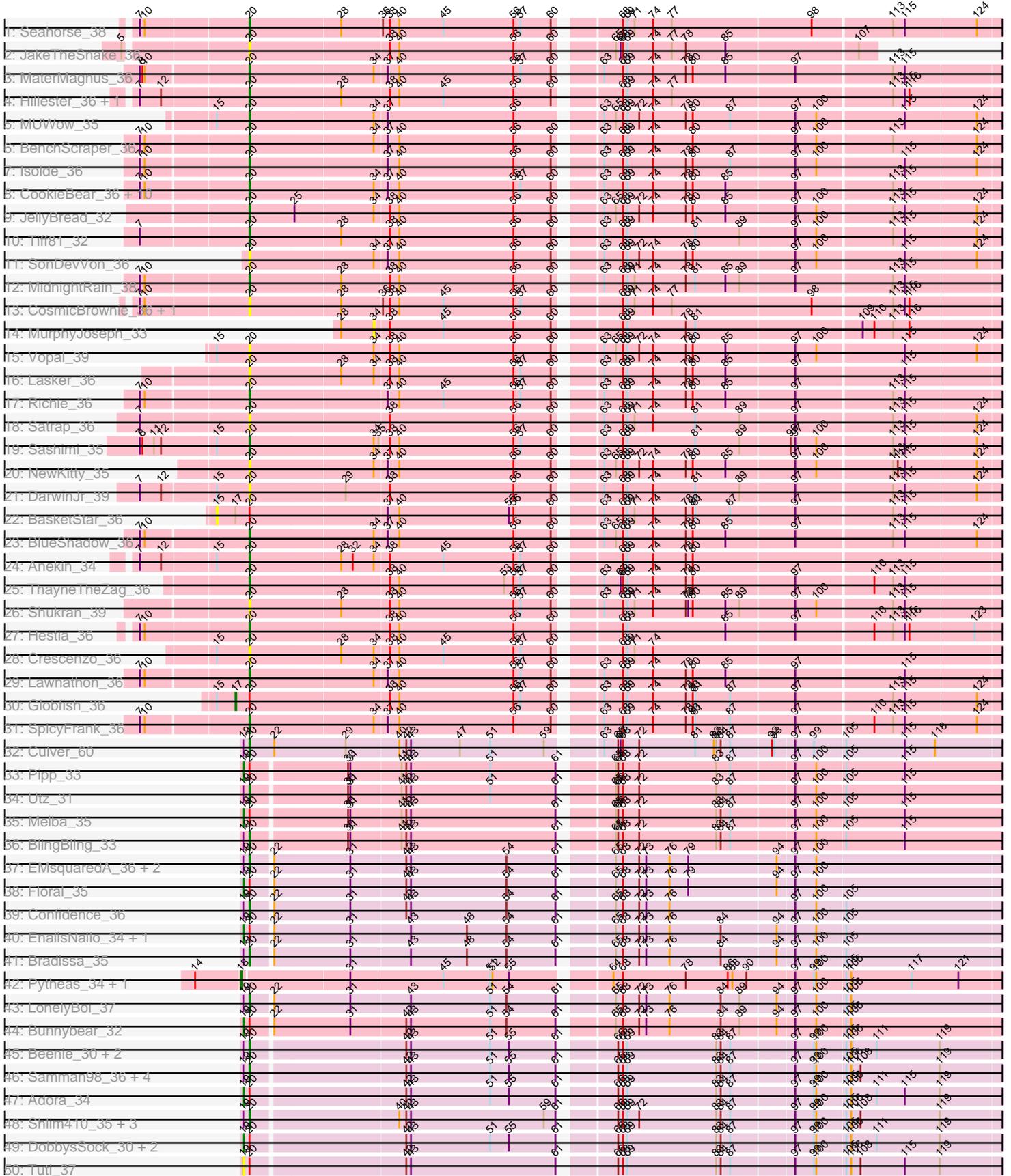
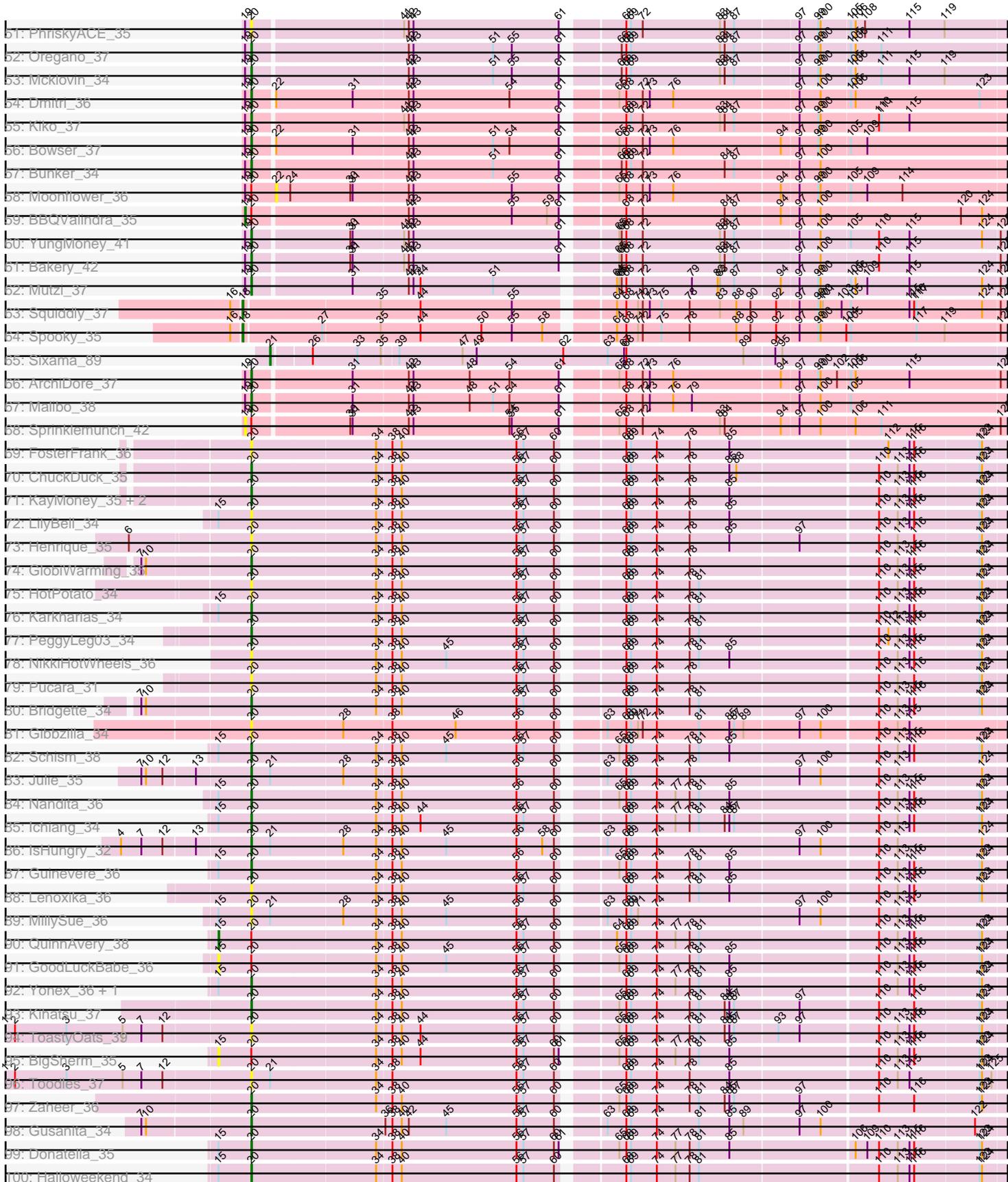


Pham 285359



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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 285359 Report

This analysis was run 03/28/26 on database version 641.

Pham number 285359 has 141 members, 39 are drafts.

Phages represented in each track:

- Track 1 : Seahorse\_38
- Track 2 : JakeTheSnake\_36
- Track 3 : MaterMagnus\_36
- Track 4 : Hillester\_36, RadFad\_36
- Track 5 : MUWow\_35
- Track 6 : BenchScraper\_36
- Track 7 : Isolde\_36
- Track 8 : CookieBear\_36, Sporco\_37, Aikyam\_33, Sakai\_36, Auxilium\_34, Raphaella\_36, Mapleville\_36, Kabloowy\_36, Gorpy\_37, BillyTP\_37, YoungHarleezy\_36
- Track 9 : JellyBread\_32
- Track 10 : Tiff81\_32
- Track 11 : SonDevVon\_36
- Track 12 : MidnightRain\_38
- Track 13 : CosmicBrownie\_36, GumGum\_37
- Track 14 : MurphyJoseph\_33
- Track 15 : Vopal\_39
- Track 16 : Lasker\_36
- Track 17 : Richie\_36
- Track 18 : Satrap\_36
- Track 19 : Sashimi\_35
- Track 20 : NewKitty\_35
- Track 21 : DarwinJr\_39
- Track 22 : BasketStar\_36
- Track 23 : BlueShadow\_36
- Track 24 : Anekin\_34
- Track 25 : ThayneTheZag\_36
- Track 26 : Shukran\_39
- Track 27 : Hestia\_36
- Track 28 : Crescenzo\_36
- Track 29 : Lawnathon\_36
- Track 30 : Globfish\_36
- Track 31 : SpicyFrank\_36
- Track 32 : Culver\_60
- Track 33 : Pipp\_33
- Track 34 : Utz\_31
- Track 35 : Melba\_35

