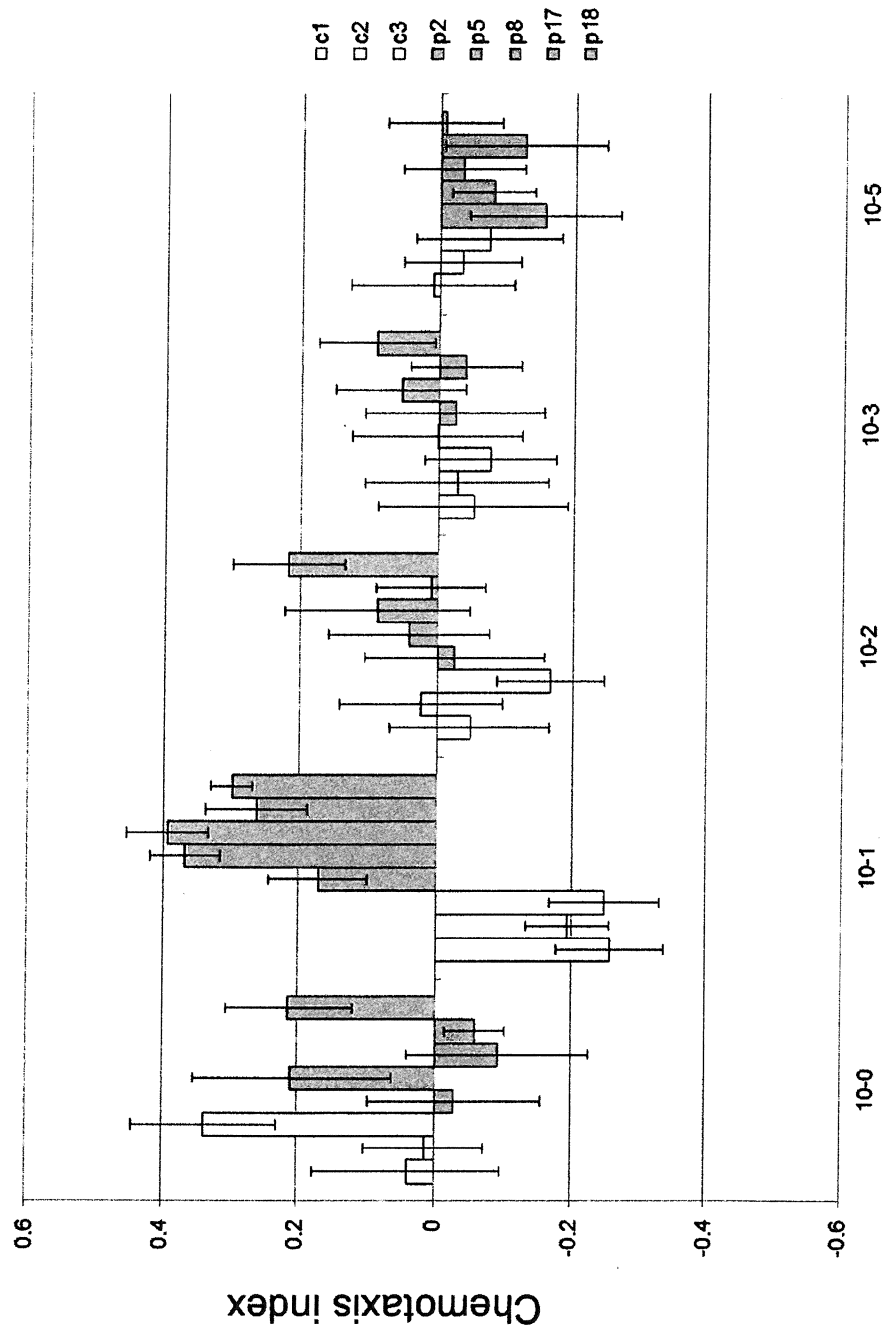
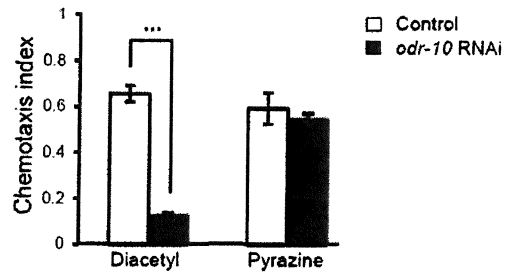


Figure 22

A



B

Odorant	The number of candidate genes
<i>Attractants</i>	
Isoamyl alcohol (Iaa)	21
Benzaldehyde (Bz)	50
Butanone (Bu)	17
Pentanedione (Pd)	39
Pyrazine (Py)	56
Trimethylthiazole (Tmt)	22
<i>Repellents</i>	
Nonanone (Nona)	4
Octanol (Oct)	10
High Iaa	1
High Bz	7
High Diacetyl (Da)	28

