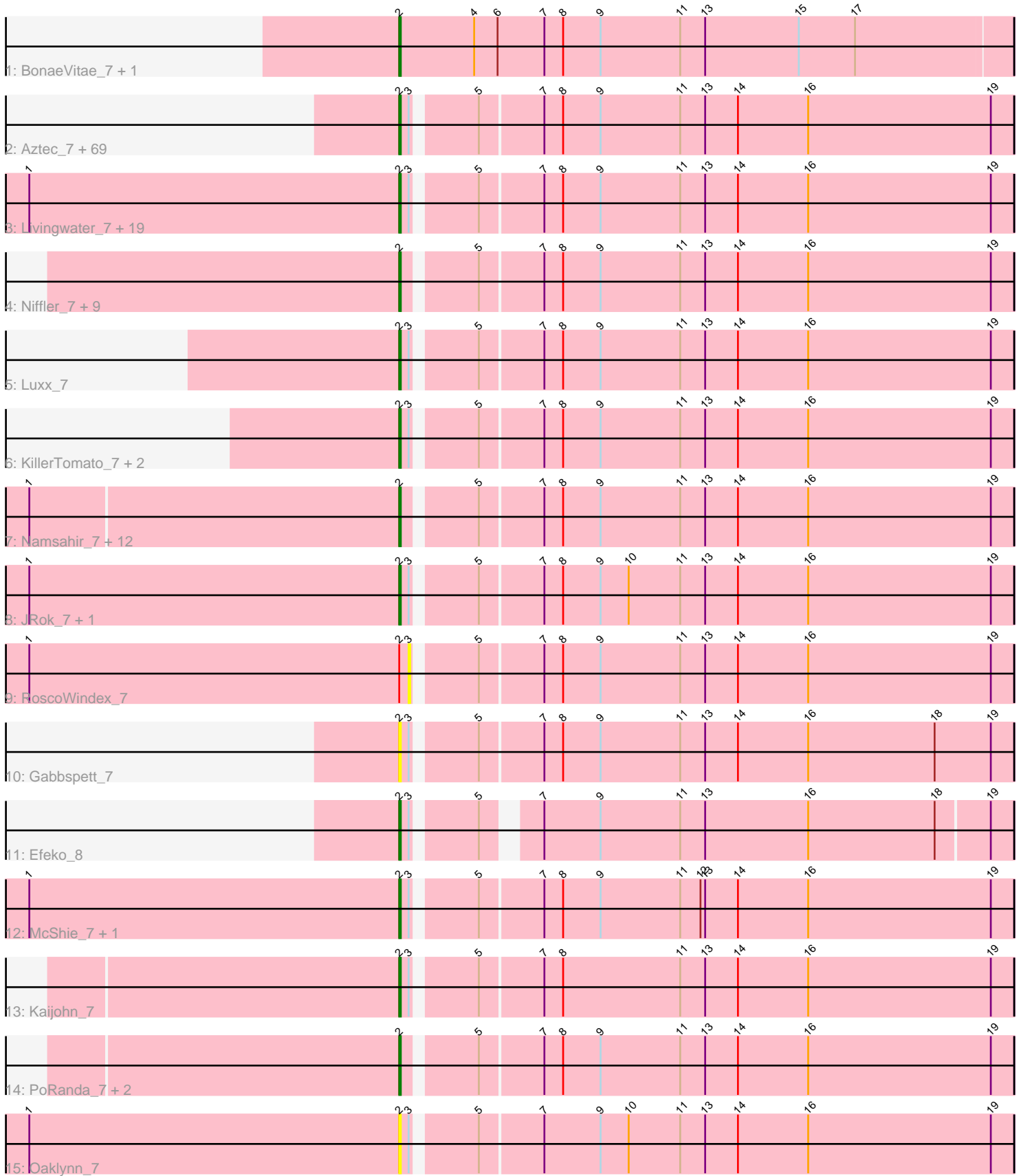


# Pham 1057



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 1057 Report

This analysis was run 07/09/24 on database version 566.

Pham number 1057 has 131 members, 20 are drafts.

Phages represented in each track:

- Track 1 : BonaeVitae\_7, Naby\_7
- Track 2 : Aztec\_7, SeaWolves\_7, Alucard\_7, Majesty\_7, Goobery\_7, Erin\_7, Scamander\_7, Burgy\_7, Minima\_7, Lola20\_7, JoBros\_7, ManAs\_7, Jahseh\_7, NeumannU\_7, Yasuo\_7, Ciel\_7, Horacetta\_7, Eightball\_7, Gillker\_7, Avvas\_7, Owens\_7, TimoTea\_7, Gardevoir\_7, Cayde6\_7, Dooby\_7, Bradley2\_7, Jannah\_7, Dongwon\_7, TeddyBoy\_7, LionelHutz\_7, MasterPitts\_7, Concrete\_7, GoldenBlanche\_7, Bri160\_7, JaimeB\_7, Puddles3\_7, Charbie\_7, Picnic\_7, DaftyDuck\_7, Sara\_7, Astro16\_7, Slentz\_7, Rhogar\_7, Baine\_7, KyriosFaba\_7, PaoPu\_7, VitulaEligans\_7, Danno\_7, Pondwater\_7, Maneater\_7, Witch\_7, BinkBonk\_7, Anseraureola\_7, Yubaba\_7, BurtonThePup\_7, BarBear\_7, YertPhresh\_7, Octopus\_7, Godfather\_7, Chatham\_7, Danimal\_7, Hernandez44\_7, Jerky\_7, Scrunchy\_7, Loca\_7, LemonPepper\_7, EdElric\_7, Aries55\_7, Kojax4\_7, BoomRoasted\_7
- Track 3 : Livingwater\_7, Vanisius\_7, Biscayne\_7, SantasSleigh\_7, Quaker\_7, MelBee03\_7, Sippinontea\_7, Otwor\_7, Belthelas\_7, Kevanna\_7, Bodhi17\_7, LaviMo\_7, Josuke\_7, Sage7\_7, Rhysand\_7, Leafy\_7, Duggie\_7, Wolfpack\_7, Cheesecake\_7, KayPaulus\_7
- Track 4 : Niffler\_7, Nobel\_7, Miaurora\_7, Lunatic\_7, Trireme\_7, TinyTruffula\_7, Yami\_7, Cazares\_7, PuffyCat\_7, Clownery\_7
- Track 5 : Luxx\_7
- Track 6 : KillerTomato\_7, MrGreen\_7, Hulk\_7
- Track 7 : Namsahir\_7, HarperAnne\_7, Slizam\_7, JooneeDee\_7, Elspeth\_7, Ekko14\_7, TomBrady12\_7, Bintii\_7, Bullzi2019\_7, Noelani\_7, Snuffles\_8, Stem\_7, Publix\_7
- Track 8 : JRok\_7, Azizam\_7
- Track 9 : RoscoWindex\_7
- Track 10 : Gabbspett\_7
- Track 11 : Efeko\_8
- Track 12 : McShie\_7, BrokMonster\_7
- Track 13 : Kaijohn\_7
- Track 14 : PoRanda\_7, MirimarMandM\_7, Upsilon\_7
- Track 15 : Oaklynn\_7

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

The start number called the most often in the published annotations is 2, it was called in 111 of the 111 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alucard\_7, Anseraureola\_7, Aries55\_7, Astro16\_7, Avvas\_7, Azizam\_7, Aztec\_7, Baine\_7, BarBear\_7, Belthelas\_7, BinkBonk\_7, Bintii\_7, Biscayne\_7, Bodhi17\_7, BonaeVitae\_7, BoomRoasted\_7, Bradley2\_7, Bri160\_7, BrokMonster\_7, Bullzi2019\_7, Burgy\_7, BurtonThePup\_7, Cayde6\_7, Cazares\_7, Charbie\_7, Chatham\_7, Cheesecake\_7, Ciel\_7, Clownery\_7, Concrete\_7, DaftyDuck\_7, Danimal\_7, Danno\_7, Dongwon\_7, Dooby\_7, Douggie\_7, EdElric\_7, Efeko\_8, Eightball\_7, Ekko14\_7, Elspeth\_7, Erin\_7, Gabbspett\_7, Gardevoir\_7, Gillker\_7, Godfather\_7, GoldenBlanche\_7, Goobery\_7, HarperAnne\_7, Hernandez44\_7, Horacetta\_7, Hulk\_7, JRok\_7, Jahseh\_7, JaimeB\_7, Jannah\_7, Jerky\_7, JoBros\_7, JooneeDee\_7, Josuke\_7, Kaijohn\_7, KayPaulus\_7, Kevanna\_7, KillerTomato\_7, Kojax4\_7, KyriosFaba\_7, LaviMo\_7, Leafy\_7, LemonPepper\_7, LionelHutz\_7, Livingwater\_7, Loca\_7, Lola20\_7, Lunatic\_7, Luxx\_7, Majesty\_7, ManAs\_7, Maneater\_7, MasterPitts\_7, McShie\_7, MelBee03\_7, Miaurora\_7, Minima\_7, MirimarMandM\_7, MrGreen\_7, Naby\_7, Namsahir\_7, NeumannU\_7, Niffler\_7, Nobel\_7, Noelani\_7, Oaklynn\_7, Octopus\_7, Otwor\_7, Owens\_7, PaoPu\_7, Picnic\_7, PoRanda\_7, Pondwater\_7, Publix\_7, Puddles3\_7, PuffyCat\_7, Quaker\_7, Rhogar\_7, Rhysand\_7, Sage7\_7, SantasSleigh\_7, Sara\_7, Scamander\_7, Scrunchy\_7, SeaWolves\_7, Sippinontea\_7, Slentz\_7, Slizam\_7, Snuffles\_8, Stem\_7, TeddyBoy\_7, TimoTea\_7, TinyTruffula\_7, TomBrady12\_7, Trireme\_7, Upsilon\_7, Vanisius\_7, VitulaEligans\_7, Witch\_7, Wolfpack\_7, Yami\_7, Yasuo\_7, YertPhresh\_7, Yubaba\_7,