- Track 36 : BlingBling\_33
- Track 37 : EMSquaredA\_36, Marteena\_35, Pollux\_37
- Track 38 : Floral\_35
- Track 39 : Confidence\_36
- Track 40 : EnalisNailo\_34, Lilas\_37
- Track 41 : Bradissa\_35
- Track 42 : Pytheas\_34, Jablanski\_34
- Track 43 : LonelyBoi\_37
- Track 44 : Bunnybear\_32
- Track 45 : Beenie\_30, Invectra\_37, MichaelScott\_36
- Track 46 : Samman98\_36, Annalisa\_34, Dolores\_37, Thimann\_34, WinkNick\_38
- Track 47 : Adora\_34
- Track 48 : Shlim410\_35, Howe\_36, Hortense\_36, Twinkle\_35
- Track 49 : DobbysSock\_30, Clark\_36, Dorito\_32
- Track 50 : Tuti\_37
- Track 51 : PhriskyACE\_35
- Track 52 : Oregano\_37
- Track 53 : Mcklovin\_34
- Track 54 : Dmitri\_36
- Track 55 : Kiko\_37
- Track 56 : Bowser\_37
- Track 57 : Bunker\_34
- Track 58 : Moonflower\_36
- Track 59 : BBQValindra\_35
- Track 60 : YungMoney\_41
- Track 61 : Bakery\_42
- Track 62 : Mutzi\_37
- Track 63 : Squiddly\_37
- Track 64 : Spooky\_35
- Track 65 : Sixama\_89
- Track 66 : ArchiDore\_37
- Track 67 : Malibo\_38
- Track 68 : Sprinklemunch\_42
- Track 69 : FosterFrank\_36
- Track 70 : ChuckDuck\_35
- Track 71 : KayMoney\_35, Constance\_34, Judy\_35
- Track 72 : LilyBell\_34
- Track 73 : Henrique\_35
- Track 74 : GlobiWarming\_35
- Track 75 : HotPotato\_34
- Track 76 : Karkharias\_34
- Track 77 : PeggyLeg03\_34
- Track 78 : NikkiHotWheels\_36
- Track 79 : Pucara\_31
- Track 80 : Bridgette\_34
- Track 81 : Gibbzilla\_34
- Track 82 : Schism\_38
- Track 83 : Julie\_35
- Track 84 : Nandita\_36
- Track 85 : Ichiang\_34
- Track 86 : IsHungry\_32
- Track 87 : Guinevere\_36
- Track 88 : Lenoxika\_36

- Track 89 : MillySue\_36
- Track 90 : QuinnAvery\_38
- Track 91 : GoodLuckBabe\_36
- Track 92 : Yonex\_36, Ryan\_36
- Track 93 : Kihatsu\_37
- Track 94 : ToastyOats\_39
- Track 95 : BigSherm\_35
- Track 96 : Toodles\_37
- Track 97 : Zaheer\_36
- Track 98 : Gusanita\_34
- Track 99 : Donatella\_35
- Track 100 : Halloweekend\_34
- Track 101 : Popper\_34
- Track 102 : Dirtdigger\_36
- Track 103 : Cole\_34
- Track 104 : AllBusiness\_33
- Track 105 : Cassini\_27
- Track 106 : BellaJr\_33
- Track 107 : BlackSpider\_31
- Track 108 : Bauer\_32
- Track 109 : Zucker\_29
- Track 110 : Maja\_28
- Track 111 : Ball\_25

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

The start number called the most often in the published annotations is 20, it was called in 84 of the 102 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Aikyam\_33, AllBusiness\_33, Anekin\_34, Annalisa\_34, ArchiDore\_37, Auxilium\_34, Bakery\_42, Ball\_25, Bauer\_32, Beenie\_30, BellaJr\_33, BenchScraper\_36, BillyTP\_37, BlackSpider\_31, BlingBling\_33, BlueShadow\_36, Bowser\_37, Bradissa\_35, Bridgette\_34, Bunker\_34, ChuckDuck\_35, Cole\_34, Confidence\_36, Constance\_34, CookieBear\_36, CosmicBrownie\_36, Crescenzo\_36, Culver\_60, DarwinJr\_39, Dirtdigger\_36, Dmitri\_36, Dolores\_37, Donatella\_35, EMSquaredA\_36, FosterFrank\_36, Gibbzilla\_34, GlobiWarming\_35, Gorpy\_37, Guinevere\_36, GumGum\_37, Gusanita\_34, Halloweekend\_34, Henrique\_35, Hestia\_36, Hillester\_36, Hortense\_36, HotPotato\_34, Howe\_36, Ichiang\_34, Invectra\_37, IsHungry\_32, Isolde\_36, JakeTheSnake\_36, JellyBread\_32, Judy\_35, Julie\_35, Kabloowy\_36, Karkharias\_34, KayMoney\_35, Kihatsu\_37, Kiko\_37, Lasker\_36, Lawnathon\_36, Lenoxika\_36, LilyBell\_34, LonelyBoi\_37, MUWow\_35, Maja\_28, Malibo\_38, Mapleville\_36, Marteena\_35, MaterMagnus\_36, Mcklovin\_34, MichaelScott\_36, MidnightRain\_38, MillySue\_36, Mutzi\_37, Nandita\_36, NewKitty\_35, NikkiHotWheels\_36, Oregano\_37, PeggyLeg03\_34, PhriskyACE\_35, Pollux\_37, Popper\_34, Pucara\_31, RadFad\_36, Raphaella\_36, Richie\_36, Ryan\_36, Sakai\_36, Samman98\_36, Sashimi\_35, Satrap\_36, Schism\_38, Seahorse\_38, Shlim410\_35, Shukran\_39, SonDevVon\_36, SpicyFrank\_36, Sporco\_37, ThayneTheZag\_36, Thimann\_34, Tiff81\_32, ToastyOats\_39, Toodles\_37, Twinkle\_35, Utz\_31, Vopal\_39, WinkNick\_38, Yonex\_36, YoungHarleezy\_36,

YungMoney\_41, Zaheer\_36, Zucker\_29,

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

- Adora\_34, BBQValindra\_35, BasketStar\_36, BigSherm\_35, Bunnybear\_32, Cassini\_27, Clark\_36, DobbysSock\_30, Dorito\_32, EnalisNailo\_34, Floral\_35, Globfish\_36, GoodLuckBabe\_36, Lilas\_37, Melba\_35, Moonflower\_36, Pipp\_33, QuinnAvery\_38, Sprinklemunch\_42, Tuti\_37,

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

- Jablanski\_34, MurphyJoseph\_33, Pytheas\_34, Sixama\_89, Spooky\_35, Squiddly\_37,

### Summary by start number:

Start 15:

- Found in 26 of 141 ( 18.4% ) of genes in pham
- Manual Annotations of this start: 1 of 102
- Called 19.2% of time when present
- Phage (with cluster) where this start called: BasketStar\_36 (AY), BigSherm\_35 (FF), Cassini\_27 (FN), GoodLuckBabe\_36 (FF), QuinnAvery\_38 (FF),

Start 17:

- Found in 2 of 141 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 102
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Globfish\_36 (AY),

Start 18:

- Found in 4 of 141 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 4 of 102
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jablanski\_34 (CY3), Pytheas\_34 (CY3), Spooky\_35 (DN2), Squiddly\_37 (DN2),

Start 19:

- Found in 47 of 141 ( 33.3% ) of genes in pham
- Manual Annotations of this start: 11 of 102
- Called 27.7% of time when present
- Phage (with cluster) where this start called: Adora\_34 (CZ4), BBQValindra\_35 (DB), Bunnybear\_32 (CZ), Clark\_36 (CZ4), DobbysSock\_30 (CZ4), Dorito\_32 (CZ4), EnalisNailo\_34 (CY1), Floral\_35 (CY1), Lilas\_37 (CY1), Melba\_35 (CV), Pipp\_33 (CV), Sprinklemunch\_42 (DW), Tuti\_37 (CZ4),

Start 20:

- Found in 135 of 141 ( 95.7% ) of genes in pham
- Manual Annotations of this start: 84 of 102
- Called 85.2% of time when present
- Phage (with cluster) where this start called: Aikyam\_33 (AY), AllBusiness\_33 (FF), Anekin\_34 (AY), Annalisa\_34 (CZ4), ArchiDore\_37 (DW), Auxilium\_34 (AY), Bakery\_42 (DC1), Ball\_25 (singleton), Bauer\_32 (FN), Beenie\_30 (CZ4), BellaJr\_33 (FN), BenchScraper\_36 (AY), BillyTP\_37 (AY), BlackSpider\_31 (FN), BlingBling\_33 (CV), BlueShadow\_36 (AY), Bowser\_37 (DB), Bradissa\_35 (CY1), Bridgette\_34 (FA), Bunker\_34 (DB), ChuckDuck\_35 (FA), Cole\_34 (FF), Confidence\_36 (CY1),