C

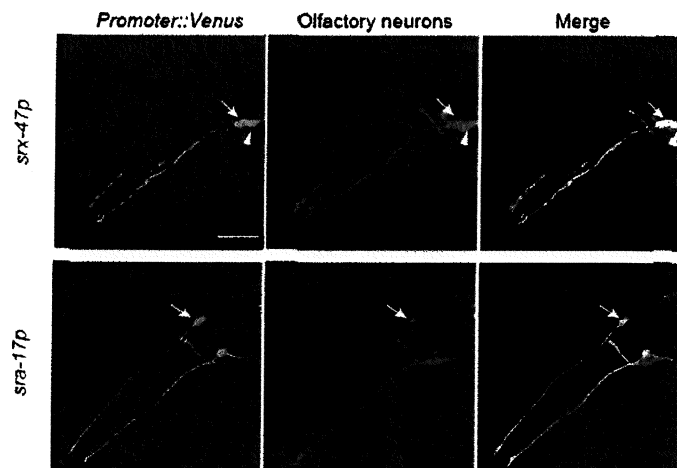


Figure 23

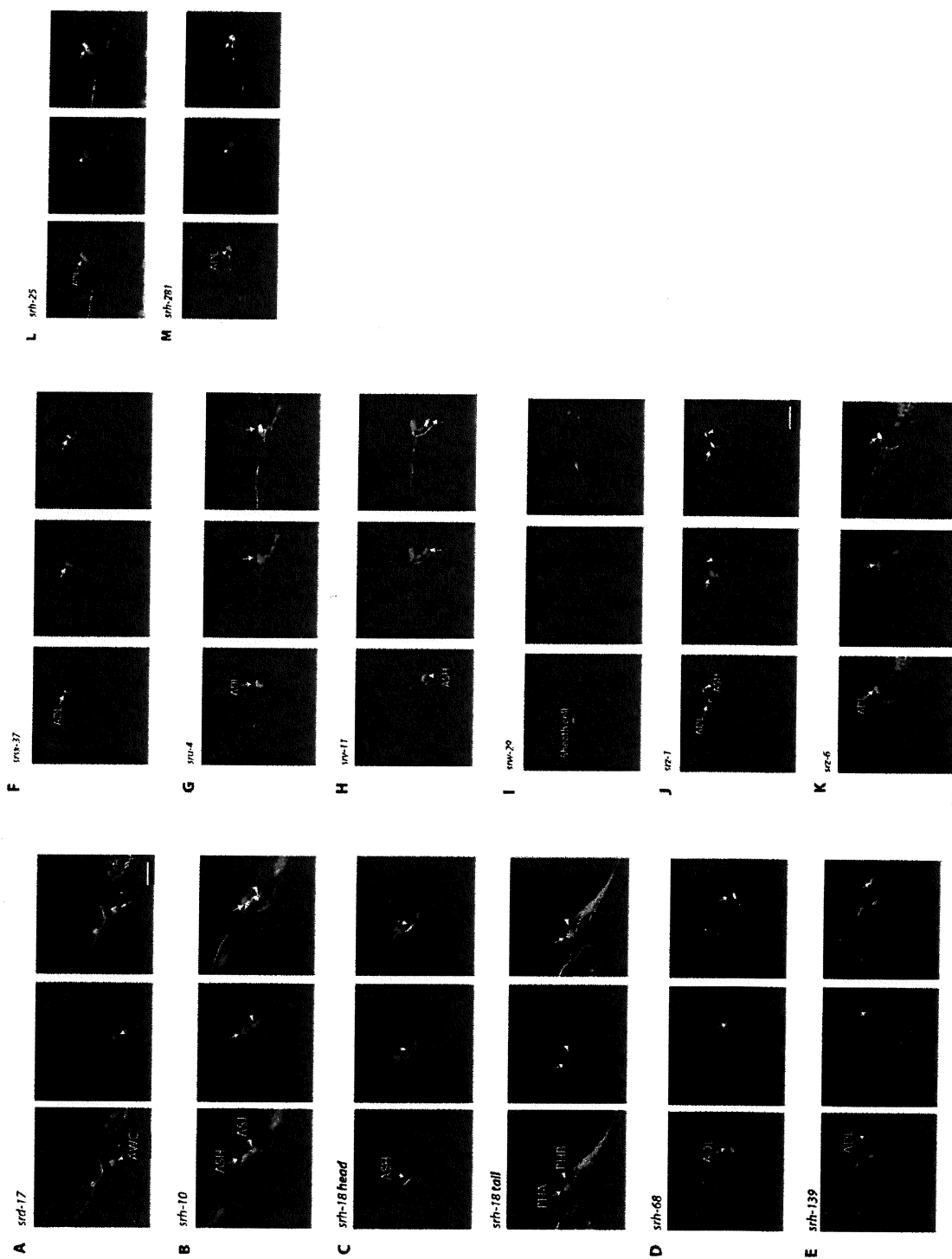


Figure 24