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

- RoscoWindex\_7,

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

- 

### Summary by start number:

Start 2:

- Found in 131 of 131 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 111 of 111
- Called 99.2% of time when present
- Phage (with cluster) where this start called: Alucard\_7 (EE), Anseraureola\_7 (EE), Aries55\_7 (EE), Astro16\_7 (EE), Avvas\_7 (EE), Azizam\_7 (EE), Aztec\_7 (EE), Baine\_7 (EE), BarBear\_7 (EE), Belthelas\_7 (EE), BinkBonk\_7 (EE), Bintii\_7 (EE), Biscayne\_7 (EE), Bodhi17\_7 (EE), BonaeVitae\_7 (EE), BoomRoasted\_7 (EE), Bradley2\_7 (EE), Bri160\_7 (EE), BrokMonster\_7 (EE), Bullzi2019\_7 (EE), Burgy\_7 (EE), BurtonThePup\_7 (EE), Cayde6\_7 (EE), Cazares\_7 (EE), Charbie\_7 (EE), Chatham\_7 (EE), Cheesecake\_7 (EE), Ciel\_7 (EE), Clownery\_7 (EE), Concrete\_7 (EE), DaftyDuck\_7 (EE), Danimal\_7 (EE), Danno\_7 (EE), Dongwon\_7 (EE), Dooby\_7 (EE), Douggie\_7 (EE), EdElric\_7 (EE), Efeko\_8 (EE), Eightball\_7 (EE), Ekko14\_7 (EE), Elspeth\_7 (EE), Erin\_7 (EE), Gabbspett\_7 (EE), Gardevoir\_7 (EE), Gillker\_7 (EE), Godfather\_7 (EE), GoldenBlanche\_7 (EE), Goobery\_7 (EE), HarperAnne\_7 (EE), Hernandez44\_7 (EE), Horacetta\_7 (EE), Hulk\_7 (EE), JRok\_7 (EE), Jahseh\_7 (EE), JaimeB\_7 (EE), Jannah\_7 (EE), Jerky\_7 (EE), JoBros\_7 (EE), JooneeDee\_7 (EE), Josuke\_7 (EE), Kaijohn\_7 (EE), KayPaulus\_7 (EE), Kevanna\_7 (EE), KillerTomato\_7 (EE), Kojax4\_7 (EE), KyriosFaba\_7 (EE), LaviMo\_7 (EE), Leafy\_7

(EE), LemonPepper\_7 (EE), LionelHutz\_7 (EE), Livingwater\_7 (EE), Loca\_7 (EE), Lola20\_7 (EE), Lunatic\_7 (EE), Luxx\_7 (EE), Majesty\_7 (EE), ManAs\_7 (EE), Maneater\_7 (EE), MasterPitts\_7 (EE), McShie\_7 (EE), MelBee03\_7 (EE), Miaurora\_7 (EE), Minima\_7 (EE), MirimarMandM\_7 (EE), MrGreen\_7 (EE), Naby\_7 (EE), Namsahir\_7 (EE), NeumannU\_7 (EE), Niffler\_7 (EE), Nobel\_7 (EE), Noelani\_7 (EE), Oaklynn\_7 (EE), Octopus\_7 (EE), Otwor\_7 (EE), Owens\_7 (EE), PaoPu\_7 (EE), Picnic\_7 (EE), PoRanda\_7 (EE), Pondwater\_7 (EE), Publix\_7 (EE), Puddles3\_7 (EE), PuffyCat\_7 (EE), Quaker\_7 (EE), Rhogar\_7 (EE), Rhysand\_7 (EE), Sage7\_7 (EE), SantasSleigh\_7 (EE), Sara\_7 (EE), Scamander\_7 (EE), Scrunchy\_7 (EE), SeaWolves\_7 (EE), Sippinontea\_7 (EE), Slentz\_7 (EE), Slizam\_7 (EE), Snuffles\_8 (EE), Stem\_7 (EE), TeddyBoy\_7 (EE), TimoTea\_7 (EE), TinyTruffula\_7 (EE), TomBrady12\_7 (EE), Trireme\_7 (EE), Upsilon\_7 (EE), Vanisius\_7 (EE), VitulaEligans\_7 (EE), Witch\_7 (EE), Wolfpack\_7 (EE), Yami\_7 (EE), Yasuo\_7 (EE), YertPhresh\_7 (EE), Yubaba\_7 (EE),

Start 3:

- Found in 103 of 131 ( 78.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.0% of time when present
- Phage (with cluster) where this start called: RoscoWindex\_7 (EE),

### Summary by clusters:

There is one cluster represented in this pham: EE

Info for manual annotations of cluster EE:

- Start number 2 was manually annotated 111 times for cluster EE.

