

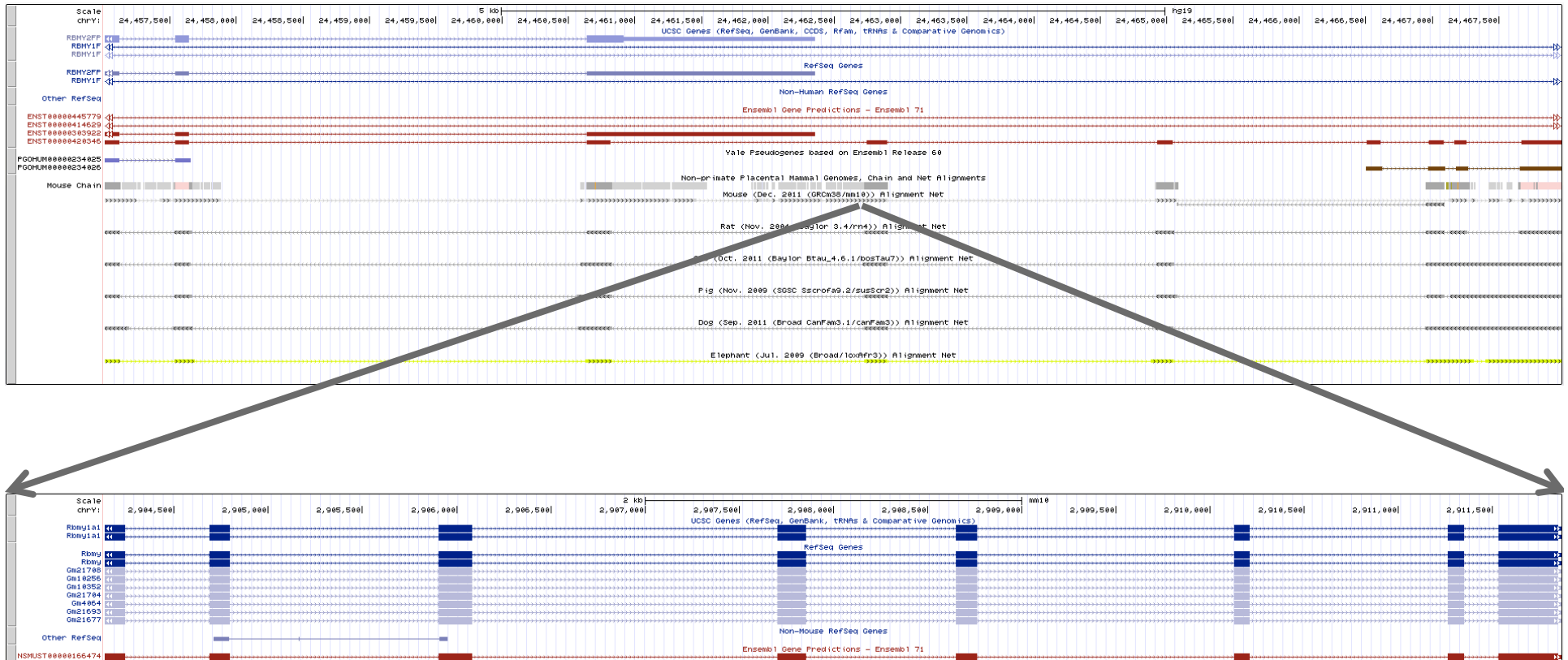
Human Pseudogenes Orthologous to Mouse Genes

	Human	Mouse
Annotation	12,007 pseudogenes	22,703 protein coding genes
In Synteny	679	637