Constance\_34 (FA), CookieBear\_36 (AY), CosmicBrownie\_36 (AY), Crescenzo\_36 (AY), Culver\_60 (CQ1), DarwinJr\_39 (AY), Dirtdigger\_36 (FF), Dmitri\_36 (DB), Dolores\_37 (CZ4), Donatella\_35 (FF), EMSquaredA\_36 (CY1), FosterFrank\_36 (FA), Gibbzilla\_34 (FB), GlobiWarming\_35 (FA), Gorpy\_37 (AY), Guinevere\_36 (FF), GumGum\_37 (AY), Gusanita\_34 (FF), Halloweekend\_34 (FF), Henrique\_35 (FA), Hestia\_36 (AY), Hillester\_36 (AY), Hortense\_36 (CZ4), HotPotato\_34 (FA), Howe\_36 (CZ4), Ichiang\_34 (FF), Invectra\_37 (CZ4), IsHungry\_32 (FF), Isolde\_36 (AY), JakeTheSnake\_36 (AY), JellyBread\_32 (AY), Judy\_35 (FA), Julie\_35 (FF), Kabloowy\_36 (AY), Karkharias\_34 (FA), KayMoney\_35 (FA), Kihatsu\_37 (FF), Kiko\_37 (DB), Lasker\_36 (AY), Lawnathon\_36 (AY), Lenoxika\_36 (FF), LilyBell\_34 (FA), LonelyBoi\_37 (CY7), MUWow\_35 (AY), Maja\_28 (FO), Malibo\_38 (DW), Mapleville\_36 (AY), Marteena\_35 (CY1), MaterMagnus\_36 (AY), Mcklovin\_34 (CZ4), MichaelScott\_36 (CZ4), MidnightRain\_38 (AY), MillySue\_36 (FF), Mutzi\_37 (DC1), Nandita\_36 (FF), NewKitty\_35 (AY), NikkiHotWheels\_36 (FA), Oregano\_37 (CZ4), PeggyLeg03\_34 (FA), PhriskyACE\_35 (CZ4), Pollux\_37 (CY1), Popper\_34 (FF), Pucara\_31 (FA), RadFad\_36 (AY), Raphaella\_36 (AY), Richie\_36 (AY), Ryan\_36 (FF), Sakai\_36 (AY), Samman98\_36 (CZ4), Sashimi\_35 (AY), Satrap\_36 (AY), Schism\_38 (FF), Seahorse\_38 (AY), Shlim410\_35 (CZ4), Shukran\_39 (AY), SonDevVon\_36 (AY), SpicyFrank\_36 (AY), Sporco\_37 (AY), ThayneTheZag\_36 (AY), Thimann\_34 (CZ4), Tiff81\_32 (AY), ToastyOats\_39 (FF), Toodles\_37 (FF), Twinkle\_35 (CZ4), Utz\_31 (CV), Vopal\_39 (AY), WinkNick\_38 (CZ4), Yonex\_36 (FF), YoungHarleezy\_36 (AY), YungMoney\_41 (DC1), Zaheer\_36 (FF), Zucker\_29 (FN),

#### Start 21:

- Found in 7 of 141 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 102
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Sixama\_89 (DS),

#### Start 22:

- Found in 14 of 141 ( 9.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Moonflower\_36 (DB),

#### Start 34:

- Found in 67 of 141 ( 47.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.5% of time when present
- Phage (with cluster) where this start called: MurphyJoseph\_33 (AY),

### Summary by clusters:

There are 19 clusters represented in this pham: CY3, CY1, CY7, CZ, DB, singleton, CZ4, DS, FA, FB, FF, DN2, AY, DW, CQ1, DC1, CV, FN, FO,

#### Info for manual annotations of cluster AY:

- Start number 17 was manually annotated 1 time for cluster AY.
- Start number 20 was manually annotated 25 times for cluster AY.

#### Info for manual annotations of cluster CQ1:

- Start number 20 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CV:

- Start number 19 was manually annotated 2 times for cluster CV.
- Start number 20 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CY1:

- Start number 19 was manually annotated 3 times for cluster CY1.
- Start number 20 was manually annotated 5 times for cluster CY1.

Info for manual annotations of cluster CY3:

- Start number 18 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY7:

- Start number 20 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ:

- Start number 19 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ4:

- Start number 19 was manually annotated 4 times for cluster CZ4.
- Start number 20 was manually annotated 14 times for cluster CZ4.

Info for manual annotations of cluster DB:

- Start number 19 was manually annotated 1 time for cluster DB.
- Start number 20 was manually annotated 4 times for cluster DB.

Info for manual annotations of cluster DC1:

- Start number 20 was manually annotated 3 times for cluster DC1.

Info for manual annotations of cluster DN2:

- Start number 18 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DS:

- Start number 21 was manually annotated 1 time for cluster DS.

Info for manual annotations of cluster DW:

- Start number 20 was manually annotated 2 times for cluster DW.

Info for manual annotations of cluster FA:

- Start number 20 was manually annotated 8 times for cluster FA.

Info for manual annotations of cluster FF:

- Start number 15 was manually annotated 1 time for cluster FF.
- Start number 20 was manually annotated 15 times for cluster FF.

Info for manual annotations of cluster FN:

- Start number 20 was manually annotated 3 times for cluster FN.

Info for manual annotations of cluster FO:

- Start number 20 was manually annotated 1 time for cluster FO.

### **Gene Information:**

Gene: Adora\_34 Start: 29404, Stop: 30327, Start Num: 19

Candidate Starts for Adora\_34:

(Start: 19 @29404 has 11 MA's), (Start: 20 @29410 has 84 MA's), (42, 29599), (43, 29605), (51, 29707), (55, 29731), (61, 29791), (66, 29848), (68, 29854), (69, 29860), (83, 29974), (84, 29980), (87, 29992), (97, 30067), (99, 30091), (100, 30094), (105, 30130), (106, 30136), (111, 30169), (115, 30205), (119, 30250),

Gene: Aikyam\_33 Start: 22410, Stop: 23327, Start Num: 20

Candidate Starts for Aikyam\_33:

(7, 22281), (10, 22287), (Start: 20 @22410 has 84 MA's), (34, 22566), (37, 22581), (40, 22593), (56, 22740), (57, 22749), (60, 22788), (63, 22833), (68, 22857), (69, 22863), (74, 22896), (78, 22938), (80, 22947), (85, 22989), (97, 23073), (113, 23193), (115, 23208),

Gene: AllBusiness\_33 Start: 27251, Stop: 28171, Start Num: 20

Candidate Starts for AllBusiness\_33:

(Start: 15 @27209 has 1 MA's), (Start: 20 @27251 has 84 MA's), (Start: 21 @27275 has 1 MA's), (28, 27365), (34, 27407), (38, 27425), (40, 27437), (45, 27494), (56, 27584), (60, 27632), (63, 27677), (68, 27701), (69, 27707), (74, 27740), (78, 27782), (85, 27833), (97, 27917), (110, 28013), (113, 28037), (116, 28058), (124, 28142),

Gene: Anekin\_34 Start: 24275, Stop: 25195, Start Num: 20

Candidate Starts for Anekin\_34:

(7, 24146), (12, 24173), (Start: 15 @24233 has 1 MA's), (Start: 20 @24275 has 84 MA's), (28, 24389), (32, 24404), (34, 24431), (38, 24449), (45, 24518), (56, 24608), (57, 24617), (60, 24656), (68, 24725), (69, 24731), (74, 24764), (78, 24806), (80, 24815),

Gene: Annalisa\_34 Start: 27182, Stop: 28099, Start Num: 20

Candidate Starts for Annalisa\_34:

(Start: 19 @27176 has 11 MA's), (Start: 20 @27182 has 84 MA's), (42, 27371), (43, 27377), (51, 27479), (55, 27503), (61, 27563), (66, 27620), (68, 27626), (69, 27632), (83, 27746), (84, 27752), (87, 27764), (97, 27839), (99, 27863), (100, 27866), (105, 27902), (106, 27908), (108, 27920), (119, 28022),

Gene: ArchiDore\_37 Start: 30835, Stop: 31752, Start Num: 20

Candidate Starts for ArchiDore\_37:

(Start: 19 @30829 has 11 MA's), (Start: 20 @30835 has 84 MA's), (31, 30955), (42, 31024), (43, 31030), (48, 31102), (54, 31153), (61, 31216), (65, 31270), (68, 31279), (72, 31300), (73, 31309), (76, 31339), (94, 31471), (97, 31492), (99, 31516), (100, 31519), (102, 31540), (105, 31555), (106, 31561), (115, 31630), (126, 31744),

Gene: Auxilium\_34 Start: 22112, Stop: 23029, Start Num: 20

Candidate Starts for Auxilium\_34:

(7, 21983), (10, 21989), (Start: 20 @22112 has 84 MA's), (34, 22268), (37, 22283), (40, 22295), (56, 22442), (57, 22451), (60, 22490), (63, 22535), (68, 22559), (69, 22565), (74, 22598), (78, 22640), (80, 22649), (85, 22691), (97, 22775), (113, 22895), (115, 22910),

Gene: BBQValindra\_35 Start: 29573, Stop: 30496, Start Num: 19

Candidate Starts for BBQValindra\_35:

(Start: 19 @29573 has 11 MA's), (Start: 20 @29579 has 84 MA's), (42, 29768), (43, 29774), (55, 29900), (59, 29945), (61, 29960), (68, 30023), (72, 30044), (84, 30149), (87, 30161), (94, 30215), (97, 30236), (100, 30263), (120, 30440), (124, 30467),

Gene: Bakery\_42 Start: 33465, Stop: 34382, Start Num: 20

Candidate Starts for Bakery\_42:

(Start: 19 @33459 has 11 MA's), (Start: 20 @33465 has 84 MA's), (30, 33582), (31, 33585), (41, 33648), (42, 33654), (43, 33660), (61, 33846), (65, 33900), (66, 33903), (68, 33909), (72, 33930), (83, 34029), (84, 34035), (87, 34047), (97, 34122), (100, 34149), (110, 34221), (115, 34260), (126, 34374),