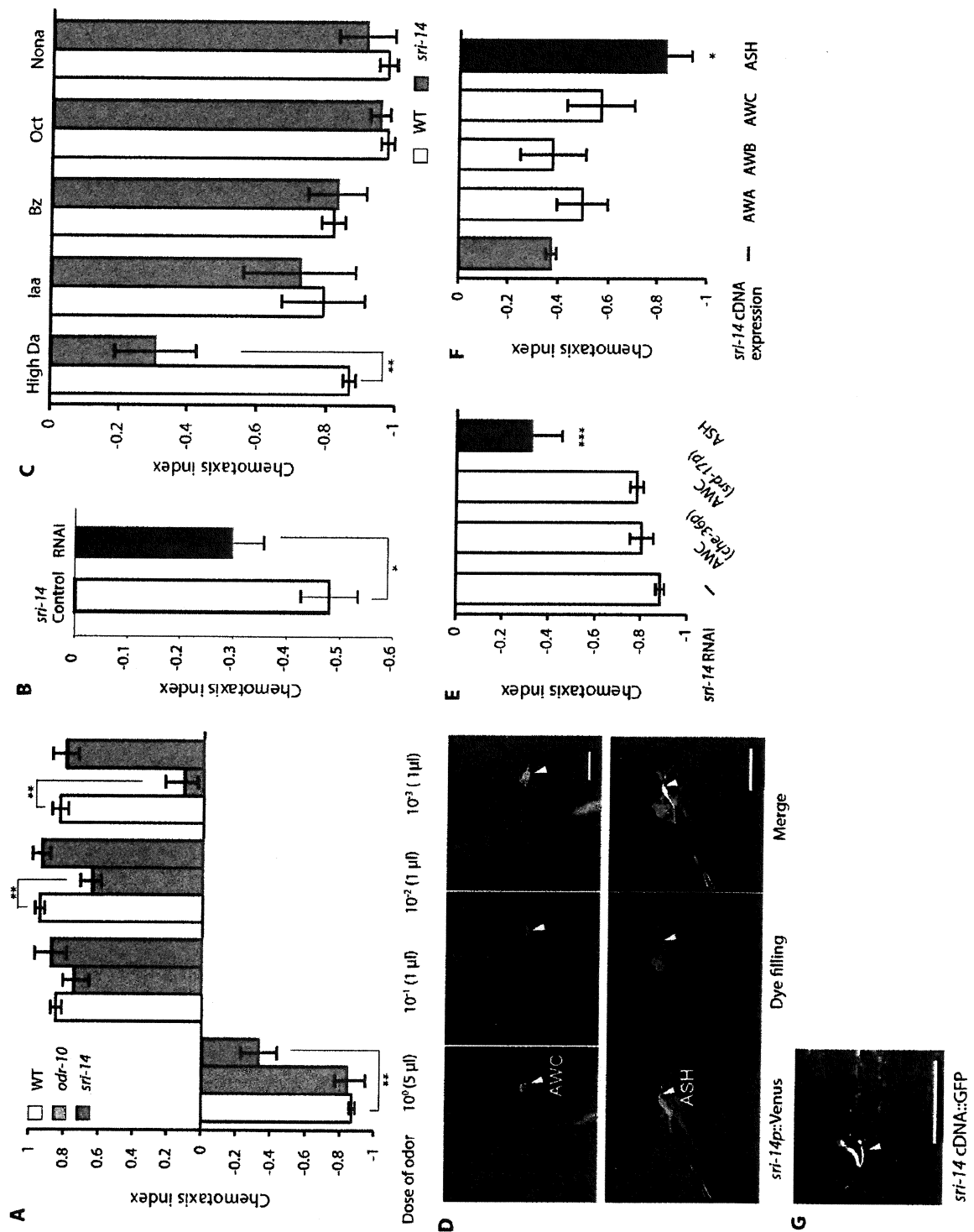


Figure 25

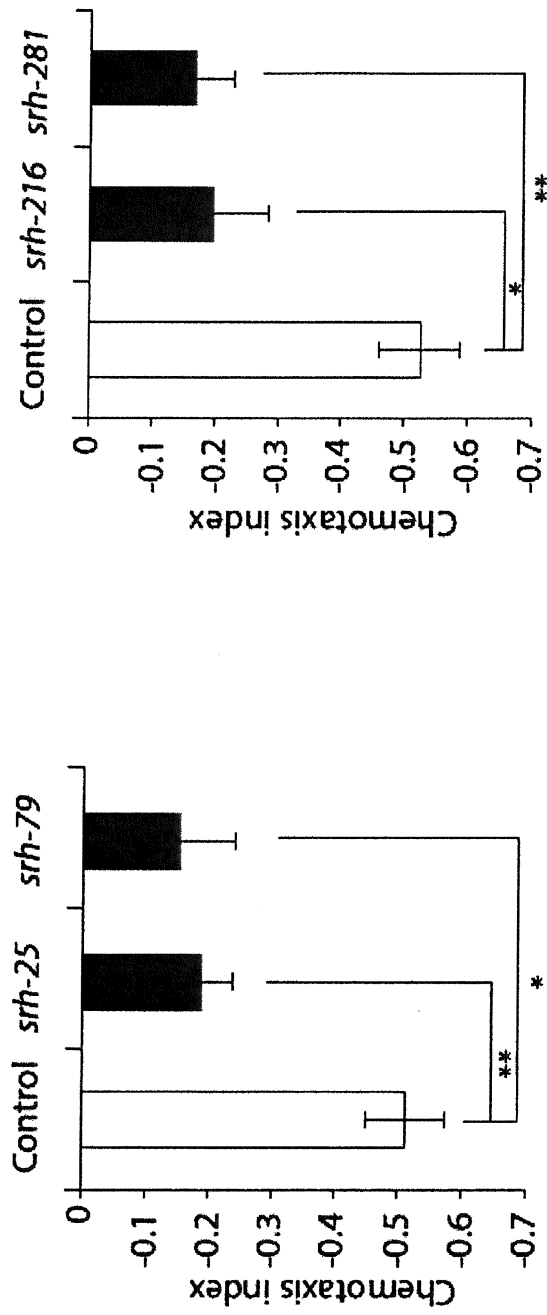


Figure 26