### Gene Information:

Gene: Alucard\_7 Start: 5724, Stop: 6104, Start Num: 2

Candidate Starts for Alucard\_7:

(Start: 2 @5724 has 111 MA's), (3, 5730), (5, 5766), (7, 5805), (8, 5817), (9, 5841), (11, 5892), (13, 5907), (14, 5928), (16, 5973), (19, 6090),

Gene: Anseraureola\_7 Start: 5747, Stop: 6127, Start Num: 2

Candidate Starts for Anseraureola\_7:

(Start: 2 @5747 has 111 MA's), (3, 5753), (5, 5789), (7, 5828), (8, 5840), (9, 5864), (11, 5915), (13, 5930), (14, 5951), (16, 5996), (19, 6113),

Gene: Aries55\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Aries55\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Astro16\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Astro16\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Avvas\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Avvas\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Azizam\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Azizam\_7:

(1, 5486), (Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (10, 5858), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Aztec\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Aztec\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Baine\_7 Start: 5720, Stop: 6100, Start Num: 2

Candidate Starts for Baine\_7:

(Start: 2 @5720 has 111 MA's), (3, 5726), (5, 5762), (7, 5801), (8, 5813), (9, 5837), (11, 5888), (13, 5903), (14, 5924), (16, 5969), (19, 6086),

Gene: BarBear\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for BarBear\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Belthelas\_7 Start: 5774, Stop: 6154, Start Num: 2

Candidate Starts for Belthelas\_7:

(1, 5537), (Start: 2 @5774 has 111 MA's), (3, 5780), (5, 5816), (7, 5855), (8, 5867), (9, 5891), (11, 5942), (13, 5957), (14, 5978), (16, 6023), (19, 6140),

Gene: BinkBonk\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for BinkBonk\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Bintii\_7 Start: 5750, Stop: 6130, Start Num: 2

Candidate Starts for Bintii\_7:

(1, 5516), (Start: 2 @5750 has 111 MA's), (5, 5792), (7, 5831), (8, 5843), (9, 5867), (11, 5918), (13, 5933), (14, 5954), (16, 5999), (19, 6116),

Gene: Biscayne\_7 Start: 5781, Stop: 6161, Start Num: 2

Candidate Starts for Biscayne\_7:

(1, 5544), (Start: 2 @5781 has 111 MA's), (3, 5787), (5, 5823), (7, 5862), (8, 5874), (9, 5898), (11, 5949), (13, 5964), (14, 5985), (16, 6030), (19, 6147),

Gene: Bodhi17\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for Bodhi17\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: BonaeVitae\_7 Start: 5455, Stop: 5844, Start Num: 2

Candidate Starts for BonaeVitae\_7:

(Start: 2 @5455 has 111 MA's), (4, 5503), (6, 5518), (7, 5548), (8, 5560), (9, 5584), (11, 5635), (13, 5650), (15, 5710), (17, 5746),

Gene: BoomRoasted\_7 Start: 5771, Stop: 6151, Start Num: 2

Candidate Starts for BoomRoasted\_7:

(Start: 2 @5771 has 111 MA's), (3, 5777), (5, 5813), (7, 5852), (8, 5864), (9, 5888), (11, 5939), (13, 5954), (14, 5975), (16, 6020), (19, 6137),

Gene: Bradley2\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Bradley2\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Bri160\_7 Start: 5771, Stop: 6151, Start Num: 2

Candidate Starts for Bri160\_7:

(Start: 2 @5771 has 111 MA's), (3, 5777), (5, 5813), (7, 5852), (8, 5864), (9, 5888), (11, 5939), (13, 5954), (14, 5975), (16, 6020), (19, 6137),

Gene: BrokMonster\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for BrokMonster\_7:

(1, 5486), (Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (12, 5903), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Bullzi2019\_7 Start: 5741, Stop: 6121, Start Num: 2

Candidate Starts for Bullzi2019\_7:

(1, 5507), (Start: 2 @5741 has 111 MA's), (5, 5783), (7, 5822), (8, 5834), (9, 5858), (11, 5909), (13, 5924), (14, 5945), (16, 5990), (19, 6107),

Gene: Burgy\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Burgy\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: BurtonThePup\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for BurtonThePup\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Cayde6\_7 Start: 5720, Stop: 6100, Start Num: 2

Candidate Starts for Cayde6\_7:

(Start: 2 @5720 has 111 MA's), (3, 5726), (5, 5762), (7, 5801), (8, 5813), (9, 5837), (11, 5888), (13, 5903), (14, 5924), (16, 5969), (19, 6086),

Gene: Cazares\_7 Start: 5711, Stop: 6091, Start Num: 2

Candidate Starts for Cazares\_7:

(Start: 2 @5711 has 111 MA's), (5, 5753), (7, 5792), (8, 5804), (9, 5828), (11, 5879), (13, 5894), (14, 5915), (16, 5960), (19, 6077),

Gene: Charbie\_7 Start: 5711, Stop: 6091, Start Num: 2

Candidate Starts for Charbie\_7:

(Start: 2 @5711 has 111 MA's), (3, 5717), (5, 5753), (7, 5792), (8, 5804), (9, 5828), (11, 5879), (13, 5894), (14, 5915), (16, 5960), (19, 6077),

