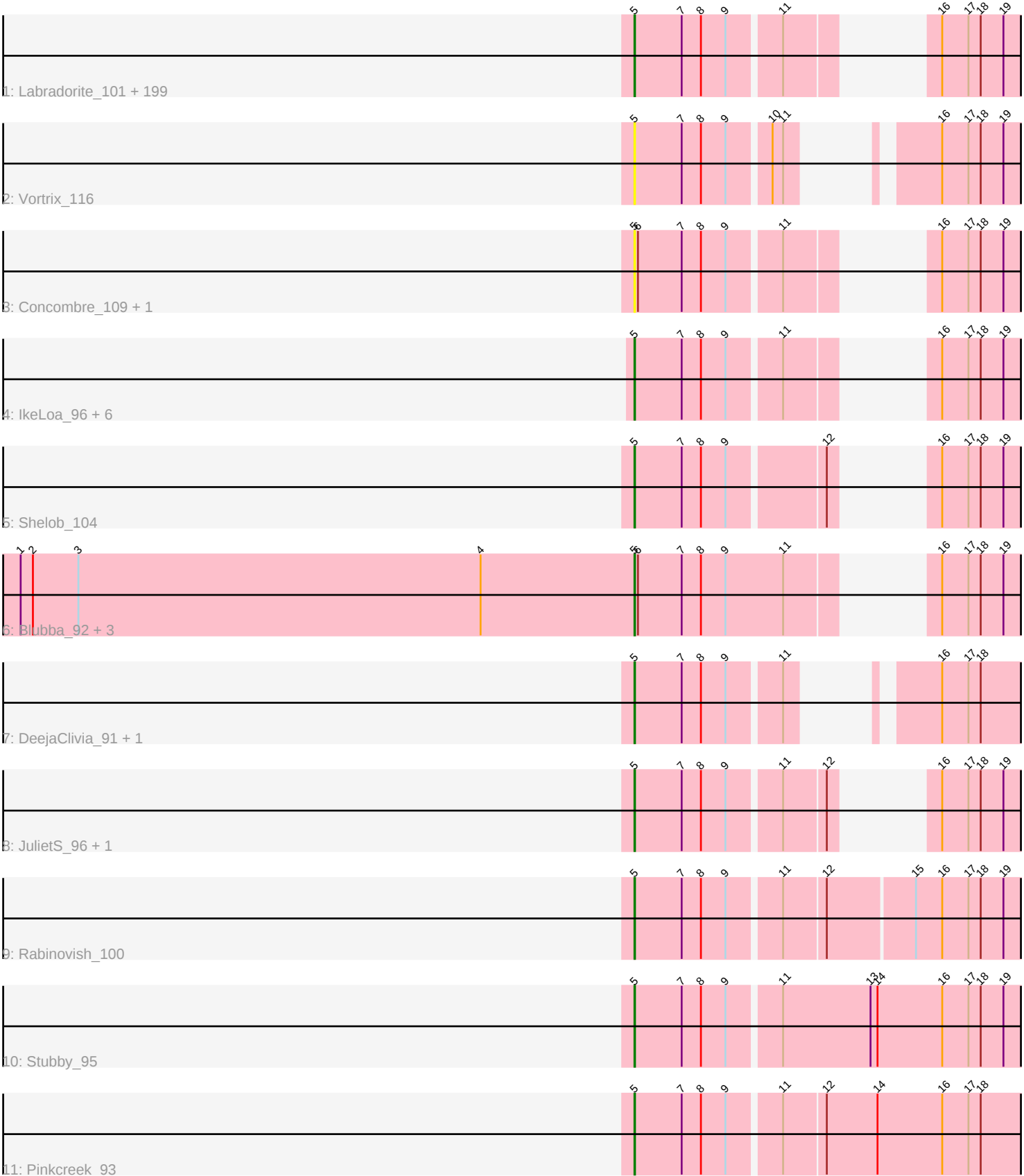


Pham 324828



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 324828 Report

This analysis was run 09/05/26 on database version 662.

Pham number 324828 has 222 members, 31 are drafts.

Phages represented in each track:

- Track 1 : Labradorite\_101, BeanWater\_94, Atlantean\_101, BackyardAgain\_99, Roots515\_101, BobaPhatt\_99, Fixie\_95, Fongie\_100, CindyLou\_103, JPickles\_100, Halldule\_96, CharlieB\_98, RoMag\_97, Naija\_101, Gabriel\_103, Sebata\_104, Rizal\_98, Moby\_93, Phox\_99, Delylah\_105, BigCity\_110, Primadonna\_96, Napoleon13\_98, BananaFence\_101, ChickenPhender\_98, Puhon\_106, Naval22\_110, Belieber\_98, EasyJones\_105, LifeSavor\_101, Ngannou\_98, Chargie21\_99, ChaylaJr\_97, Bread\_102, ValleyTerrace\_102, Sauce\_103, Babyland\_103, SoilZilla\_98, Catera\_99, SiwenD96\_104, Maguvora\_107, Megamind\_101, Tainan\_106, SilverDipper\_103, Teardrop\_101, Bowman\_104, MikeLiesIn\_103, Nidhogg\_103, Rahel\_101, Guwapp\_101, Essence\_99, Caravan\_97, JayJay\_108, Ewok\_103, Jaygup\_102, DTDevon\_103, InigoMontoya\_103, Domi\_96, Grasshills\_109, ArcherS7\_101, ScottMcG\_99, OrediggerDelux\_105, Kboogie\_106, Lunareta\_101, Tyke\_103, ParkTD\_103, TinyTim\_102, GoldenSnow\_106, LolaVinca\_103, Derek\_102, FoxtrotP1\_102, ShiaLabeouf\_101, Bigswole\_107, LordLeafolot\_107, Jemmno\_102, Yassified\_99, Zalkecks\_103, Dietrick\_94, EggyFarm\_110, Blackdragon\_98, Phlegm\_104, NuevoMundo\_108, LRRHood\_97, Ading\_102, Ghost\_101, Ablatia\_101, Adlitam\_102, ET08\_91, Ronan\_96, Moiqah\_93, EmmaElysia\_102, Erdmann\_103, Bonray\_102, JustHall\_99, Specks\_107, Cali\_98, PharkleMinkus\_105, YemiJoy2021\_103, NedWong\_103, Trinitium\_99, BadAgartude\_98, Willis\_103, Capablanca\_104, Sprinklers\_98, Darko\_102, Wally\_101, Pivoine\_101, McGee\_104, DrPhinkDaddy\_101, FrayBell\_107, Bipolarisk\_101, Tonenili\_117, Cleatunium\_96, Basquiat\_99, Zeenon\_104, Grungle\_90, StubbySaigey\_105, Spud\_102, Janiyr\_104, Quasimodo\_103, Momo\_101, Drazdys\_101, Ava3\_103, Mangeria\_102, Nappy\_105, Littleton\_102, Amataga\_102, LookingGlass\_103, Norm\_103, Phusco\_102, Shnickers\_102, Jessibeth14\_101, Izajani\_102, Shifa\_91, QBert\_96, NoodleTree\_109, Turret\_97, Jedediah\_105, HyRo\_94, Montpel\_101, Audrick\_104, ZygoTaiga\_101, StephanieG\_101, GlutenPhree\_103, Lukilu\_93, Astraea\_99, Lee7\_105, Tortoise16\_99, Substance289\_100, Maby2021\_102, Morizzled23\_102, Matsumoto\_100, Duckfeet\_95, Maturis\_100, Gamgam\_102, Shaqnato\_95, EmToTheThree\_105, Cactojaque\_97, Blackbrain\_97, Gizmo\_106, Spec\_99, LinStu\_102, SrishMeg2525\_101, Salacia\_106, Asterius\_105, Melpomini\_96, Jezreel\_102, Mikro\_100, Daffodil\_107, Issimir\_101, MoMoMixon\_103, Chomp\_101, SmallFry\_102, DirtMonster\_96, Dessert\_102, Delilah\_102, Patter\_102, Pio\_106, I3\_108, Pupusa\_108, Bxz1\_100, Shrimp\_102, YoungMoneyMata\_103, Flabslab\_96, Lethe\_101, Koguma\_99, Bezza\_96, JigglyPuff\_110, FudgeTart\_102, ErnieJ\_98, Burrough\_102, Pleione\_105, InterFolia\_110, Iota\_97, Yucca\_102, Breeniome\_101,

Fludd\_103, Latch\_102, Bangla1971\_103, Alice\_95

- Track 2 : Vortrix\_116
- Track 3 : Concombre\_109, Demodog\_109
- Track 4 : IkeLoa\_96, Khaleesi\_101, Kamryn\_102, SVoro\_100, Rocha\_101, McWolfish\_100, PurduePete\_102
- Track 5 : Shelob\_104
- Track 6 : Blubba\_92, Pier\_107, Cane17\_92, Colt\_93
- Track 7 : DeejaClivia\_91, Loanshark\_102
- Track 8 : JulietS\_96, Dandelion\_109
- Track 9 : Rabinovich\_100
- Track 10 : Stubby\_95
- Track 11 : Pinkcreek\_93

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

The start number called the most often in the published annotations is 5, it was called in 191 of the 191 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_101, Ading\_102, Adlitam\_102, Alice\_95, Amataga\_102, ArcherS7\_101, Asterius\_105, Astraea\_99, Atlantean\_101, Audrick\_104, Ava3\_103, Babyland\_103, BackyardAgain\_99, BadAgartude\_98, BananaFence\_101, Bangla1971\_103, Basquiat\_99, BeanWater\_94, Belieber\_98, Bezza\_96, BigCity\_110, Bigswole\_107, Bipolarisk\_101, Blackbrain\_97, Blackdragon\_98, Blubba\_92, BobaPhatt\_99, Bonray\_102, Bowman\_104, Bread\_102, Breeniome\_101, Burrough\_102, Bxz1\_100, Cactojaque\_97, Cali\_98, Cane17\_92, Capablanca\_104, Caravan\_97, Catera\_99, Chargie21\_99, CharlieB\_98, ChaylaJr\_97, ChickenPhender\_98, Chomp\_101, CindyLou\_103, Cleatunium\_96, Colt\_93, Concombre\_109, DTDevon\_103, Daffodil\_107, Dandelion\_109, Darko\_102, DeejaClivia\_91, Delilah\_102, Delylah\_105, Demodog\_109, Derek\_102, Dessert\_102, Dietrick\_94, DirtMonster\_96, Domi\_96, DrPhinkDaddy\_101, Drazdys\_101, Duckfeet\_95, ET08\_91, EasyJones\_105, EggFarm\_110, EmToTheThree\_105, EmmaElysia\_102, Erdmann\_103, ErnieJ\_98, Essence\_99, Ewok\_103, Fixie\_95, Flabslab\_96, Fludd\_103, Fongie\_100, FoxtrotP1\_102, FrayBell\_107, FudgeTart\_102, Gabriel\_103, Gangam\_102, Ghost\_101, Gizmo\_106, GlutenPhree\_103, GoldenSnow\_106, Grasshills\_109, Grungle\_90, Guwapp\_101, Halldule\_96, HyRo\_94, I3\_108, IkeLoa\_96, InigoMontoya\_103, InterFolia\_110, Iota\_97, Issimir\_101, Izajani\_102, JPickles\_100, JaniYra\_104, JayJay\_108, Jaygup\_102, Jediah\_105, Jemmno\_102, Jessibeth14\_101, Jezreel\_102, JigglyPuff\_110, JulietS\_96, JustHall\_99, Kamryn\_102, Kboogie\_106, Khaleesi\_101, Koguma\_99, LRRHood\_97, Labradorite\_101, Latch\_102, Lee7\_105, Lethe\_101, LifeSavor\_101, LinStu\_102, Littleton\_102, Loanshark\_102, LolaVinca\_103, LookingGlass\_103, LordLeafolot\_107, Lukilu\_93, Lunareta\_101, Maby2021\_102, Maguvora\_107, Mangeria\_102, Matsumoto\_100, Maturis\_100, McGee\_104, McWolfish\_100, Megamind\_101, Melpomini\_96, MikeLiesIn\_103, Mikro\_100, MoMoMixon\_103, Moby\_93, Moiqah\_93, Momo\_101, Montpel\_101, Morizzled23\_102, Naija\_101, Napoleon13\_98, Nappy\_105, Naval22\_110, NedWong\_103, Ngannou\_98, Nidhogg\_103, NoodleTree\_109, Norm\_103, NuevoMundo\_108, OrediggerDelux\_105, ParkTD\_103, Patter\_102, PharkleMinkus\_105, Phlegm\_104, Phox\_99, Phusco\_102, Pier\_107, Pinkcreek\_93, Pio\_106, Pivoine\_101, Pleione\_105, Primadonna\_96, Puhon\_106,