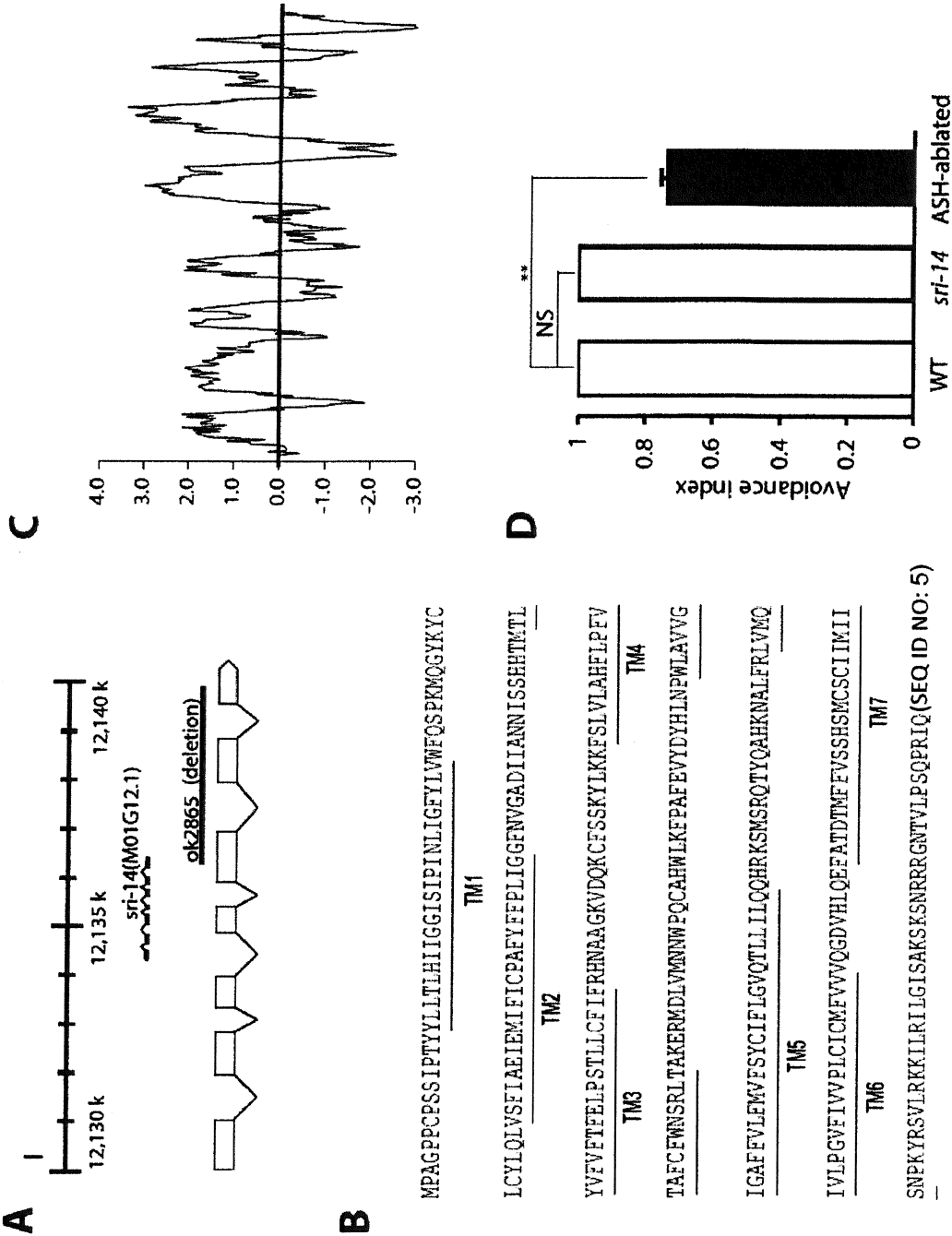


Figure 27

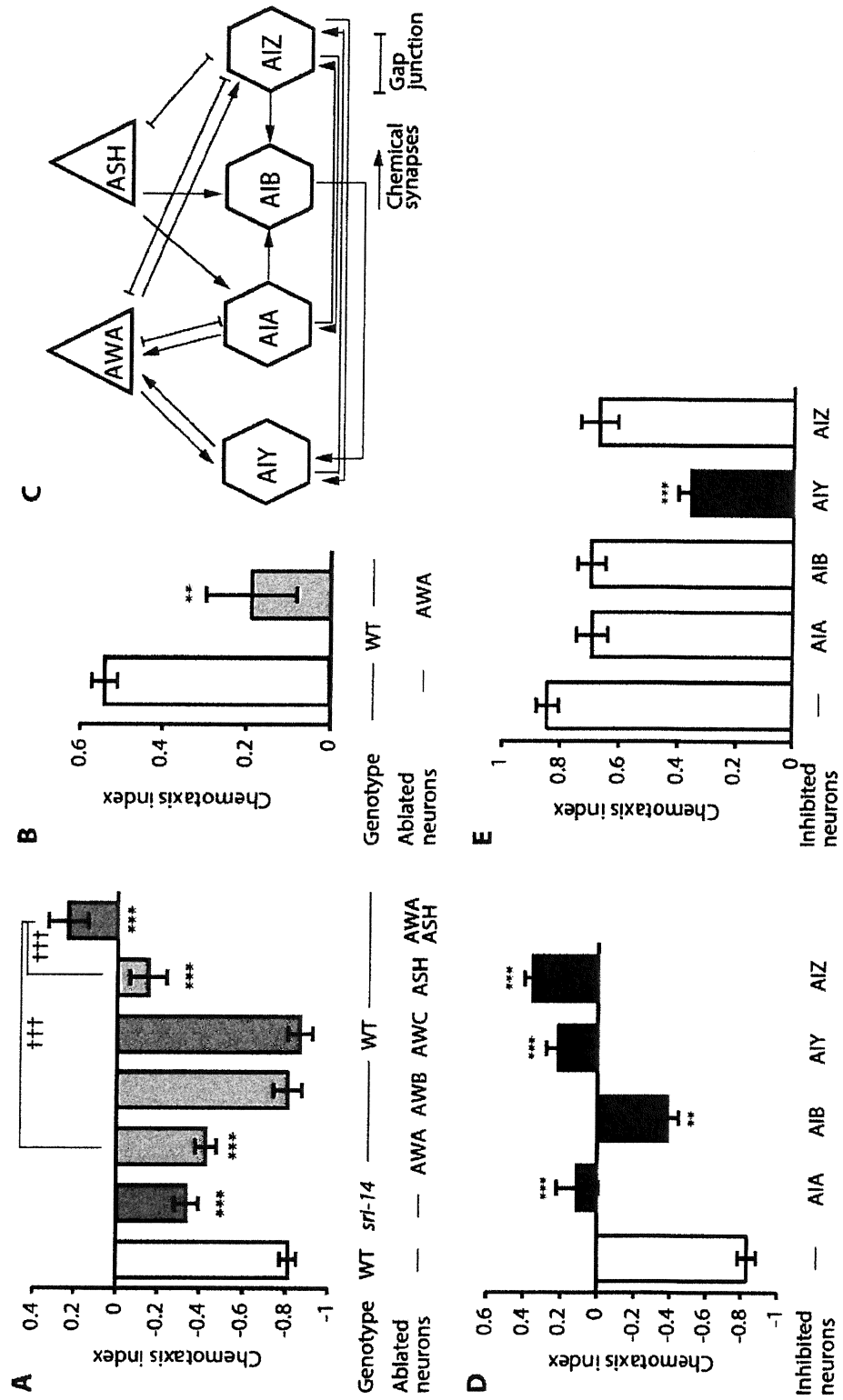


Figure 28

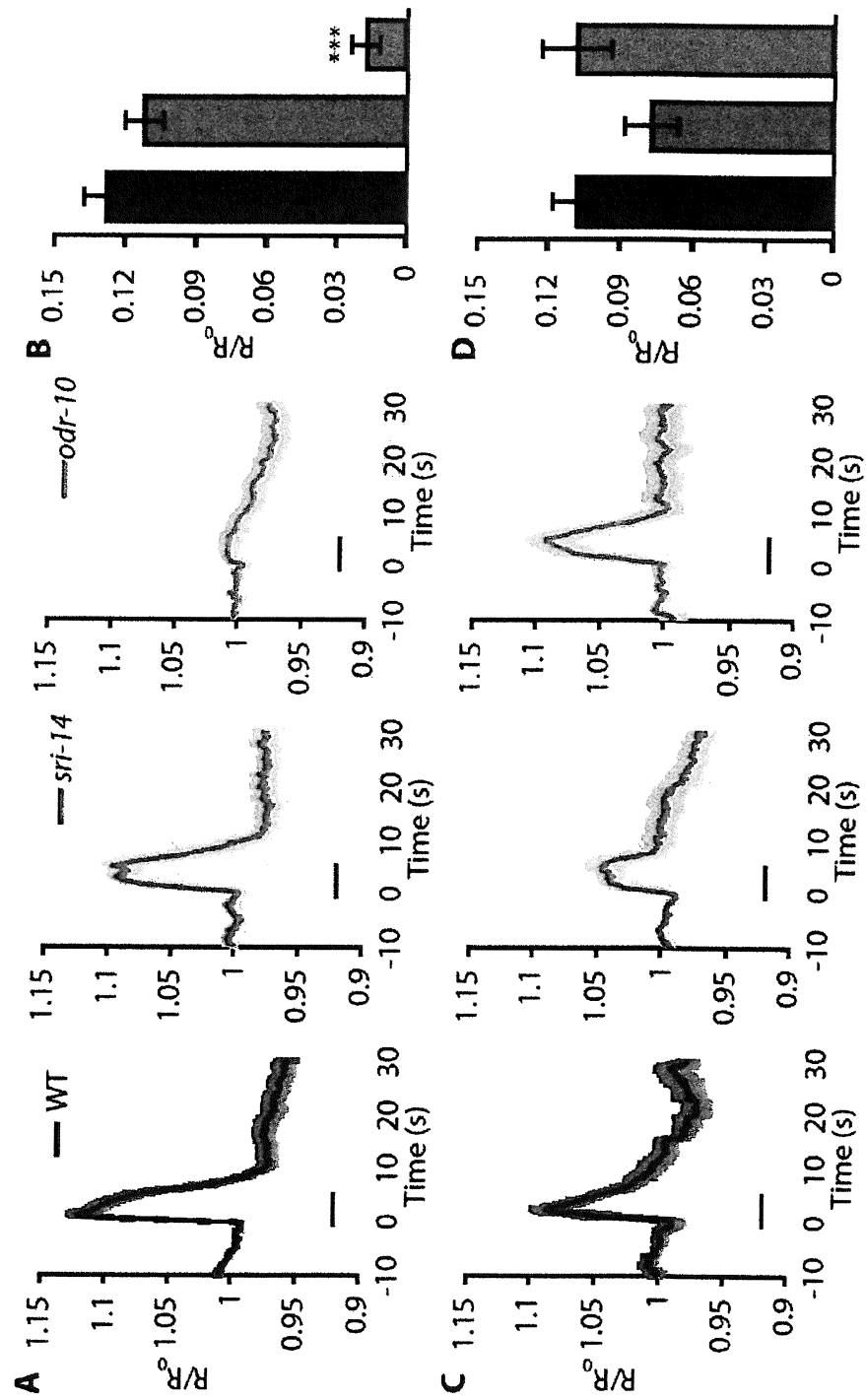


