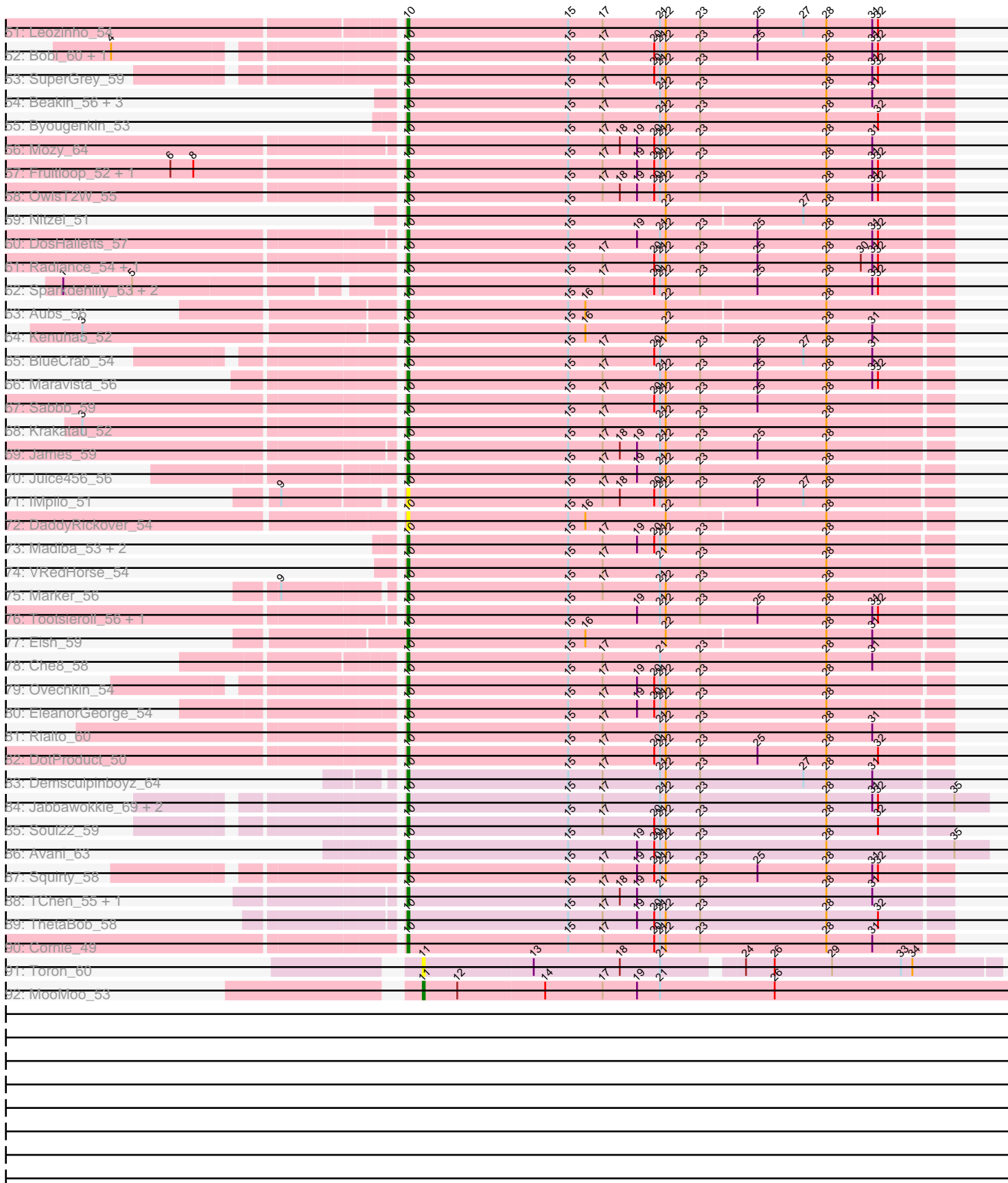


Pham 202656



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 202656 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202656 has 236 members, 13 are drafts.

Phages represented in each track:

- Track 1 : OlympiaSaint\_57, Cabrinians\_56, Burwell21\_53, Jarcob\_55, Koella\_49, FreddyB\_56, Martik\_55, Lizziana\_61, ShowerHandel\_58, Gorge\_59, NormanBulbieJr\_55, Priscilla\_55, LastJedi\_49, Brocalys\_50, ShiLan\_54, Saal\_57, Pippy\_53, Clifton\_50, Yorick\_54, Crumble\_50
- Track 2 : Fancypants\_57, Whouxphf\_52, LunaBlu\_57, Galactic\_54
- Track 3 : MisterCuddles\_53, Girr\_53, Ruby\_51
- Track 4 : Quico\_64, Girafales\_65, Florinda\_67
- Track 5 : GUmbie\_53, BuzzLyseyear\_61
- Track 6 : Brushbloom\_63
- Track 7 : XFactor\_53
- Track 8 : Poenanya\_55, Doomphist\_55
- Track 9 : Vivum\_58
- Track 10 : Nimbo\_49, Scottish\_53, PHappiness\_50, JoeyJr\_50, Leperchaun\_47, Deb65\_50, Daenerys\_49, Geralt\_50, RitaG\_50, KingMidas\_54, Empress\_53, Pacc40\_49, Polka14\_53
- Track 11 : SiSi\_53, Mantra\_51, Plumbus\_57
- Track 12 : Gandolph\_58, Mahavrat\_53, Grimmer\_65
- Track 13 : Bubbles123\_52
- Track 14 : Seabastian\_60, Jinglebell\_60, Constella\_110, OfUltron\_60, Ochi17\_58, SimranZ1\_55, Llama\_60, AlpineSix\_60, Ogotogo\_60, Modragons\_59, Oksu\_59
- Track 15 : Bipolar\_54, GigiOuiOui\_51
- Track 16 : Phatniss\_53, Llij\_51, Chuckly\_58, Drago\_53, DirtMcgirt\_54, BobaPhett\_59, MadMen\_53, UncleRicky\_54, Rita\_56, Lorde\_55
- Track 17 : RockyHorror\_55, Zerg\_54
- Track 18 : MilanaBonita\_46, Akhila\_47
- Track 19 : IrishSherpFalk\_56, Spartacus\_57, Melissau88\_53, JalFarm20\_67, WillSterrel\_56, Wachhund\_57, CaptainTrips\_52, Flathead\_55, MinionDave\_54, Ms6\_50, Hegedechwinu\_55, SG4\_52, StAnnes\_54, MilleniumForce\_59, Enby\_56, Spikelee\_62
- Track 20 : Phanphagia\_53, Shauna1\_54, Sassafras\_53, Donkeykong\_59, Inventum\_50
- Track 21 : Alexphander\_59, Stap\_53
- Track 22 : Ardmore\_47, Filuzino\_53
- Track 23 : Hades\_56, Harley\_57
- Track 24 : Pollywog\_56
- Track 25 : Job42\_57
- Track 26 : LilMoolah\_53, SwagPiggett\_60, Zizzle\_59, Mattes\_59, Nivrat\_51

- Track 27 : Latretium\_57, Juniper1\_53
- Track 28 : Phasih\_53
- Track 29 : Eradicator\_48, Sandalphon\_56, Veteran\_52, OldBen\_52, DaWorst\_56, Renaud18\_60, Chevrolet\_61, ArcusAngelus\_58, Phalconet\_53, IbOuu\_56, Doug\_57, PhesterPhotato\_56
- Track 30 : lbhubesi\_55
- Track 31 : Strokeseat\_51, Hlubikazi\_51, Mandlovu\_51
- Track 32 : Karhdo\_52
- Track 33 : Whatsapiecost\_56
- Track 34 : Blexus\_53
- Track 35 : ShroomBoi\_57, Kersh\_57
- Track 36 : Firehouse51\_56, DeadP\_61, Mutaforma13\_59, Tweety\_55, Taj\_59, Wee\_58, KristaRAM\_58
- Track 37 : Cornucopia\_57
- Track 38 : Estave1\_58, Rockne\_56, PMC\_52, DillTech15\_52, Fastidio\_55, Boomer\_60
- Track 39 : DoRead\_57
- Track 40 : DRBy19\_58, Philus\_58, ByChance\_47
- Track 41 : Kimberlium\_57, QuickMath\_56, MulchExplorer\_61
- Track 42 : Minnie\_59
- Track 43 : Batiatus\_53
- Track 44 : BigPhil\_51, Kingsley\_52, Velveteen\_50, Coco12\_54, Cerasum\_51, Sarma624\_53, Seagreen\_55
- Track 45 : Dante\_56
- Track 46 : PopTart\_49, SassyB\_49
- Track 47 : Mova\_56
- Track 48 : Starcevich\_54
- Track 49 : Spoonbill\_52
- Track 50 : RedBird\_52, Dorothy\_52
- Track 51 : Leozinho\_54
- Track 52 : Bobi\_60, Moonbeam\_53
- Track 53 : SuperGrey\_59
- Track 54 : Beakin\_56, Royals2015\_57, Che9d\_62, Yoshi\_66
- Track 55 : Byougenkin\_53
- Track 56 : Mozy\_64
- Track 57 : Fruitloop\_52, DLane\_50
- Track 58 : OwlsT2W\_55
- Track 59 : Nitzel\_51
- Track 60 : DosHalletts\_57
- Track 61 : Radiance\_54, BodEinwohner17\_55
- Track 62 : Sparkdehlily\_63, TDanisky\_63, Hamulus\_56
- Track 63 : Aubs\_56
- Track 64 : Kenuha5\_52
- Track 65 : BlueCrab\_54
- Track 66 : Maravista\_56
- Track 67 : Sabbb\_59
- Track 68 : Krakatau\_52
- Track 69 : James\_59
- Track 70 : Juice456\_56
- Track 71 : IMpilo\_51
- Track 72 : DaddyRickover\_54
- Track 73 : Madiba\_53, LittleShirley\_54, Totinger\_54
- Track 74 : VRedHorse\_54

- Track 75 : Marker\_56
- Track 76 : Tootsieroll\_56, Ramsey\_55
- Track 77 : Eish\_59
- Track 78 : Che8\_58
- Track 79 : Ovechkin\_54
- Track 80 : EleanorGeorge\_54
- Track 81 : Rialto\_60
- Track 82 : DotProduct\_50
- Track 83 : Demsculpinboyz\_64
- Track 84 : Jabbawokkie\_69, Zapner\_68, Blarby\_67
- Track 85 : Soul22\_59
- Track 86 : Avani\_63
- Track 87 : Squirty\_58
- Track 88 : TChen\_55, LunaStella\_53
- Track 89 : ThetaBob\_58
- Track 90 : Cornie\_49
- Track 91 : Toron\_60
- Track 92 : MooMoo\_53

***Summary of Final Annotations (See graph section above for start numbers):***

The start number called the most often in the published annotations is 10, it was called in 222 of the 223 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_47, Alexphander\_59, AlpineSix\_60, ArcusAngelus\_58, Ardmore\_47, Aubs\_56, Avani\_63, Batiatus\_53, Beakin\_56, BigPhil\_51, Bipolar\_54, Blarby\_67, Blexus\_53, BlueCrab\_54, BobaPhett\_59, Bobi\_60, BodEinwohner17\_55, Boomer\_60, Brocalys\_50, Brushbloom\_63, Bubbles123\_52, Burwell21\_53, BuzzLyseyear\_61, ByChance\_47, Byougenkin\_53, Cabrinians\_56, CaptainTrips\_52, Cerasum\_51, Che8\_58, Che9d\_62, Chevrolet\_61, Chuckly\_58, Clifton\_50, Coco12\_54, Constella\_110, Cornie\_49, Cornucopia\_57, Crumble\_50, DLane\_50, DRBy19\_58, DaWorst\_56, DaddyRickover\_54, Daenerys\_49, Dante\_56, DeadP\_61, Deb65\_50, Demsculpinboyz\_64, DillTech15\_52, DirtMcgirt\_54, DoRead\_57, Donkeykong\_59, Doomphist\_55, Dorothy\_52, DosHalletts\_57, DotProduct\_50, Doug\_57, Drago\_53, Eish\_59, EleanorGeorge\_54, Empress\_53, Enby\_56, Eradicator\_48, Estave1\_58, Fancypants\_57, Fastidio\_55, Filuzino\_53, Firehouse51\_56, Flathead\_55, Florinda\_67, FreddyB\_56, Fruitloop\_52, GUmbie\_53, Galactic\_54, Gandalph\_58, Geralt\_50, GigiOuiOui\_51, Girafales\_65, Girr\_53, Gorge\_59, Grimmer\_65, Hades\_56, Hamulus\_56, Harley\_57, Hegedechwinu\_55, Hlubikazi\_51, IMpilo\_51, IbOuu\_56, Ibhubesi\_55, Inventum\_50, IrishSherpFalk\_56, Jabbawokkie\_69, JalFarm20\_67, James\_59, Jarcob\_55, Jinglebell\_60, Job42\_57, JoeyJr\_50, Juice456\_56, Juniper1\_53, Karhdo\_52, Kenuha5\_52, Kersh\_57, Kimberlium\_57, KingMidas\_54, Kingsley\_52, Koella\_49, Krakatau\_52, KristaRAM\_58, LastJedi\_49, Latretium\_57, Leozinho\_54, Leperchaun\_47, LilMoolah\_53, LittleShirley\_54, Lizziana\_61, Llama\_60, Llij\_51, Lorde\_55, LunaBlu\_57, LunaStella\_53, MadMen\_53, Madiba\_53, Mahavrat\_53, Mandlovu\_51, Mantra\_51, Maravista\_56, Marker\_56, Martik\_55, Mattes\_59, Melissauren88\_53, MilanaBonita\_46, MilleniumForce\_59, MinionDave\_54, Minnie\_59, MisterCuddles\_53, Modragons\_59, Moonbeam\_53, Mova\_56, Mozy\_64, Ms6\_50, MulchExplorer\_61, Mutaforma13\_59, Nimbo\_49,