Gene: Chatham\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Chatham\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Cheesecake\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Cheesecake\_7:

(1, 5498), (Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Ciel\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Ciel\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Clownery\_7 Start: 5828, Stop: 6208, Start Num: 2

Candidate Starts for Clownery\_7:

(Start: 2 @5828 has 111 MA's), (5, 5870), (7, 5909), (8, 5921), (9, 5945), (11, 5996), (13, 6011), (14, 6032), (16, 6077), (19, 6194),

Gene: Concrete\_7 Start: 5771, Stop: 6151, Start Num: 2

Candidate Starts for Concrete\_7:

(Start: 2 @5771 has 111 MA's), (3, 5777), (5, 5813), (7, 5852), (8, 5864), (9, 5888), (11, 5939), (13, 5954), (14, 5975), (16, 6020), (19, 6137),

Gene: DaftyDuck\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for DaftyDuck\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Danimal\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Danimal\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Danno\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Danno\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Dongwon\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Dongwon\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Dooby\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Dooby\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Douggie\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for Douggie\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: EdElric\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for EdElric\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Efeke\_8 Start: 5630, Stop: 5995, Start Num: 2

Candidate Starts for Efeke\_8:

(Start: 2 @5630 has 111 MA's), (3, 5636), (5, 5672), (7, 5699), (9, 5735), (11, 5786), (13, 5801), (16, 5867), (18, 5948), (19, 5981),

Gene: Eightball\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Eightball\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Ekko14\_7 Start: 5708, Stop: 6088, Start Num: 2

Candidate Starts for Ekko14\_7:

(1, 5474), (Start: 2 @5708 has 111 MA's), (5, 5750), (7, 5789), (8, 5801), (9, 5825), (11, 5876), (13, 5891), (14, 5912), (16, 5957), (19, 6074),

Gene: Elspeth\_7 Start: 5708, Stop: 6088, Start Num: 2

Candidate Starts for Elspeth\_7:

(1, 5474), (Start: 2 @5708 has 111 MA's), (5, 5750), (7, 5789), (8, 5801), (9, 5825), (11, 5876), (13, 5891), (14, 5912), (16, 5957), (19, 6074),

Gene: Erin\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Erin\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Gabbspett\_7 Start: 5828, Stop: 6208, Start Num: 2

Candidate Starts for Gabbspett\_7:

(Start: 2 @5828 has 111 MA's), (3, 5834), (5, 5870), (7, 5909), (8, 5921), (9, 5945), (11, 5996), (13, 6011), (14, 6032), (16, 6077), (18, 6158), (19, 6194),

Gene: Gardevoir\_7 Start: 5724, Stop: 6104, Start Num: 2

Candidate Starts for Gardevoir\_7:

(Start: 2 @5724 has 111 MA's), (3, 5730), (5, 5766), (7, 5805), (8, 5817), (9, 5841), (11, 5892), (13, 5907), (14, 5928), (16, 5973), (19, 6090),

Gene: Gillker\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Gillker\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Godfather\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Godfather\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: GoldenBlanche\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for GoldenBlanche\_7:



(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Goobery\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Goobery\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: HarperAnne\_7 Start: 5708, Stop: 6088, Start Num: 2

Candidate Starts for HarperAnne\_7:

(1, 5474), (Start: 2 @5708 has 111 MA's), (5, 5750), (7, 5789), (8, 5801), (9, 5825), (11, 5876), (13, 5891), (14, 5912), (16, 5957), (19, 6074),

Gene: Hernandez44\_7 Start: 5828, Stop: 6208, Start Num: 2

Candidate Starts for Hernandez44\_7:

(Start: 2 @5828 has 111 MA's), (3, 5834), (5, 5870), (7, 5909), (8, 5921), (9, 5945), (11, 5996), (13, 6011), (14, 6032), (16, 6077), (19, 6194),

Gene: Horacetta\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Horacetta\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Hulk\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Hulk\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: JRok\_7 Start: 5720, Stop: 6100, Start Num: 2

Candidate Starts for JRok\_7:

(1, 5483), (Start: 2 @5720 has 111 MA's), (3, 5726), (5, 5762), (7, 5801), (8, 5813), (9, 5837), (10, 5855), (11, 5888), (13, 5903), (14, 5924), (16, 5969), (19, 6086),

Gene: Jahseh\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Jahseh\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: JaimeB\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for JaimeB\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Jannah\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Jannah\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Jerky\_7 Start: 5807, Stop: 6187, Start Num: 2

Candidate Starts for Jerky\_7:

(Start: 2 @5807 has 111 MA's), (3, 5813), (5, 5849), (7, 5888), (8, 5900), (9, 5924), (11, 5975), (13, 5990), (14, 6011), (16, 6056), (19, 6173),

Gene: JoBros\_7 Start: 5724, Stop: 6104, Start Num: 2

Candidate Starts for JoBros\_7:

(Start: 2 @5724 has 111 MA's), (3, 5730), (5, 5766), (7, 5805), (8, 5817), (9, 5841), (11, 5892), (13, 5907), (14, 5928), (16, 5973), (19, 6090),

Gene: JooneeDee\_7 Start: 5750, Stop: 6130, Start Num: 2

Candidate Starts for JooneeDee\_7:

(1, 5516), (Start: 2 @5750 has 111 MA's), (5, 5792), (7, 5831), (8, 5843), (9, 5867), (11, 5918), (13, 5933), (14, 5954), (16, 5999), (19, 6116),

Gene: Josuke\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Josuke\_7:

(1, 5498), (Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Kaijohn\_7 Start: 5726, Stop: 6106, Start Num: 2

Candidate Starts for Kaijohn\_7:

(Start: 2 @5726 has 111 MA's), (3, 5732), (5, 5768), (7, 5807), (8, 5819), (11, 5894), (13, 5909), (14, 5930), (16, 5975), (19, 6092),

Gene: KayPaulus\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for KayPaulus\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: Kevanna\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for Kevanna\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: KillerTomato\_7 Start: 5771, Stop: 6151, Start Num: 2

Candidate Starts for KillerTomato\_7:

(Start: 2 @5771 has 111 MA's), (3, 5777), (5, 5813), (7, 5852), (8, 5864), (9, 5888), (11, 5939), (13, 5954), (14, 5975), (16, 6020), (19, 6137),

Gene: Kojax4\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Kojax4\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: KyriosFaba\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for KyriosFaba\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: LaviMo\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for LaviMo\_7:

(1, 5498), (Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Leafy\_7 Start: 5741, Stop: 6121, Start Num: 2

Candidate Starts for Leafy\_7:

(1, 5504), (Start: 2 @5741 has 111 MA's), (3, 5747), (5, 5783), (7, 5822), (8, 5834), (9, 5858), (11, 5909), (13, 5924), (14, 5945), (16, 5990), (19, 6107),

Gene: LemonPepper\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for LemonPepper\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: LionelHutz\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for LionelHutz\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Livingwater\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for Livingwater\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: Loca\_7 Start: 5744, Stop: 6124, Start Num: 2

Candidate Starts for Loca\_7:

(Start: 2 @5744 has 111 MA's), (3, 5750), (5, 5786), (7, 5825), (8, 5837), (9, 5861), (11, 5912), (13, 5927), (14, 5948), (16, 5993), (19, 6110),

Gene: Lola20\_7 Start: 5720, Stop: 6100, Start Num: 2

Candidate Starts for Lola20\_7:

(Start: 2 @5720 has 111 MA's), (3, 5726), (5, 5762), (7, 5801), (8, 5813), (9, 5837), (11, 5888), (13, 5903), (14, 5924), (16, 5969), (19, 6086),

Gene: Lunatic\_7 Start: 5711, Stop: 6091, Start Num: 2

Candidate Starts for Lunatic\_7:

(Start: 2 @5711 has 111 MA's), (5, 5753), (7, 5792), (8, 5804), (9, 5828), (11, 5879), (13, 5894), (14, 5915), (16, 5960), (19, 6077),

Gene: Luxx\_7 Start: 5747, Stop: 6127, Start Num: 2

Candidate Starts for Luxx\_7:

(Start: 2 @5747 has 111 MA's), (3, 5753), (5, 5789), (7, 5828), (8, 5840), (9, 5864), (11, 5915), (13, 5930), (14, 5951), (16, 5996), (19, 6113),

Gene: Majesty\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Majesty\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: ManAs\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for ManAs\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Maneater\_7 Start: 5711, Stop: 6091, Start Num: 2

Candidate Starts for Maneater\_7:

(Start: 2 @5711 has 111 MA's), (3, 5717), (5, 5753), (7, 5792), (8, 5804), (9, 5828), (11, 5879), (13, 5894), (14, 5915), (16, 5960), (19, 6077),

Gene: MasterPitts\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for MasterPitts\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: McShie\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for McShie\_7:

(1, 5486), (Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (12, 5903), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: MelBee03\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for MelBee03\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: Miaurora\_7 Start: 5828, Stop: 6208, Start Num: 2

Candidate Starts for Miaurora\_7:

(Start: 2 @5828 has 111 MA's), (5, 5870), (7, 5909), (8, 5921), (9, 5945), (11, 5996), (13, 6011), (14, 6032), (16, 6077), (19, 6194),

Gene: Minima\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Minima\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: MirimarMandM\_7 Start: 5792, Stop: 6172, Start Num: 2

Candidate Starts for MirimarMandM\_7:

(Start: 2 @5792 has 111 MA's), (5, 5834), (7, 5873), (8, 5885), (9, 5909), (11, 5960), (13, 5975), (14, 5996), (16, 6041), (19, 6158),

Gene: MrGreen\_7 Start: 5738, Stop: 6118, Start Num: 2

Candidate Starts for MrGreen\_7:

(Start: 2 @5738 has 111 MA's), (3, 5744), (5, 5780), (7, 5819), (8, 5831), (9, 5855), (11, 5906), (13, 5921), (14, 5942), (16, 5987), (19, 6104),