Figure 29

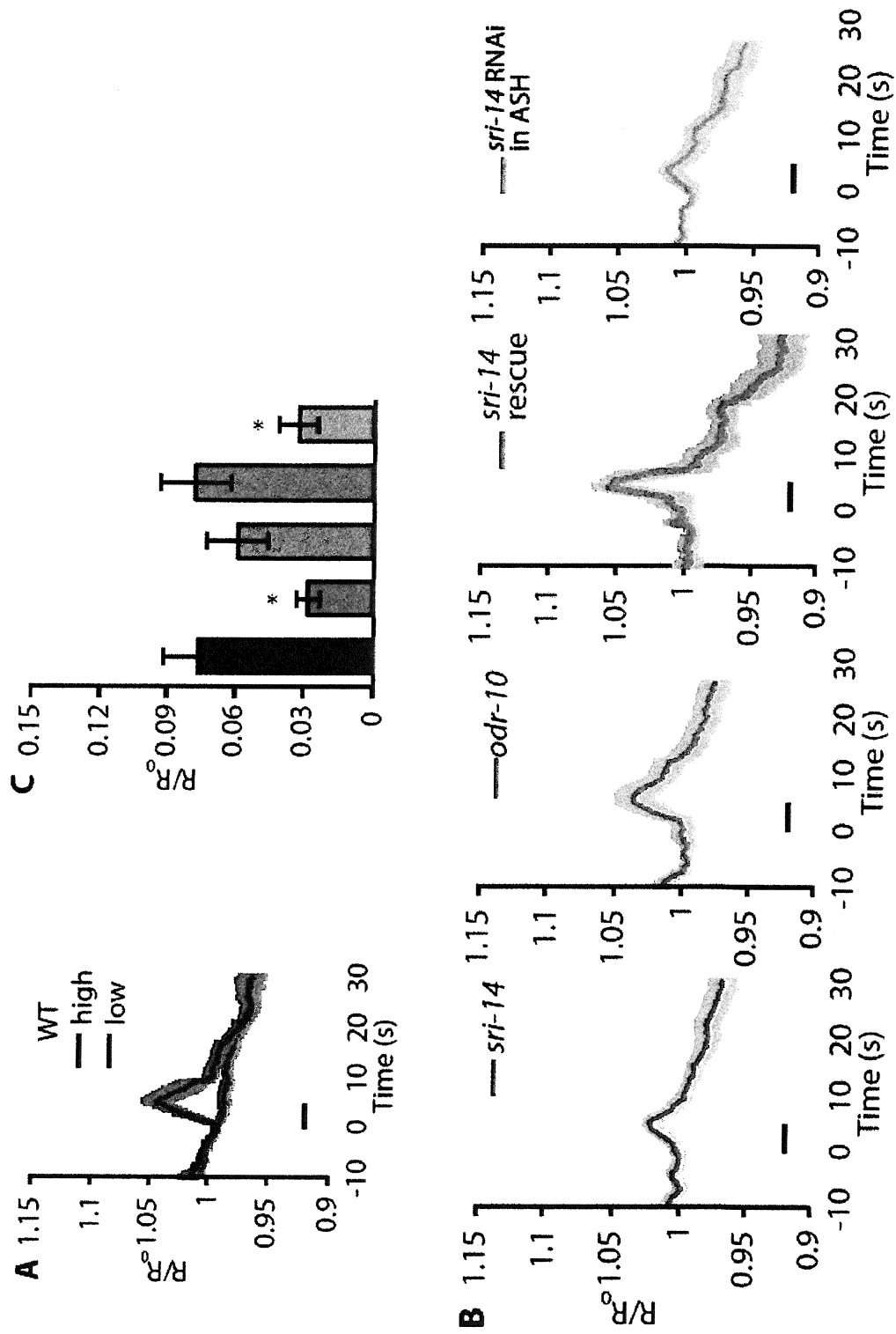
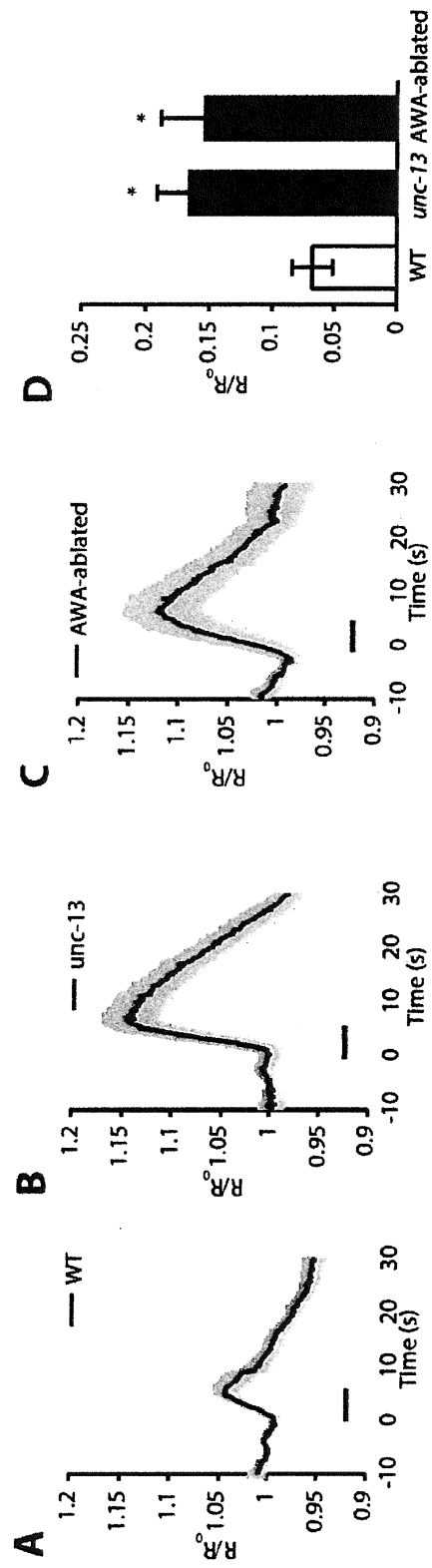