Nitzel\_51, Nivrat\_51, NormanBulbieJr\_55, Ochi17\_58, OfUltron\_60, Ogotopogo\_60, Oksu\_59, OldBen\_52, OlympiaSaint\_57, Ovechkin\_54, OwlsT2W\_55, PHappiness\_50, PMC\_52, Pacc40\_49, Phalconet\_53, Phanphagia\_53, Phasih\_53, Phatniss\_53, PhesterPhotato\_56, Philus\_58, Pippy\_53, Plumbus\_57, Poenanya\_55, Polka14\_53, Pollywog\_56, PopTart\_49, Priscilla\_55, QuickMath\_56, Quico\_64, Radiance\_54, Ramsey\_55, RedBird\_52, Renaud18\_60, Rialto\_60, RitaG\_50, Rita\_56, Rockne\_56, RockyHorror\_55, Royals2015\_57, Ruby\_51, SG4\_52, Saal\_57, Sabb\_59, Sandalphon\_56, Sarma624\_53, Sassafras\_53, SassyB\_49, Scottish\_53, Seabastian\_60, Seagreen\_55, Shauna1\_54, ShiLan\_54, ShowerHandel\_58, ShroomBoi\_57, SiSi\_53, SimranZ1\_55, Soul22\_59, Sparkdehlily\_63, Spartacus\_57, Spikelee\_62, Spoonbill\_52, Squirty\_58, StAnnes\_54, Stap\_53, Starceвич\_54, Strokeseat\_51, SuperGrey\_59, SwagPiggett\_60, TChen\_55, TDanisky\_63, Taj\_59, ThetaBob\_58, Tootsieroll\_56, Totinger\_54, Tweety\_55, UncleRicky\_54, VRedHorse\_54, Velveteen\_50, Veteran\_52, Vivum\_58, Wachhund\_57, Wee\_58, Whatsapiecost\_56, Whouxphf\_52, WillSterrel\_56, XFactor\_53, Yorick\_54, Yoshi\_66, Zapner\_68, Zerg\_54, Zizzle\_59,

Genes that have the "Most Annotated" start but do not call it:

- 

Genes that do not have the "Most Annotated" start:

- MooMoo\_53, Toron\_60,

### Summary by start number:

Start 10:

- Found in 234 of 236 ( 99.2% ) of genes in pham
- Manual Annotations of this start: 222 of 223
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akhila\_47 (F1), Alexphander\_59 (F1), AlpineSix\_60 (F1), ArcusAngelus\_58 (F1), Ardmore\_47 (F1), Aubs\_56 (F1), Avani\_63 (F2), Batiatus\_53 (F1), Beakin\_56 (F1), BigPhil\_51 (F1), Bipolar\_54 (F1), Blarby\_67 (F), Blexus\_53 (F1), BlueCrab\_54 (F1), BobaPhett\_59 (F1), Bobi\_60 (F1), BodEinwohner17\_55 (F1), Boomer\_60 (F1), Brocalys\_50 (F1), Brushbloom\_63 (F1), Bubbles123\_52 (F1), Burwell21\_53 (F1), BuzzLyseyear\_61 (F1), ByChance\_47 (F1), Byougenkin\_53 (F1), Cabrinians\_56 (F1), CaptainTrips\_52 (F1), Cerasum\_51 (F1), Che8\_58 (F1), Che9d\_62 (F2), Chevrolet\_61 (F1), Chuckly\_58 (F1), Clifton\_50 (F1), Coco12\_54 (F1), Constella\_110 (J), Cornie\_49 (F5), Cornucopia\_57 (F1), Crumble\_50 (F1), DLane\_50 (F1), DRBy19\_58 (F1), DaWorst\_56 (F1), DaddyRickover\_54 (F1), Daenerys\_49 (F1), Dante\_56 (F1), DeadP\_61 (F1), Deb65\_50 (F1), Demsculpinboyz\_64 (F2), DillTech15\_52 (F1), DirtMcgirt\_54 (F1), DoRead\_57 (F1), Donkeykong\_59 (F1), Doomphist\_55 (F1), Dorothy\_52 (F1), DosHalletts\_57 (F1), DotProduct\_50 (F1), Doug\_57 (F1), Drago\_53 (F1), Eish\_59 (F1), EleanorGeorge\_54 (F1), Empress\_53 (F1), Enby\_56 (F1), Eradicator\_48 (F1), Estave1\_58 (F1), Fancypants\_57 (F1), Fastidio\_55 (F1), Filuzino\_53 (F1), Firehouse51\_56 (F1), Flathead\_55 (F1), Florinda\_67 (F1), FreddyB\_56 (F1), Fruitloop\_52 (F1), GUmbie\_53 (F1), Galactic\_54 (F1), Gandolph\_58 (F1), Geralt\_50 (F1), GigiOuiOui\_51 (F1), Girafales\_65 (F1), Girr\_53 (F1), Gorge\_59 (F1), Grimmer\_65 (F1), Hades\_56 (F1), Hamulus\_56 (F1), Harley\_57 (F1), Hegedechwinu\_55 (F1), Hlubikazi\_51 (F1), IMpilo\_51 (F1), IbOuu\_56 (F1), Ibhuesi\_55 (F1), Inventum\_50 (F1), IrishSherpFalk\_56 (F1), Jabbawokkie\_69 (F2), JalFarm20\_67 (F1), James\_59 (F1), Jarcob\_55 (F1), Jinglebell\_60 (F1), Job42\_57 (F1), JoeyJr\_50 (F1), Juice456\_56 (F1), Juniper1\_53 (F1), Karhdo\_52 (F1),

Kenuha5\_52 (F1), Kersh\_57 (F1), Kimberlium\_57 (F1), KingMidas\_54 (F1), Kingsley\_52 (F1), Koella\_49 (F1), Krakatau\_52 (F1), KristaRAM\_58 (F1), LastJedi\_49 (F1), Latretium\_57 (F1), Leozinho\_54 (F1), Leperchaun\_47 (F1), LilMoolah\_53 (F1), LittleShirley\_54 (F1), Lizziana\_61 (F1), Llama\_60 (F1), Llij\_51 (F1), Lorde\_55 (F1), LunaBlu\_57 (F1), LunaStella\_53 (F4), MadMen\_53 (F1), Madiba\_53 (F1), Mahavrat\_53 (F1), Mandlovu\_51 (F1), Mantra\_51 (F1), Maravista\_56 (F1), Marker\_56 (F1), Martik\_55 (F1), Mattes\_59 (F1), Melissauren88\_53 (F1), MilanaBonita\_46 (F1), MilleniumForce\_59 (F1), MinionDave\_54 (F1), Minnie\_59 (F1), MisterCuddles\_53 (F1), Modragons\_59 (F1), Moonbeam\_53 (F1), Mova\_56 (F1), Mozy\_64 (F1), Ms6\_50 (F1), MulchExplorer\_61 (F1), Mutaforma13\_59 (F1), Nimbo\_49 (F1), Nitzel\_51 (F1), Nivrat\_51 (F1), NormanBulbieJr\_55 (F1), Ochi17\_58 (F1), OfUltron\_60 (F1), Ogotopogo\_60 (F1), Oksu\_59 (F1), OldBen\_52 (F1), OlympiaSaint\_57 (F1), Ovechkin\_54 (F1), OwlsT2W\_55 (F1), PHappiness\_50 (F1), PMC\_52 (F1), Pacc40\_49 (F1), Phalconet\_53 (F1), Phanphagia\_53 (F1), Phasih\_53 (F1), Phatniss\_53 (F1), PhesterPhotato\_56 (F1), Philus\_58 (F1), Pippy\_53 (F1), Plumbus\_57 (F1), Poenanya\_55 (F1), Polka14\_53 (F1), Pollywog\_56 (F1), PopTart\_49 (F1), Priscilla\_55 (F1), QuickMath\_56 (F1), Quico\_64 (F1), Radiance\_54 (F1), Ramsey\_55 (F1), RedBird\_52 (F1), Renaud18\_60 (F4), Rialto\_60 (F1), RitaG\_50 (F1), Rita\_56 (F1), Rockne\_56 (F1), RockyHorror\_55 (F1), Royals2015\_57 (F1), Ruby\_51 (F1), SG4\_52 (F1), Saal\_57 (F1), Sabb\_59 (F1), Sandalphon\_56 (F1), Sarma624\_53 (F1), Sassafras\_53 (F1), SassyB\_49 (F1), Scottish\_53 (F1), Seabastian\_60 (F1), Seagreen\_55 (F1), Shauna1\_54 (F1), ShiLan\_54 (F1), ShowerHandel\_58 (F1), ShroomBoi\_57 (F1), SiSi\_53 (F1), SimranZ1\_55 (F1), Soul22\_59 (F2), Sparkdehlily\_63 (F1), Spartacus\_57 (F1), Spikelee\_62 (F1), Spoonbill\_52 (F1), Squirty\_58 (F3), StAnnes\_54 (F1), Stap\_53 (F1), Starceвич\_54 (F1), Strokeseat\_51 (F1), SuperGrey\_59 (F1), SwagPigglett\_60 (F1), TChen\_55 (F4), TDanisky\_63 (F1), Taj\_59 (F1), ThetaBob\_58 (F4), Tootsieroll\_56 (F1), Totinger\_54 (F1), Tweety\_55 (F1), UncleRicky\_54 (F1), VRedHorse\_54 (F1), Velveteen\_50 (F1), Veteran\_52 (F1), Vivum\_58 (F1), Wachhund\_57 (F1), Wee\_58 (F1), Whatsapiecost\_56 (F1), Whouxphf\_52 (F1), WillSterrel\_56 (F1), XFactor\_53 (F1), Yorick\_54 (F1), Yoshi\_66 (F2), Zapner\_68 (F2), Zerg\_54 (F1), Zizzle\_59 (F1),

Start 11:

- Found in 2 of 236 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 223
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MooMoo\_53 (singleton), Toron\_60 (F6),

### Summary by clusters:

There are 9 clusters represented in this pham: F1, F2, F3, F4, F5, F6, F, J, singleton,

Info for manual annotations of cluster F1:

- Start number 10 was manually annotated 208 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 10 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 10 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 10 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 10 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 10 was manually annotated 1 time for cluster J.

