

Genome Evolution

Lecture 29
Nov 14, 2016

ANNOUNCEMENTS

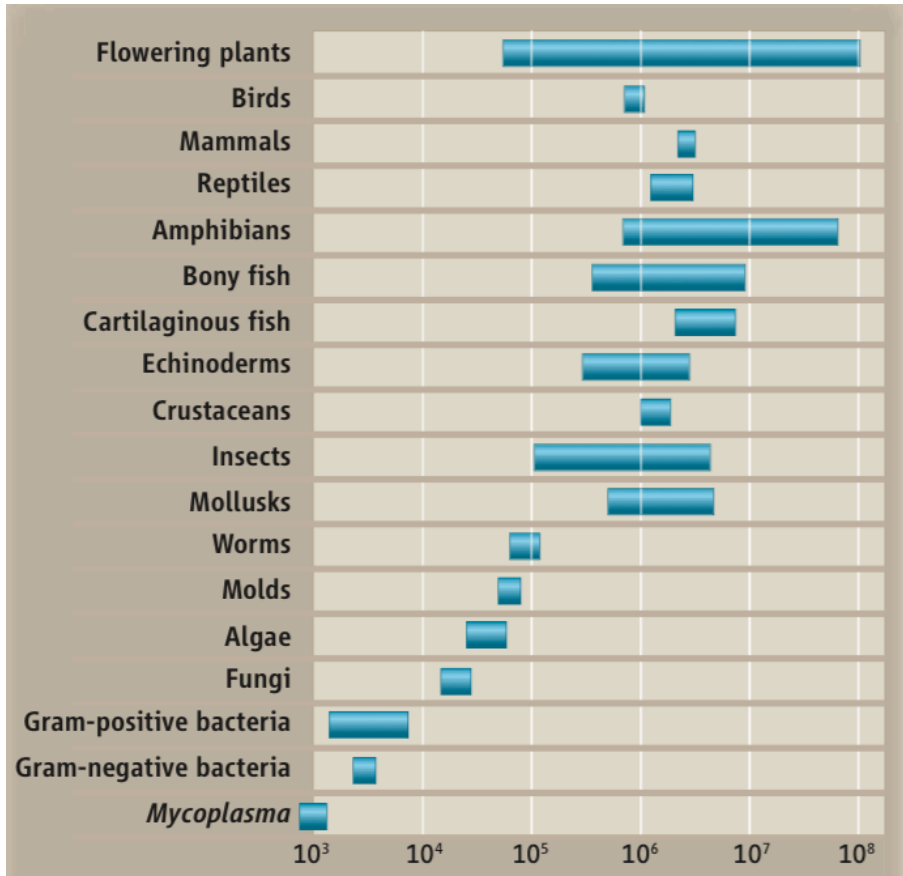
Exam Friday
Review Wednesday

Privacy

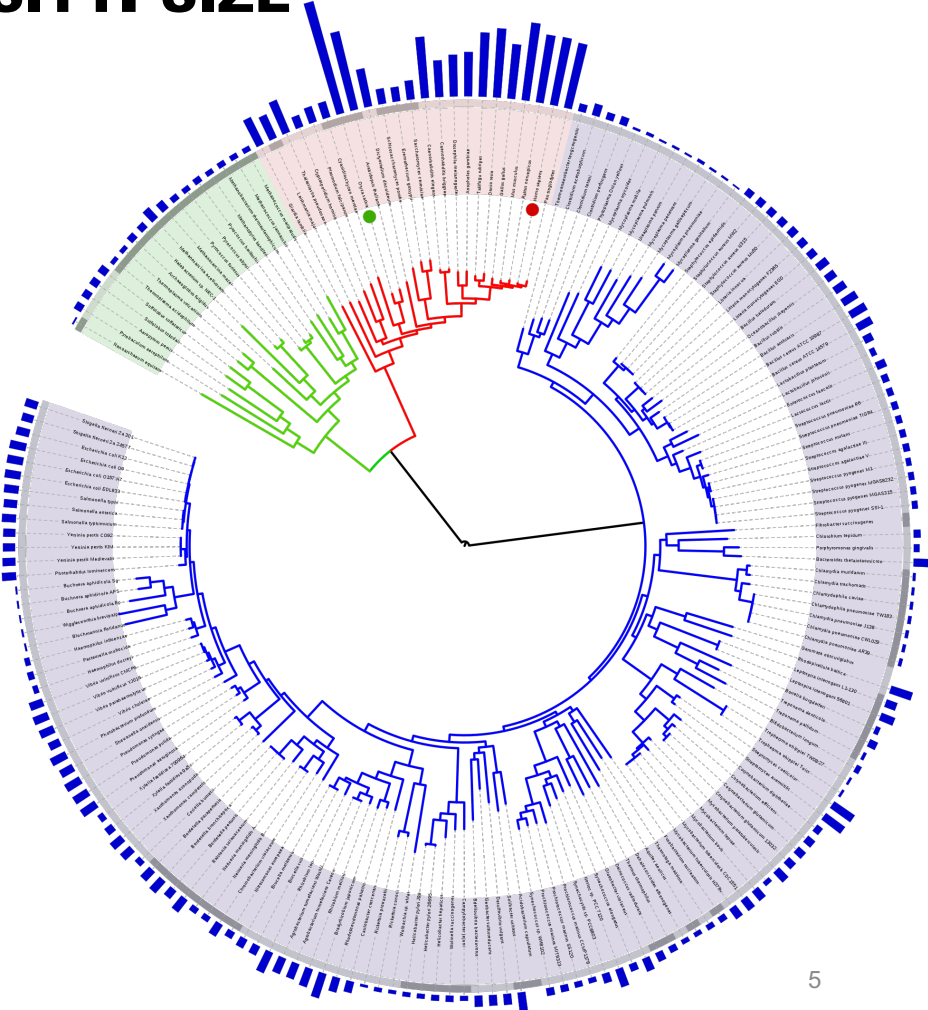
You think you have some fatal genetic disease, and you want to sequence your Mom and Dad, but they are old and scared and will not consent..