Figure 30



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Figure 31

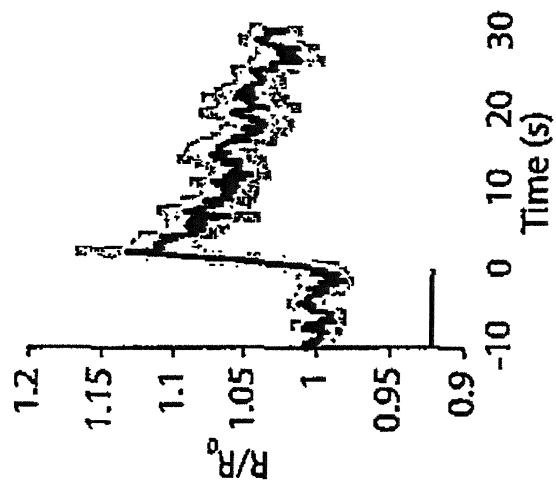


Figure 32

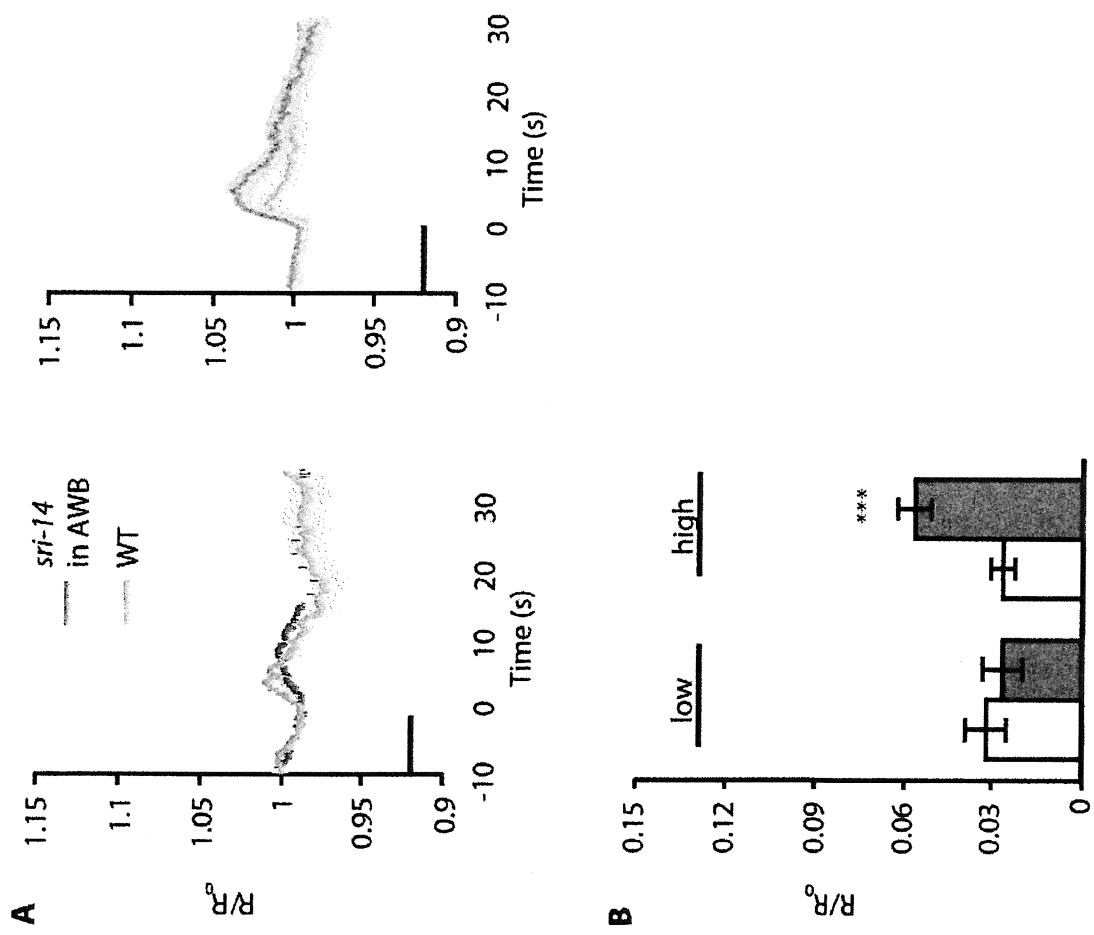


Figure 33

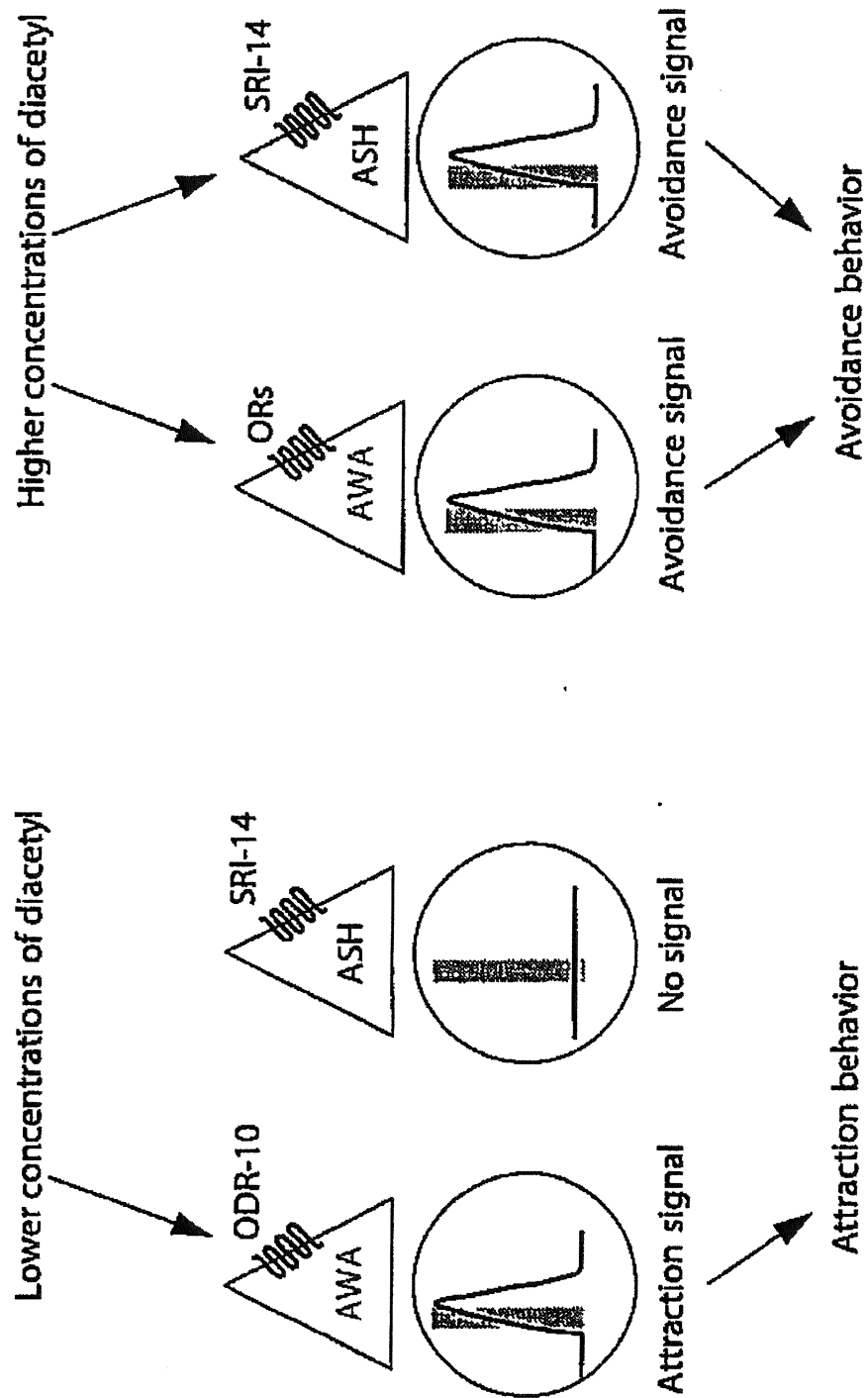


Figure 34

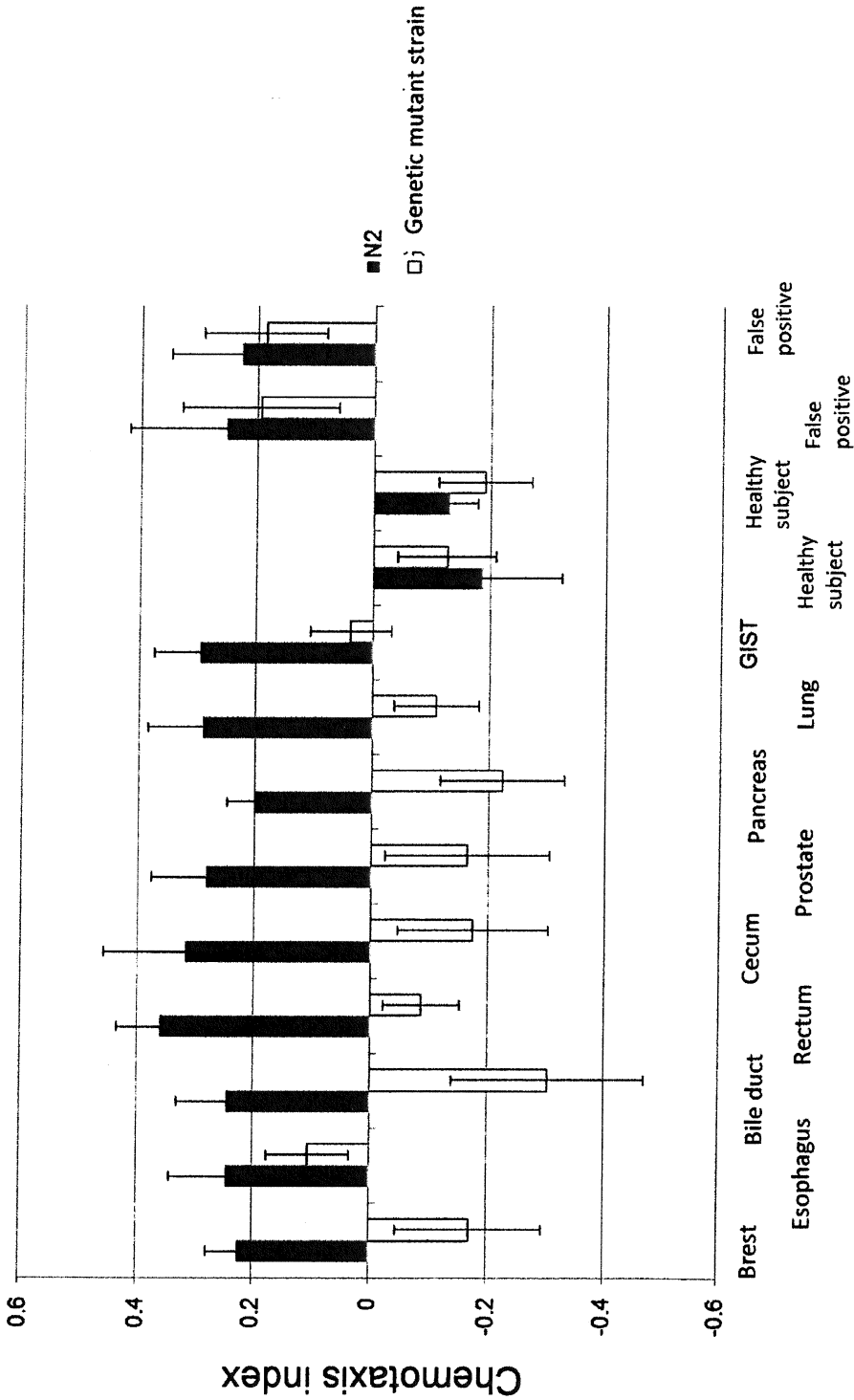


Figure 35

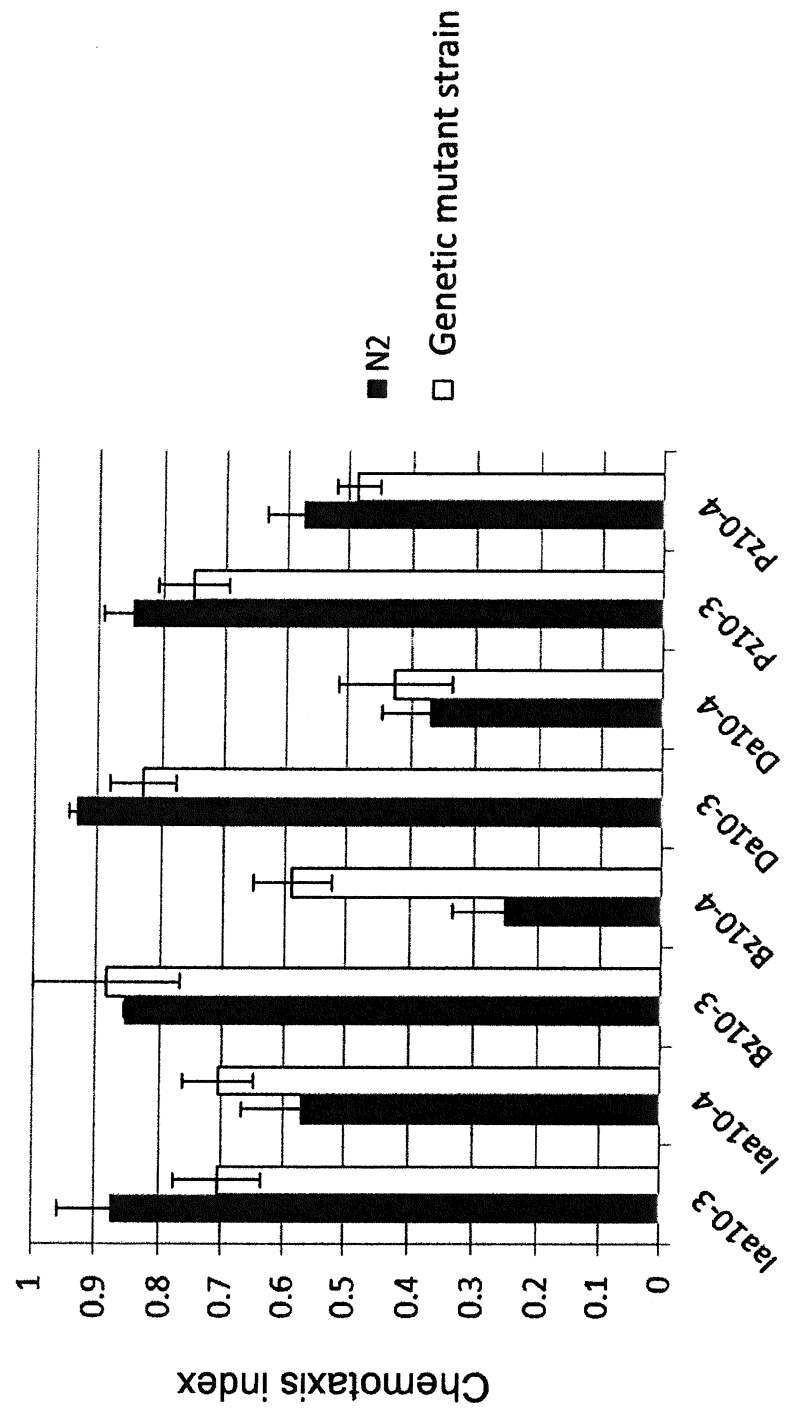


Figure 36