### **Gene Information:**

Gene: Akhila\_47 Start: 34867, Stop: 35148, Start Num: 10

Candidate Starts for Akhila\_47:

(Start: 10 @34867 has 222 MA's), (15, 34951), (17, 34969), (19, 34987), (20, 34996), (21, 34999), (22, 35002), (23, 35020), (25, 35050), (28, 35086), (31, 35110), (32, 35113),

Gene: Alexphander\_59 Start: 38824, Stop: 39105, Start Num: 10

Candidate Starts for Alexphander\_59:

(Start: 10 @38824 has 222 MA's), (15, 38908), (17, 38926), (20, 38953), (21, 38956), (22, 38959), (23, 38977), (25, 39007), (28, 39043), (31, 39067), (32, 39070),

Gene: AlpineSix\_60 Start: 40946, Stop: 41224, Start Num: 10

Candidate Starts for AlpineSix\_60:

(Start: 10 @40946 has 222 MA's), (15, 41030), (16, 41039), (22, 41081), (28, 41162), (31, 41186),

Gene: ArcusAngelus\_58 Start: 39420, Stop: 39701, Start Num: 10

Candidate Starts for ArcusAngelus\_58:

(Start: 10 @39420 has 222 MA's), (15, 39504), (17, 39522), (20, 39549), (21, 39552), (22, 39555), (23, 39573), (25, 39603), (28, 39639), (31, 39663), (32, 39666),

Gene: Ardmore\_47 Start: 36773, Stop: 37054, Start Num: 10

Candidate Starts for Ardmore\_47:

(9, 36713), (Start: 10 @36773 has 222 MA's), (15, 36857), (17, 36875), (20, 36902), (21, 36905), (22, 36908), (23, 36926), (25, 36956), (28, 36992), (31, 37016), (32, 37019),

Gene: Aubs\_56 Start: 39120, Stop: 39398, Start Num: 10

Candidate Starts for Aubs\_56:

(Start: 10 @39120 has 222 MA's), (15, 39204), (16, 39213), (22, 39255), (28, 39336),

Gene: Avani\_63 Start: 39078, Stop: 39377, Start Num: 10

Candidate Starts for Avani\_63:

(Start: 10 @39078 has 222 MA's), (15, 39162), (19, 39198), (20, 39207), (21, 39210), (22, 39213), (23, 39231), (28, 39297), (35, 39360),

Gene: Batiatus\_53 Start: 38641, Stop: 38922, Start Num: 10

Candidate Starts for Batiatus\_53:

(Start: 10 @38641 has 222 MA's), (15, 38725), (17, 38743), (20, 38770), (21, 38773), (22, 38776), (23, 38794), (25, 38824), (28, 38860), (31, 38884), (32, 38887),

Gene: Beakin\_56 Start: 37762, Stop: 38043, Start Num: 10

Candidate Starts for Beakin\_56:



(Start: 10 @37762 has 222 MA's), (15, 37846), (17, 37864), (21, 37894), (22, 37897), (23, 37915), (28, 37981), (31, 38005),

Gene: BigPhil\_51 Start: 34536, Stop: 34817, Start Num: 10

Candidate Starts for BigPhil\_51:

(Start: 10 @34536 has 222 MA's), (15, 34620), (17, 34638), (21, 34668), (22, 34671), (23, 34689), (27, 34743), (28, 34755), (31, 34779),

Gene: Bipolar\_54 Start: 38577, Stop: 38858, Start Num: 10

Candidate Starts for Bipolar\_54:

(Start: 10 @38577 has 222 MA's), (15, 38661), (17, 38679), (20, 38706), (21, 38709), (22, 38712), (23, 38730), (28, 38796), (31, 38820), (32, 38823),

Gene: Blarby\_67 Start: 40176, Stop: 40475, Start Num: 10

Candidate Starts for Blarby\_67:

(Start: 10 @40176 has 222 MA's), (15, 40260), (17, 40278), (21, 40308), (22, 40311), (23, 40329), (28, 40395), (31, 40419), (32, 40422), (35, 40458),

Gene: Blexus\_53 Start: 38794, Stop: 39075, Start Num: 10

Candidate Starts for Blexus\_53:

(Start: 10 @38794 has 222 MA's), (15, 38878), (17, 38896), (18, 38905), (19, 38914), (20, 38923), (21, 38926), (22, 38929), (23, 38947), (28, 39013), (32, 39040),

Gene: BlueCrab\_54 Start: 38908, Stop: 39189, Start Num: 10

Candidate Starts for BlueCrab\_54:

(Start: 10 @38908 has 222 MA's), (15, 38992), (17, 39010), (20, 39037), (21, 39040), (23, 39061), (25, 39091), (27, 39115), (28, 39127), (31, 39151),

Gene: BobaPhett\_59 Start: 41056, Stop: 41334, Start Num: 10

Candidate Starts for BobaPhett\_59:

(Start: 10 @41056 has 222 MA's), (15, 41140), (16, 41149), (22, 41191), (28, 41272),

Gene: Bobi\_60 Start: 40250, Stop: 40531, Start Num: 10

Candidate Starts for Bobi\_60:

(4, 40115), (Start: 10 @40250 has 222 MA's), (15, 40334), (17, 40352), (20, 40379), (21, 40382), (22, 40385), (23, 40403), (25, 40433), (28, 40469), (31, 40493), (32, 40496),

Gene: BodEinwohner17\_55 Start: 37864, Stop: 38145, Start Num: 10

Candidate Starts for BodEinwohner17\_55:

(Start: 10 @37864 has 222 MA's), (15, 37948), (17, 37966), (20, 37993), (21, 37996), (22, 37999), (23, 38017), (25, 38047), (28, 38083), (30, 38101), (31, 38107), (32, 38110),

Gene: Boomer\_60 Start: 40731, Stop: 41009, Start Num: 10

Candidate Starts for Boomer\_60:

(Start: 10 @40731 has 222 MA's), (15, 40815), (16, 40824), (22, 40866), (28, 40947), (30, 40965), (31, 40971), (32, 40974),

Gene: Brocalys\_50 Start: 35241, Stop: 35519, Start Num: 10

Candidate Starts for Brocalys\_50:

(Start: 10 @35241 has 222 MA's), (15, 35325), (16, 35334), (22, 35376), (28, 35457),

Gene: Brushbloom\_63 Start: 39753, Stop: 40034, Start Num: 10

Candidate Starts for Brushbloom\_63:

(Start: 10 @39753 has 222 MA's), (15, 39837), (17, 39855), (20, 39882), (21, 39885), (22, 39888), (23, 39906), (25, 39936), (28, 39972), (31, 39996), (32, 39999),

Gene: Bubbles123\_52 Start: 38682, Stop: 38978, Start Num: 10

Candidate Starts for Bubbles123\_52:

(Start: 10 @38682 has 222 MA's), (15, 38766), (22, 38817), (27, 38886), (28, 38898), (35, 38961),

Gene: Burwell21\_53 Start: 38339, Stop: 38617, Start Num: 10

Candidate Starts for Burwell21\_53:

(Start: 10 @38339 has 222 MA's), (15, 38423), (16, 38432), (22, 38474), (28, 38555),

Gene: BuzzLyseyear\_61 Start: 39760, Stop: 40041, Start Num: 10

Candidate Starts for BuzzLyseyear\_61:

(Start: 10 @39760 has 222 MA's), (15, 39844), (17, 39862), (20, 39889), (21, 39892), (22, 39895), (23, 39913), (25, 39943), (28, 39979), (31, 40003), (32, 40006),

Gene: ByChance\_47 Start: 34027, Stop: 34308, Start Num: 10

Candidate Starts for ByChance\_47:

(7, 33919), (Start: 10 @34027 has 222 MA's), (15, 34111), (17, 34129), (19, 34147), (20, 34156), (21, 34159), (22, 34162), (23, 34180), (28, 34246),

Gene: Byougenkin\_53 Start: 38099, Stop: 38380, Start Num: 10

Candidate Starts for Byougenkin\_53:

(Start: 10 @38099 has 222 MA's), (15, 38183), (17, 38201), (21, 38231), (22, 38234), (23, 38252), (28, 38318), (32, 38345),

Gene: Cabrinians\_56 Start: 38417, Stop: 38695, Start Num: 10

Candidate Starts for Cabrinians\_56:

(Start: 10 @38417 has 222 MA's), (15, 38501), (16, 38510), (22, 38552), (28, 38633),

Gene: CaptainTrips\_52 Start: 37910, Stop: 38191, Start Num: 10

Candidate Starts for CaptainTrips\_52:

(Start: 10 @37910 has 222 MA's), (15, 37994), (17, 38012), (20, 38039), (21, 38042), (22, 38045), (23, 38063), (25, 38093), (28, 38129), (31, 38153), (32, 38156),

Gene: Cerasum\_51 Start: 34554, Stop: 34835, Start Num: 10

Candidate Starts for Cerasum\_51:

(Start: 10 @34554 has 222 MA's), (15, 34638), (17, 34656), (21, 34686), (22, 34689), (23, 34707), (27, 34761), (28, 34773), (31, 34797),

Gene: Che8\_58 Start: 40132, Stop: 40413, Start Num: 10

Candidate Starts for Che8\_58:

(Start: 10 @40132 has 222 MA's), (15, 40216), (17, 40234), (21, 40264), (23, 40285), (28, 40351), (31, 40375),

Gene: Che9d\_62 Start: 37942, Stop: 38223, Start Num: 10

Candidate Starts for Che9d\_62:

(Start: 10 @37942 has 222 MA's), (15, 38026), (17, 38044), (21, 38074), (22, 38077), (23, 38095), (28, 38161), (31, 38185),

Gene: Chevrolet\_61 Start: 39421, Stop: 39702, Start Num: 10

Candidate Starts for Chevrolet\_61:

(Start: 10 @39421 has 222 MA's), (15, 39505), (17, 39523), (20, 39550), (21, 39553), (22, 39556), (23, 39574), (25, 39604), (28, 39640), (31, 39664), (32, 39667),

Gene: Chuckly\_58 Start: 39059, Stop: 39337, Start Num: 10

Candidate Starts for Chuckly\_58:

(Start: 10 @39059 has 222 MA's), (15, 39143), (16, 39152), (22, 39194), (28, 39275),

Gene: Clifton\_50 Start: 35592, Stop: 35870, Start Num: 10

Candidate Starts for Clifton\_50:

(Start: 10 @35592 has 222 MA's), (15, 35676), (16, 35685), (22, 35727), (28, 35808),

Gene: Coco12\_54 Start: 38611, Stop: 38892, Start Num: 10

Candidate Starts for Coco12\_54:

(Start: 10 @38611 has 222 MA's), (15, 38695), (17, 38713), (21, 38743), (22, 38746), (23, 38764), (27, 38818), (28, 38830), (31, 38854),

Gene: Constella\_110 Start: 64495, Stop: 64773, Start Num: 10

Candidate Starts for Constella\_110:

(Start: 10 @64495 has 222 MA's), (15, 64579), (16, 64588), (22, 64630), (28, 64711), (31, 64735),

Gene: Cornie\_49 Start: 36431, Stop: 36712, Start Num: 10

Candidate Starts for Cornie\_49:

(Start: 10 @36431 has 222 MA's), (15, 36515), (17, 36533), (20, 36560), (21, 36563), (22, 36566), (23, 36584), (28, 36650), (31, 36674),

Gene: Cornucopia\_57 Start: 39066, Stop: 39347, Start Num: 10

Candidate Starts for Cornucopia\_57:

(Start: 10 @39066 has 222 MA's), (15, 39150), (17, 39168), (20, 39195), (21, 39198), (22, 39201), (23, 39219), (28, 39285),

Gene: Crumble\_50 Start: 34353, Stop: 34631, Start Num: 10

Candidate Starts for Crumble\_50:

(Start: 10 @34353 has 222 MA's), (15, 34437), (16, 34446), (22, 34488), (28, 34569),

Gene: DLane\_50 Start: 37297, Stop: 37578, Start Num: 10

Candidate Starts for DLane\_50:

(6, 37183), (8, 37195), (Start: 10 @37297 has 222 MA's), (15, 37381), (17, 37399), (19, 37417), (20, 37426), (21, 37429), (22, 37432), (23, 37450), (28, 37516), (31, 37540), (32, 37543),

Gene: DRBy19\_58 Start: 39514, Stop: 39795, Start Num: 10

Candidate Starts for DRBy19\_58:

(7, 39406), (Start: 10 @39514 has 222 MA's), (15, 39598), (17, 39616), (19, 39634), (20, 39643), (21, 39646), (22, 39649), (23, 39667), (28, 39733),

Gene: DaWorst\_56 Start: 38812, Stop: 39096, Start Num: 10

Candidate Starts for DaWorst\_56:

(Start: 10 @38812 has 222 MA's), (15, 38896), (17, 38914), (20, 38941), (21, 38944), (22, 38947), (23, 38965), (25, 38995), (28, 39031), (31, 39055), (32, 39058),

Gene: DaddyRickover\_54 Start: 38556, Stop: 38834, Start Num: 10

Candidate Starts for DaddyRickover\_54:

(Start: 10 @38556 has 222 MA's), (15, 38640), (16, 38649), (22, 38691), (28, 38772),

Gene: Daenerys\_49 Start: 36672, Stop: 36950, Start Num: 10

Candidate Starts for Daenerys\_49:

(Start: 10 @36672 has 222 MA's), (15, 36756), (16, 36765), (22, 36807), (28, 36888), (30, 36906), (31, 36912), (32, 36915),

Gene: Dante\_56 Start: 38338, Stop: 38619, Start Num: 10

Candidate Starts for Dante\_56:

(6, 38224), (8, 38236), (Start: 10 @38338 has 222 MA's), (15, 38422), (17, 38440), (20, 38467), (21, 38470), (22, 38473), (23, 38491), (25, 38521), (28, 38557), (31, 38581), (32, 38584),

Gene: DeadP\_61 Start: 40990, Stop: 41271, Start Num: 10

Candidate Starts for DeadP\_61:

(Start: 10 @40990 has 222 MA's), (15, 41074), (17, 41092), (20, 41119), (21, 41122), (22, 41125), (23, 41143), (25, 41173), (28, 41209), (32, 41236),

Gene: Deb65\_50 Start: 36641, Stop: 36919, Start Num: 10

Candidate Starts for Deb65\_50:

(Start: 10 @36641 has 222 MA's), (15, 36725), (16, 36734), (22, 36776), (28, 36857), (30, 36875), (31, 36881), (32, 36884),

Gene: Demsculpinboyz\_64 Start: 37946, Stop: 38227, Start Num: 10

Candidate Starts for Demsculpinboyz\_64:

(Start: 10 @37946 has 222 MA's), (15, 38030), (17, 38048), (21, 38078), (22, 38081), (23, 38099), (27, 38153), (28, 38165), (31, 38189),

Gene: DillTech15\_52 Start: 37006, Stop: 37284, Start Num: 10

Candidate Starts for DillTech15\_52:

(Start: 10 @37006 has 222 MA's), (15, 37090), (16, 37099), (22, 37141), (28, 37222), (30, 37240), (31, 37246), (32, 37249),

Gene: DirtMcgirt\_54 Start: 37081, Stop: 37359, Start Num: 10

Candidate Starts for DirtMcgirt\_54:

(Start: 10 @37081 has 222 MA's), (15, 37165), (16, 37174), (22, 37216), (28, 37297),

Gene: DoRead\_57 Start: 37343, Stop: 37624, Start Num: 10

Candidate Starts for DoRead\_57:

(Start: 10 @37343 has 222 MA's), (15, 37427), (17, 37445), (18, 37454), (19, 37463), (21, 37475), (23, 37496), (25, 37526), (27, 37550), (28, 37562), (31, 37586),

Gene: Donkeykong\_59 Start: 41372, Stop: 41653, Start Num: 10

Candidate Starts for Donkeykong\_59:

(Start: 10 @41372 has 222 MA's), (15, 41456), (17, 41474), (21, 41504), (22, 41507), (23, 41525), (25, 41555), (28, 41591), (31, 41615), (32, 41618),

Gene: Doomphist\_55 Start: 39514, Stop: 39795, Start Num: 10

Candidate Starts for Doomphist\_55:

(Start: 10 @39514 has 222 MA's), (15, 39598), (19, 39634), (21, 39646), (22, 39649), (23, 39667), (25, 39697), (28, 39733), (31, 39757), (32, 39760),

Gene: Dorothy\_52 Start: 37553, Stop: 37834, Start Num: 10

Candidate Starts for Dorothy\_52:

(Start: 10 @37553 has 222 MA's), (15, 37637), (17, 37655), (18, 37664), (20, 37682), (21, 37685), (22, 37688), (23, 37706), (25, 37736), (28, 37772), (31, 37796), (32, 37799),

Gene: DosHalletts\_57 Start: 39869, Stop: 40150, Start Num: 10

Candidate Starts for DosHalletts\_57:

(Start: 10 @39869 has 222 MA's), (15, 39953), (19, 39989), (21, 40001), (22, 40004), (23, 40022), (25, 40052), (28, 40088), (31, 40112), (32, 40115),

Gene: DotProduct\_50 Start: 37132, Stop: 37413, Start Num: 10

Candidate Starts for DotProduct\_50:

(Start: 10 @37132 has 222 MA's), (15, 37216), (17, 37234), (20, 37261), (21, 37264), (22, 37267), (23, 37285), (25, 37315), (28, 37351), (32, 37378),

Gene: Doug\_57 Start: 39078, Stop: 39362, Start Num: 10

Candidate Starts for Doug\_57:

(Start: 10 @39078 has 222 MA's), (15, 39162), (17, 39180), (20, 39207), (21, 39210), (22, 39213), (23, 39231), (25, 39261), (28, 39297), (31, 39321), (32, 39324),

Gene: Drago\_53 Start: 37084, Stop: 37362, Start Num: 10

Candidate Starts for Drago\_53:

(Start: 10 @37084 has 222 MA's), (15, 37168), (16, 37177), (22, 37219), (28, 37300),

Gene: Eish\_59 Start: 39333, Stop: 39611, Start Num: 10

Candidate Starts for Eish\_59:

(Start: 10 @39333 has 222 MA's), (15, 39417), (16, 39426), (22, 39468), (28, 39549), (31, 39573),

Gene: EleanorGeorge\_54 Start: 38453, Stop: 38734, Start Num: 10

Candidate Starts for EleanorGeorge\_54:

(Start: 10 @38453 has 222 MA's), (15, 38537), (17, 38555), (19, 38573), (20, 38582), (21, 38585), (22, 38588), (23, 38606), (28, 38672),

Gene: Empress\_53 Start: 38086, Stop: 38364, Start Num: 10

Candidate Starts for Empress\_53:

(Start: 10 @38086 has 222 MA's), (15, 38170), (16, 38179), (22, 38221), (28, 38302), (30, 38320), (31, 38326), (32, 38329),

Gene: Enby\_56 Start: 37357, Stop: 37638, Start Num: 10

Candidate Starts for Enby\_56:

(Start: 10 @37357 has 222 MA's), (15, 37441), (17, 37459), (20, 37486), (21, 37489), (22, 37492), (23, 37510), (25, 37540), (28, 37576), (31, 37600), (32, 37603),

Gene: Eradicator\_48 Start: 36610, Stop: 36891, Start Num: 10

Candidate Starts for Eradicator\_48:

(Start: 10 @36610 has 222 MA's), (15, 36694), (17, 36712), (20, 36739), (21, 36742), (22, 36745), (23, 36763), (25, 36793), (28, 36829), (31, 36853), (32, 36856),

Gene: Estave1\_58 Start: 39537, Stop: 39815, Start Num: 10

Candidate Starts for Estave1\_58:

(Start: 10 @39537 has 222 MA's), (15, 39621), (16, 39630), (22, 39672), (28, 39753), (30, 39771), (31, 39777), (32, 39780),

Gene: Fancypants\_57 Start: 39048, Stop: 39329, Start Num: 10

Candidate Starts for Fancypants\_57:

(Start: 10 @39048 has 222 MA's), (15, 39132), (17, 39150), (21, 39180), (22, 39183), (23, 39201), (25, 39231), (27, 39255), (28, 39267), (30, 39285), (31, 39291), (32, 39294),

Gene: Fastidio\_55 Start: 37153, Stop: 37431, Start Num: 10

Candidate Starts for Fastidio\_55:

(Start: 10 @37153 has 222 MA's), (15, 37237), (16, 37246), (22, 37288), (28, 37369), (30, 37387), (31, 37393), (32, 37396),

Gene: Filuzino\_53 Start: 37599, Stop: 37880, Start Num: 10

Candidate Starts for Filuzino\_53:

(9, 37539), (Start: 10 @37599 has 222 MA's), (15, 37683), (17, 37701), (20, 37728), (21, 37731), (22, 37734), (23, 37752), (25, 37782), (28, 37818), (31, 37842), (32, 37845),

Gene: Firehouse51\_56 Start: 41932, Stop: 42213, Start Num: 10

Candidate Starts for Firehouse51\_56:

(Start: 10 @41932 has 222 MA's), (15, 42016), (17, 42034), (20, 42061), (21, 42064), (22, 42067), (23, 42085), (25, 42115), (28, 42151), (32, 42178),

Gene: Flathead\_55 Start: 39066, Stop: 39347, Start Num: 10

Candidate Starts for Flathead\_55:

(Start: 10 @39066 has 222 MA's), (15, 39150), (17, 39168), (20, 39195), (21, 39198), (22, 39201), (23, 39219), (25, 39249), (28, 39285), (31, 39309), (32, 39312),

Gene: Florinda\_67 Start: 40870, Stop: 41151, Start Num: 10

Candidate Starts for Florinda\_67:

(Start: 10 @40870 has 222 MA's), (15, 40954), (17, 40972), (20, 40999), (21, 41002), (22, 41005), (23, 41023), (25, 41053), (27, 41077), (28, 41089), (30, 41107), (31, 41113), (32, 41116),

Gene: FreddyB\_56 Start: 37265, Stop: 37543, Start Num: 10

Candidate Starts for FreddyB\_56:

(Start: 10 @37265 has 222 MA's), (15, 37349), (16, 37358), (22, 37400), (28, 37481),

Gene: Fruitloop\_52 Start: 38913, Stop: 39194, Start Num: 10

Candidate Starts for Fruitloop\_52:

(6, 38799), (8, 38811), (Start: 10 @38913 has 222 MA's), (15, 38997), (17, 39015), (19, 39033), (20, 39042), (21, 39045), (22, 39048), (23, 39066), (28, 39132), (31, 39156), (32, 39159),

Gene: GUmbie\_53 Start: 37837, Stop: 38118, Start Num: 10

Candidate Starts for GUmbie\_53:

(Start: 10 @37837 has 222 MA's), (15, 37921), (17, 37939), (20, 37966), (21, 37969), (22, 37972), (23, 37990), (25, 38020), (28, 38056), (31, 38080), (32, 38083),

Gene: Galactic\_54 Start: 38303, Stop: 38584, Start Num: 10

Candidate Starts for Galactic\_54:

(Start: 10 @38303 has 222 MA's), (15, 38387), (17, 38405), (21, 38435), (22, 38438), (23, 38456), (25, 38486), (27, 38510), (28, 38522), (30, 38540), (31, 38546), (32, 38549),

Gene: Gandalph\_58 Start: 38655, Stop: 38936, Start Num: 10

Candidate Starts for Gandalph\_58:

(Start: 10 @38655 has 222 MA's), (15, 38739), (17, 38757), (21, 38787), (22, 38790), (23, 38808), (25, 38838), (28, 38874), (31, 38898),

Gene: Geralt\_50 Start: 36640, Stop: 36918, Start Num: 10

Candidate Starts for Geralt\_50:

(Start: 10 @36640 has 222 MA's), (15, 36724), (16, 36733), (22, 36775), (28, 36856), (30, 36874), (31, 36880), (32, 36883),

Gene: GigiOuiOui\_51 Start: 37277, Stop: 37558, Start Num: 10

Candidate Starts for GigiOuiOui\_51:

(Start: 10 @37277 has 222 MA's), (15, 37361), (17, 37379), (20, 37406), (21, 37409), (22, 37412), (23, 37430), (28, 37496), (31, 37520), (32, 37523),

Gene: Girafales\_65 Start: 40661, Stop: 40942, Start Num: 10

Candidate Starts for Girafales\_65:

(Start: 10 @40661 has 222 MA's), (15, 40745), (17, 40763), (20, 40790), (21, 40793), (22, 40796), (23, 40814), (25, 40844), (27, 40868), (28, 40880), (30, 40898), (31, 40904), (32, 40907),

Gene: Girr\_53 Start: 38141, Stop: 38425, Start Num: 10

Candidate Starts for Girr\_53:

(Start: 10 @38141 has 222 MA's), (15, 38225), (16, 38234), (17, 38243), (21, 38273), (22, 38276), (23, 38294), (25, 38324), (27, 38348), (28, 38360),

Gene: Gorge\_59 Start: 39782, Stop: 40060, Start Num: 10

Candidate Starts for Gorge\_59:

(Start: 10 @39782 has 222 MA's), (15, 39866), (16, 39875), (22, 39917), (28, 39998),

Gene: Grimmer\_65 Start: 39939, Stop: 40220, Start Num: 10

Candidate Starts for Grimmer\_65:

(Start: 10 @39939 has 222 MA's), (15, 40023), (17, 40041), (21, 40071), (22, 40074), (23, 40092), (25, 40122), (28, 40158), (31, 40182),

Gene: Hades\_56 Start: 39235, Stop: 39516, Start Num: 10

Candidate Starts for Hades\_56:

(Start: 10 @39235 has 222 MA's), (15, 39319), (18, 39346), (19, 39355), (21, 39367), (22, 39370), (23, 39388), (28, 39454), (31, 39478), (32, 39481),

Gene: Hamulus\_56 Start: 39053, Stop: 39334, Start Num: 10

Candidate Starts for Hamulus\_56:

(1, 38891), (5, 38927), (Start: 10 @39053 has 222 MA's), (15, 39137), (17, 39155), (20, 39182), (21, 39185), (22, 39188), (23, 39206), (25, 39236), (28, 39272), (31, 39296), (32, 39299),

Gene: Harley\_57 Start: 39014, Stop: 39295, Start Num: 10

Candidate Starts for Harley\_57:

(Start: 10 @39014 has 222 MA's), (15, 39098), (18, 39125), (19, 39134), (21, 39146), (22, 39149), (23, 39167), (28, 39233), (31, 39257), (32, 39260),

Gene: Hegedechwinu\_55 Start: 37449, Stop: 37730, Start Num: 10

Candidate Starts for Hegedechwinu\_55:

(Start: 10 @37449 has 222 MA's), (15, 37533), (17, 37551), (20, 37578), (21, 37581), (22, 37584), (23, 37602), (25, 37632), (28, 37668), (31, 37692), (32, 37695),

Gene: Hlubikazi\_51 Start: 36455, Stop: 36736, Start Num: 10

Candidate Starts for Hlubikazi\_51:

(Start: 10 @36455 has 222 MA's), (15, 36539), (17, 36557), (21, 36587), (22, 36590), (23, 36608), (25, 36638), (28, 36674),

Gene: IMpilo\_51 Start: 36293, Stop: 36574, Start Num: 10

Candidate Starts for IMpilo\_51:

(9, 36239), (Start: 10 @36293 has 222 MA's), (15, 36377), (17, 36395), (18, 36404), (20, 36422), (21, 36425), (22, 36428), (23, 36446), (25, 36476), (27, 36500), (28, 36512),

Gene: lbOuu\_56 Start: 38814, Stop: 39095, Start Num: 10

Candidate Starts for lbOuu\_56:

(Start: 10 @38814 has 222 MA's), (15, 38898), (17, 38916), (20, 38943), (21, 38946), (22, 38949), (23, 38967), (25, 38997), (28, 39033), (31, 39057), (32, 39060),

Gene: lbhubesi\_55 Start: 38427, Stop: 38708, Start Num: 10

Candidate Starts for lbhubesi\_55:

(Start: 10 @38427 has 222 MA's), (15, 38511), (17, 38529), (20, 38556), (21, 38559), (22, 38562), (23, 38580), (25, 38610), (27, 38634), (28, 38646), (30, 38664), (31, 38670), (32, 38673),

Gene: Inventum\_50 Start: 37931, Stop: 38212, Start Num: 10

Candidate Starts for Inventum\_50:

(Start: 10 @37931 has 222 MA's), (15, 38015), (17, 38033), (21, 38063), (22, 38066), (23, 38084), (25, 38114), (28, 38150), (31, 38174), (32, 38177),

Gene: IrishSherpFalk\_56 Start: 40091, Stop: 40372, Start Num: 10

Candidate Starts for IrishSherpFalk\_56:

(Start: 10 @40091 has 222 MA's), (15, 40175), (17, 40193), (20, 40220), (21, 40223), (22, 40226), (23, 40244), (25, 40274), (28, 40310), (31, 40334), (32, 40337),

Gene: Jabbawokkie\_69 Start: 40096, Stop: 40395, Start Num: 10

Candidate Starts for Jabbawokkie\_69:

(Start: 10 @40096 has 222 MA's), (15, 40180), (17, 40198), (21, 40228), (22, 40231), (23, 40249), (28, 40315), (31, 40339), (32, 40342), (35, 40378),

Gene: JalFarm20\_67 Start: 42162, Stop: 42443, Start Num: 10

Candidate Starts for JalFarm20\_67:

(Start: 10 @42162 has 222 MA's), (15, 42246), (17, 42264), (20, 42291), (21, 42294), (22, 42297), (23, 42315), (25, 42345), (28, 42381), (31, 42405), (32, 42408),

Gene: James\_59 Start: 39904, Stop: 40185, Start Num: 10

Candidate Starts for James\_59:

(Start: 10 @39904 has 222 MA's), (15, 39988), (17, 40006), (18, 40015), (19, 40024), (21, 40036), (22, 40039), (23, 40057), (25, 40087), (28, 40123),

Gene: Jacob\_55 Start: 38385, Stop: 38663, Start Num: 10

Candidate Starts for Jacob\_55:

(Start: 10 @38385 has 222 MA's), (15, 38469), (16, 38478), (22, 38520), (28, 38601),

Gene: Jinglebell\_60 Start: 40945, Stop: 41223, Start Num: 10

Candidate Starts for Jinglebell\_60:

(Start: 10 @40945 has 222 MA's), (15, 41029), (16, 41038), (22, 41080), (28, 41161), (31, 41185),

Gene: Job42\_57 Start: 40322, Stop: 40603, Start Num: 10

Candidate Starts for Job42\_57:

(Start: 10 @40322 has 222 MA's), (15, 40406), (17, 40424), (18, 40433), (19, 40442), (21, 40454), (22, 40457), (23, 40475), (25, 40505), (27, 40529), (28, 40541),

Gene: JoeyJr\_50 Start: 36840, Stop: 37118, Start Num: 10



Candidate Starts for JoeyJr\_50:

(Start: 10 @36840 has 222 MA's), (15, 36924), (16, 36933), (22, 36975), (28, 37056), (30, 37074), (31, 37080), (32, 37083),

Gene: Juice456\_56 Start: 40298, Stop: 40579, Start Num: 10

Candidate Starts for Juice456\_56:

(Start: 10 @40298 has 222 MA's), (15, 40382), (17, 40400), (19, 40418), (21, 40430), (22, 40433), (23, 40451), (28, 40517),

Gene: Juniper1\_53 Start: 38241, Stop: 38519, Start Num: 10

Candidate Starts for Juniper1\_53:

(Start: 10 @38241 has 222 MA's), (15, 38325), (16, 38334), (22, 38376), (28, 38457), (31, 38481), (32, 38484),

Gene: Karhdo\_52 Start: 37927, Stop: 38208, Start Num: 10

Candidate Starts for Karhdo\_52:

(2, 37768), (Start: 10 @37927 has 222 MA's), (15, 38011), (17, 38029), (20, 38056), (21, 38059), (22, 38062), (23, 38080), (25, 38110), (28, 38146), (30, 38164), (31, 38170), (32, 38173),

Gene: Kenuha5\_52 Start: 37183, Stop: 37461, Start Num: 10

Candidate Starts for Kenuha5\_52:

(3, 37024), (Start: 10 @37183 has 222 MA's), (15, 37267), (16, 37276), (22, 37318), (28, 37399), (31, 37423),

Gene: Kersh\_57 Start: 40680, Stop: 40961, Start Num: 10

Candidate Starts for Kersh\_57:

(Start: 10 @40680 has 222 MA's), (15, 40764), (17, 40782), (19, 40800), (20, 40809), (21, 40812), (22, 40815), (23, 40833), (28, 40899),

Gene: Kimberlium\_57 Start: 40001, Stop: 40282, Start Num: 10

Candidate Starts for Kimberlium\_57:

(Start: 10 @40001 has 222 MA's), (15, 40085), (17, 40103), (20, 40130), (21, 40133), (22, 40136), (23, 40154), (28, 40220), (31, 40244), (32, 40247),

Gene: KingMidas\_54 Start: 38502, Stop: 38780, Start Num: 10

Candidate Starts for KingMidas\_54:

(Start: 10 @38502 has 222 MA's), (15, 38586), (16, 38595), (22, 38637), (28, 38718), (30, 38736), (31, 38742), (32, 38745),

Gene: Kingsley\_52 Start: 37344, Stop: 37625, Start Num: 10

Candidate Starts for Kingsley\_52:

(Start: 10 @37344 has 222 MA's), (15, 37428), (17, 37446), (21, 37476), (22, 37479), (23, 37497), (27, 37551), (28, 37563), (31, 37587),

Gene: Koella\_49 Start: 34315, Stop: 34593, Start Num: 10

Candidate Starts for Koella\_49:

(Start: 10 @34315 has 222 MA's), (15, 34399), (16, 34408), (22, 34450), (28, 34531),

Gene: Krakatau\_52 Start: 37870, Stop: 38151, Start Num: 10

Candidate Starts for Krakatau\_52:

(3, 37711), (Start: 10 @37870 has 222 MA's), (15, 37954), (17, 37972), (21, 38002), (22, 38005), (23, 38023), (28, 38089),

Gene: KristaRAM\_58 Start: 40884, Stop: 41165, Start Num: 10  
Candidate Starts for KristaRAM\_58:  
(Start: 10 @40884 has 222 MA's), (15, 40968), (17, 40986), (20, 41013), (21, 41016), (22, 41019), (23, 41037), (25, 41067), (28, 41103), (32, 41130),

Gene: LastJedi\_49 Start: 35635, Stop: 35913, Start Num: 10  
Candidate Starts for LastJedi\_49:  
(Start: 10 @35635 has 222 MA's), (15, 35719), (16, 35728), (22, 35770), (28, 35851),

Gene: Latretium\_57 Start: 38961, Stop: 39239, Start Num: 10  
Candidate Starts for Latretium\_57:  
(Start: 10 @38961 has 222 MA's), (15, 39045), (16, 39054), (22, 39096), (28, 39177), (31, 39201), (32, 39204),

Gene: Leozinho\_54 Start: 37714, Stop: 37998, Start Num: 10  
Candidate Starts for Leozinho\_54:  
(Start: 10 @37714 has 222 MA's), (15, 37798), (17, 37816), (21, 37846), (22, 37849), (23, 37867), (25, 37897), (27, 37921), (28, 37933), (31, 37957), (32, 37960),

Gene: Leperchaun\_47 Start: 36070, Stop: 36348, Start Num: 10  
Candidate Starts for Leperchaun\_47:  
(Start: 10 @36070 has 222 MA's), (15, 36154), (16, 36163), (22, 36205), (28, 36286), (30, 36304), (31, 36310), (32, 36313),

Gene: LilMoolah\_53 Start: 37827, Stop: 38108, Start Num: 10  
Candidate Starts for LilMoolah\_53:  
(Start: 10 @37827 has 222 MA's), (15, 37911), (17, 37929), (18, 37938), (19, 37947), (21, 37959), (22, 37962), (23, 37980), (25, 38010), (27, 38034), (28, 38046),

Gene: LittleShirley\_54 Start: 38871, Stop: 39152, Start Num: 10  
Candidate Starts for LittleShirley\_54:  
(Start: 10 @38871 has 222 MA's), (15, 38955), (17, 38973), (19, 38991), (20, 39000), (21, 39003), (22, 39006), (23, 39024), (28, 39090),

Gene: Lizziana\_61 Start: 39388, Stop: 39666, Start Num: 10  
Candidate Starts for Lizziana\_61:  
(Start: 10 @39388 has 222 MA's), (15, 39472), (16, 39481), (22, 39523), (28, 39604),

Gene: Llama\_60 Start: 40799, Stop: 41077, Start Num: 10  
Candidate Starts for Llama\_60:  
(Start: 10 @40799 has 222 MA's), (15, 40883), (16, 40892), (22, 40934), (28, 41015), (31, 41039),

Gene: Llij\_51 Start: 37238, Stop: 37516, Start Num: 10  
Candidate Starts for Llij\_51:  
(Start: 10 @37238 has 222 MA's), (15, 37322), (16, 37331), (22, 37373), (28, 37454),

Gene: Lorde\_55 Start: 36525, Stop: 36803, Start Num: 10  
Candidate Starts for Lorde\_55:  
(Start: 10 @36525 has 222 MA's), (15, 36609), (16, 36618), (22, 36660), (28, 36741),

Gene: LunaBlu\_57 Start: 38962, Stop: 39243, Start Num: 10  
Candidate Starts for LunaBlu\_57:

(Start: 10 @38962 has 222 MA's), (15, 39046), (17, 39064), (21, 39094), (22, 39097), (23, 39115), (25, 39145), (27, 39169), (28, 39181), (30, 39199), (31, 39205), (32, 39208),

Gene: LunaStella\_53 Start: 37593, Stop: 37874, Start Num: 10

Candidate Starts for LunaStella\_53:

(Start: 10 @37593 has 222 MA's), (15, 37677), (17, 37695), (18, 37704), (19, 37713), (21, 37725), (23, 37746), (28, 37812), (31, 37836),

Gene: MadMen\_53 Start: 38162, Stop: 38440, Start Num: 10

Candidate Starts for MadMen\_53:

(Start: 10 @38162 has 222 MA's), (15, 38246), (16, 38255), (22, 38297), (28, 38378),

Gene: Madiba\_53 Start: 37408, Stop: 37689, Start Num: 10

Candidate Starts for Madiba\_53:

(Start: 10 @37408 has 222 MA's), (15, 37492), (17, 37510), (19, 37528), (20, 37537), (21, 37540), (22, 37543), (23, 37561), (28, 37627),

Gene: Mahavrat\_53 Start: 37787, Stop: 38068, Start Num: 10

Candidate Starts for Mahavrat\_53:

(Start: 10 @37787 has 222 MA's), (15, 37871), (17, 37889), (21, 37919), (22, 37922), (23, 37940), (25, 37970), (28, 38006), (31, 38030),

Gene: Mandlovu\_51 Start: 36397, Stop: 36678, Start Num: 10

Candidate Starts for Mandlovu\_51:

(Start: 10 @36397 has 222 MA's), (15, 36481), (17, 36499), (21, 36529), (22, 36532), (23, 36550), (25, 36580), (28, 36616),

Gene: Mantra\_51 Start: 37280, Stop: 37561, Start Num: 10

Candidate Starts for Mantra\_51:

(Start: 10 @37280 has 222 MA's), (15, 37364), (17, 37382), (18, 37391), (19, 37400), (21, 37412), (22, 37415), (23, 37433), (25, 37463), (28, 37499), (31, 37523), (32, 37526),

Gene: Maravista\_56 Start: 39834, Stop: 40115, Start Num: 10

Candidate Starts for Maravista\_56:

(Start: 10 @39834 has 222 MA's), (15, 39918), (17, 39936), (21, 39966), (22, 39969), (23, 39987), (25, 40017), (28, 40053), (31, 40077), (32, 40080),

Gene: Marker\_56 Start: 38323, Stop: 38604, Start Num: 10

Candidate Starts for Marker\_56:

(9, 38269), (Start: 10 @38323 has 222 MA's), (15, 38407), (17, 38425), (21, 38455), (22, 38458), (23, 38476), (28, 38542),

Gene: Martik\_55 Start: 38341, Stop: 38619, Start Num: 10

Candidate Starts for Martik\_55:

(Start: 10 @38341 has 222 MA's), (15, 38425), (16, 38434), (22, 38476), (28, 38557),

Gene: Mattes\_59 Start: 39904, Stop: 40185, Start Num: 10

Candidate Starts for Mattes\_59:

(Start: 10 @39904 has 222 MA's), (15, 39988), (17, 40006), (18, 40015), (19, 40024), (21, 40036), (22, 40039), (23, 40057), (25, 40087), (27, 40111), (28, 40123),

Gene: Melissauren88\_53 Start: 38094, Stop: 38375, Start Num: 10

Candidate Starts for Melissauren88\_53:

(Start: 10 @38094 has 222 MA's), (15, 38178), (17, 38196), (20, 38223), (21, 38226), (22, 38229), (23, 38247), (25, 38277), (28, 38313), (31, 38337), (32, 38340),

Gene: MilanaBonita\_46 Start: 34867, Stop: 35148, Start Num: 10

Candidate Starts for MilanaBonita\_46:

(Start: 10 @34867 has 222 MA's), (15, 34951), (17, 34969), (19, 34987), (20, 34996), (21, 34999), (22, 35002), (23, 35020), (25, 35050), (28, 35086), (31, 35110), (32, 35113),

Gene: MilleniumForce\_59 Start: 40956, Stop: 41237, Start Num: 10

Candidate Starts for MilleniumForce\_59:

(Start: 10 @40956 has 222 MA's), (15, 41040), (17, 41058), (20, 41085), (21, 41088), (22, 41091), (23, 41109), (25, 41139), (28, 41175), (31, 41199), (32, 41202),

Gene: MinionDave\_54 Start: 38685, Stop: 38966, Start Num: 10

Candidate Starts for MinionDave\_54:

(Start: 10 @38685 has 222 MA's), (15, 38769), (17, 38787), (20, 38814), (21, 38817), (22, 38820), (23, 38838), (25, 38868), (28, 38904), (31, 38928), (32, 38931),

Gene: Minnie\_59 Start: 40258, Stop: 40539, Start Num: 10

Candidate Starts for Minnie\_59:

(Start: 10 @40258 has 222 MA's), (15, 40342), (17, 40360), (20, 40387), (21, 40390), (22, 40393), (23, 40411), (25, 40441), (28, 40477), (31, 40501), (32, 40504),

Gene: MisterCuddles\_53 Start: 38141, Stop: 38425, Start Num: 10

Candidate Starts for MisterCuddles\_53:

(Start: 10 @38141 has 222 MA's), (15, 38225), (16, 38234), (17, 38243), (21, 38273), (22, 38276), (23, 38294), (25, 38324), (27, 38348), (28, 38360),

Gene: Modragons\_59 Start: 40789, Stop: 41067, Start Num: 10

Candidate Starts for Modragons\_59:

(Start: 10 @40789 has 222 MA's), (15, 40873), (16, 40882), (22, 40924), (28, 41005), (31, 41029),

Gene: MooMoo\_53 Start: 38118, Stop: 38435, Start Num: 11

Candidate Starts for MooMoo\_53:

(Start: 11 @38118 has 1 MA's), (12, 38136), (14, 38181), (17, 38211), (19, 38229), (21, 38241), (26, 38301),

Gene: Moonbeam\_53 Start: 38238, Stop: 38519, Start Num: 10

Candidate Starts for Moonbeam\_53:

(4, 38103), (Start: 10 @38238 has 222 MA's), (15, 38322), (17, 38340), (20, 38367), (21, 38370), (22, 38373), (23, 38391), (25, 38421), (28, 38457), (31, 38481), (32, 38484),

Gene: Mova\_56 Start: 37912, Stop: 38193, Start Num: 10

Candidate Starts for Mova\_56:

(Start: 10 @37912 has 222 MA's), (15, 37996), (17, 38014), (20, 38041), (21, 38044), (22, 38047), (23, 38065), (25, 38095), (28, 38131), (31, 38155), (32, 38158),

Gene: Mozy\_64 Start: 40919, Stop: 41200, Start Num: 10

Candidate Starts for Mozy\_64:

(Start: 10 @40919 has 222 MA's), (15, 41003), (17, 41021), (18, 41030), (19, 41039), (20, 41048), (21, 41051), (22, 41054), (23, 41072), (28, 41138), (31, 41162),

Gene: Ms6\_50 Start: 33825, Stop: 34106, Start Num: 10

Candidate Starts for Ms6\_50:

(Start: 10 @33825 has 222 MA's), (15, 33909), (17, 33927), (20, 33954), (21, 33957), (22, 33960), (23, 33978), (25, 34008), (28, 34044), (31, 34068), (32, 34071),

Gene: MulchExplorer\_61 Start: 40000, Stop: 40281, Start Num: 10

Candidate Starts for MulchExplorer\_61:

(Start: 10 @40000 has 222 MA's), (15, 40084), (17, 40102), (20, 40129), (21, 40132), (22, 40135), (23, 40153), (28, 40219), (31, 40243), (32, 40246),

Gene: Mutaforma13\_59 Start: 41242, Stop: 41523, Start Num: 10

Candidate Starts for Mutaforma13\_59:

(Start: 10 @41242 has 222 MA's), (15, 41326), (17, 41344), (20, 41371), (21, 41374), (22, 41377), (23, 41395), (25, 41425), (28, 41461), (32, 41488),

Gene: Nimbo\_49 Start: 36643, Stop: 36921, Start Num: 10

Candidate Starts for Nimbo\_49:

(Start: 10 @36643 has 222 MA's), (15, 36727), (16, 36736), (22, 36778), (28, 36859), (30, 36877), (31, 36883), (32, 36886),

Gene: Nitzel\_51 Start: 37086, Stop: 37364, Start Num: 10

Candidate Starts for Nitzel\_51:

(Start: 10 @37086 has 222 MA's), (15, 37170), (22, 37221), (27, 37290), (28, 37302),

Gene: Nivrat\_51 Start: 37700, Stop: 37981, Start Num: 10

Candidate Starts for Nivrat\_51:

(Start: 10 @37700 has 222 MA's), (15, 37784), (17, 37802), (18, 37811), (19, 37820), (21, 37832), (22, 37835), (23, 37853), (25, 37883), (27, 37907), (28, 37919),

Gene: NormanBulbieJr\_55 Start: 38328, Stop: 38606, Start Num: 10

Candidate Starts for NormanBulbieJr\_55:

(Start: 10 @38328 has 222 MA's), (15, 38412), (16, 38421), (22, 38463), (28, 38544),

Gene: Ochi17\_58 Start: 40396, Stop: 40674, Start Num: 10

Candidate Starts for Ochi17\_58:

(Start: 10 @40396 has 222 MA's), (15, 40480), (16, 40489), (22, 40531), (28, 40612), (31, 40636),

Gene: OfUltron\_60 Start: 40945, Stop: 41223, Start Num: 10

Candidate Starts for OfUltron\_60:

(Start: 10 @40945 has 222 MA's), (15, 41029), (16, 41038), (22, 41080), (28, 41161), (31, 41185),

Gene: Ogopogo\_60 Start: 39087, Stop: 39365, Start Num: 10

Candidate Starts for Ogopogo\_60:

(Start: 10 @39087 has 222 MA's), (15, 39171), (16, 39180), (22, 39222), (28, 39303), (31, 39327),

Gene: Oksu\_59 Start: 41208, Stop: 41486, Start Num: 10

Candidate Starts for Oksu\_59:

(Start: 10 @41208 has 222 MA's), (15, 41292), (16, 41301), (22, 41343), (28, 41424), (31, 41448),

Gene: OldBen\_52 Start: 38250, Stop: 38531, Start Num: 10

Candidate Starts for OldBen\_52:

(Start: 10 @38250 has 222 MA's), (15, 38334), (17, 38352), (20, 38379), (21, 38382), (22, 38385), (23, 38403), (25, 38433), (28, 38469), (31, 38493), (32, 38496),

Gene: OlympiaSaint\_57 Start: 38849, Stop: 39127, Start Num: 10  
Candidate Starts for OlympiaSaint\_57:  
(Start: 10 @38849 has 222 MA's), (15, 38933), (16, 38942), (22, 38984), (28, 39065),

Gene: Ovechkin\_54 Start: 38846, Stop: 39127, Start Num: 10  
Candidate Starts for Ovechkin\_54:  
(Start: 10 @38846 has 222 MA's), (15, 38930), (17, 38948), (19, 38966), (20, 38975), (21, 38978), (22, 38981), (23, 38999), (28, 39065),

Gene: OwlsT2W\_55 Start: 38568, Stop: 38849, Start Num: 10  
Candidate Starts for OwlsT2W\_55:  
(Start: 10 @38568 has 222 MA's), (15, 38652), (17, 38670), (18, 38679), (19, 38688), (20, 38697), (21, 38700), (22, 38703), (23, 38721), (28, 38787), (31, 38811), (32, 38814),

Gene: PHappiness\_50 Start: 36616, Stop: 36894, Start Num: 10  
Candidate Starts for PHappiness\_50:  
(Start: 10 @36616 has 222 MA's), (15, 36700), (16, 36709), (22, 36751), (28, 36832), (30, 36850), (31, 36856), (32, 36859),

Gene: PMC\_52 Start: 38955, Stop: 39233, Start Num: 10  
Candidate Starts for PMC\_52:  
(Start: 10 @38955 has 222 MA's), (15, 39039), (16, 39048), (22, 39090), (28, 39171), (30, 39189), (31, 39195), (32, 39198),

Gene: Pacc40\_49 Start: 36690, Stop: 36968, Start Num: 10  
Candidate Starts for Pacc40\_49:  
(Start: 10 @36690 has 222 MA's), (15, 36774), (16, 36783), (22, 36825), (28, 36906), (30, 36924), (31, 36930), (32, 36933),

Gene: Phalconet\_53 Start: 37365, Stop: 37646, Start Num: 10  
Candidate Starts for Phalconet\_53:  
(Start: 10 @37365 has 222 MA's), (15, 37449), (17, 37467), (20, 37494), (21, 37497), (22, 37500), (23, 37518), (25, 37548), (28, 37584), (31, 37608), (32, 37611),