Pupusa\_108, PurduePete\_102, QBert\_96, Quasimodo\_103, Rabinovich\_100, Rahel\_101, Rizal\_98, RoMag\_97, Rocha\_101, Ronan\_96, Roots515\_101, SVoro\_100, Salacia\_106, Sauce\_103, ScottMcG\_99, Sebata\_104, Shaqnato\_95, Shelob\_104, ShiaLabeouf\_101, Shifa\_91, Shnickers\_102, Shrimp\_102, SilverDipper\_103, SiwenD96\_104, SmallFry\_102, SoilZilla\_98, Spec\_99, Specks\_107, Sprinklers\_98, Spud\_102, SrishMeg2525\_101, StephanieG\_101, StubbySaigey\_105, Stubby\_95, Substance289\_100, Tainan\_106, Teardrop\_101, TinyTim\_102, Tonenili\_117, Tortoise16\_99, Trinitium\_99, Turret\_97, Tyke\_103, ValleyTerrace\_102, Vortrix\_116, Wally\_101, Willis\_103, Yassified\_99, YemiJoy2021\_103, YoungMoneyMata\_103, Yucca\_102, Zalkecks\_103, Zeenon\_104, ZygoTaiga\_101,

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

•

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

•

### Summary by start number:

Start 5:

- Found in 222 of 222 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 191 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ablatia\_101 (C1), Ading\_102 (C1), Adlitam\_102 (C1), Alice\_95 (C1), Amataga\_102 (C1), ArcherS7\_101 (C1), Asterius\_105 (C1), Astraea\_99 (C1), Atlantean\_101 (C1), Audrick\_104 (C1), Ava3\_103 (C1), Babyland\_103 (C1), BackyardAgain\_99 (C1), BadAgartude\_98 (C1), BananaFence\_101 (C1), Bangla1971\_103 (C1), Basquiat\_99 (C1), BeanWater\_94 (C1), Belieber\_98 (C1), Bezza\_96 (C1), BigCity\_110 (C1), Bigswole\_107 (C1), Bipolarisk\_101 (C1), Blackbrain\_97 (C1), Blackdragon\_98 (C1), Blubba\_92 (C1), BobaPhatt\_99 (C1), Bonray\_102 (C1), Bowman\_104 (C1), Bread\_102 (C1), Breeniome\_101 (C1), Burrough\_102 (C1), Bxz1\_100 (C1), Cactojaque\_97 (C1), Cali\_98 (C1), Cane17\_92 (C1), Capablanca\_104 (C1), Caravan\_97 (C1), Catera\_99 (C1), Chargie21\_99 (C1), CharlieB\_98 (C1), ChaylaJr\_97 (C1), ChickenPhender\_98 (C1), Chomp\_101 (C1), CindyLou\_103 (C1), Cleatunium\_96 (C1), Colt\_93 (C1), Concombre\_109 (C1), DTDevon\_103 (C1), Daffodil\_107 (C1), Dandelion\_109 (C1), Darko\_102 (C1), DeejaClivia\_91 (C1), Delilah\_102 (C1), Delylah\_105 (C1), Demodog\_109 (C1), Derek\_102 (C1), Dessert\_102 (C1), Dietrick\_94 (C1), DirtMonster\_96 (C1), Domi\_96 (C1), DrPhinkDaddy\_101 (C1), Drazdys\_101 (C1), Duckfeet\_95 (C1), ET08\_91 (C1), EasyJones\_105 (C1), EggyFarm\_110 (C1), EmToTheThree\_105 (C1), EmmaElysia\_102 (C1), Erdmann\_103 (C1), ErnieJ\_98 (C1), Essence\_99 (C1), Ewok\_103 (C1), Fixie\_95 (C1), Flabslab\_96 (C1), Fludd\_103 (C1), Fongie\_100 (C1), FoxtrotP1\_102 (C1), FrayBell\_107 (C1), FudgeTart\_102 (C1), Gabriel\_103 (C1), Gamgam\_102 (C1), Ghost\_101 (C1), Gizmo\_106 (C1), GlutenPhree\_103 (C1), GoldenSnow\_106 (C1), Grasshills\_109 (C1), Grungle\_90 (C1), Guwapp\_101 (C1), Halldule\_96 (C1), HyRo\_94 (C1), I3\_108 (C1), IkeLoa\_96 (C1), InigoMontoya\_103 (C1), InterFolia\_110 (C1), Iota\_97 (C1), Issimir\_101 (C1), Izajani\_102 (C1), JPickles\_100 (C1), Janiyr\_104 (C1), JayJay\_108 (C1), Jaygup\_102 (C1), Jedediah\_105 (C1), Jemmno\_102 (C1), Jessibeth14\_101 (C1), Jezreel\_102 (C1), JigglyPuff\_110 (C1), JulietS\_96 (C1), JustHall\_99 (C1), Kamryn\_102 (C1), Kboogie\_106 (C1), Khaleesi\_101 (C1), Koguma\_99 (C1), LRRHood\_97 (C1), Labradorite\_101 (C1), Latch\_102 (C1), Lee7\_105 (C1),

Lethe\_101 (C1), LifeSavor\_101 (C1), LinStu\_102 (C1), Littleton\_102 (C1),  
 Loanshark\_102 (C1), LolaVinca\_103 (C1), LookingGlass\_103 (C1), LordLeafolot\_107  
 (C1), Lukilu\_93 (C1), Lunareta\_101 (C1), Maby2021\_102 (C1), Maguvora\_107 (C1),  
 Mangeria\_102 (C1), Matsumoto\_100 (C1), Maturis\_100 (C1), McGee\_104 (C1),  
 McWolfish\_100 (C1), Megamind\_101 (C1), Melpomini\_96 (C1), MikeLiesIn\_103 (C1),  
 Mikro\_100 (C1), MoMoMixon\_103 (C1), Moby\_93 (C1), Moiqah\_93 (C1), Momo\_101  
 (C1), Montpel\_101 (C1), Morizzled23\_102 (C1), Naija\_101 (C1), Napoleon13\_98  
 (C1), Nappy\_105 (C1), Naval22\_110 (C1), NedWong\_103 (C1), Ngannou\_98 (C1),  
 Nidhogg\_103 (C1), NoodleTree\_109 (C1), Norm\_103 (C1), NuevoMundo\_108 (C1),  
 OrediggerDelux\_105 (C1), ParkTD\_103 (C1), Patter\_102 (C1), PharkleMinkus\_105  
 (C1), Phlegm\_104 (C1), Phox\_99 (C1), Phusco\_102 (C1), Pier\_107 (C1),  
 Pinkcreek\_93 (C1), Pio\_106 (C1), Pivoine\_101 (C1), Pleione\_105 (C1),  
 Primadonna\_96 (C1), Puhon\_106 (C1), Pupusa\_108 (C1), PurduePete\_102 (C1),  
 QBert\_96 (C1), Quasimodo\_103 (C1), Rabinovich\_100 (C1), Rahel\_101 (C1),  
 Rizal\_98 (C1), RoMag\_97 (C1), Rocha\_101 (C1), Ronan\_96 (C1), Roots515\_101  
 (C1), SVoro\_100 (C1), Salacia\_106 (C1), Sauce\_103 (C1), ScottMcG\_99 (C1),  
 Sebata\_104 (C1), Shaqnato\_95 (C1), Shelob\_104 (C1), ShiaLabeouf\_101 (C1),  
 Shifa\_91 (C1), Shnickers\_102 (C1), Shrimp\_102 (C1), SilverDipper\_103 (C1),  
 SiwenD96\_104 (C1), SmallFry\_102 (C1), SoilZilla\_98 (C1), Spec\_99 (C1),  
 Specks\_107 (C1), Sprinklers\_98 (C1), Spud\_102 (C1), SrishMeg2525\_101 (C1),  
 StephanieG\_101 (C1), StubbySaigey\_105 (C1), Stubby\_95 (C1), Substance289\_100  
 (C1), Tainan\_106 (C1), Teardrop\_101 (C1), TinyTim\_102 (C1), Tonenili\_117 (C1),  
 Tortoise16\_99 (C1), Trinitium\_99 (C1), Turret\_97 (C1), Tyke\_103 (C1),  
 ValleyTerrace\_102 (C1), Vortrix\_116 (C1), Wally\_101 (C1), Willis\_103 (C1),  
 Yassified\_99 (C1), YemiJoy2021\_103 (C1), YoungMoneyMata\_103 (C1), Yucca\_102  
 (C1), Zalkecks\_103 (C1), Zeenon\_104 (C1), ZygoTaiga\_101 (C1),

### Summary by clusters:

There is one cluster represented in this pham: C1

Info for manual annotations of cluster C1:

- Start number 5 was manually annotated 191 times for cluster C1.