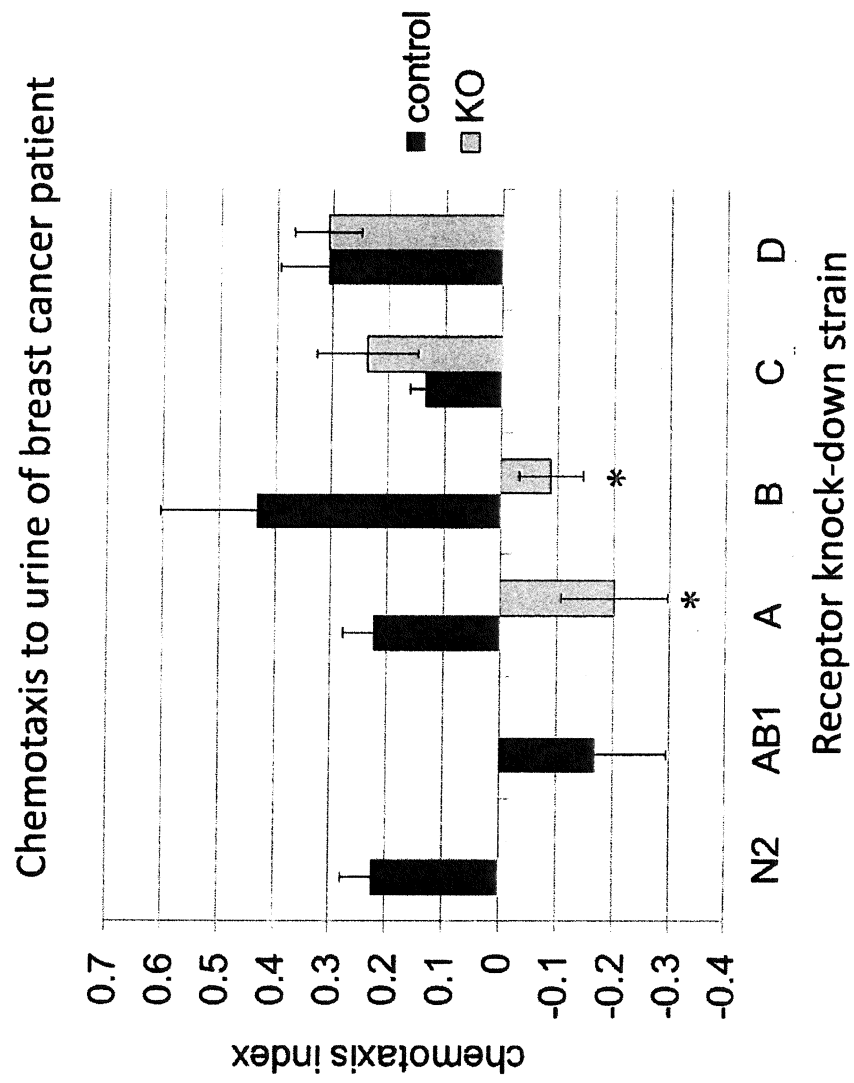


Figure 37

Method of examining type of cancer

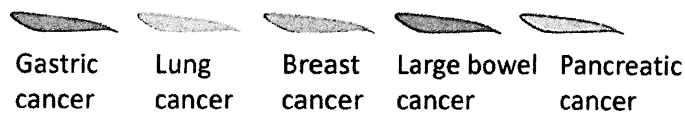
As a result of the studies regarding cancer detection dogs, it is suggested that an odorant and/or a receptor would be different depending on the type of cancer.



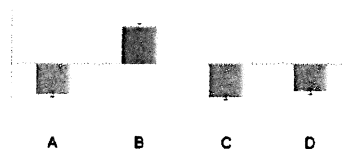
Identification of a receptor for each type of cancer, using nematodes



Production of a nematode strain which deletes the receptor
(CRISPR/Cas9 genome editing technique)



i) The presence or absence of all cancers is examined using wild-type nematodes.



ii) Analysis is carried out using nematode strains deleting the receptor for each cancer species.