Gene: Phanphagia\_53 Start: 39136, Stop: 39417, Start Num: 10  
Candidate Starts for Phanphagia\_53:  
(Start: 10 @39136 has 222 MA's), (15, 39220), (17, 39238), (21, 39268), (22, 39271), (23, 39289), (25, 39319), (28, 39355), (31, 39379), (32, 39382),

Gene: Phasih\_53 Start: 38756, Stop: 39034, Start Num: 10  
Candidate Starts for Phasih\_53:  
(Start: 10 @38756 has 222 MA's), (15, 38840), (16, 38849), (22, 38891), (28, 38972), (30, 38990), (31, 38996), (32, 38999),

Gene: Phatniss\_53 Start: 38333, Stop: 38611, Start Num: 10  
Candidate Starts for Phatniss\_53:  
(Start: 10 @38333 has 222 MA's), (15, 38417), (16, 38426), (22, 38468), (28, 38549),

Gene: PhesterPhotato\_56 Start: 38362, Stop: 38643, Start Num: 10  
Candidate Starts for PhesterPhotato\_56:  
(Start: 10 @38362 has 222 MA's), (15, 38446), (17, 38464), (20, 38491), (21, 38494), (22, 38497), (23, 38515), (25, 38545), (28, 38581), (31, 38605), (32, 38608),

Gene: Philus\_58 Start: 39490, Stop: 39771, Start Num: 10

Candidate Starts for Philus\_58:

(7, 39382), (Start: 10 @39490 has 222 MA's), (15, 39574), (17, 39592), (19, 39610), (20, 39619), (21, 39622), (22, 39625), (23, 39643), (28, 39709),

Gene: Pippy\_53 Start: 37199, Stop: 37477, Start Num: 10

Candidate Starts for Pippy\_53:

(Start: 10 @37199 has 222 MA's), (15, 37283), (16, 37292), (22, 37334), (28, 37415),

Gene: Plumbus\_57 Start: 38657, Stop: 38938, Start Num: 10

Candidate Starts for Plumbus\_57:

(Start: 10 @38657 has 222 MA's), (15, 38741), (17, 38759), (18, 38768), (19, 38777), (21, 38789), (22, 38792), (23, 38810), (25, 38840), (28, 38876), (31, 38900), (32, 38903),

Gene: Poenanya\_55 Start: 39514, Stop: 39795, Start Num: 10

Candidate Starts for Poenanya\_55:

(Start: 10 @39514 has 222 MA's), (15, 39598), (19, 39634), (21, 39646), (22, 39649), (23, 39667), (25, 39697), (28, 39733), (31, 39757), (32, 39760),

Gene: Polka14\_53 Start: 37713, Stop: 37991, Start Num: 10

Candidate Starts for Polka14\_53:

(Start: 10 @37713 has 222 MA's), (15, 37797), (16, 37806), (22, 37848), (28, 37929), (30, 37947), (31, 37953), (32, 37956),

Gene: Pollywog\_56 Start: 39161, Stop: 39442, Start Num: 10

Candidate Starts for Pollywog\_56:

(Start: 10 @39161 has 222 MA's), (15, 39245), (17, 39263), (21, 39293), (22, 39296), (23, 39314), (25, 39344), (28, 39380), (30, 39398), (31, 39404), (32, 39407),

Gene: PopTart\_49 Start: 36990, Stop: 37271, Start Num: 10

Candidate Starts for PopTart\_49:

(Start: 10 @36990 has 222 MA's), (15, 37074), (17, 37092), (21, 37122), (22, 37125), (23, 37143), (28, 37209), (31, 37233), (32, 37236),

Gene: Priscilla\_55 Start: 38427, Stop: 38705, Start Num: 10

Candidate Starts for Priscilla\_55:

(Start: 10 @38427 has 222 MA's), (15, 38511), (16, 38520), (22, 38562), (28, 38643),

Gene: QuickMath\_56 Start: 40224, Stop: 40505, Start Num: 10

Candidate Starts for QuickMath\_56:

(Start: 10 @40224 has 222 MA's), (15, 40308), (17, 40326), (20, 40353), (21, 40356), (22, 40359), (23, 40377), (28, 40443), (31, 40467), (32, 40470),

Gene: Quico\_64 Start: 40690, Stop: 40971, Start Num: 10

Candidate Starts for Quico\_64:

(Start: 10 @40690 has 222 MA's), (15, 40774), (17, 40792), (20, 40819), (21, 40822), (22, 40825), (23, 40843), (25, 40873), (27, 40897), (28, 40909), (30, 40927), (31, 40933), (32, 40936),

Gene: Radiance\_54 Start: 38449, Stop: 38730, Start Num: 10

Candidate Starts for Radiance\_54:

(Start: 10 @38449 has 222 MA's), (15, 38533), (17, 38551), (20, 38578), (21, 38581), (22, 38584), (23, 38602), (25, 38632), (28, 38668), (30, 38686), (31, 38692), (32, 38695),

Gene: Ramsey\_55 Start: 39112, Stop: 39393, Start Num: 10

Candidate Starts for Ramsey\_55:

(Start: 10 @39112 has 222 MA's), (15, 39196), (19, 39232), (21, 39244), (22, 39247), (23, 39265), (25, 39295), (28, 39331), (31, 39355), (32, 39358),

Gene: RedBird\_52 Start: 37565, Stop: 37846, Start Num: 10

Candidate Starts for RedBird\_52:

(Start: 10 @37565 has 222 MA's), (15, 37649), (17, 37667), (18, 37676), (20, 37694), (21, 37697), (22, 37700), (23, 37718), (25, 37748), (28, 37784), (31, 37808), (32, 37811),

Gene: Renaud18\_60 Start: 39002, Stop: 39283, Start Num: 10

Candidate Starts for Renaud18\_60:

(Start: 10 @39002 has 222 MA's), (15, 39086), (17, 39104), (20, 39131), (21, 39134), (22, 39137), (23, 39155), (25, 39185), (28, 39221), (31, 39245), (32, 39248),

Gene: Rialto\_60 Start: 41034, Stop: 41315, Start Num: 10

Candidate Starts for Rialto\_60:

(Start: 10 @41034 has 222 MA's), (15, 41118), (17, 41136), (21, 41166), (22, 41169), (23, 41187), (28, 41253), (31, 41277),

Gene: Rita\_56 Start: 37058, Stop: 37336, Start Num: 10

Candidate Starts for Rita\_56:

(Start: 10 @37058 has 222 MA's), (15, 37142), (16, 37151), (22, 37193), (28, 37274),

Gene: RitaG\_50 Start: 36961, Stop: 37239, Start Num: 10

Candidate Starts for RitaG\_50:

(Start: 10 @36961 has 222 MA's), (15, 37045), (16, 37054), (22, 37096), (28, 37177), (30, 37195), (31, 37201), (32, 37204),

Gene: Rockne\_56 Start: 38967, Stop: 39245, Start Num: 10

Candidate Starts for Rockne\_56:

(Start: 10 @38967 has 222 MA's), (15, 39051), (16, 39060), (22, 39102), (28, 39183), (30, 39201), (31, 39207), (32, 39210),

Gene: RockyHorror\_55 Start: 37836, Stop: 38114, Start Num: 10

Candidate Starts for RockyHorror\_55:

(9, 37776), (Start: 10 @37836 has 222 MA's), (15, 37920), (16, 37929), (22, 37971), (28, 38052), (31, 38076),

Gene: Royals2015\_57 Start: 38172, Stop: 38453, Start Num: 10

Candidate Starts for Royals2015\_57:

(Start: 10 @38172 has 222 MA's), (15, 38256), (17, 38274), (21, 38304), (22, 38307), (23, 38325), (28, 38391), (31, 38415),

Gene: Ruby\_51 Start: 38142, Stop: 38426, Start Num: 10

Candidate Starts for Ruby\_51:

(Start: 10 @38142 has 222 MA's), (15, 38226), (16, 38235), (17, 38244), (21, 38274), (22, 38277), (23, 38295), (25, 38325), (27, 38349), (28, 38361),

Gene: SG4\_52 Start: 37842, Stop: 38123, Start Num: 10

Candidate Starts for SG4\_52:

(Start: 10 @37842 has 222 MA's), (15, 37926), (17, 37944), (20, 37971), (21, 37974), (22, 37977), (23, 37995), (25, 38025), (28, 38061), (31, 38085), (32, 38088),



Gene: Saal\_57 Start: 39601, Stop: 39879, Start Num: 10

Candidate Starts for Saal\_57:

(Start: 10 @39601 has 222 MA's), (15, 39685), (16, 39694), (22, 39736), (28, 39817),

Gene: Sabbb\_59 Start: 39286, Stop: 39567, Start Num: 10

Candidate Starts for Sabbb\_59:

(Start: 10 @39286 has 222 MA's), (15, 39370), (17, 39388), (20, 39415), (21, 39418), (22, 39421), (23, 39439), (25, 39469), (28, 39505),

Gene: Sandalphon\_56 Start: 39056, Stop: 39337, Start Num: 10

Candidate Starts for Sandalphon\_56:

(Start: 10 @39056 has 222 MA's), (15, 39140), (17, 39158), (20, 39185), (21, 39188), (22, 39191), (23, 39209), (25, 39239), (28, 39275), (31, 39299), (32, 39302),

Gene: Sarma624\_53 Start: 34536, Stop: 34817, Start Num: 10

Candidate Starts for Sarma624\_53:

(Start: 10 @34536 has 222 MA's), (15, 34620), (17, 34638), (21, 34668), (22, 34671), (23, 34689), (27, 34743), (28, 34755), (31, 34779),

Gene: Sassafras\_53 Start: 37930, Stop: 38211, Start Num: 10

Candidate Starts for Sassafras\_53:

(Start: 10 @37930 has 222 MA's), (15, 38014), (17, 38032), (21, 38062), (22, 38065), (23, 38083), (25, 38113), (28, 38149), (31, 38173), (32, 38176),

Gene: SassyB\_49 Start: 36990, Stop: 37271, Start Num: 10

Candidate Starts for SassyB\_49:

(Start: 10 @36990 has 222 MA's), (15, 37074), (17, 37092), (21, 37122), (22, 37125), (23, 37143), (28, 37209), (31, 37233), (32, 37236),

Gene: Scottish\_53 Start: 37973, Stop: 38251, Start Num: 10

Candidate Starts for Scottish\_53:

(Start: 10 @37973 has 222 MA's), (15, 38057), (16, 38066), (22, 38108), (28, 38189), (30, 38207), (31, 38213), (32, 38216),

Gene: Seabastian\_60 Start: 40946, Stop: 41224, Start Num: 10

Candidate Starts for Seabastian\_60:

(Start: 10 @40946 has 222 MA's), (15, 41030), (16, 41039), (22, 41081), (28, 41162), (31, 41186),

Gene: Seagreen\_55 Start: 37934, Stop: 38215, Start Num: 10

Candidate Starts for Seagreen\_55:

(Start: 10 @37934 has 222 MA's), (15, 38018), (17, 38036), (21, 38066), (22, 38069), (23, 38087), (27, 38141), (28, 38153), (31, 38177),

Gene: Shauna1\_54 Start: 39045, Stop: 39326, Start Num: 10

Candidate Starts for Shauna1\_54:

(Start: 10 @39045 has 222 MA's), (15, 39129), (17, 39147), (21, 39177), (22, 39180), (23, 39198), (25, 39228), (28, 39264), (31, 39288), (32, 39291),

Gene: ShiLan\_54 Start: 38374, Stop: 38652, Start Num: 10

Candidate Starts for ShiLan\_54:

(Start: 10 @38374 has 222 MA's), (15, 38458), (16, 38467), (22, 38509), (28, 38590),

Gene: ShowerHandel\_58 Start: 38341, Stop: 38619, Start Num: 10  
Candidate Starts for ShowerHandel\_58:  
(Start: 10 @38341 has 222 MA's), (15, 38425), (16, 38434), (22, 38476), (28, 38557),

Gene: ShroomBoi\_57 Start: 39298, Stop: 39579, Start Num: 10  
Candidate Starts for ShroomBoi\_57:  
(Start: 10 @39298 has 222 MA's), (15, 39382), (17, 39400), (19, 39418), (20, 39427), (21, 39430), (22, 39433), (23, 39451), (28, 39517),