Gene: Naby\_7 Start: 5455, Stop: 5844, Start Num: 2

Candidate Starts for Naby\_7:

(Start: 2 @5455 has 111 MA's), (4, 5503), (6, 5518), (7, 5548), (8, 5560), (9, 5584), (11, 5635), (13, 5650), (15, 5710), (17, 5746),

Gene: Namsahir\_7 Start: 5783, Stop: 6163, Start Num: 2

Candidate Starts for Namsahir\_7:

(1, 5549), (Start: 2 @5783 has 111 MA's), (5, 5825), (7, 5864), (8, 5876), (9, 5900), (11, 5951), (13, 5966), (14, 5987), (16, 6032), (19, 6149),

Gene: NeumannU\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for NeumannU\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Niffler\_7 Start: 5801, Stop: 6181, Start Num: 2

Candidate Starts for Niffler\_7:

(Start: 2 @5801 has 111 MA's), (5, 5843), (7, 5882), (8, 5894), (9, 5918), (11, 5969), (13, 5984), (14, 6005), (16, 6050), (19, 6167),

Gene: Nobel\_7 Start: 5828, Stop: 6208, Start Num: 2

Candidate Starts for Nobel\_7:

(Start: 2 @5828 has 111 MA's), (5, 5870), (7, 5909), (8, 5921), (9, 5945), (11, 5996), (13, 6011), (14, 6032), (16, 6077), (19, 6194),

Gene: Noelani\_7 Start: 5708, Stop: 6088, Start Num: 2

Candidate Starts for Noelani\_7:

(1, 5474), (Start: 2 @5708 has 111 MA's), (5, 5750), (7, 5789), (8, 5801), (9, 5825), (11, 5876), (13, 5891), (14, 5912), (16, 5957), (19, 6074),

Gene: Oaklynn\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Oaklynn\_7:

(1, 5486), (Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (9, 5840), (10, 5858), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Octopus\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Octopus\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Otwor\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Otwor\_7:

(1, 5498), (Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Owens\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Owens\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: PaoPu\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for PaoPu\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Picnic\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Picnic\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: PoRanda\_7 Start: 5792, Stop: 6172, Start Num: 2

Candidate Starts for PoRanda\_7:

(Start: 2 @5792 has 111 MA's), (5, 5834), (7, 5873), (8, 5885), (9, 5909), (11, 5960), (13, 5975), (14, 5996), (16, 6041), (19, 6158),

Gene: Pondwater\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Pondwater\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Publix\_7 Start: 5783, Stop: 6163, Start Num: 2

Candidate Starts for Publix\_7:

(1, 5549), (Start: 2 @5783 has 111 MA's), (5, 5825), (7, 5864), (8, 5876), (9, 5900), (11, 5951), (13, 5966), (14, 5987), (16, 6032), (19, 6149),

Gene: Puddles3\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Puddles3\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: PuffyCat\_7 Start: 5753, Stop: 6133, Start Num: 2

Candidate Starts for PuffyCat\_7:

(Start: 2 @5753 has 111 MA's), (5, 5795), (7, 5834), (8, 5846), (9, 5870), (11, 5921), (13, 5936), (14, 5957), (16, 6002), (19, 6119),

Gene: Quaker\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for Quaker\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: Rhogar\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Rhogar\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Rhysand\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Rhysand\_7:

(1, 5498), (Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: RoscoWindex\_7 Start: 5741, Stop: 6115, Start Num: 3

Candidate Starts for RoscoWindex\_7:

(1, 5498), (Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Sage7\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Sage7\_7:

(1, 5498), (Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: SantasSleigh\_7 Start: 5759, Stop: 6139, Start Num: 2

Candidate Starts for SantasSleigh\_7:

(1, 5522), (Start: 2 @5759 has 111 MA's), (3, 5765), (5, 5801), (7, 5840), (8, 5852), (9, 5876), (11, 5927), (13, 5942), (14, 5963), (16, 6008), (19, 6125),

Gene: Sara\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for Sara\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Scamander\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Scamander\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Scrunchy\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Scrunchy\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: SeaWolves\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for SeaWolves\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Sippinontea\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for Sippinontea\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: Slentz\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Slentz\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: Slizam\_7 Start: 5759, Stop: 6139, Start Num: 2

Candidate Starts for Slizam\_7:

(1, 5525), (Start: 2 @5759 has 111 MA's), (5, 5801), (7, 5840), (8, 5852), (9, 5876), (11, 5927), (13, 5942), (14, 5963), (16, 6008), (19, 6125),

Gene: Snuffles\_8 Start: 5929, Stop: 6309, Start Num: 2

Candidate Starts for Snuffles\_8:

(1, 5695), (Start: 2 @5929 has 111 MA's), (5, 5971), (7, 6010), (8, 6022), (9, 6046), (11, 6097), (13, 6112), (14, 6133), (16, 6178), (19, 6295),

Gene: Stem\_7 Start: 5759, Stop: 6139, Start Num: 2

Candidate Starts for Stem\_7:

(1, 5525), (Start: 2 @5759 has 111 MA's), (5, 5801), (7, 5840), (8, 5852), (9, 5876), (11, 5927), (13, 5942), (14, 5963), (16, 6008), (19, 6125),

Gene: TeddyBoy\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for TeddyBoy\_7:

(Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: TimoTea\_7 Start: 5711, Stop: 6091, Start Num: 2

Candidate Starts for TimoTea\_7:

(Start: 2 @5711 has 111 MA's), (3, 5717), (5, 5753), (7, 5792), (8, 5804), (9, 5828), (11, 5879), (13, 5894), (14, 5915), (16, 5960), (19, 6077),

Gene: TinyTruffula\_7 Start: 5828, Stop: 6208, Start Num: 2

Candidate Starts for TinyTruffula\_7:

(Start: 2 @5828 has 111 MA's), (5, 5870), (7, 5909), (8, 5921), (9, 5945), (11, 5996), (13, 6011), (14, 6032), (16, 6077), (19, 6194),

Gene: TomBrady12\_7 Start: 5759, Stop: 6139, Start Num: 2

Candidate Starts for TomBrady12\_7:

(1, 5525), (Start: 2 @5759 has 111 MA's), (5, 5801), (7, 5840), (8, 5852), (9, 5876), (11, 5927), (13, 5942), (14, 5963), (16, 6008), (19, 6125),

Gene: Trireme\_7 Start: 5828, Stop: 6208, Start Num: 2

Candidate Starts for Trireme\_7:

(Start: 2 @5828 has 111 MA's), (5, 5870), (7, 5909), (8, 5921), (9, 5945), (11, 5996), (13, 6011), (14, 6032), (16, 6077), (19, 6194),

Gene: Upsilon\_7 Start: 5792, Stop: 6172, Start Num: 2

Candidate Starts for Upsilon\_7:

(Start: 2 @5792 has 111 MA's), (5, 5834), (7, 5873), (8, 5885), (9, 5909), (11, 5960), (13, 5975), (14, 5996), (16, 6041), (19, 6158),

Gene: Vanisius\_7 Start: 5735, Stop: 6115, Start Num: 2

Candidate Starts for Vanisius\_7:

(1, 5498), (Start: 2 @5735 has 111 MA's), (3, 5741), (5, 5777), (7, 5816), (8, 5828), (9, 5852), (11, 5903), (13, 5918), (14, 5939), (16, 5984), (19, 6101),

Gene: VitulaEligans\_7 Start: 5807, Stop: 6187, Start Num: 2

Candidate Starts for VitulaEligans\_7:

(Start: 2 @5807 has 111 MA's), (3, 5813), (5, 5849), (7, 5888), (8, 5900), (9, 5924), (11, 5975), (13, 5990), (14, 6011), (16, 6056), (19, 6173),

Gene: Witch\_7 Start: 5724, Stop: 6104, Start Num: 2

Candidate Starts for Witch\_7:

(Start: 2 @5724 has 111 MA's), (3, 5730), (5, 5766), (7, 5805), (8, 5817), (9, 5841), (11, 5892), (13, 5907), (14, 5928), (16, 5973), (19, 6090),

Gene: Wolfpack\_7 Start: 5717, Stop: 6097, Start Num: 2

Candidate Starts for Wolfpack\_7:

(1, 5480), (Start: 2 @5717 has 111 MA's), (3, 5723), (5, 5759), (7, 5798), (8, 5810), (9, 5834), (11, 5885), (13, 5900), (14, 5921), (16, 5966), (19, 6083),

Gene: Yami\_7 Start: 5711, Stop: 6091, Start Num: 2

Candidate Starts for Yami\_7:

(Start: 2 @5711 has 111 MA's), (5, 5753), (7, 5792), (8, 5804), (9, 5828), (11, 5879), (13, 5894), (14, 5915), (16, 5960), (19, 6077),

Gene: Yasuo\_7 Start: 5720, Stop: 6100, Start Num: 2

Candidate Starts for Yasuo\_7:

(Start: 2 @5720 has 111 MA's), (3, 5726), (5, 5762), (7, 5801), (8, 5813), (9, 5837), (11, 5888), (13, 5903), (14, 5924), (16, 5969), (19, 6086),

Gene: YertPhresh\_7 Start: 5723, Stop: 6103, Start Num: 2

Candidate Starts for YertPhresh\_7:

(Start: 2 @5723 has 111 MA's), (3, 5729), (5, 5765), (7, 5804), (8, 5816), (9, 5840), (11, 5891), (13, 5906), (14, 5927), (16, 5972), (19, 6089),

Gene: Yubaba\_7 Start: 5724, Stop: 6104, Start Num: 2

Candidate Starts for Yubaba\_7:



(Start: 2 @5724 has 111 MA's), (3, 5730), (5, 5766), (7, 5805), (8, 5817), (9, 5841), (11, 5892), (13, 5907), (14, 5928), (16, 5973), (19, 6090),