Gene: Ball\_25 Start: 21363, Stop: 22283, Start Num: 20

Candidate Starts for Ball\_25:

(Start: 20 @21363 has 84 MA's), (Start: 21 @21387 has 1 MA's), (28, 21477), (34, 21519), (38, 21537), (40, 21549), (45, 21606), (47, 21627), (56, 21696), (57, 21705), (60, 21744), (68, 21813), (69, 21819), (74, 21852), (77, 21876), (78, 21894), (85, 21945), (87, 21951), (89, 21963), (113, 22149), (116, 22170), (123, 22251), (124, 22254),

Gene: BasketStar\_36 Start: 24585, Stop: 25544, Start Num: 15

Candidate Starts for BasketStar\_36:

(Start: 15 @24585 has 1 MA's), (Start: 17 @24609 has 1 MA's), (Start: 20 @24627 has 84 MA's), (37, 24798), (40, 24810), (55, 24951), (56, 24957), (60, 25005), (63, 25050), (68, 25074), (69, 25080), (71, 25089), (74, 25113), (78, 25155), (80, 25164), (81, 25167), (87, 25212), (97, 25290), (113, 25410), (115, 25425),

Gene: Bauer\_32 Start: 24145, Stop: 25065, Start Num: 20

Candidate Starts for Bauer\_32:

(Start: 20 @24145 has 84 MA's), (28, 24259), (34, 24301), (38, 24319), (40, 24331), (45, 24388), (56, 24478), (60, 24526), (68, 24595), (69, 24601), (74, 24634), (77, 24658), (113, 24931), (115, 24946), (116, 24952),

Gene: Beenie\_30 Start: 27395, Stop: 28312, Start Num: 20

Candidate Starts for Beenie\_30:

(Start: 19 @27389 has 11 MA's), (Start: 20 @27395 has 84 MA's), (42, 27584), (43, 27590), (51, 27692), (55, 27716), (61, 27776), (66, 27833), (68, 27839), (69, 27845), (83, 27959), (84, 27965), (87, 27977), (97, 28052), (99, 28076), (100, 28079), (105, 28115), (106, 28121), (111, 28154), (119, 28235),

Gene: BellaJr\_33 Start: 25121, Stop: 26041, Start Num: 20

Candidate Starts for BellaJr\_33:

(1, 24830), (2, 24842), (3, 24908), (9, 24998), (Start: 20 @25121 has 84 MA's), (28, 25235), (36, 25286), (38, 25295), (40, 25307), (45, 25364), (56, 25454), (60, 25502), (68, 25571), (69, 25577), (74, 25610), (77, 25634), (113, 25907), (115, 25922), (116, 25928),

Gene: BenchScraper\_36 Start: 24587, Stop: 25504, Start Num: 20

Candidate Starts for BenchScraper\_36:

(7, 24458), (10, 24464), (Start: 20 @24587 has 84 MA's), (34, 24743), (37, 24758), (40, 24770), (56, 24917), (60, 24965), (63, 25010), (68, 25034), (69, 25040), (74, 25073), (80, 25124), (97, 25250), (100, 25277), (113, 25370), (124, 25475),

Gene: BigSherm\_35 Start: 26331, Stop: 27293, Start Num: 15

Candidate Starts for BigSherm\_35:

(Start: 15 @26331 has 1 MA's), (Start: 20 @26373 has 84 MA's), (34, 26529), (38, 26547), (40, 26559), (44, 26583), (56, 26706), (57, 26715), (60, 26754), (61, 26760), (65, 26814), (68, 26823), (69, 26829), (74, 26862), (77, 26886), (78, 26904), (81, 26916), (85, 26955), (110, 27135), (113, 27159), (115, 27174), (116, 27180), (123, 27261), (124, 27264),

Gene: BillyTP\_37 Start: 25308, Stop: 26225, Start Num: 20

Candidate Starts for BillyTP\_37:

(7, 25179), (10, 25185), (Start: 20 @25308 has 84 MA's), (34, 25464), (37, 25479), (40, 25491), (56, 25638), (57, 25647), (60, 25686), (63, 25731), (68, 25755), (69, 25761), (74, 25794), (78, 25836), (80, 25845), (85, 25887), (97, 25971), (113, 26091), (115, 26106),

Gene: BlackSpider\_31 Start: 24033, Stop: 24953, Start Num: 20

Candidate Starts for BlackSpider\_31:

(1, 23742), (2, 23754), (3, 23820), (9, 23910), (Start: 20 @24033 has 84 MA's), (28, 24147), (36, 24198), (38, 24207), (40, 24219), (45, 24276), (56, 24366), (60, 24414), (68, 24483), (69, 24489), (71, 24498), (74, 24522), (77, 24546), (98, 24720), (113, 24819), (114, 24825), (115, 24834), (116, 24840),

Gene: BlingBling\_33 Start: 29081, Stop: 30001, Start Num: 20

Candidate Starts for BlingBling\_33:

(Start: 19 @29075 has 11 MA's), (Start: 20 @29081 has 84 MA's), (30, 29198), (31, 29201), (41, 29264), (42, 29270), (43, 29276), (61, 29462), (65, 29516), (66, 29519), (68, 29525), (72, 29546), (83, 29645), (84, 29651), (87, 29663), (97, 29738), (100, 29765), (105, 29801), (115, 29876),

Gene: BlueShadow\_36 Start: 24572, Stop: 25489, Start Num: 20

Candidate Starts for BlueShadow\_36:

(7, 24443), (10, 24449), (Start: 20 @24572 has 84 MA's), (34, 24728), (37, 24743), (40, 24755), (56, 24902), (60, 24950), (63, 24995), (65, 25010), (68, 25019), (69, 25025), (74, 25058), (78, 25100), (80, 25109), (85, 25151), (97, 25235), (113, 25355), (115, 25370), (124, 25460),

Gene: Bowser\_37 Start: 29401, Stop: 30318, Start Num: 20

Candidate Starts for Bowser\_37:

(Start: 19 @29395 has 11 MA's), (Start: 20 @29401 has 84 MA's), (22, 29425), (31, 29521), (42, 29590), (43, 29596), (51, 29698), (54, 29719), (61, 29782), (65, 29836), (68, 29845), (72, 29866), (73, 29875), (76, 29905), (94, 30037), (97, 30058), (99, 30082), (100, 30085), (105, 30121), (109, 30142),

Gene: Bradissa\_35 Start: 30283, Stop: 31200, Start Num: 20

Candidate Starts for Bradissa\_35:

(Start: 19 @30277 has 11 MA's), (Start: 20 @30283 has 84 MA's), (22, 30307), (31, 30403), (43, 30478), (48, 30550), (54, 30601), (61, 30664), (65, 30718), (68, 30727), (72, 30748), (73, 30757), (76, 30787), (84, 30853), (94, 30919), (97, 30940), (100, 30967), (105, 31003),

Gene: Bridgette\_34 Start: 24627, Stop: 25547, Start Num: 20

Candidate Starts for Bridgette\_34:

(7, 24498), (10, 24504), (Start: 20 @24627 has 84 MA's), (34, 24783), (38, 24801), (40, 24813), (56, 24960), (57, 24969), (60, 25008), (68, 25077), (69, 25083), (74, 25116), (78, 25158), (81, 25170), (110, 25389), (113, 25413), (115, 25428), (116, 25434), (123, 25515), (124, 25518),

Gene: Bunker\_34 Start: 28706, Stop: 29623, Start Num: 20

Candidate Starts for Bunker\_34:

(Start: 19 @28700 has 11 MA's), (Start: 20 @28706 has 84 MA's), (42, 28895), (43, 28901), (51, 29003), (61, 29087), (66, 29144), (68, 29150), (69, 29156), (72, 29171), (84, 29276), (87, 29288), (97, 29363), (100, 29390),

Gene: Bunnybear\_32 Start: 28492, Stop: 29415, Start Num: 19

Candidate Starts for Bunnybear\_32:

(Start: 19 @28492 has 11 MA's), (Start: 20 @28498 has 84 MA's), (22, 28522), (31, 28618), (42, 28687), (43, 28693), (51, 28795), (54, 28816), (61, 28879), (65, 28933), (68, 28942), (72, 28963), (73, 28972), (76, 29002), (84, 29068), (89, 29092), (94, 29134), (97, 29155), (100, 29182), (105, 29218),

(106, 29224),

Gene: Cassini\_27 Start: 21975, Stop: 22931, Start Num: 15

Candidate Starts for Cassini\_27:

(Start: 15 @21975 has 1 MA's), (Start: 20 @22014 has 84 MA's), (29, 22134), (34, 22170), (37, 22185), (40, 22197), (56, 22344), (60, 22392), (63, 22437), (65, 22452), (68, 22461), (69, 22467), (74, 22500), (78, 22542), (80, 22551), (81, 22554), (87, 22599), (97, 22677), (113, 22797), (115, 22812), (124, 22902),

Gene: ChuckDuck\_35 Start: 24394, Stop: 25314, Start Num: 20

Candidate Starts for ChuckDuck\_35:

(Start: 20 @24394 has 84 MA's), (34, 24550), (38, 24568), (40, 24580), (56, 24727), (57, 24736), (60, 24775), (68, 24844), (69, 24850), (74, 24883), (78, 24925), (85, 24976), (88, 24985), (110, 25156), (113, 25180), (115, 25195), (116, 25201), (123, 25282), (124, 25285),