### Gene Information:

Gene: Ablatia\_101 Start: 51406, Stop: 51945, Start Num: 5

Candidate Starts for Ablatia\_101:

(Start: 5 @51406 has 191 MA's), (7, 51487), (8, 51520), (9, 51562), (11, 51646), (16, 51760), (17, 51805), (18, 51826), (19, 51865),

Gene: Ading\_102 Start: 51790, Stop: 52329, Start Num: 5

Candidate Starts for Ading\_102:

(Start: 5 @51790 has 191 MA's), (7, 51871), (8, 51904), (9, 51946), (11, 52030), (16, 52144), (17, 52189), (18, 52210), (19, 52249),

Gene: Adlitam\_102 Start: 51807, Stop: 52346, Start Num: 5

Candidate Starts for Adlitam\_102:

(Start: 5 @51807 has 191 MA's), (7, 51888), (8, 51921), (9, 51963), (11, 52047), (16, 52161), (17, 52206), (18, 52227), (19, 52266),

Gene: Alice\_95 Start: 50705, Stop: 51244, Start Num: 5

Candidate Starts for Alice\_95:

(Start: 5 @50705 has 191 MA's), (7, 50786), (8, 50819), (9, 50861), (11, 50945), (16, 51059), (17, 51104), (18, 51125), (19, 51164),

Gene: Amataga\_102 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for Amataga\_102:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: ArcherS7\_101 Start: 51370, Stop: 51909, Start Num: 5

Candidate Starts for ArcherS7\_101:

(Start: 5 @51370 has 191 MA's), (7, 51451), (8, 51484), (9, 51526), (11, 51610), (16, 51724), (17, 51769), (18, 51790), (19, 51829),

Gene: Asterius\_105 Start: 52045, Stop: 52584, Start Num: 5

Candidate Starts for Asterius\_105:

(Start: 5 @52045 has 191 MA's), (7, 52126), (8, 52159), (9, 52201), (11, 52285), (16, 52399), (17, 52444), (18, 52465), (19, 52504),

Gene: Astraea\_99 Start: 50821, Stop: 51360, Start Num: 5

Candidate Starts for Astraea\_99:

(Start: 5 @50821 has 191 MA's), (7, 50902), (8, 50935), (9, 50977), (11, 51061), (16, 51175), (17, 51220), (18, 51241), (19, 51280),

Gene: Atlantean\_101 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for Atlantean\_101:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Audrick\_104 Start: 51031, Stop: 51570, Start Num: 5

Candidate Starts for Audrick\_104:

(Start: 5 @51031 has 191 MA's), (7, 51112), (8, 51145), (9, 51187), (11, 51271), (16, 51385), (17, 51430), (18, 51451), (19, 51490),

Gene: Ava3\_103 Start: 51965, Stop: 52504, Start Num: 5

Candidate Starts for Ava3\_103:

(Start: 5 @51965 has 191 MA's), (7, 52046), (8, 52079), (9, 52121), (11, 52205), (16, 52319), (17, 52364), (18, 52385), (19, 52424),

Gene: Babyland\_103 Start: 51140, Stop: 51679, Start Num: 5

Candidate Starts for Babyland\_103:

(Start: 5 @51140 has 191 MA's), (7, 51221), (8, 51254), (9, 51296), (11, 51380), (16, 51494), (17, 51539), (18, 51560), (19, 51599),

Gene: BackyardAgain\_99 Start: 50970, Stop: 51509, Start Num: 5

Candidate Starts for BackyardAgain\_99:

(Start: 5 @50970 has 191 MA's), (7, 51051), (8, 51084), (9, 51126), (11, 51210), (16, 51324), (17, 51369), (18, 51390), (19, 51429),

Gene: BadAgartude\_98 Start: 52490, Stop: 53029, Start Num: 5

Candidate Starts for BadAgartude\_98:

(Start: 5 @52490 has 191 MA's), (7, 52571), (8, 52604), (9, 52646), (11, 52730), (16, 52844), (17, 52889), (18, 52910), (19, 52949),

Gene: BananaFence\_101 Start: 52224, Stop: 52763, Start Num: 5

Candidate Starts for BananaFence\_101:

(Start: 5 @52224 has 191 MA's), (7, 52305), (8, 52338), (9, 52380), (11, 52464), (16, 52578), (17, 52623), (18, 52644), (19, 52683),

Gene: Bangla1971\_103 Start: 51500, Stop: 52039, Start Num: 5

Candidate Starts for Bangla1971\_103:

(Start: 5 @51500 has 191 MA's), (7, 51581), (8, 51614), (9, 51656), (11, 51740), (16, 51854), (17, 51899), (18, 51920), (19, 51959),

Gene: Basquiat\_99 Start: 50939, Stop: 51478, Start Num: 5

Candidate Starts for Basquiat\_99:

(Start: 5 @50939 has 191 MA's), (7, 51020), (8, 51053), (9, 51095), (11, 51179), (16, 51293), (17, 51338), (18, 51359), (19, 51398),

Gene: BeanWater\_94 Start: 51820, Stop: 52359, Start Num: 5

Candidate Starts for BeanWater\_94:

(Start: 5 @51820 has 191 MA's), (7, 51901), (8, 51934), (9, 51976), (11, 52060), (16, 52174), (17, 52219), (18, 52240), (19, 52279),

Gene: Belieber\_98 Start: 51286, Stop: 51825, Start Num: 5

Candidate Starts for Belieber\_98:

(Start: 5 @51286 has 191 MA's), (7, 51367), (8, 51400), (9, 51442), (11, 51526), (16, 51640), (17, 51685), (18, 51706), (19, 51745),

Gene: Bezza\_96 Start: 51245, Stop: 51784, Start Num: 5

Candidate Starts for Bezza\_96:

(Start: 5 @51245 has 191 MA's), (7, 51326), (8, 51359), (9, 51401), (11, 51485), (16, 51599), (17, 51644), (18, 51665), (19, 51704),

Gene: BigCity\_110 Start: 54481, Stop: 55020, Start Num: 5

Candidate Starts for BigCity\_110:

(Start: 5 @54481 has 191 MA's), (7, 54562), (8, 54595), (9, 54637), (11, 54721), (16, 54835), (17, 54880), (18, 54901), (19, 54940),

Gene: Bigswole\_107 Start: 55013, Stop: 55552, Start Num: 5

Candidate Starts for Bigswole\_107:

(Start: 5 @55013 has 191 MA's), (7, 55094), (8, 55127), (9, 55169), (11, 55253), (16, 55367), (17, 55412), (18, 55433), (19, 55472),

Gene: Bipolarisk\_101 Start: 52223, Stop: 52762, Start Num: 5

Candidate Starts for Bipolarisk\_101:

(Start: 5 @52223 has 191 MA's), (7, 52304), (8, 52337), (9, 52379), (11, 52463), (16, 52577), (17, 52622), (18, 52643), (19, 52682),

Gene: Blackbrain\_97 Start: 50517, Stop: 51056, Start Num: 5

Candidate Starts for Blackbrain\_97:

(Start: 5 @50517 has 191 MA's), (7, 50598), (8, 50631), (9, 50673), (11, 50757), (16, 50871), (17, 50916), (18, 50937), (19, 50976),

Gene: Blackdragon\_98 Start: 51647, Stop: 52186, Start Num: 5

Candidate Starts for Blackdragon\_98:

(Start: 5 @51647 has 191 MA's), (7, 51728), (8, 51761), (9, 51803), (11, 51887), (16, 52001), (17, 52046), (18, 52067), (19, 52106),

Gene: Blubba\_92 Start: 52245, Stop: 52799, Start Num: 5

Candidate Starts for Blubba\_92:

(1, 51192), (2, 51213), (3, 51291), (4, 51981), (Start: 5 @52245 has 191 MA's), (6, 52251), (7, 52326), (8, 52359), (9, 52401), (11, 52500), (16, 52614), (17, 52659), (18, 52680), (19, 52719),

Gene: BobaPhatt\_99 Start: 50570, Stop: 51109, Start Num: 5

Candidate Starts for BobaPhatt\_99:

(Start: 5 @50570 has 191 MA's), (7, 50651), (8, 50684), (9, 50726), (11, 50810), (16, 50924), (17, 50969), (18, 50990), (19, 51029),

Gene: Bonray\_102 Start: 52396, Stop: 52935, Start Num: 5

Candidate Starts for Bonray\_102:

(Start: 5 @52396 has 191 MA's), (7, 52477), (8, 52510), (9, 52552), (11, 52636), (16, 52750), (17, 52795), (18, 52816), (19, 52855),

Gene: Bowman\_104 Start: 51957, Stop: 52496, Start Num: 5

Candidate Starts for Bowman\_104:

(Start: 5 @51957 has 191 MA's), (7, 52038), (8, 52071), (9, 52113), (11, 52197), (16, 52311), (17, 52356), (18, 52377), (19, 52416),

Gene: Bread\_102 Start: 52051, Stop: 52590, Start Num: 5

Candidate Starts for Bread\_102:

(Start: 5 @52051 has 191 MA's), (7, 52132), (8, 52165), (9, 52207), (11, 52291), (16, 52405), (17, 52450), (18, 52471), (19, 52510),

Gene: Breeniome\_101 Start: 50633, Stop: 51172, Start Num: 5

Candidate Starts for Breeniome\_101:

(Start: 5 @50633 has 191 MA's), (7, 50714), (8, 50747), (9, 50789), (11, 50873), (16, 50987), (17, 51032), (18, 51053), (19, 51092),

Gene: Burrough\_102 Start: 52550, Stop: 53089, Start Num: 5

Candidate Starts for Burrough\_102:

(Start: 5 @52550 has 191 MA's), (7, 52631), (8, 52664), (9, 52706), (11, 52790), (16, 52904), (17, 52949), (18, 52970), (19, 53009),

Gene: Bxz1\_100 Start: 53988, Stop: 54527, Start Num: 5

Candidate Starts for Bxz1\_100:

(Start: 5 @53988 has 191 MA's), (7, 54069), (8, 54102), (9, 54144), (11, 54228), (16, 54342), (17, 54387), (18, 54408), (19, 54447),

Gene: Cactojaque\_97 Start: 50624, Stop: 51163, Start Num: 5

Candidate Starts for Cactojaque\_97:

(Start: 5 @50624 has 191 MA's), (7, 50705), (8, 50738), (9, 50780), (11, 50864), (16, 50978), (17, 51023), (18, 51044), (19, 51083),

Gene: Cali\_98 Start: 52552, Stop: 53091, Start Num: 5

Candidate Starts for Cali\_98:

(Start: 5 @52552 has 191 MA's), (7, 52633), (8, 52666), (9, 52708), (11, 52792), (16, 52906), (17, 52951), (18, 52972), (19, 53011),

Gene: Cane17\_92 Start: 52318, Stop: 52857, Start Num: 5

Candidate Starts for Cane17\_92:

(1, 51265), (2, 51286), (3, 51364), (4, 52054), (Start: 5 @52318 has 191 MA's), (6, 52324), (7, 52399), (8, 52432), (9, 52474), (11, 52558), (16, 52672), (17, 52717), (18, 52738), (19, 52777),

Gene: Capablanca\_104 Start: 52802, Stop: 53341, Start Num: 5

Candidate Starts for Capablanca\_104:

(Start: 5 @52802 has 191 MA's), (7, 52883), (8, 52916), (9, 52958), (11, 53042), (16, 53156), (17, 53201), (18, 53222), (19, 53261),

Gene: Caravan\_97 Start: 51909, Stop: 52448, Start Num: 5

Candidate Starts for Caravan\_97:

(Start: 5 @51909 has 191 MA's), (7, 51990), (8, 52023), (9, 52065), (11, 52149), (16, 52263), (17, 52308), (18, 52329), (19, 52368),

Gene: Catera\_99 Start: 50825, Stop: 51364, Start Num: 5

Candidate Starts for Catera\_99:

(Start: 5 @50825 has 191 MA's), (7, 50906), (8, 50939), (9, 50981), (11, 51065), (16, 51179), (17, 51224), (18, 51245), (19, 51284),

Gene: Chargie21\_99 Start: 50939, Stop: 51478, Start Num: 5

Candidate Starts for Chargie21\_99:

(Start: 5 @50939 has 191 MA's), (7, 51020), (8, 51053), (9, 51095), (11, 51179), (16, 51293), (17, 51338), (18, 51359), (19, 51398),