- A. Yes
- B. No

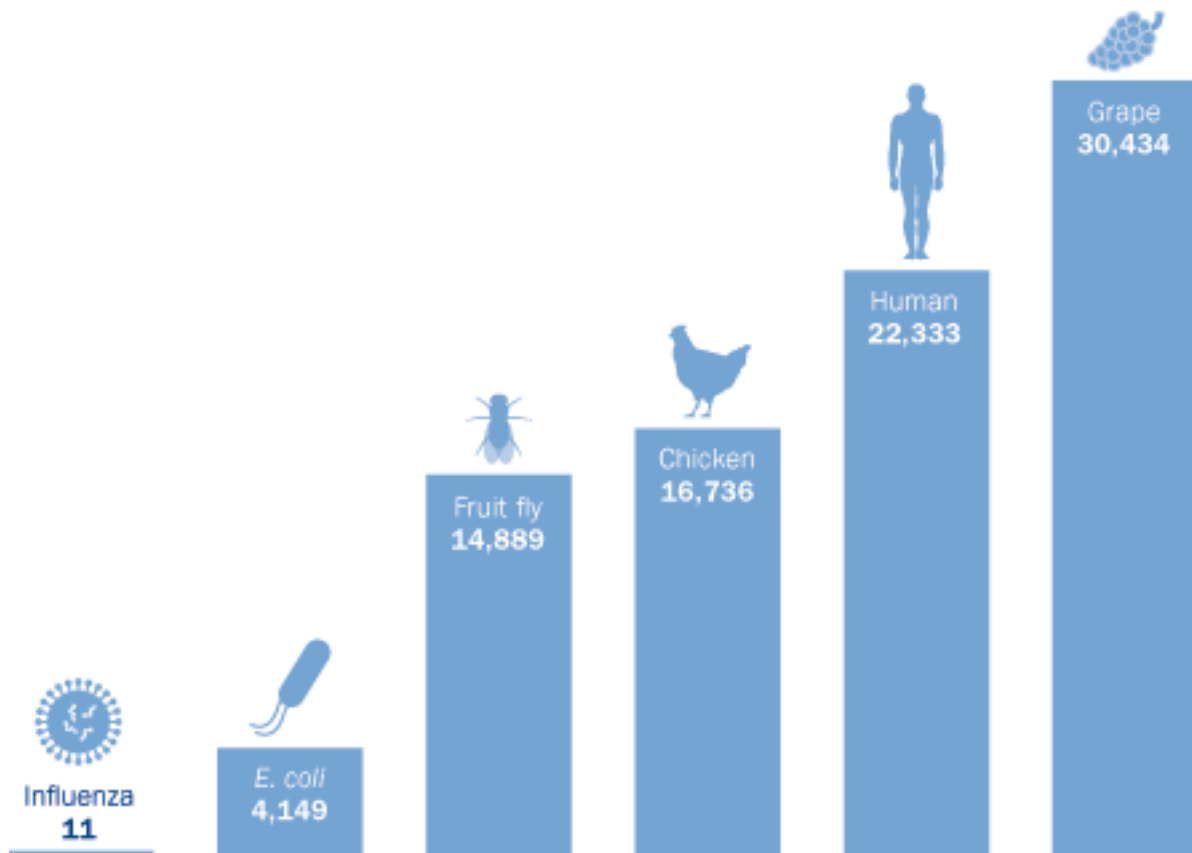
GENOME DIVERSITY: SIZE



GENOME DIVERSITY: SIZE



GENOME DIVERSITY: # GENES



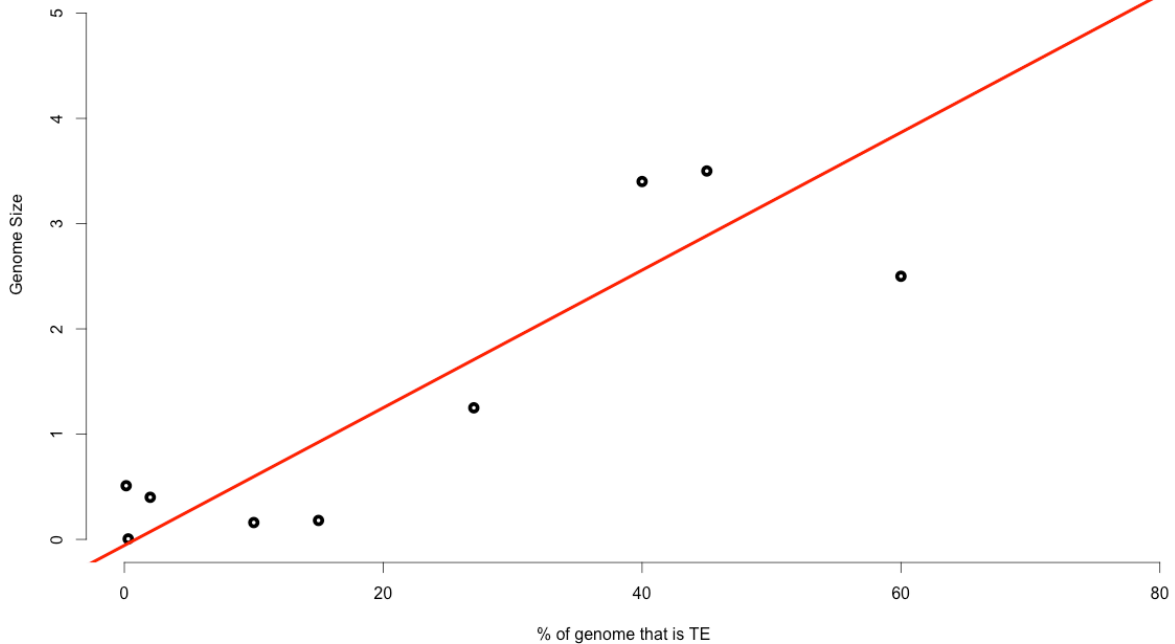
GENOME DIVERSITY:

Genome size unrelated to gene number

Species	Common name	Genome size, pg	% TEs	Gene number
<i>Fritillaria assyriaca</i>	lily	127.4	95-99	23,000
<i>Rana esculenta</i>	frog	5.6- 8.0	77	
<i>Homo sapiens</i>	human	3.5	45	
<i>Xenopus laevis</i>	frog	3.5	37	
<i>Mus musculus</i>	mouse	3.4	40	35,000
<i>Zea mays</i>	maize	2.5	60	20,000
<i>Gallus domesticus</i>	hen	1.25	27	
<i>Tetraodon nigroviridis</i>	fish	0.51	0.14	
<i>Takifugu rubripes</i>	fish	0.4	2	
<i>Anopheles gambiae</i>	malaria mosquito	0.28	16	14,000
<i>Drosophila melanogaster</i>	fruit fly	0.18	15-22	14,039
<i>Ciona intestinalis</i>	ascidian	0.16	10	15,500
<i>Arabidopsis thaliana</i>	arabidopsis	0.16	14	26,000
<i>Caenorhabditis elegans</i>	worm	0.1	12	20,060
<i>Saccharomyces cerevisiae</i>	yeasts	0.012	3-5	6,680
<i>Escherichia coli</i>	bacterium	0.0046	0.3	4,500

GENOME DIVERSITY:

Genome size unrelated to gene number



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Genome size unrelated to gene number