Gene: Clark\_36 Start: 27206, Stop: 28129, Start Num: 19

Candidate Starts for Clark\_36:

(Start: 19 @27206 has 11 MA's), (Start: 20 @27212 has 84 MA's), (42, 27401), (43, 27407), (51, 27509), (55, 27533), (61, 27593), (66, 27650), (68, 27656), (69, 27662), (83, 27776), (84, 27782), (87, 27794), (97, 27869), (99, 27893), (100, 27896), (105, 27932), (106, 27938), (111, 27971), (119, 28052),

Gene: Cole\_34 Start: 26120, Stop: 27040, Start Num: 20

Candidate Starts for Cole\_34:

(Start: 15 @26078 has 1 MA's), (Start: 20 @26120 has 84 MA's), (34, 26276), (35, 26282), (38, 26294), (40, 26306), (56, 26453), (57, 26462), (60, 26501), (64, 26558), (68, 26570), (69, 26576), (74, 26609), (77, 26633), (78, 26651), (81, 26663), (85, 26702), (106, 26852), (110, 26882), (113, 26906), (116, 26927), (123, 27008), (124, 27011),

Gene: Confidence\_36 Start: 28133, Stop: 29050, Start Num: 20

Candidate Starts for Confidence\_36:

(Start: 19 @28127 has 11 MA's), (Start: 20 @28133 has 84 MA's), (22, 28157), (31, 28253), (42, 28322), (43, 28328), (54, 28451), (61, 28514), (65, 28568), (68, 28577), (72, 28598), (73, 28607), (76, 28637), (97, 28790), (100, 28817), (105, 28853),

Gene: Constance\_34 Start: 24866, Stop: 25786, Start Num: 20

Candidate Starts for Constance\_34:

(Start: 20 @24866 has 84 MA's), (34, 25022), (38, 25040), (40, 25052), (56, 25199), (57, 25208), (60, 25247), (68, 25316), (69, 25322), (74, 25355), (78, 25397), (85, 25448), (110, 25628), (113, 25652), (115, 25667), (116, 25673), (123, 25754), (124, 25757),

Gene: CookieBear\_36 Start: 24572, Stop: 25489, Start Num: 20

Candidate Starts for CookieBear\_36:

(7, 24443), (10, 24449), (Start: 20 @24572 has 84 MA's), (34, 24728), (37, 24743), (40, 24755), (56, 24902), (57, 24911), (60, 24950), (63, 24995), (68, 25019), (69, 25025), (74, 25058), (78, 25100), (80, 25109), (85, 25151), (97, 25235), (113, 25355), (115, 25370),

Gene: CosmicBrownie\_36 Start: 24392, Stop: 25312, Start Num: 20

Candidate Starts for CosmicBrownie\_36:

(7, 24263), (10, 24269), (Start: 20 @24392 has 84 MA's), (28, 24506), (36, 24557), (38, 24566), (40, 24578), (45, 24635), (56, 24725), (57, 24734), (60, 24773), (68, 24842), (69, 24848), (71, 24857), (74, 24881), (77, 24905), (98, 25079), (113, 25178), (115, 25193), (116, 25199),

Gene: Crescenzo\_36 Start: 24998, Stop: 25918, Start Num: 20

Candidate Starts for Crescenzo\_36:

(Start: 15 @24956 has 1 MA's), (Start: 20 @24998 has 84 MA's), (28, 25112), (34, 25154), (38, 25172), (40, 25184), (45, 25241), (56, 25331), (57, 25340), (60, 25379), (68, 25448), (69, 25454), (71, 25463), (74, 25487),

Gene: Culver\_60 Start: 37716, Stop: 38639, Start Num: 20

Candidate Starts for Culver\_60:

(Start: 19 @37710 has 11 MA's), (Start: 20 @37716 has 84 MA's), (22, 37746), (29, 37836), (40, 37902), (42, 37911), (43, 37917), (47, 37980), (51, 38019), (59, 38088), (63, 38142), (66, 38160), (67, 38163), (68, 38166), (72, 38187), (81, 38259), (82, 38283), (83, 38286), (84, 38292), (87, 38304), (92, 38352), (93, 38355), (97, 38379), (99, 38403), (105, 38442), (115, 38517), (118, 38556),

Gene: DarwinJr\_39 Start: 25983, Stop: 26903, Start Num: 20

Candidate Starts for DarwinJr\_39:

(7, 25854), (12, 25881), (Start: 15 @25941 has 1 MA's), (Start: 20 @25983 has 84 MA's), (29, 26103), (38, 26157), (56, 26316), (60, 26364), (63, 26409), (68, 26433), (69, 26439), (74, 26472), (81, 26526), (89, 26583), (97, 26649), (113, 26769), (115, 26784), (124, 26874),

Gene: Dirdigger\_36 Start: 26196, Stop: 27113, Start Num: 20

Candidate Starts for Dirdigger\_36:

(Start: 20 @26196 has 84 MA's), (34, 26352), (40, 26379), (45, 26436), (56, 26526), (57, 26535), (60, 26574), (63, 26619), (68, 26643), (69, 26649), (72, 26664), (74, 26682), (78, 26724), (85, 26775), (97, 26859), (100, 26886), (110, 26955), (122, 27075),

Gene: Dmitri\_36 Start: 30429, Stop: 31346, Start Num: 20

Candidate Starts for Dmitri\_36:

(Start: 19 @30423 has 11 MA's), (Start: 20 @30429 has 84 MA's), (22, 30453), (31, 30549), (42, 30618), (43, 30624), (54, 30747), (61, 30810), (65, 30864), (68, 30873), (72, 30894), (73, 30903), (76, 30933), (97, 31086), (100, 31113), (105, 31149), (106, 31155), (123, 31314),

Gene: DobbysSock\_30 Start: 26128, Stop: 27051, Start Num: 19

Candidate Starts for DobbysSock\_30:

(Start: 19 @26128 has 11 MA's), (Start: 20 @26134 has 84 MA's), (42, 26323), (43, 26329), (51, 26431), (55, 26455), (61, 26515), (66, 26572), (68, 26578), (69, 26584), (83, 26698), (84, 26704), (87, 26716), (97, 26791), (99, 26815), (100, 26818), (105, 26854), (106, 26860), (111, 26893), (119, 26974),

Gene: Dolores\_37 Start: 28084, Stop: 29001, Start Num: 20

Candidate Starts for Dolores\_37:

(Start: 19 @28078 has 11 MA's), (Start: 20 @28084 has 84 MA's), (42, 28273), (43, 28279), (51, 28381), (55, 28405), (61, 28465), (66, 28522), (68, 28528), (69, 28534), (83, 28648), (84, 28654), (87, 28666), (97, 28741), (99, 28765), (100, 28768), (105, 28804), (106, 28810), (108, 28822), (119, 28924),

Gene: Donatella\_35 Start: 26584, Stop: 27504, Start Num: 20

Candidate Starts for Donatella\_35:

(Start: 15 @26542 has 1 MA's), (Start: 20 @26584 has 84 MA's), (34, 26740), (38, 26758), (40, 26770), (56, 26917), (57, 26926), (60, 26965), (61, 26971), (65, 27025), (68, 27034), (69, 27040), (74, 27073), (77, 27097), (78, 27115), (81, 27127), (85, 27166), (106, 27316), (109, 27331), (110, 27346), (113, 27370), (115, 27385), (116, 27391), (123, 27472), (124, 27475),

Gene: Dorito\_32 Start: 25772, Stop: 26695, Start Num: 19

Candidate Starts for Dorito\_32:

(Start: 19 @25772 has 11 MA's), (Start: 20 @25778 has 84 MA's), (42, 25967), (43, 25973), (51, 26075), (55, 26099), (61, 26159), (66, 26216), (68, 26222), (69, 26228), (83, 26342), (84, 26348), (87, 26360), (97, 26435), (99, 26459), (100, 26462), (105, 26498), (106, 26504), (111, 26537), (119, 26618),

Gene: EMSquaredA\_36 Start: 28837, Stop: 29754, Start Num: 20

Candidate Starts for EMSquaredA\_36:

(Start: 19 @28831 has 11 MA's), (Start: 20 @28837 has 84 MA's), (22, 28861), (31, 28957), (42, 29026), (43, 29032), (54, 29155), (61, 29218), (65, 29272), (68, 29281), (72, 29302), (73, 29311), (76, 29341), (79, 29365), (94, 29473), (97, 29494), (100, 29521),

Gene: EnalisNailo\_34 Start: 29811, Stop: 30734, Start Num: 19

Candidate Starts for EnalisNailo\_34:

(Start: 19 @29811 has 11 MA's), (Start: 20 @29817 has 84 MA's), (22, 29841), (31, 29937), (43, 30012), (48, 30084), (54, 30135), (61, 30198), (65, 30252), (68, 30261), (72, 30282), (73, 30291), (76, 30321), (84, 30387), (94, 30453), (97, 30474), (100, 30501), (105, 30537),

Gene: Floral\_35 Start: 30904, Stop: 31827, Start Num: 19

Candidate Starts for Floral\_35:

(Start: 19 @30904 has 11 MA's), (Start: 20 @30910 has 84 MA's), (22, 30934), (31, 31030), (42, 31099), (43, 31105), (54, 31228), (61, 31291), (65, 31345), (68, 31354), (72, 31375), (73, 31384), (76, 31414), (79, 31438), (94, 31546), (97, 31567), (100, 31594),