Gene: CharlieB\_98 Start: 50954, Stop: 51493, Start Num: 5

Candidate Starts for CharlieB\_98:

(Start: 5 @50954 has 191 MA's), (7, 51035), (8, 51068), (9, 51110), (11, 51194), (16, 51308), (17, 51353), (18, 51374), (19, 51413),

Gene: ChaylaJr\_97 Start: 50445, Stop: 50984, Start Num: 5

Candidate Starts for ChaylaJr\_97:

(Start: 5 @50445 has 191 MA's), (7, 50526), (8, 50559), (9, 50601), (11, 50685), (16, 50799), (17, 50844), (18, 50865), (19, 50904),

Gene: ChickenPhender\_98 Start: 50748, Stop: 51287, Start Num: 5

Candidate Starts for ChickenPhender\_98:

(Start: 5 @50748 has 191 MA's), (7, 50829), (8, 50862), (9, 50904), (11, 50988), (16, 51102), (17, 51147), (18, 51168), (19, 51207),

Gene: Chomp\_101 Start: 52340, Stop: 52879, Start Num: 5

Candidate Starts for Chomp\_101:

(Start: 5 @52340 has 191 MA's), (7, 52421), (8, 52454), (9, 52496), (11, 52580), (16, 52694), (17, 52739), (18, 52760), (19, 52799),

Gene: CindyLou\_103 Start: 52381, Stop: 52920, Start Num: 5

Candidate Starts for CindyLou\_103:

(Start: 5 @52381 has 191 MA's), (7, 52462), (8, 52495), (9, 52537), (11, 52621), (16, 52735), (17, 52780), (18, 52801), (19, 52840),

Gene: Cleatunium\_96 Start: 51038, Stop: 51577, Start Num: 5

Candidate Starts for Cleatunium\_96:

(Start: 5 @51038 has 191 MA's), (7, 51119), (8, 51152), (9, 51194), (11, 51278), (16, 51392), (17, 51437), (18, 51458), (19, 51497),

Gene: Colt\_93 Start: 52914, Stop: 53453, Start Num: 5

Candidate Starts for Colt\_93:

(1, 51861), (2, 51882), (3, 51960), (4, 52650), (Start: 5 @52914 has 191 MA's), (6, 52920), (7, 52995), (8, 53028), (9, 53070), (11, 53154), (16, 53268), (17, 53313), (18, 53334), (19, 53373),

Gene: Concombre\_109 Start: 54722, Stop: 55261, Start Num: 5

Candidate Starts for Concombre\_109:

(Start: 5 @54722 has 191 MA's), (6, 54728), (7, 54803), (8, 54836), (9, 54878), (11, 54962), (16, 55076), (17, 55121), (18, 55142), (19, 55181),

Gene: DTDevon\_103 Start: 52826, Stop: 53365, Start Num: 5

Candidate Starts for DTDevon\_103:

(Start: 5 @52826 has 191 MA's), (7, 52907), (8, 52940), (9, 52982), (11, 53066), (16, 53180), (17, 53225), (18, 53246), (19, 53285),

Gene: Daffodil\_107 Start: 52523, Stop: 53062, Start Num: 5

Candidate Starts for Daffodil\_107:

(Start: 5 @52523 has 191 MA's), (7, 52604), (8, 52637), (9, 52679), (11, 52763), (16, 52877), (17, 52922), (18, 52943), (19, 52982),

Gene: Dandelion\_109 Start: 54960, Stop: 55499, Start Num: 5

Candidate Starts for Dandelion\_109:

(Start: 5 @54960 has 191 MA's), (7, 55041), (8, 55074), (9, 55116), (11, 55200), (12, 55269), (16, 55314), (17, 55359), (18, 55380), (19, 55419),

Gene: Darko\_102 Start: 52459, Stop: 52998, Start Num: 5

Candidate Starts for Darko\_102:

(Start: 5 @52459 has 191 MA's), (7, 52540), (8, 52573), (9, 52615), (11, 52699), (16, 52813), (17, 52858), (18, 52879), (19, 52918),

Gene: DeejaClivia\_91 Start: 49136, Stop: 49675, Start Num: 5

Candidate Starts for DeejaClivia\_91:

(Start: 5 @49136 has 191 MA's), (7, 49217), (8, 49250), (9, 49292), (11, 49376), (16, 49490), (17, 49535), (18, 49556),

Gene: Delilah\_102 Start: 52677, Stop: 53216, Start Num: 5

Candidate Starts for Delilah\_102:

(Start: 5 @52677 has 191 MA's), (7, 52758), (8, 52791), (9, 52833), (11, 52917), (16, 53031), (17, 53076), (18, 53097), (19, 53136),

Gene: Delylah\_105 Start: 52216, Stop: 52755, Start Num: 5

Candidate Starts for Delylah\_105:

(Start: 5 @52216 has 191 MA's), (7, 52297), (8, 52330), (9, 52372), (11, 52456), (16, 52570), (17, 52615), (18, 52636), (19, 52675),

Gene: Demodog\_109 Start: 54722, Stop: 55261, Start Num: 5

Candidate Starts for Demodog\_109:

(Start: 5 @54722 has 191 MA's), (6, 54728), (7, 54803), (8, 54836), (9, 54878), (11, 54962), (16, 55076), (17, 55121), (18, 55142), (19, 55181),

Gene: Derek\_102 Start: 52142, Stop: 52681, Start Num: 5

Candidate Starts for Derek\_102:

(Start: 5 @52142 has 191 MA's), (7, 52223), (8, 52256), (9, 52298), (11, 52382), (16, 52496), (17, 52541), (18, 52562), (19, 52601),

Gene: Dessert\_102 Start: 50618, Stop: 51157, Start Num: 5

Candidate Starts for Dessert\_102:

(Start: 5 @50618 has 191 MA's), (7, 50699), (8, 50732), (9, 50774), (11, 50858), (16, 50972), (17, 51017), (18, 51038), (19, 51077),

Gene: Dietrick\_94 Start: 50218, Stop: 50757, Start Num: 5

Candidate Starts for Dietrick\_94:

(Start: 5 @50218 has 191 MA's), (7, 50299), (8, 50332), (9, 50374), (11, 50458), (16, 50572), (17, 50617), (18, 50638), (19, 50677),

Gene: DirtMonster\_96 Start: 51710, Stop: 52249, Start Num: 5

Candidate Starts for DirtMonster\_96:

(Start: 5 @51710 has 191 MA's), (7, 51791), (8, 51824), (9, 51866), (11, 51950), (16, 52064), (17, 52109), (18, 52130), (19, 52169),

Gene: Domi\_96 Start: 51567, Stop: 52106, Start Num: 5

Candidate Starts for Domi\_96:

(Start: 5 @51567 has 191 MA's), (7, 51648), (8, 51681), (9, 51723), (11, 51807), (16, 51921), (17, 51966), (18, 51987), (19, 52026),

Gene: DrPhinkDaddy\_101 Start: 52743, Stop: 53282, Start Num: 5

Candidate Starts for DrPhinkDaddy\_101:

(Start: 5 @52743 has 191 MA's), (7, 52824), (8, 52857), (9, 52899), (11, 52983), (16, 53097), (17, 53142), (18, 53163), (19, 53202),

Gene: Drazdys\_101 Start: 51440, Stop: 51979, Start Num: 5

Candidate Starts for Drazdys\_101:

(Start: 5 @51440 has 191 MA's), (7, 51521), (8, 51554), (9, 51596), (11, 51680), (16, 51794), (17, 51839), (18, 51860), (19, 51899),

Gene: Duckfeet\_95 Start: 50667, Stop: 51206, Start Num: 5

Candidate Starts for Duckfeet\_95:

(Start: 5 @50667 has 191 MA's), (7, 50748), (8, 50781), (9, 50823), (11, 50907), (16, 51021), (17, 51066), (18, 51087), (19, 51126),

Gene: ET08\_91 Start: 51209, Stop: 51748, Start Num: 5

Candidate Starts for ET08\_91:

(Start: 5 @51209 has 191 MA's), (7, 51290), (8, 51323), (9, 51365), (11, 51449), (16, 51563), (17, 51608), (18, 51629), (19, 51668),

Gene: EasyJones\_105 Start: 51602, Stop: 52141, Start Num: 5

Candidate Starts for EasyJones\_105:

(Start: 5 @51602 has 191 MA's), (7, 51683), (8, 51716), (9, 51758), (11, 51842), (16, 51956), (17, 52001), (18, 52022), (19, 52061),

Gene: EggyFarm\_110 Start: 54481, Stop: 55020, Start Num: 5

Candidate Starts for EggyFarm\_110:

(Start: 5 @54481 has 191 MA's), (7, 54562), (8, 54595), (9, 54637), (11, 54721), (16, 54835), (17, 54880), (18, 54901), (19, 54940),

Gene: EmToTheThree\_105 Start: 53740, Stop: 54279, Start Num: 5

Candidate Starts for EmToTheThree\_105:

(Start: 5 @53740 has 191 MA's), (7, 53821), (8, 53854), (9, 53896), (11, 53980), (16, 54094), (17, 54139), (18, 54160), (19, 54199),

Gene: EmmaElysia\_102 Start: 51268, Stop: 51810, Start Num: 5

Candidate Starts for EmmaElysia\_102:

(Start: 5 @51268 has 191 MA's), (7, 51349), (8, 51382), (9, 51424), (11, 51508), (16, 51622), (17, 51667), (18, 51688), (19, 51727),

Gene: Erdmann\_103 Start: 52524, Stop: 53063, Start Num: 5

Candidate Starts for Erdmann\_103:

(Start: 5 @52524 has 191 MA's), (7, 52605), (8, 52638), (9, 52680), (11, 52764), (16, 52878), (17, 52923), (18, 52944), (19, 52983),

Gene: ErnieJ\_98 Start: 50734, Stop: 51273, Start Num: 5

Candidate Starts for ErnieJ\_98:

(Start: 5 @50734 has 191 MA's), (7, 50815), (8, 50848), (9, 50890), (11, 50974), (16, 51088), (17, 51133), (18, 51154), (19, 51193),

Gene: Essence\_99 Start: 51606, Stop: 52145, Start Num: 5

Candidate Starts for Essence\_99:

(Start: 5 @51606 has 191 MA's), (7, 51687), (8, 51720), (9, 51762), (11, 51846), (16, 51960), (17, 52005), (18, 52026), (19, 52065),

Gene: Ewok\_103 Start: 51911, Stop: 52450, Start Num: 5

Candidate Starts for Ewok\_103:

(Start: 5 @51911 has 191 MA's), (7, 51992), (8, 52025), (9, 52067), (11, 52151), (16, 52265), (17, 52310), (18, 52331), (19, 52370),

Gene: Fixie\_95 Start: 51164, Stop: 51703, Start Num: 5

Candidate Starts for Fixie\_95:

(Start: 5 @51164 has 191 MA's), (7, 51245), (8, 51278), (9, 51320), (11, 51404), (16, 51518), (17, 51563), (18, 51584), (19, 51623),

Gene: Flabslab\_96 Start: 49603, Stop: 50142, Start Num: 5

Candidate Starts for Flabslab\_96:

(Start: 5 @49603 has 191 MA's), (7, 49684), (8, 49717), (9, 49759), (11, 49843), (16, 49957), (17, 50002), (18, 50023), (19, 50062),

Gene: Fludd\_103 Start: 51374, Stop: 51913, Start Num: 5

Candidate Starts for Fludd\_103:

(Start: 5 @51374 has 191 MA's), (7, 51455), (8, 51488), (9, 51530), (11, 51614), (16, 51728), (17, 51773), (18, 51794), (19, 51833),

Gene: Fongie\_100 Start: 52124, Stop: 52663, Start Num: 5

Candidate Starts for Fongie\_100:

(Start: 5 @52124 has 191 MA's), (7, 52205), (8, 52238), (9, 52280), (11, 52364), (16, 52478), (17, 52523), (18, 52544), (19, 52583),

Gene: FoxtrotP1\_102 Start: 53694, Stop: 54233, Start Num: 5

Candidate Starts for FoxtrotP1\_102:

(Start: 5 @53694 has 191 MA's), (7, 53775), (8, 53808), (9, 53850), (11, 53934), (16, 54048), (17, 54093), (18, 54114), (19, 54153),

Gene: FrayBell\_107 Start: 53092, Stop: 53631, Start Num: 5

Candidate Starts for FrayBell\_107:

(Start: 5 @53092 has 191 MA's), (7, 53173), (8, 53206), (9, 53248), (11, 53332), (16, 53446), (17, 53491), (18, 53512), (19, 53551),

Gene: FudgeTart\_102 Start: 51808, Stop: 52347, Start Num: 5

Candidate Starts for FudgeTart\_102:

(Start: 5 @51808 has 191 MA's), (7, 51889), (8, 51922), (9, 51964), (11, 52048), (16, 52162), (17, 52207), (18, 52228), (19, 52267),

Gene: Gabriel\_103 Start: 51012, Stop: 51551, Start Num: 5

Candidate Starts for Gabriel\_103:

(Start: 5 @51012 has 191 MA's), (7, 51093), (8, 51126), (9, 51168), (11, 51252), (16, 51366), (17, 51411), (18, 51432), (19, 51471),

Gene: Gamgam\_102 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for Gamgam\_102:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Ghost\_101 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for Ghost\_101:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Gizmo\_106 Start: 53674, Stop: 54213, Start Num: 5

Candidate Starts for Gizmo\_106:

(Start: 5 @53674 has 191 MA's), (7, 53755), (8, 53788), (9, 53830), (11, 53914), (16, 54028), (17, 54073), (18, 54094), (19, 54133),

Gene: GlutenPhree\_103 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for GlutenPhree\_103:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: GoldenSnow\_106 Start: 53091, Stop: 53630, Start Num: 5

Candidate Starts for GoldenSnow\_106:

(Start: 5 @53091 has 191 MA's), (7, 53172), (8, 53205), (9, 53247), (11, 53331), (16, 53445), (17, 53490), (18, 53511), (19, 53550),

Gene: Grasshills\_109 Start: 54481, Stop: 55020, Start Num: 5

Candidate Starts for Grasshills\_109:

(Start: 5 @54481 has 191 MA's), (7, 54562), (8, 54595), (9, 54637), (11, 54721), (16, 54835), (17, 54880), (18, 54901), (19, 54940),

Gene: Grungle\_90 Start: 48867, Stop: 49406, Start Num: 5

Candidate Starts for Grungle\_90:

(Start: 5 @48867 has 191 MA's), (7, 48948), (8, 48981), (9, 49023), (11, 49107), (16, 49221), (17, 49266), (18, 49287), (19, 49326),

Gene: Guwapp\_101 Start: 51177, Stop: 51716, Start Num: 5

Candidate Starts for Guwapp\_101:

(Start: 5 @51177 has 191 MA's), (7, 51258), (8, 51291), (9, 51333), (11, 51417), (16, 51531), (17, 51576), (18, 51597), (19, 51636),

Gene: Halldule\_96 Start: 49893, Stop: 50432, Start Num: 5

Candidate Starts for Halldule\_96:

(Start: 5 @49893 has 191 MA's), (7, 49974), (8, 50007), (9, 50049), (11, 50133), (16, 50247), (17, 50292), (18, 50313), (19, 50352),

Gene: HyRo\_94 Start: 51304, Stop: 51843, Start Num: 5

Candidate Starts for HyRo\_94:

(Start: 5 @51304 has 191 MA's), (7, 51385), (8, 51418), (9, 51460), (11, 51544), (16, 51658), (17, 51703), (18, 51724), (19, 51763),

Gene: I3\_108 Start: 53019, Stop: 53558, Start Num: 5

Candidate Starts for I3\_108:

(Start: 5 @53019 has 191 MA's), (7, 53100), (8, 53133), (9, 53175), (11, 53259), (16, 53373), (17, 53418), (18, 53439), (19, 53478),

Gene: IkeLoa\_96 Start: 51134, Stop: 51673, Start Num: 5

Candidate Starts for IkeLoa\_96:

(Start: 5 @51134 has 191 MA's), (7, 51215), (8, 51248), (9, 51290), (11, 51374), (16, 51488), (17, 51533), (18, 51554), (19, 51593),

Gene: InigoMontoya\_103 Start: 51013, Stop: 51552, Start Num: 5

Candidate Starts for InigoMontoya\_103:

(Start: 5 @51013 has 191 MA's), (7, 51094), (8, 51127), (9, 51169), (11, 51253), (16, 51367), (17, 51412), (18, 51433), (19, 51472),

Gene: InterFolia\_110 Start: 54027, Stop: 54566, Start Num: 5

Candidate Starts for InterFolia\_110:

(Start: 5 @54027 has 191 MA's), (7, 54108), (8, 54141), (9, 54183), (11, 54267), (16, 54381), (17, 54426), (18, 54447), (19, 54486),

Gene: Iota\_97 Start: 51489, Stop: 52028, Start Num: 5

Candidate Starts for Iota\_97:

(Start: 5 @51489 has 191 MA's), (7, 51570), (8, 51603), (9, 51645), (11, 51729), (16, 51843), (17, 51888), (18, 51909), (19, 51948),

Gene: Issimir\_101 Start: 52498, Stop: 53037, Start Num: 5

Candidate Starts for Issimir\_101:

(Start: 5 @52498 has 191 MA's), (7, 52579), (8, 52612), (9, 52654), (11, 52738), (16, 52852), (17, 52897), (18, 52918), (19, 52957),

Gene: Izajani\_102 Start: 52704, Stop: 53243, Start Num: 5

Candidate Starts for Izajani\_102:

(Start: 5 @52704 has 191 MA's), (7, 52785), (8, 52818), (9, 52860), (11, 52944), (16, 53058), (17, 53103), (18, 53124), (19, 53163),

Gene: JPickles\_100 Start: 50283, Stop: 50822, Start Num: 5

Candidate Starts for JPickles\_100:

(Start: 5 @50283 has 191 MA's), (7, 50364), (8, 50397), (9, 50439), (11, 50523), (16, 50637), (17, 50682), (18, 50703), (19, 50742),

Gene: Janiyra\_104 Start: 51979, Stop: 52518, Start Num: 5

Candidate Starts for Janiyra\_104:

(Start: 5 @51979 has 191 MA's), (7, 52060), (8, 52093), (9, 52135), (11, 52219), (16, 52333), (17, 52378), (18, 52399), (19, 52438),

Gene: JayJay\_108 Start: 53744, Stop: 54283, Start Num: 5

Candidate Starts for JayJay\_108:

(Start: 5 @53744 has 191 MA's), (7, 53825), (8, 53858), (9, 53900), (11, 53984), (16, 54098), (17, 54143), (18, 54164), (19, 54203),

Gene: Jaygup\_102 Start: 51808, Stop: 52347, Start Num: 5

Candidate Starts for Jaygup\_102:

(Start: 5 @51808 has 191 MA's), (7, 51889), (8, 51922), (9, 51964), (11, 52048), (16, 52162), (17, 52207), (18, 52228), (19, 52267),

Gene: Jedediah\_105 Start: 52341, Stop: 52880, Start Num: 5

Candidate Starts for Jedediah\_105:

(Start: 5 @52341 has 191 MA's), (7, 52422), (8, 52455), (9, 52497), (11, 52581), (16, 52695), (17, 52740), (18, 52761), (19, 52800),

Gene: Jemmno\_102 Start: 51788, Stop: 52327, Start Num: 5

Candidate Starts for Jemmno\_102:

(Start: 5 @51788 has 191 MA's), (7, 51869), (8, 51902), (9, 51944), (11, 52028), (16, 52142), (17, 52187), (18, 52208), (19, 52247),

Gene: Jessibeth14\_101 Start: 52309, Stop: 52848, Start Num: 5

Candidate Starts for Jessibeth14\_101:

(Start: 5 @52309 has 191 MA's), (7, 52390), (8, 52423), (9, 52465), (11, 52549), (16, 52663), (17, 52708), (18, 52729), (19, 52768),

Gene: Jezreel\_102 Start: 52472, Stop: 53011, Start Num: 5

Candidate Starts for Jezreel\_102:

(Start: 5 @52472 has 191 MA's), (7, 52553), (8, 52586), (9, 52628), (11, 52712), (16, 52826), (17, 52871), (18, 52892), (19, 52931),

Gene: JigglyPuff\_110 Start: 54638, Stop: 55177, Start Num: 5

Candidate Starts for JigglyPuff\_110:

(Start: 5 @54638 has 191 MA's), (7, 54719), (8, 54752), (9, 54794), (11, 54878), (16, 54992), (17, 55037), (18, 55058), (19, 55097),

Gene: JulietS\_96 Start: 49746, Stop: 50285, Start Num: 5

Candidate Starts for JulietS\_96:

(Start: 5 @49746 has 191 MA's), (7, 49827), (8, 49860), (9, 49902), (11, 49986), (12, 50055), (16, 50100), (17, 50145), (18, 50166), (19, 50205),

Gene: JustHall\_99 Start: 51847, Stop: 52386, Start Num: 5  
Candidate Starts for JustHall\_99:  
(Start: 5 @51847 has 191 MA's), (7, 51928), (8, 51961), (9, 52003), (11, 52087), (16, 52201), (17, 52246), (18, 52267), (19, 52306),

Gene: Kamryn\_102 Start: 53124, Stop: 53663, Start Num: 5  
Candidate Starts for Kamryn\_102:  
(Start: 5 @53124 has 191 MA's), (7, 53205), (8, 53238), (9, 53280), (11, 53364), (16, 53478), (17, 53523), (18, 53544), (19, 53583),

Gene: Kboogie\_106 Start: 51483, Stop: 52022, Start Num: 5  
Candidate Starts for Kboogie\_106:  
(Start: 5 @51483 has 191 MA's), (7, 51564), (8, 51597), (9, 51639), (11, 51723), (16, 51837), (17, 51882), (18, 51903), (19, 51942),

Gene: Khaleesi\_101 Start: 52423, Stop: 52962, Start Num: 5  
Candidate Starts for Khaleesi\_101:  
(Start: 5 @52423 has 191 MA's), (7, 52504), (8, 52537), (9, 52579), (11, 52663), (16, 52777), (17, 52822), (18, 52843), (19, 52882),