Duplicated pseudogenes: 266
Processed pseudogene: 321 (?)
Unitary pseudogene: 71

IG_V_pseudogene: 2
TR_V_pseudogene: 1
Ambiguous pseudogene: 18

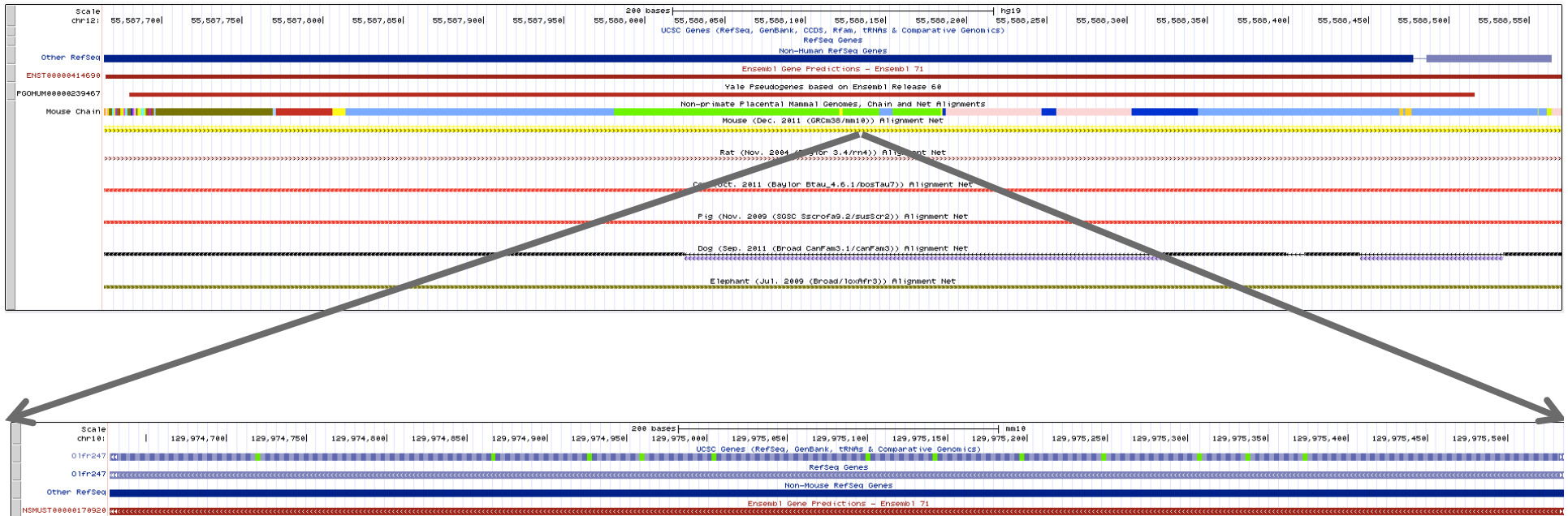
One Duplicated Pgene Example



Human position: chrY:24,456,953-24,468,110
(ENST00000420346.1, which is a duplicated pseudogene)

Mouse position: chrY:2,904,091-2,911,983
(Rbmy1a1, chrY:2,900,989-2,912,210)

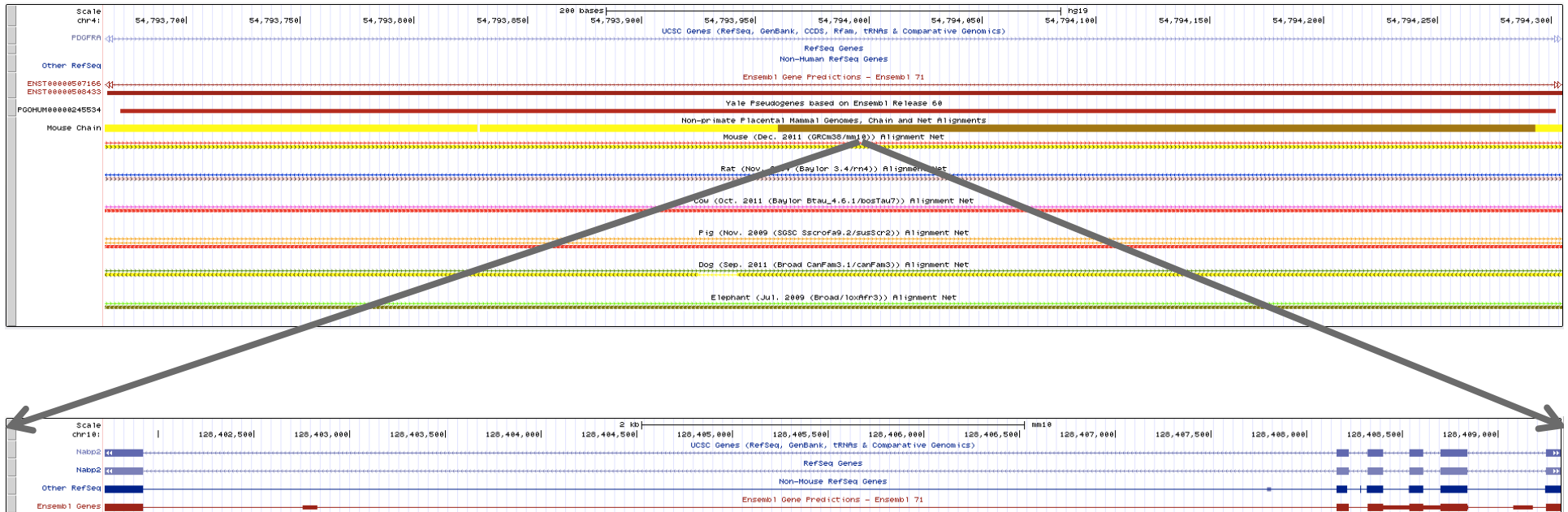
One Unitary Pgene Example



Human position: chr12:55587665-55588570
 (ENST00000414690.2, which is a unitary pseudogene)

Mouse position: chr10:128,401,396-128,409,337
 (Olf247, chr10:129,974,605-129,984,424)

One Processed Pgene Example



Human position: chr4:54,793,365-54,794,317
(ENST00000508433.1, which is a processed pseudogene)

Mouse position: chr10:128,401,396-128,409,337
(Nabp2, chr10:128,401,395-128,409,796)

Next Steps

- Refine the current synteny mapping results (with latest annotation?) to remove artifacts
- Understand how processed human processed pseudogenes can be syntenic to mouse protein coding genes?
- Figure out when the pseudogenization happened by using primate data, and the cause of pseudogenization
- Study the mouse genes that lost function during evolution to see whether there is some biological implication
- Find human genes syntenic to mouse pseudogenes. Does that mean pseudogene resurrection?