Gene: FosterFrank\_36 Start: 24468, Stop: 25388, Start Num: 20

Candidate Starts for FosterFrank\_36:

(Start: 20 @24468 has 84 MA's), (34, 24624), (38, 24642), (40, 24654), (56, 24801), (57, 24810), (60, 24849), (68, 24918), (69, 24924), (74, 24957), (78, 24999), (85, 25050), (112, 25242), (115, 25269), (116, 25275), (123, 25356), (124, 25359),

Gene: Gibbzilla\_34 Start: 22108, Stop: 23028, Start Num: 20

Candidate Starts for Gibbzilla\_34:

(Start: 20 @22108 has 84 MA's), (28, 22222), (38, 22282), (46, 22363), (56, 22441), (60, 22489), (63, 22534), (68, 22558), (69, 22564), (71, 22573), (72, 22579), (74, 22597), (81, 22651), (85, 22690), (87, 22696), (89, 22708), (97, 22774), (100, 22801), (110, 22870), (113, 22894), (115, 22909),

Gene: Globfish\_36 Start: 24791, Stop: 25729, Start Num: 17

Candidate Starts for Globfish\_36:

(Start: 15 @24767 has 1 MA's), (Start: 17 @24791 has 1 MA's), (Start: 20 @24809 has 84 MA's), (38, 24983), (40, 24995), (56, 25142), (57, 25151), (60, 25190), (63, 25235), (68, 25259), (69, 25265), (74, 25298), (78, 25340), (80, 25349), (81, 25352), (87, 25397), (97, 25475), (113, 25595), (115, 25610), (124, 25700),

Gene: GlobiWarming\_35 Start: 24310, Stop: 25230, Start Num: 20

Candidate Starts for GlobiWarming\_35:

(7, 24181), (10, 24187), (Start: 20 @24310 has 84 MA's), (34, 24466), (38, 24484), (40, 24496), (56, 24643), (57, 24652), (60, 24691), (68, 24760), (69, 24766), (74, 24799), (78, 24841), (110, 25072), (113, 25096), (115, 25111), (116, 25117), (123, 25198), (124, 25201),

Gene: GoodLuckBabe\_36 Start: 26660, Stop: 27622, Start Num: 15

Candidate Starts for GoodLuckBabe\_36:

(Start: 15 @26660 has 1 MA's), (Start: 20 @26702 has 84 MA's), (34, 26858), (38, 26876), (40, 26888), (45, 26945), (56, 27035), (57, 27044), (60, 27083), (65, 27143), (68, 27152), (69, 27158), (74, 27191),

(78, 27233), (81, 27245), (85, 27284), (110, 27464), (113, 27488), (115, 27503), (116, 27509), (123, 27590), (124, 27593),

Gene: Gorpy\_37 Start: 25804, Stop: 26721, Start Num: 20

Candidate Starts for Gorpy\_37:

(7, 25675), (10, 25681), (Start: 20 @25804 has 84 MA's), (34, 25960), (37, 25975), (40, 25987), (56, 26134), (57, 26143), (60, 26182), (63, 26227), (68, 26251), (69, 26257), (74, 26290), (78, 26332), (80, 26341), (85, 26383), (97, 26467), (113, 26587), (115, 26602),

Gene: Guinevere\_36 Start: 26292, Stop: 27212, Start Num: 20

Candidate Starts for Guinevere\_36:

(Start: 15 @26250 has 1 MA's), (Start: 20 @26292 has 84 MA's), (34, 26448), (38, 26466), (40, 26478), (56, 26625), (60, 26673), (65, 26733), (68, 26742), (69, 26748), (74, 26781), (78, 26823), (81, 26835), (85, 26874), (110, 27054), (113, 27078), (115, 27093), (116, 27099), (123, 27180), (124, 27183),

Gene: GumGum\_37 Start: 24736, Stop: 25656, Start Num: 20

Candidate Starts for GumGum\_37:

(7, 24607), (10, 24613), (Start: 20 @24736 has 84 MA's), (28, 24850), (36, 24901), (38, 24910), (40, 24922), (45, 24979), (56, 25069), (57, 25078), (60, 25117), (68, 25186), (69, 25192), (71, 25201), (74, 25225), (77, 25249), (98, 25423), (113, 25522), (115, 25537), (116, 25543),

Gene: Gusanita\_34 Start: 26041, Stop: 26961, Start Num: 20

Candidate Starts for Gusanita\_34:

(7, 25912), (10, 25918), (Start: 20 @26041 has 84 MA's), (36, 26206), (38, 26215), (40, 26227), (42, 26236), (45, 26284), (56, 26374), (57, 26383), (60, 26422), (63, 26467), (68, 26491), (69, 26497), (74, 26530), (81, 26584), (85, 26623), (89, 26641), (97, 26707), (100, 26734), (122, 26923),

Gene: Halloweekend\_34 Start: 25999, Stop: 26919, Start Num: 20

Candidate Starts for Halloweekend\_34:

(Start: 15 @25957 has 1 MA's), (Start: 20 @25999 has 84 MA's), (34, 26155), (38, 26173), (40, 26185), (56, 26332), (57, 26341), (60, 26380), (68, 26449), (69, 26455), (74, 26488), (77, 26512), (78, 26530), (81, 26542), (110, 26761), (113, 26785), (115, 26800), (116, 26806), (123, 26887), (124, 26890),

Gene: Henrique\_35 Start: 24359, Stop: 25279, Start Num: 20

Candidate Starts for Henrique\_35:

(6, 24215), (Start: 20 @24359 has 84 MA's), (34, 24515), (38, 24533), (40, 24545), (56, 24692), (57, 24701), (60, 24740), (68, 24809), (69, 24815), (74, 24848), (78, 24890), (85, 24941), (97, 25025), (110, 25121), (113, 25145), (116, 25166), (123, 25247), (124, 25250),

Gene: Hestia\_36 Start: 24611, Stop: 25531, Start Num: 20

Candidate Starts for Hestia\_36:

(7, 24482), (10, 24488), (Start: 20 @24611 has 84 MA's), (38, 24785), (40, 24797), (56, 24944), (60, 24992), (68, 25061), (69, 25067), (85, 25193), (97, 25277), (110, 25373), (113, 25397), (115, 25412), (116, 25418), (123, 25499),

Gene: Hillester\_36 Start: 24572, Stop: 25492, Start Num: 20

Candidate Starts for Hillester\_36:

(7, 24443), (12, 24470), (Start: 20 @24572 has 84 MA's), (28, 24686), (38, 24746), (40, 24758), (45, 24815), (56, 24905), (60, 24953), (68, 25022), (69, 25028), (74, 25061), (77, 25085), (113, 25358), (115, 25373), (116, 25379),

Gene: Hortense\_36 Start: 30765, Stop: 31682, Start Num: 20

Candidate Starts for Hortense\_36:

(Start: 19 @30759 has 11 MA's), (Start: 20 @30765 has 84 MA's), (40, 30945), (42, 30954), (43, 30960), (59, 31131), (61, 31146), (66, 31203), (68, 31209), (69, 31215), (72, 31230), (83, 31329), (84, 31335), (87, 31347), (97, 31422), (99, 31446), (100, 31449), (105, 31485), (106, 31491), (108, 31503), (119, 31605),

Gene: HotPotato\_34 Start: 24923, Stop: 25843, Start Num: 20

Candidate Starts for HotPotato\_34:

(Start: 20 @24923 has 84 MA's), (34, 25079), (38, 25097), (40, 25109), (56, 25256), (57, 25265), (60, 25304), (68, 25373), (69, 25379), (74, 25412), (78, 25454), (81, 25466), (110, 25685), (113, 25709), (115, 25724), (116, 25730), (123, 25811), (124, 25814),

Gene: Howe\_36 Start: 30765, Stop: 31682, Start Num: 20

Candidate Starts for Howe\_36:

(Start: 19 @30759 has 11 MA's), (Start: 20 @30765 has 84 MA's), (40, 30945), (42, 30954), (43, 30960), (59, 31131), (61, 31146), (66, 31203), (68, 31209), (69, 31215), (72, 31230), (83, 31329), (84, 31335), (87, 31347), (97, 31422), (99, 31446), (100, 31449), (105, 31485), (106, 31491), (108, 31503), (119, 31605),

Gene: Ichiang\_34 Start: 26018, Stop: 26938, Start Num: 20

Candidate Starts for Ichiang\_34:

(Start: 15 @25976 has 1 MA's), (Start: 20 @26018 has 84 MA's), (34, 26174), (38, 26192), (40, 26204), (44, 26228), (56, 26351), (57, 26360), (60, 26399), (68, 26468), (69, 26474), (74, 26507), (77, 26531), (78, 26549), (81, 26561), (84, 26594), (85, 26600), (87, 26606), (110, 26780), (113, 26804), (115, 26819), (116, 26825), (123, 26906), (124, 26909),

Gene: Invectra\_37 Start: 28866, Stop: 29783, Start Num: 20

Candidate Starts for Invectra\_37:

(Start: 19 @28860 has 11 MA's), (Start: 20 @28866 has 84 MA's), (42, 29055), (43, 29061), (51, 29163), (55, 29187), (61, 29247), (66, 29304), (68, 29310), (69, 29316), (83, 29430), (84, 29436), (87, 29448), (97, 29523), (99, 29547), (100, 29550), (105, 29586), (106, 29592), (111, 29625), (119, 29706),