Gene: Koguma\_99 Start: 49968, Stop: 50507, Start Num: 5  
Candidate Starts for Koguma\_99:  
(Start: 5 @49968 has 191 MA's), (7, 50049), (8, 50082), (9, 50124), (11, 50208), (16, 50322), (17, 50367), (18, 50388), (19, 50427),

Gene: LRRHood\_97 Start: 52022, Stop: 52561, Start Num: 5  
Candidate Starts for LRRHood\_97:  
(Start: 5 @52022 has 191 MA's), (7, 52103), (8, 52136), (9, 52178), (11, 52262), (16, 52376), (17, 52421), (18, 52442), (19, 52481),

Gene: Labradorite\_101 Start: 50739, Stop: 51278, Start Num: 5  
Candidate Starts for Labradorite\_101:  
(Start: 5 @50739 has 191 MA's), (7, 50820), (8, 50853), (9, 50895), (11, 50979), (16, 51093), (17, 51138), (18, 51159), (19, 51198),

Gene: Latch\_102 Start: 51052, Stop: 51591, Start Num: 5  
Candidate Starts for Latch\_102:  
(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Lee7\_105 Start: 53054, Stop: 53593, Start Num: 5  
Candidate Starts for Lee7\_105:  
(Start: 5 @53054 has 191 MA's), (7, 53135), (8, 53168), (9, 53210), (11, 53294), (16, 53408), (17, 53453), (18, 53474), (19, 53513),

Gene: Lethe\_101 Start: 52495, Stop: 53034, Start Num: 5  
Candidate Starts for Lethe\_101:  
(Start: 5 @52495 has 191 MA's), (7, 52576), (8, 52609), (9, 52651), (11, 52735), (16, 52849), (17, 52894), (18, 52915), (19, 52954),

Gene: LifeSavor\_101 Start: 51740, Stop: 52279, Start Num: 5  
Candidate Starts for LifeSavor\_101:

(Start: 5 @51740 has 191 MA's), (7, 51821), (8, 51854), (9, 51896), (11, 51980), (16, 52094), (17, 52139), (18, 52160), (19, 52199),

Gene: LinStu\_102 Start: 52630, Stop: 53169, Start Num: 5

Candidate Starts for LinStu\_102:

(Start: 5 @52630 has 191 MA's), (7, 52711), (8, 52744), (9, 52786), (11, 52870), (16, 52984), (17, 53029), (18, 53050), (19, 53089),

Gene: Littleton\_102 Start: 51872, Stop: 52411, Start Num: 5

Candidate Starts for Littleton\_102:

(Start: 5 @51872 has 191 MA's), (7, 51953), (8, 51986), (9, 52028), (11, 52112), (16, 52226), (17, 52271), (18, 52292), (19, 52331),

Gene: Loanshark\_102 Start: 52647, Stop: 53186, Start Num: 5

Candidate Starts for Loanshark\_102:

(Start: 5 @52647 has 191 MA's), (7, 52728), (8, 52761), (9, 52803), (11, 52887), (16, 53001), (17, 53046), (18, 53067),

Gene: LolaVince\_103 Start: 52746, Stop: 53285, Start Num: 5

Candidate Starts for LolaVince\_103:

(Start: 5 @52746 has 191 MA's), (7, 52827), (8, 52860), (9, 52902), (11, 52986), (16, 53100), (17, 53145), (18, 53166), (19, 53205),

Gene: LookingGlass\_103 Start: 52570, Stop: 53109, Start Num: 5

Candidate Starts for LookingGlass\_103:

(Start: 5 @52570 has 191 MA's), (7, 52651), (8, 52684), (9, 52726), (11, 52810), (16, 52924), (17, 52969), (18, 52990), (19, 53029),

Gene: LordLeafolot\_107 Start: 53710, Stop: 54249, Start Num: 5

Candidate Starts for LordLeafolot\_107:

(Start: 5 @53710 has 191 MA's), (7, 53791), (8, 53824), (9, 53866), (11, 53950), (16, 54064), (17, 54109), (18, 54130), (19, 54169),

Gene: Lukilu\_93 Start: 52153, Stop: 52692, Start Num: 5

Candidate Starts for Lukilu\_93:

(Start: 5 @52153 has 191 MA's), (7, 52234), (8, 52267), (9, 52309), (11, 52393), (16, 52507), (17, 52552), (18, 52573), (19, 52612),

Gene: Lunareta\_101 Start: 53663, Stop: 54202, Start Num: 5

Candidate Starts for Lunareta\_101:

(Start: 5 @53663 has 191 MA's), (7, 53744), (8, 53777), (9, 53819), (11, 53903), (16, 54017), (17, 54062), (18, 54083), (19, 54122),

Gene: Maby2021\_102 Start: 52517, Stop: 53056, Start Num: 5

Candidate Starts for Maby2021\_102:

(Start: 5 @52517 has 191 MA's), (7, 52598), (8, 52631), (9, 52673), (11, 52757), (16, 52871), (17, 52916), (18, 52937), (19, 52976),

Gene: Maguvora\_107 Start: 53097, Stop: 53636, Start Num: 5

Candidate Starts for Maguvora\_107:

(Start: 5 @53097 has 191 MA's), (7, 53178), (8, 53211), (9, 53253), (11, 53337), (16, 53451), (17, 53496), (18, 53517), (19, 53556),

Gene: Mangeria\_102 Start: 52586, Stop: 53125, Start Num: 5

Candidate Starts for Mangeria\_102:

(Start: 5 @52586 has 191 MA's), (7, 52667), (8, 52700), (9, 52742), (11, 52826), (16, 52940), (17, 52985), (18, 53006), (19, 53045),

Gene: Matsumoto\_100 Start: 51368, Stop: 51907, Start Num: 5

Candidate Starts for Matsumoto\_100:

(Start: 5 @51368 has 191 MA's), (7, 51449), (8, 51482), (9, 51524), (11, 51608), (16, 51722), (17, 51767), (18, 51788), (19, 51827),

Gene: Maturis\_100 Start: 52159, Stop: 52698, Start Num: 5

Candidate Starts for Maturis\_100:

(Start: 5 @52159 has 191 MA's), (7, 52240), (8, 52273), (9, 52315), (11, 52399), (16, 52513), (17, 52558), (18, 52579), (19, 52618),

Gene: McGee\_104 Start: 51124, Stop: 51663, Start Num: 5

Candidate Starts for McGee\_104:

(Start: 5 @51124 has 191 MA's), (7, 51205), (8, 51238), (9, 51280), (11, 51364), (16, 51478), (17, 51523), (18, 51544), (19, 51583),

Gene: McWolfish\_100 Start: 52306, Stop: 52845, Start Num: 5

Candidate Starts for McWolfish\_100:

(Start: 5 @52306 has 191 MA's), (7, 52387), (8, 52420), (9, 52462), (11, 52546), (16, 52660), (17, 52705), (18, 52726), (19, 52765),

Gene: Megamind\_101 Start: 52190, Stop: 52729, Start Num: 5

Candidate Starts for Megamind\_101:

(Start: 5 @52190 has 191 MA's), (7, 52271), (8, 52304), (9, 52346), (11, 52430), (16, 52544), (17, 52589), (18, 52610), (19, 52649),

Gene: Melpomini\_96 Start: 49659, Stop: 50198, Start Num: 5

Candidate Starts for Melpomini\_96:

(Start: 5 @49659 has 191 MA's), (7, 49740), (8, 49773), (9, 49815), (11, 49899), (16, 50013), (17, 50058), (18, 50079), (19, 50118),

Gene: MikeLiesIn\_103 Start: 52537, Stop: 53076, Start Num: 5

Candidate Starts for MikeLiesIn\_103:

(Start: 5 @52537 has 191 MA's), (7, 52618), (8, 52651), (9, 52693), (11, 52777), (16, 52891), (17, 52936), (18, 52957), (19, 52996),

Gene: Mikro\_100 Start: 53759, Stop: 54298, Start Num: 5

Candidate Starts for Mikro\_100:

(Start: 5 @53759 has 191 MA's), (7, 53840), (8, 53873), (9, 53915), (11, 53999), (16, 54113), (17, 54158), (18, 54179), (19, 54218),

Gene: MoMoMixon\_103 Start: 52013, Stop: 52552, Start Num: 5

Candidate Starts for MoMoMixon\_103:

(Start: 5 @52013 has 191 MA's), (7, 52094), (8, 52127), (9, 52169), (11, 52253), (16, 52367), (17, 52412), (18, 52433), (19, 52472),

Gene: Moby\_93 Start: 48546, Stop: 49085, Start Num: 5

Candidate Starts for Moby\_93:

(Start: 5 @48546 has 191 MA's), (7, 48627), (8, 48660), (9, 48702), (11, 48786), (16, 48900), (17, 48945), (18, 48966), (19, 49005),

Gene: Moiqah\_93 Start: 48546, Stop: 49085, Start Num: 5

Candidate Starts for Moiqah\_93:

(Start: 5 @48546 has 191 MA's), (7, 48627), (8, 48660), (9, 48702), (11, 48786), (16, 48900), (17, 48945), (18, 48966), (19, 49005),

Gene: Momo\_101 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for Momo\_101:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Montpel\_101 Start: 53661, Stop: 54200, Start Num: 5

Candidate Starts for Montpel\_101:

(Start: 5 @53661 has 191 MA's), (7, 53742), (8, 53775), (9, 53817), (11, 53901), (16, 54015), (17, 54060), (18, 54081), (19, 54120),

Gene: Morizzled23\_102 Start: 51417, Stop: 51956, Start Num: 5

Candidate Starts for Morizzled23\_102:

(Start: 5 @51417 has 191 MA's), (7, 51498), (8, 51531), (9, 51573), (11, 51657), (16, 51771), (17, 51816), (18, 51837), (19, 51876),

Gene: Naija\_101 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for Naija\_101:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Napoleon13\_98 Start: 50097, Stop: 50636, Start Num: 5

Candidate Starts for Napoleon13\_98:

(Start: 5 @50097 has 191 MA's), (7, 50178), (8, 50211), (9, 50253), (11, 50337), (16, 50451), (17, 50496), (18, 50517), (19, 50556),

Gene: Nappy\_105 Start: 53447, Stop: 53986, Start Num: 5

Candidate Starts for Nappy\_105:

(Start: 5 @53447 has 191 MA's), (7, 53528), (8, 53561), (9, 53603), (11, 53687), (16, 53801), (17, 53846), (18, 53867), (19, 53906),

Gene: Naval22\_110 Start: 54028, Stop: 54567, Start Num: 5

Candidate Starts for Naval22\_110:

(Start: 5 @54028 has 191 MA's), (7, 54109), (8, 54142), (9, 54184), (11, 54268), (16, 54382), (17, 54427), (18, 54448), (19, 54487),

Gene: NedWong\_103 Start: 52524, Stop: 53063, Start Num: 5

Candidate Starts for NedWong\_103:

(Start: 5 @52524 has 191 MA's), (7, 52605), (8, 52638), (9, 52680), (11, 52764), (16, 52878), (17, 52923), (18, 52944), (19, 52983),

Gene: Ngannou\_98 Start: 50034, Stop: 50573, Start Num: 5

Candidate Starts for Ngannou\_98:

(Start: 5 @50034 has 191 MA's), (7, 50115), (8, 50148), (9, 50190), (11, 50274), (16, 50388), (17, 50433), (18, 50454), (19, 50493),