Gene: SiSi\_53 Start: 37744, Stop: 38025, Start Num: 10  
Candidate Starts for SiSi\_53:  
(Start: 10 @37744 has 222 MA's), (15, 37828), (17, 37846), (18, 37855), (19, 37864), (21, 37876), (22, 37879), (23, 37897), (25, 37927), (28, 37963), (31, 37987), (32, 37990),

Gene: SimranZ1\_55 Start: 38527, Stop: 38805, Start Num: 10  
Candidate Starts for SimranZ1\_55:  
(Start: 10 @38527 has 222 MA's), (15, 38611), (16, 38620), (22, 38662), (28, 38743), (31, 38767),

Gene: Soul22\_59 Start: 39314, Stop: 39595, Start Num: 10  
Candidate Starts for Soul22\_59:  
(Start: 10 @39314 has 222 MA's), (15, 39398), (17, 39416), (20, 39443), (21, 39446), (22, 39449), (23, 39467), (28, 39533), (32, 39560),

Gene: Sparkdehlily\_63 Start: 40056, Stop: 40337, Start Num: 10  
Candidate Starts for Sparkdehlily\_63:  
(1, 39894), (5, 39930), (Start: 10 @40056 has 222 MA's), (15, 40140), (17, 40158), (20, 40185), (21, 40188), (22, 40191), (23, 40209), (25, 40239), (28, 40275), (31, 40299), (32, 40302),

Gene: Spartacus\_57 Start: 39008, Stop: 39289, Start Num: 10  
Candidate Starts for Spartacus\_57:  
(Start: 10 @39008 has 222 MA's), (15, 39092), (17, 39110), (20, 39137), (21, 39140), (22, 39143), (23, 39161), (25, 39191), (28, 39227), (31, 39251), (32, 39254),

Gene: Spikelee\_62 Start: 40628, Stop: 40909, Start Num: 10  
Candidate Starts for Spikelee\_62:  
(Start: 10 @40628 has 222 MA's), (15, 40712), (17, 40730), (20, 40757), (21, 40760), (22, 40763), (23, 40781), (25, 40811), (28, 40847), (31, 40871), (32, 40874),

Gene: Spoonbill\_52 Start: 36918, Stop: 37199, Start Num: 10  
Candidate Starts for Spoonbill\_52:  
(Start: 10 @36918 has 222 MA's), (15, 37002), (17, 37020), (20, 37047), (21, 37050), (22, 37053), (23, 37071), (25, 37101), (28, 37137), (30, 37155), (31, 37161), (32, 37164),

Gene: Squirty\_58 Start: 39817, Stop: 40098, Start Num: 10  
Candidate Starts for Squirty\_58:  
(Start: 10 @39817 has 222 MA's), (15, 39901), (17, 39919), (19, 39937), (20, 39946), (21, 39949), (22, 39952), (23, 39970), (25, 40000), (28, 40036), (31, 40060), (32, 40063),

Gene: StAnnes\_54 Start: 39223, Stop: 39504, Start Num: 10  
Candidate Starts for StAnnes\_54:  
(Start: 10 @39223 has 222 MA's), (15, 39307), (17, 39325), (20, 39352), (21, 39355), (22, 39358), (23, 39376), (25, 39406), (28, 39442), (31, 39466), (32, 39469),

Gene: Stap\_53 Start: 37719, Stop: 38000, Start Num: 10

Candidate Starts for Stap\_53:

(Start: 10 @37719 has 222 MA's), (15, 37803), (17, 37821), (20, 37848), (21, 37851), (22, 37854), (23, 37872), (25, 37902), (28, 37938), (31, 37962), (32, 37965),

Gene: Starcevich\_54 Start: 38298, Stop: 38576, Start Num: 10

Candidate Starts for Starcevich\_54:

(Start: 10 @38298 has 222 MA's), (15, 38382), (16, 38391), (22, 38433), (28, 38514),

Gene: Strokeseat\_51 Start: 36454, Stop: 36735, Start Num: 10

Candidate Starts for Strokeseat\_51:

(Start: 10 @36454 has 222 MA's), (15, 36538), (17, 36556), (21, 36586), (22, 36589), (23, 36607), (25, 36637), (28, 36673),

Gene: SuperGrey\_59 Start: 40531, Stop: 40812, Start Num: 10

Candidate Starts for SuperGrey\_59:

(Start: 10 @40531 has 222 MA's), (15, 40615), (17, 40633), (20, 40660), (21, 40663), (22, 40666), (23, 40684), (28, 40750), (31, 40774), (32, 40777),

Gene: SwagPigglett\_60 Start: 40646, Stop: 40927, Start Num: 10

Candidate Starts for SwagPigglett\_60:

(Start: 10 @40646 has 222 MA's), (15, 40730), (17, 40748), (18, 40757), (19, 40766), (21, 40778), (22, 40781), (23, 40799), (25, 40829), (27, 40853), (28, 40865),

Gene: TChen\_55 Start: 39544, Stop: 39825, Start Num: 10

Candidate Starts for TChen\_55:

(Start: 10 @39544 has 222 MA's), (15, 39628), (17, 39646), (18, 39655), (19, 39664), (21, 39676), (23, 39697), (28, 39763), (31, 39787),

Gene: TDanisky\_63 Start: 40056, Stop: 40337, Start Num: 10

Candidate Starts for TDanisky\_63:

(1, 39894), (5, 39930), (Start: 10 @40056 has 222 MA's), (15, 40140), (17, 40158), (20, 40185), (21, 40188), (22, 40191), (23, 40209), (25, 40239), (28, 40275), (31, 40299), (32, 40302),

Gene: Taj\_59 Start: 40104, Stop: 40385, Start Num: 10

Candidate Starts for Taj\_59:

(Start: 10 @40104 has 222 MA's), (15, 40188), (17, 40206), (20, 40233), (21, 40236), (22, 40239), (23, 40257), (25, 40287), (28, 40323), (32, 40350),

Gene: ThetaBob\_58 Start: 38692, Stop: 38973, Start Num: 10

Candidate Starts for ThetaBob\_58:

(Start: 10 @38692 has 222 MA's), (15, 38776), (17, 38794), (19, 38812), (20, 38821), (21, 38824), (22, 38827), (23, 38845), (28, 38911), (32, 38938),

Gene: Tootsieroll\_56 Start: 37667, Stop: 37948, Start Num: 10

Candidate Starts for Tootsieroll\_56:

(Start: 10 @37667 has 222 MA's), (15, 37751), (19, 37787), (21, 37799), (22, 37802), (23, 37820), (25, 37850), (28, 37886), (31, 37910), (32, 37913),

Gene: Toron\_60 Start: 40265, Stop: 40555, Start Num: 11

Candidate Starts for Toron\_60:

(Start: 11 @40265 has 1 MA's), (13, 40322), (18, 40367), (21, 40388), (24, 40424), (26, 40439), (29, 40469), (33, 40505), (34, 40511),

Gene: Totinger\_54 Start: 37597, Stop: 37878, Start Num: 10

Candidate Starts for Totinger\_54:

(Start: 10 @37597 has 222 MA's), (15, 37681), (17, 37699), (19, 37717), (20, 37726), (21, 37729), (22, 37732), (23, 37750), (28, 37816),

Gene: Tweety\_55 Start: 39847, Stop: 40128, Start Num: 10

Candidate Starts for Tweety\_55:

(Start: 10 @39847 has 222 MA's), (15, 39931), (17, 39949), (20, 39976), (21, 39979), (22, 39982), (23, 40000), (25, 40030), (28, 40066), (32, 40093),

Gene: UncleRicky\_54 Start: 38581, Stop: 38859, Start Num: 10

Candidate Starts for UncleRicky\_54:

(Start: 10 @38581 has 222 MA's), (15, 38665), (16, 38674), (22, 38716), (28, 38797),

Gene: VRedHorse\_54 Start: 37460, Stop: 37741, Start Num: 10

Candidate Starts for VRedHorse\_54:

(Start: 10 @37460 has 222 MA's), (15, 37544), (17, 37562), (21, 37592), (23, 37613), (28, 37679),

Gene: Velveteen\_50 Start: 34536, Stop: 34817, Start Num: 10

Candidate Starts for Velveteen\_50:

(Start: 10 @34536 has 222 MA's), (15, 34620), (17, 34638), (21, 34668), (22, 34671), (23, 34689), (27, 34743), (28, 34755), (31, 34779),

Gene: Veteran\_52 Start: 37433, Stop: 37714, Start Num: 10

Candidate Starts for Veteran\_52:

(Start: 10 @37433 has 222 MA's), (15, 37517), (17, 37535), (20, 37562), (21, 37565), (22, 37568), (23, 37586), (25, 37616), (28, 37652), (31, 37676), (32, 37679),

Gene: Vivum\_58 Start: 38656, Stop: 38937, Start Num: 10

Candidate Starts for Vivum\_58:

(Start: 10 @38656 has 222 MA's), (15, 38740), (19, 38776), (21, 38788), (22, 38791), (23, 38809), (25, 38839), (28, 38875), (31, 38899), (32, 38902),

Gene: Wachhund\_57 Start: 38647, Stop: 38928, Start Num: 10

Candidate Starts for Wachhund\_57:

(Start: 10 @38647 has 222 MA's), (15, 38731), (17, 38749), (20, 38776), (21, 38779), (22, 38782), (23, 38800), (25, 38830), (28, 38866), (31, 38890), (32, 38893),

Gene: Wee\_58 Start: 40173, Stop: 40454, Start Num: 10

Candidate Starts for Wee\_58:

(Start: 10 @40173 has 222 MA's), (15, 40257), (17, 40275), (20, 40302), (21, 40305), (22, 40308), (23, 40326), (25, 40356), (28, 40392), (32, 40419),

Gene: Whatsapiecost\_56 Start: 37931, Stop: 38212, Start Num: 10

Candidate Starts for Whatsapiecost\_56:

(Start: 10 @37931 has 222 MA's), (15, 38015), (17, 38033), (20, 38060), (21, 38063), (22, 38066), (23, 38084), (25, 38114), (28, 38150), (31, 38174), (32, 38177),

Gene: Whouxphf\_52 Start: 38250, Stop: 38531, Start Num: 10

Candidate Starts for Whouxphf\_52:

(Start: 10 @38250 has 222 MA's), (15, 38334), (17, 38352), (21, 38382), (22, 38385), (23, 38403), (25, 38433), (27, 38457), (28, 38469), (30, 38487), (31, 38493), (32, 38496),

Gene: WillSterrel\_56 Start: 40124, Stop: 40405, Start Num: 10

Candidate Starts for WillSterrel\_56:

(Start: 10 @40124 has 222 MA's), (15, 40208), (17, 40226), (20, 40253), (21, 40256), (22, 40259), (23, 40277), (25, 40307), (28, 40343), (31, 40367), (32, 40370),

Gene: XFactor\_53 Start: 37556, Stop: 37837, Start Num: 10

Candidate Starts for XFactor\_53:

(Start: 10 @37556 has 222 MA's), (15, 37640), (18, 37667), (19, 37676), (20, 37685), (21, 37688), (22, 37691), (23, 37709), (25, 37739), (28, 37775), (31, 37799), (32, 37802),

Gene: Yorick\_54 Start: 38715, Stop: 38993, Start Num: 10

Candidate Starts for Yorick\_54:

(Start: 10 @38715 has 222 MA's), (15, 38799), (16, 38808), (22, 38850), (28, 38931),

Gene: Yoshi\_66 Start: 39702, Stop: 39983, Start Num: 10

Candidate Starts for Yoshi\_66:

(Start: 10 @39702 has 222 MA's), (15, 39786), (17, 39804), (21, 39834), (22, 39837), (23, 39855), (28, 39921), (31, 39945),

Gene: Zapner\_68 Start: 40190, Stop: 40489, Start Num: 10

Candidate Starts for Zapner\_68:

(Start: 10 @40190 has 222 MA's), (15, 40274), (17, 40292), (21, 40322), (22, 40325), (23, 40343), (28, 40409), (31, 40433), (32, 40436), (35, 40472),

Gene: Zerg\_54 Start: 37945, Stop: 38223, Start Num: 10

Candidate Starts for Zerg\_54:

(9, 37885), (Start: 10 @37945 has 222 MA's), (15, 38029), (16, 38038), (22, 38080), (28, 38161), (31, 38185),

Gene: Zizzle\_59 Start: 39965, Stop: 40246, Start Num: 10

Candidate Starts for Zizzle\_59:

(Start: 10 @39965 has 222 MA's), (15, 40049), (17, 40067), (18, 40076), (19, 40085), (21, 40097), (22, 40100), (23, 40118), (25, 40148), (27, 40172), (28, 40184),