Gene: Nidhogg\_103 Start: 52258, Stop: 52797, Start Num: 5

Candidate Starts for Nidhogg\_103:

(Start: 5 @52258 has 191 MA's), (7, 52339), (8, 52372), (9, 52414), (11, 52498), (16, 52612), (17, 52657), (18, 52678), (19, 52717),

Gene: NoodleTree\_109 Start: 52850, Stop: 53389, Start Num: 5

Candidate Starts for NoodleTree\_109:

(Start: 5 @52850 has 191 MA's), (7, 52931), (8, 52964), (9, 53006), (11, 53090), (16, 53204), (17, 53249), (18, 53270), (19, 53309),

Gene: Norm\_103 Start: 53453, Stop: 53992, Start Num: 5

Candidate Starts for Norm\_103:

(Start: 5 @53453 has 191 MA's), (7, 53534), (8, 53567), (9, 53609), (11, 53693), (16, 53807), (17, 53852), (18, 53873), (19, 53912),

Gene: NuevoMundo\_108 Start: 54801, Stop: 55340, Start Num: 5

Candidate Starts for NuevoMundo\_108:

(Start: 5 @54801 has 191 MA's), (7, 54882), (8, 54915), (9, 54957), (11, 55041), (16, 55155), (17, 55200), (18, 55221), (19, 55260),

Gene: OrediggerDelux\_105 Start: 53054, Stop: 53593, Start Num: 5

Candidate Starts for OrediggerDelux\_105:

(Start: 5 @53054 has 191 MA's), (7, 53135), (8, 53168), (9, 53210), (11, 53294), (16, 53408), (17, 53453), (18, 53474), (19, 53513),

Gene: ParkTD\_103 Start: 52520, Stop: 53059, Start Num: 5

Candidate Starts for ParkTD\_103:

(Start: 5 @52520 has 191 MA's), (7, 52601), (8, 52634), (9, 52676), (11, 52760), (16, 52874), (17, 52919), (18, 52940), (19, 52979),

Gene: Patter\_102 Start: 51069, Stop: 51608, Start Num: 5

Candidate Starts for Patter\_102:

(Start: 5 @51069 has 191 MA's), (7, 51150), (8, 51183), (9, 51225), (11, 51309), (16, 51423), (17, 51468), (18, 51489), (19, 51528),

Gene: PharkleMinkus\_105 Start: 53092, Stop: 53631, Start Num: 5

Candidate Starts for PharkleMinkus\_105:

(Start: 5 @53092 has 191 MA's), (7, 53173), (8, 53206), (9, 53248), (11, 53332), (16, 53446), (17, 53491), (18, 53512), (19, 53551),

Gene: Phlegm\_104 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for Phlegm\_104:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Phox\_99 Start: 52800, Stop: 53339, Start Num: 5

Candidate Starts for Phox\_99:

(Start: 5 @52800 has 191 MA's), (7, 52881), (8, 52914), (9, 52956), (11, 53040), (16, 53154), (17, 53199), (18, 53220), (19, 53259),

Gene: Phusco\_102 Start: 51817, Stop: 52356, Start Num: 5

Candidate Starts for Phusco\_102:

(Start: 5 @51817 has 191 MA's), (7, 51898), (8, 51931), (9, 51973), (11, 52057), (16, 52171), (17, 52216), (18, 52237), (19, 52276),

Gene: Pier\_107 Start: 54794, Stop: 55348, Start Num: 5

Candidate Starts for Pier\_107:

(1, 53741), (2, 53762), (3, 53840), (4, 54530), (Start: 5 @54794 has 191 MA's), (6, 54800), (7, 54875), (8, 54908), (9, 54950), (11, 55049), (16, 55163), (17, 55208), (18, 55229), (19, 55268),

Gene: Pinkcreek\_93 Start: 49611, Stop: 50303, Start Num: 5

Candidate Starts for Pinkcreek\_93:

(Start: 5 @49611 has 191 MA's), (7, 49692), (8, 49725), (9, 49767), (11, 49851), (12, 49920), (14, 50007), (16, 50118), (17, 50163), (18, 50184),

Gene: Pio\_106 Start: 54410, Stop: 54949, Start Num: 5

Candidate Starts for Pio\_106:

(Start: 5 @54410 has 191 MA's), (7, 54491), (8, 54524), (9, 54566), (11, 54650), (16, 54764), (17, 54809), (18, 54830), (19, 54869),

Gene: Pivoine\_101 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for Pivoine\_101:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Pleione\_105 Start: 52687, Stop: 53226, Start Num: 5

Candidate Starts for Pleione\_105:

(Start: 5 @52687 has 191 MA's), (7, 52768), (8, 52801), (9, 52843), (11, 52927), (16, 53041), (17, 53086), (18, 53107), (19, 53146),

Gene: Primadonna\_96 Start: 51416, Stop: 51955, Start Num: 5

Candidate Starts for Primadonna\_96:

(Start: 5 @51416 has 191 MA's), (7, 51497), (8, 51530), (9, 51572), (11, 51656), (16, 51770), (17, 51815), (18, 51836), (19, 51875),

Gene: Puhon\_106 Start: 53045, Stop: 53584, Start Num: 5

Candidate Starts for Puhon\_106:

(Start: 5 @53045 has 191 MA's), (7, 53126), (8, 53159), (9, 53201), (11, 53285), (16, 53399), (17, 53444), (18, 53465), (19, 53504),

Gene: Pupusa\_108 Start: 53899, Stop: 54438, Start Num: 5

Candidate Starts for Pupusa\_108:

(Start: 5 @53899 has 191 MA's), (7, 53980), (8, 54013), (9, 54055), (11, 54139), (16, 54253), (17, 54298), (18, 54319), (19, 54358),

Gene: PurduePete\_102 Start: 52944, Stop: 53483, Start Num: 5

Candidate Starts for PurduePete\_102:

(Start: 5 @52944 has 191 MA's), (7, 53025), (8, 53058), (9, 53100), (11, 53184), (16, 53298), (17, 53343), (18, 53364), (19, 53403),

Gene: QBert\_96 Start: 51595, Stop: 52134, Start Num: 5

Candidate Starts for QBert\_96:

(Start: 5 @51595 has 191 MA's), (7, 51676), (8, 51709), (9, 51751), (11, 51835), (16, 51949), (17, 51994), (18, 52015), (19, 52054),

Gene: Quasimodo\_103 Start: 52476, Stop: 53015, Start Num: 5

Candidate Starts for Quasimodo\_103:

(Start: 5 @52476 has 191 MA's), (7, 52557), (8, 52590), (9, 52632), (11, 52716), (16, 52830), (17, 52875), (18, 52896), (19, 52935),

Gene: Rabinovish\_100 Start: 52575, Stop: 53258, Start Num: 5

Candidate Starts for Rabinovish\_100:

(Start: 5 @52575 has 191 MA's), (7, 52656), (8, 52689), (9, 52731), (11, 52815), (12, 52884), (15, 53028), (16, 53073), (17, 53118), (18, 53139), (19, 53178),

Gene: Rahel\_101 Start: 51409, Stop: 51948, Start Num: 5

Candidate Starts for Rahel\_101:

(Start: 5 @51409 has 191 MA's), (7, 51490), (8, 51523), (9, 51565), (11, 51649), (16, 51763), (17, 51808), (18, 51829), (19, 51868),

Gene: Rizal\_98 Start: 50557, Stop: 51096, Start Num: 5

Candidate Starts for Rizal\_98:

(Start: 5 @50557 has 191 MA's), (7, 50638), (8, 50671), (9, 50713), (11, 50797), (16, 50911), (17, 50956), (18, 50977), (19, 51016),

Gene: RoMag\_97 Start: 51732, Stop: 52271, Start Num: 5

Candidate Starts for RoMag\_97:

(Start: 5 @51732 has 191 MA's), (7, 51813), (8, 51846), (9, 51888), (11, 51972), (16, 52086), (17, 52131), (18, 52152), (19, 52191),

Gene: Rocha\_101 Start: 51985, Stop: 52524, Start Num: 5

Candidate Starts for Rocha\_101:

(Start: 5 @51985 has 191 MA's), (7, 52066), (8, 52099), (9, 52141), (11, 52225), (16, 52339), (17, 52384), (18, 52405), (19, 52444),

Gene: Ronan\_96 Start: 49683, Stop: 50222, Start Num: 5

Candidate Starts for Ronan\_96:

(Start: 5 @49683 has 191 MA's), (7, 49764), (8, 49797), (9, 49839), (11, 49923), (16, 50037), (17, 50082), (18, 50103), (19, 50142),

Gene: Roots515\_101 Start: 52717, Stop: 53256, Start Num: 5

Candidate Starts for Roots515\_101:

(Start: 5 @52717 has 191 MA's), (7, 52798), (8, 52831), (9, 52873), (11, 52957), (16, 53071), (17, 53116), (18, 53137), (19, 53176),

Gene: SVoro\_100 Start: 52894, Stop: 53433, Start Num: 5

Candidate Starts for SVoro\_100:

(Start: 5 @52894 has 191 MA's), (7, 52975), (8, 53008), (9, 53050), (11, 53134), (16, 53248), (17, 53293), (18, 53314), (19, 53353),

Gene: Salacia\_106 Start: 52858, Stop: 53397, Start Num: 5

Candidate Starts for Salacia\_106:

(Start: 5 @52858 has 191 MA's), (7, 52939), (8, 52972), (9, 53014), (11, 53098), (16, 53212), (17, 53257), (18, 53278), (19, 53317),

Gene: Sauce\_103 Start: 51720, Stop: 52259, Start Num: 5

Candidate Starts for Sauce\_103:

(Start: 5 @51720 has 191 MA's), (7, 51801), (8, 51834), (9, 51876), (11, 51960), (16, 52074), (17, 52119), (18, 52140), (19, 52179),

Gene: ScottMcG\_99 Start: 51482, Stop: 52021, Start Num: 5

Candidate Starts for ScottMcG\_99:

(Start: 5 @51482 has 191 MA's), (7, 51563), (8, 51596), (9, 51638), (11, 51722), (16, 51836), (17, 51881), (18, 51902), (19, 51941),

Gene: Sebata\_104 Start: 53189, Stop: 53728, Start Num: 5

Candidate Starts for Sebata\_104:

(Start: 5 @53189 has 191 MA's), (7, 53270), (8, 53303), (9, 53345), (11, 53429), (16, 53543), (17, 53588), (18, 53609), (19, 53648),

Gene: Shaqnato\_95 Start: 50595, Stop: 51134, Start Num: 5

Candidate Starts for Shaqnato\_95:

(Start: 5 @50595 has 191 MA's), (7, 50676), (8, 50709), (9, 50751), (11, 50835), (16, 50949), (17, 50994), (18, 51015), (19, 51054),

Gene: Shelob\_104 Start: 53305, Stop: 53844, Start Num: 5

Candidate Starts for Shelob\_104:

(Start: 5 @53305 has 191 MA's), (7, 53386), (8, 53419), (9, 53461), (12, 53614), (16, 53659), (17, 53704), (18, 53725), (19, 53764),

Gene: ShiaLabeouf\_101 Start: 51844, Stop: 52383, Start Num: 5

Candidate Starts for ShiaLabeouf\_101:

(Start: 5 @51844 has 191 MA's), (7, 51925), (8, 51958), (9, 52000), (11, 52084), (16, 52198), (17, 52243), (18, 52264), (19, 52303),

Gene: Shifa\_91 Start: 50570, Stop: 51109, Start Num: 5

Candidate Starts for Shifa\_91:

(Start: 5 @50570 has 191 MA's), (7, 50651), (8, 50684), (9, 50726), (11, 50810), (16, 50924), (17, 50969), (18, 50990), (19, 51029),

Gene: Shnickers\_102 Start: 51808, Stop: 52347, Start Num: 5

Candidate Starts for Shnickers\_102:

(Start: 5 @51808 has 191 MA's), (7, 51889), (8, 51922), (9, 51964), (11, 52048), (16, 52162), (17, 52207), (18, 52228), (19, 52267),

Gene: Shrimp\_102 Start: 52528, Stop: 53067, Start Num: 5

Candidate Starts for Shrimp\_102:

(Start: 5 @52528 has 191 MA's), (7, 52609), (8, 52642), (9, 52684), (11, 52768), (16, 52882), (17, 52927), (18, 52948), (19, 52987),

Gene: SilverDipper\_103 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for SilverDipper\_103:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: SiwenD96\_104 Start: 53219, Stop: 53758, Start Num: 5

Candidate Starts for SiwenD96\_104:

(Start: 5 @53219 has 191 MA's), (7, 53300), (8, 53333), (9, 53375), (11, 53459), (16, 53573), (17, 53618), (18, 53639), (19, 53678),

Gene: SmallFry\_102 Start: 51033, Stop: 51572, Start Num: 5

Candidate Starts for SmallFry\_102:

(Start: 5 @51033 has 191 MA's), (7, 51114), (8, 51147), (9, 51189), (11, 51273), (16, 51387), (17, 51432), (18, 51453), (19, 51492),

Gene: SoilZilla\_98 Start: 51807, Stop: 52346, Start Num: 5

Candidate Starts for SoilZilla\_98:

(Start: 5 @51807 has 191 MA's), (7, 51888), (8, 51921), (9, 51963), (11, 52047), (16, 52161), (17, 52206), (18, 52227), (19, 52266),

Gene: Spec\_99 Start: 51573, Stop: 52112, Start Num: 5

Candidate Starts for Spec\_99:

(Start: 5 @51573 has 191 MA's), (7, 51654), (8, 51687), (9, 51729), (11, 51813), (16, 51927), (17, 51972), (18, 51993), (19, 52032),

Gene: Specks\_107 Start: 53707, Stop: 54246, Start Num: 5

Candidate Starts for Specks\_107:

(Start: 5 @53707 has 191 MA's), (7, 53788), (8, 53821), (9, 53863), (11, 53947), (16, 54061), (17, 54106), (18, 54127), (19, 54166),

Gene: Sprinklers\_98 Start: 51092, Stop: 51631, Start Num: 5

Candidate Starts for Sprinklers\_98:

(Start: 5 @51092 has 191 MA's), (7, 51173), (8, 51206), (9, 51248), (11, 51332), (16, 51446), (17, 51491), (18, 51512), (19, 51551),

Gene: Spud\_102 Start: 52607, Stop: 53146, Start Num: 5

Candidate Starts for Spud\_102:

(Start: 5 @52607 has 191 MA's), (7, 52688), (8, 52721), (9, 52763), (11, 52847), (16, 52961), (17, 53006), (18, 53027), (19, 53066),

Gene: SrishMeg2525\_101 Start: 52626, Stop: 53165, Start Num: 5

Candidate Starts for SrishMeg2525\_101:

(Start: 5 @52626 has 191 MA's), (7, 52707), (8, 52740), (9, 52782), (11, 52866), (16, 52980), (17, 53025), (18, 53046), (19, 53085),

Gene: StephanieG\_101 Start: 53437, Stop: 53976, Start Num: 5

Candidate Starts for StephanieG\_101:

(Start: 5 @53437 has 191 MA's), (7, 53518), (8, 53551), (9, 53593), (11, 53677), (16, 53791), (17, 53836), (18, 53857), (19, 53896),

Gene: Stubby\_95 Start: 50727, Stop: 51425, Start Num: 5

Candidate Starts for Stubby\_95:

(Start: 5 @50727 has 191 MA's), (7, 50808), (8, 50841), (9, 50883), (11, 50967), (13, 51117), (14, 51129), (16, 51240), (17, 51285), (18, 51306), (19, 51345),

Gene: StubbySaigey\_105 Start: 51224, Stop: 51763, Start Num: 5

Candidate Starts for StubbySaigey\_105:

(Start: 5 @51224 has 191 MA's), (7, 51305), (8, 51338), (9, 51380), (11, 51464), (16, 51578), (17, 51623), (18, 51644), (19, 51683),

Gene: Substance289\_100 Start: 51326, Stop: 51865, Start Num: 5

Candidate Starts for Substance289\_100:

(Start: 5 @51326 has 191 MA's), (7, 51407), (8, 51440), (9, 51482), (11, 51566), (16, 51680), (17, 51725), (18, 51746), (19, 51785),

Gene: Tainan\_106 Start: 53030, Stop: 53569, Start Num: 5

Candidate Starts for Tainan\_106:

(Start: 5 @53030 has 191 MA's), (7, 53111), (8, 53144), (9, 53186), (11, 53270), (16, 53384), (17, 53429), (18, 53450), (19, 53489),

Gene: Teardrop\_101 Start: 51031, Stop: 51570, Start Num: 5

Candidate Starts for Teardrop\_101:

(Start: 5 @51031 has 191 MA's), (7, 51112), (8, 51145), (9, 51187), (11, 51271), (16, 51385), (17, 51430), (18, 51451), (19, 51490),

Gene: TinyTim\_102 Start: 52284, Stop: 52823, Start Num: 5

Candidate Starts for TinyTim\_102:

(Start: 5 @52284 has 191 MA's), (7, 52365), (8, 52398), (9, 52440), (11, 52524), (16, 52638), (17, 52683), (18, 52704), (19, 52743),

Gene: Tonenili\_117 Start: 56031, Stop: 56570, Start Num: 5

Candidate Starts for Tonenili\_117:

(Start: 5 @56031 has 191 MA's), (7, 56112), (8, 56145), (9, 56187), (11, 56271), (16, 56385), (17, 56430), (18, 56451), (19, 56490),

Gene: Tortoise16\_99 Start: 51632, Stop: 52171, Start Num: 5

Candidate Starts for Tortoise16\_99:

(Start: 5 @51632 has 191 MA's), (7, 51713), (8, 51746), (9, 51788), (11, 51872), (16, 51986), (17, 52031), (18, 52052), (19, 52091),

Gene: Trinitium\_99 Start: 50990, Stop: 51529, Start Num: 5

Candidate Starts for Trinitium\_99:

(Start: 5 @50990 has 191 MA's), (7, 51071), (8, 51104), (9, 51146), (11, 51230), (16, 51344), (17, 51389), (18, 51410), (19, 51449),

Gene: Turret\_97 Start: 50435, Stop: 50974, Start Num: 5

Candidate Starts for Turret\_97:

(Start: 5 @50435 has 191 MA's), (7, 50516), (8, 50549), (9, 50591), (11, 50675), (16, 50789), (17, 50834), (18, 50855), (19, 50894),

Gene: Tyke\_103 Start: 53173, Stop: 53712, Start Num: 5

Candidate Starts for Tyke\_103:

(Start: 5 @53173 has 191 MA's), (7, 53254), (8, 53287), (9, 53329), (11, 53413), (16, 53527), (17, 53572), (18, 53593), (19, 53632),

Gene: ValleyTerrace\_102 Start: 51052, Stop: 51591, Start Num: 5

Candidate Starts for ValleyTerrace\_102:

(Start: 5 @51052 has 191 MA's), (7, 51133), (8, 51166), (9, 51208), (11, 51292), (16, 51406), (17, 51451), (18, 51472), (19, 51511),

Gene: Vortrix\_116 Start: 55349, Stop: 55888, Start Num: 5

Candidate Starts for Vortrix\_116:

(Start: 5 @55349 has 191 MA's), (7, 55430), (8, 55463), (9, 55505), (10, 55571), (11, 55589), (16, 55703), (17, 55748), (18, 55769), (19, 55808),

Gene: Wally\_101 Start: 51062, Stop: 51601, Start Num: 5

Candidate Starts for Wally\_101:

(Start: 5 @51062 has 191 MA's), (7, 51143), (8, 51176), (9, 51218), (11, 51302), (16, 51416), (17, 51461), (18, 51482), (19, 51521),

Gene: Willis\_103 Start: 52419, Stop: 52958, Start Num: 5

Candidate Starts for Willis\_103:

(Start: 5 @52419 has 191 MA's), (7, 52500), (8, 52533), (9, 52575), (11, 52659), (16, 52773), (17, 52818), (18, 52839), (19, 52878),

Gene: Yassified\_99 Start: 51139, Stop: 51678, Start Num: 5

Candidate Starts for Yassified\_99:

(Start: 5 @51139 has 191 MA's), (7, 51220), (8, 51253), (9, 51295), (11, 51379), (16, 51493), (17, 51538), (18, 51559), (19, 51598),

Gene: YemiJoy2021\_103 Start: 52521, Stop: 53060, Start Num: 5

Candidate Starts for YemiJoy2021\_103:

(Start: 5 @52521 has 191 MA's), (7, 52602), (8, 52635), (9, 52677), (11, 52761), (16, 52875), (17, 52920), (18, 52941), (19, 52980),

Gene: YoungMoneyMata\_103 Start: 51685, Stop: 52224, Start Num: 5

Candidate Starts for YoungMoneyMata\_103:

(Start: 5 @51685 has 191 MA's), (7, 51766), (8, 51799), (9, 51841), (11, 51925), (16, 52039), (17, 52084), (18, 52105), (19, 52144),

Gene: Yucca\_102 Start: 52203, Stop: 52742, Start Num: 5

Candidate Starts for Yucca\_102:

(Start: 5 @52203 has 191 MA's), (7, 52284), (8, 52317), (9, 52359), (11, 52443), (16, 52557), (17, 52602), (18, 52623), (19, 52662),

Gene: Zalkecks\_103 Start: 52204, Stop: 52743, Start Num: 5

Candidate Starts for Zalkecks\_103:

(Start: 5 @52204 has 191 MA's), (7, 52285), (8, 52318), (9, 52360), (11, 52444), (16, 52558), (17, 52603), (18, 52624), (19, 52663),

Gene: Zeenon\_104 Start: 52289, Stop: 52828, Start Num: 5

Candidate Starts for Zeenon\_104:

(Start: 5 @52289 has 191 MA's), (7, 52370), (8, 52403), (9, 52445), (11, 52529), (16, 52643), (17, 52688), (18, 52709), (19, 52748),

Gene: ZygoTaiga\_101 Start: 53449, Stop: 53988, Start Num: 5

Candidate Starts for ZygoTaiga\_101:

(Start: 5 @53449 has 191 MA's), (7, 53530), (8, 53563), (9, 53605), (11, 53689), (16, 53803), (17, 53848), (18, 53869), (19, 53908),