Gene: IsHungry\_32 Start: 25028, Stop: 25948, Start Num: 20

Candidate Starts for IsHungry\_32:

(4, 24872), (7, 24896), (12, 24923), (13, 24962), (Start: 20 @25028 has 84 MA's), (Start: 21 @25052 has 1 MA's), (28, 25142), (34, 25184), (38, 25202), (40, 25214), (45, 25271), (56, 25361), (58, 25394), (60, 25409), (63, 25454), (68, 25478), (69, 25484), (74, 25517), (97, 25694), (100, 25721), (110, 25790), (113, 25814), (124, 25919),

Gene: Isolde\_36 Start: 24341, Stop: 25258, Start Num: 20

Candidate Starts for Isolde\_36:

(7, 24212), (10, 24218), (Start: 20 @24341 has 84 MA's), (37, 24512), (40, 24524), (56, 24671), (60, 24719), (63, 24764), (68, 24788), (69, 24794), (74, 24827), (78, 24869), (80, 24878), (87, 24926), (97, 25004), (100, 25031), (115, 25139), (124, 25229),

Gene: Jablanski\_34 Start: 28854, Stop: 29789, Start Num: 18

Candidate Starts for Jablanski\_34:

(14, 28800), (Start: 18 @28854 has 4 MA's), (31, 28986), (45, 29103), (51, 29163), (52, 29166), (55, 29187), (64, 29298), (68, 29310), (78, 29391), (86, 29445), (88, 29451), (90, 29469), (97, 29529), (99, 29553), (100, 29556), (105, 29592), (106, 29598), (117, 29676), (121, 29736),

Gene: JakeTheSnake\_36 Start: 25235, Stop: 25999, Start Num: 20

Candidate Starts for JakeTheSnake\_36:

(5, 25094), (Start: 20 @25235 has 84 MA's), (38, 25409), (40, 25421), (56, 25568), (60, 25616), (65, 25676), (67, 25682), (68, 25685), (69, 25691), (74, 25724), (77, 25748), (78, 25766), (85, 25817), (107, 25976),

Gene: JellyBread\_32 Start: 23160, Stop: 24080, Start Num: 20

Candidate Starts for JellyBread\_32:

(Start: 20 @23160 has 84 MA's), (25, 23217), (34, 23316), (38, 23334), (40, 23346), (56, 23493), (60, 23541), (63, 23586), (65, 23601), (68, 23610), (69, 23616), (72, 23631), (74, 23649), (78, 23691), (80, 23700), (85, 23742), (97, 23826), (100, 23853), (113, 23946), (115, 23961), (124, 24051),

Gene: Judy\_35 Start: 24877, Stop: 25797, Start Num: 20

Candidate Starts for Judy\_35:

(Start: 20 @24877 has 84 MA's), (34, 25033), (38, 25051), (40, 25063), (56, 25210), (57, 25219), (60, 25258), (68, 25327), (69, 25333), (74, 25366), (78, 25408), (85, 25459), (110, 25639), (113, 25663), (115, 25678), (116, 25684), (123, 25765), (124, 25768),

Gene: Julie\_35 Start: 26941, Stop: 27861, Start Num: 20

Candidate Starts for Julie\_35:

(7, 26809), (10, 26815), (12, 26836), (13, 26875), (Start: 20 @26941 has 84 MA's), (Start: 21 @26965 has 1 MA's), (28, 27055), (34, 27097), (38, 27115), (40, 27127), (56, 27274), (60, 27322), (63, 27367), (68, 27391), (69, 27397), (74, 27430), (78, 27472), (97, 27607), (100, 27634), (110, 27703), (113, 27727), (124, 27832),

Gene: Kabloowy\_36 Start: 24752, Stop: 25669, Start Num: 20

Candidate Starts for Kabloowy\_36:

(7, 24623), (10, 24629), (Start: 20 @24752 has 84 MA's), (34, 24908), (37, 24923), (40, 24935), (56, 25082), (57, 25091), (60, 25130), (63, 25175), (68, 25199), (69, 25205), (74, 25238), (78, 25280), (80, 25289), (85, 25331), (97, 25415), (113, 25535), (115, 25550),

Gene: Karkharias\_34 Start: 24280, Stop: 25200, Start Num: 20

Candidate Starts for Karkharias\_34:

(Start: 15 @24238 has 1 MA's), (Start: 20 @24280 has 84 MA's), (34, 24436), (38, 24454), (40, 24466), (56, 24613), (57, 24622), (60, 24661), (68, 24730), (69, 24736), (74, 24769), (78, 24811), (81, 24823), (110, 25042), (113, 25066), (115, 25081), (116, 25087), (123, 25168), (124, 25171),

Gene: KayMoney\_35 Start: 24398, Stop: 25318, Start Num: 20

Candidate Starts for KayMoney\_35:

(Start: 20 @24398 has 84 MA's), (34, 24554), (38, 24572), (40, 24584), (56, 24731), (57, 24740), (60, 24779), (68, 24848), (69, 24854), (74, 24887), (78, 24929), (85, 24980), (110, 25160), (113, 25184), (115, 25199), (116, 25205), (123, 25286), (124, 25289),

Gene: Kihatsu\_37 Start: 26637, Stop: 27557, Start Num: 20

Candidate Starts for Kihatsu\_37:

(Start: 20 @26637 has 84 MA's), (34, 26793), (38, 26811), (40, 26823), (56, 26970), (57, 26979), (60, 27018), (65, 27078), (68, 27087), (69, 27093), (74, 27126), (78, 27168), (81, 27180), (84, 27213), (85, 27219), (87, 27225), (97, 27303), (110, 27399), (116, 27444), (123, 27525), (124, 27528),

Gene: Kiko\_37 Start: 28964, Stop: 29881, Start Num: 20

Candidate Starts for Kiko\_37:

(Start: 19 @28958 has 11 MA's), (Start: 20 @28964 has 84 MA's), (41, 29147), (42, 29153), (43, 29159), (61, 29345), (68, 29408), (69, 29414), (72, 29429), (83, 29528), (84, 29534), (87, 29546), (97, 29621), (99, 29645), (100, 29648), (110, 29720), (111, 29723), (115, 29759),

Gene: Lasker\_36 Start: 24581, Stop: 25501, Start Num: 20

Candidate Starts for Lasker\_36:

(Start: 20 @24581 has 84 MA's), (28, 24695), (34, 24737), (38, 24755), (40, 24767), (56, 24914), (57, 24923), (60, 24962), (63, 25007), (68, 25031), (69, 25037), (74, 25070), (78, 25112), (80, 25121), (85, 25163), (97, 25247), (115, 25382),

Gene: Lawnathon\_36 Start: 24435, Stop: 25352, Start Num: 20

Candidate Starts for Lawnathon\_36:

(7, 24306), (10, 24312), (Start: 20 @24435 has 84 MA's), (34, 24591), (37, 24606), (40, 24618), (56, 24765), (57, 24774), (60, 24813), (63, 24858), (68, 24882), (69, 24888), (74, 24921), (78, 24963), (80, 24972), (85, 25014), (97, 25098), (115, 25233),

Gene: Lenoxika\_36 Start: 26286, Stop: 27206, Start Num: 20

Candidate Starts for Lenoxika\_36:

(Start: 20 @26286 has 84 MA's), (34, 26442), (38, 26460), (40, 26472), (56, 26619), (57, 26628), (60, 26667), (68, 26736), (69, 26742), (74, 26775), (78, 26817), (81, 26829), (85, 26868), (110, 27048), (113, 27072), (115, 27087), (116, 27093), (123, 27174), (124, 27177),

Gene: Lilas\_37 Start: 31522, Stop: 32445, Start Num: 19

Candidate Starts for Lilas\_37:

(Start: 19 @31522 has 11 MA's), (Start: 20 @31528 has 84 MA's), (22, 31552), (31, 31648), (43, 31723), (48, 31795), (54, 31846), (61, 31909), (65, 31963), (68, 31972), (72, 31993), (73, 32002), (76, 32032), (84, 32098), (94, 32164), (97, 32185), (100, 32212), (105, 32248),

Gene: LilyBell\_34 Start: 24292, Stop: 25212, Start Num: 20

Candidate Starts for LilyBell\_34:

(Start: 15 @24250 has 1 MA's), (Start: 20 @24292 has 84 MA's), (34, 24448), (38, 24466), (40, 24478), (56, 24625), (57, 24634), (60, 24673), (68, 24742), (69, 24748), (74, 24781), (78, 24823), (85, 24874), (110, 25054), (113, 25078), (115, 25093), (116, 25099), (123, 25180), (124, 25183),

Gene: LonelyBoi\_37 Start: 31310, Stop: 32227, Start Num: 20

Candidate Starts for LonelyBoi\_37:

(Start: 19 @31304 has 11 MA's), (Start: 20 @31310 has 84 MA's), (22, 31334), (31, 31430), (43, 31505), (51, 31607), (54, 31628), (61, 31691), (65, 31745), (68, 31754), (72, 31775), (73, 31784), (76, 31814), (84, 31880), (89, 31904), (94, 31946), (97, 31967), (100, 31994), (105, 32030), (106, 32036),

Gene: MUWow\_35 Start: 24597, Stop: 25514, Start Num: 20

Candidate Starts for MUWow\_35:

(Start: 15 @24558 has 1 MA's), (Start: 20 @24597 has 84 MA's), (34, 24753), (37, 24768), (56, 24927), (63, 25020), (65, 25035), (68, 25044), (69, 25050), (72, 25065), (74, 25083), (78, 25125), (80, 25134), (87, 25182), (97, 25260), (100, 25287), (115, 25395), (124, 25485),

Gene: Maja\_28 Start: 23177, Stop: 24097, Start Num: 20

Candidate Starts for Maja\_28:

(Start: 20 @23177 has 84 MA's), (34, 23333), (38, 23351), (40, 23363), (42, 23372), (45, 23420), (56, 23510), (60, 23558), (68, 23627), (69, 23633), (74, 23666), (78, 23708), (81, 23720), (85, 23759), (97, 23843), (100, 23870), (116, 23984), (124, 24068),

Gene: Malibo\_38 Start: 29560, Stop: 30477, Start Num: 20

Candidate Starts for Malibo\_38:

(Start: 19 @29554 has 11 MA's), (Start: 20 @29560 has 84 MA's), (31, 29680), (42, 29749), (43, 29755), (48, 29827), (51, 29857), (54, 29878), (61, 29941), (68, 30004), (72, 30025), (73, 30034), (76, 30064), (79, 30088), (97, 30217), (100, 30244), (105, 30280),

Gene: Mapleville\_36 Start: 24505, Stop: 25422, Start Num: 20

Candidate Starts for Mapleville\_36:

(7, 24376), (10, 24382), (Start: 20 @24505 has 84 MA's), (34, 24661), (37, 24676), (40, 24688), (56, 24835), (57, 24844), (60, 24883), (63, 24928), (68, 24952), (69, 24958), (74, 24991), (78, 25033), (80, 25042), (85, 25084), (97, 25168), (113, 25288), (115, 25303),

Gene: Marteena\_35 Start: 28837, Stop: 29754, Start Num: 20

Candidate Starts for Marteena\_35:

(Start: 19 @28831 has 11 MA's), (Start: 20 @28837 has 84 MA's), (22, 28861), (31, 28957), (42, 29026), (43, 29032), (54, 29155), (61, 29218), (65, 29272), (68, 29281), (72, 29302), (73, 29311), (76, 29341), (79, 29365), (94, 29473), (97, 29494), (100, 29521),

Gene: MaterMagnus\_36 Start: 24582, Stop: 25499, Start Num: 20

Candidate Starts for MaterMagnus\_36:

(7, 24453), (8, 24456), (10, 24459), (Start: 20 @24582 has 84 MA's), (34, 24738), (37, 24753), (40, 24765), (56, 24912), (57, 24921), (60, 24960), (63, 25005), (68, 25029), (69, 25035), (74, 25068), (78, 25110), (80, 25119), (85, 25161), (97, 25245), (113, 25365), (115, 25380),

Gene: Mcklovin\_34 Start: 32550, Stop: 33467, Start Num: 20

Candidate Starts for Mcklovin\_34:

(Start: 19 @32544 has 11 MA's), (Start: 20 @32550 has 84 MA's), (42, 32739), (43, 32745), (51, 32847), (55, 32871), (61, 32931), (66, 32988), (68, 32994), (69, 33000), (83, 33114), (84, 33120), (87, 33132), (97, 33207), (99, 33231), (100, 33234), (105, 33270), (106, 33276), (111, 33309), (115, 33345), (119, 33390),

Gene: Melba\_35 Start: 28919, Stop: 29845, Start Num: 19

Candidate Starts for Melba\_35:

(Start: 19 @28919 has 11 MA's), (Start: 20 @28925 has 84 MA's), (30, 29042), (31, 29045), (41, 29108), (42, 29114), (43, 29120), (61, 29306), (65, 29360), (66, 29363), (68, 29369), (72, 29390), (83, 29489), (84, 29495), (87, 29507), (97, 29582), (100, 29609), (105, 29645), (115, 29720),

Gene: MichaelScott\_36 Start: 28688, Stop: 29605, Start Num: 20

Candidate Starts for MichaelScott\_36:

(Start: 19 @28682 has 11 MA's), (Start: 20 @28688 has 84 MA's), (42, 28877), (43, 28883), (51, 28985), (55, 29009), (61, 29069), (66, 29126), (68, 29132), (69, 29138), (83, 29252), (84, 29258), (87, 29270), (97, 29345), (99, 29369), (100, 29372), (105, 29408), (106, 29414), (111, 29447), (119, 29528),

Gene: MidnightRain\_38 Start: 25380, Stop: 26300, Start Num: 20

Candidate Starts for MidnightRain\_38:

(7, 25251), (10, 25257), (Start: 20 @25380 has 84 MA's), (28, 25494), (38, 25554), (40, 25566), (56, 25713), (60, 25761), (63, 25806), (68, 25830), (69, 25836), (71, 25845), (74, 25869), (78, 25911), (81, 25923), (85, 25962), (89, 25980), (97, 26046), (113, 26166), (115, 26181),

Gene: MillySue\_36 Start: 26192, Stop: 27112, Start Num: 20

Candidate Starts for MillySue\_36:

(Start: 15 @26150 has 1 MA's), (Start: 20 @26192 has 84 MA's), (Start: 21 @26216 has 1 MA's), (28, 26306), (34, 26348), (38, 26366), (40, 26378), (45, 26435), (56, 26525), (60, 26573), (63, 26618), (68, 26642), (69, 26648), (71, 26657), (74, 26681), (97, 26858), (100, 26885), (110, 26954), (113, 26978), (115, 26993),

Gene: Moonflower\_36 Start: 30479, Stop: 31372, Start Num: 22

Candidate Starts for Moonflower\_36:

(Start: 19 @30449 has 11 MA's), (Start: 20 @30455 has 84 MA's), (22, 30479), (24, 30497), (30, 30572), (31, 30575), (42, 30644), (43, 30650), (55, 30776), (61, 30836), (65, 30890), (68, 30899), (72, 30920), (73, 30929), (76, 30959), (94, 31091), (97, 31112), (99, 31136), (100, 31139), (105, 31175), (109, 31196), (114, 31241),

Gene: MurphyJoseph\_33 Start: 23984, Stop: 24748, Start Num: 34

Candidate Starts for MurphyJoseph\_33:

(28, 23945), (34, 23984), (38, 24002), (45, 24071), (56, 24161), (60, 24209), (68, 24278), (69, 24284), (78, 24359), (81, 24371), (109, 24575), (110, 24590), (113, 24614), (116, 24635),

Gene: Mutzi\_37 Start: 33648, Stop: 34565, Start Num: 20

Candidate Starts for Mutzi\_37:

(Start: 19 @33642 has 11 MA's), (Start: 20 @33648 has 84 MA's), (31, 33768), (42, 33837), (43, 33843), (44, 33852), (51, 33945), (64, 34080), (65, 34083), (66, 34086), (68, 34092), (72, 34113), (79, 34176), (82, 34209), (83, 34212), (87, 34230), (94, 34284), (97, 34305), (99, 34329), (100, 34332), (105, 34368), (106, 34374), (109, 34389), (115, 34443), (124, 34536), (126, 34557),

Gene: Nandita\_36 Start: 26292, Stop: 27212, Start Num: 20

Candidate Starts for Nandita\_36:

(Start: 15 @26250 has 1 MA's), (Start: 20 @26292 has 84 MA's), (34, 26448), (38, 26466), (40, 26478), (56, 26625), (60, 26673), (65, 26733), (68, 26742), (69, 26748), (74, 26781), (77, 26805), (78, 26823), (81, 26835), (85, 26874), (110, 27054), (113, 27078), (115, 27093), (116, 27099), (123, 27180), (124, 27183),

Gene: NewKitty\_35 Start: 24177, Stop: 25094, Start Num: 20

Candidate Starts for NewKitty\_35:

(Start: 20 @24177 has 84 MA's), (34, 24333), (37, 24348), (40, 24360), (56, 24507), (60, 24555), (63, 24600), (65, 24615), (68, 24624), (69, 24630), (72, 24645), (74, 24663), (78, 24705), (80, 24714), (85, 24756), (97, 24840), (100, 24867), (113, 24960), (114, 24966), (115, 24975), (124, 25065),

Gene: NikkiHotWheels\_36 Start: 24352, Stop: 25272, Start Num: 20

Candidate Starts for NikkiHotWheels\_36:

(Start: 20 @24352 has 84 MA's), (34, 24508), (38, 24526), (40, 24538), (45, 24595), (56, 24685), (57, 24694), (60, 24733), (68, 24802), (69, 24808), (74, 24841), (78, 24883), (81, 24895), (85, 24934), (110, 25114), (113, 25138), (115, 25153), (116, 25159), (123, 25240), (124, 25243),

Gene: Oregano\_37 Start: 27817, Stop: 28734, Start Num: 20

Candidate Starts for Oregano\_37:

(Start: 19 @27811 has 11 MA's), (Start: 20 @27817 has 84 MA's), (42, 28006), (43, 28012), (51, 28114), (55, 28138), (61, 28198), (66, 28255), (68, 28261), (69, 28267), (83, 28381), (84, 28387), (87, 28399), (97, 28474), (99, 28498), (100, 28501), (105, 28537), (106, 28543), (111, 28576),

Gene: PeggyLeg03\_34 Start: 24890, Stop: 25810, Start Num: 20

Candidate Starts for PeggyLeg03\_34:

(Start: 20 @24890 has 84 MA's), (34, 25046), (38, 25064), (40, 25076), (56, 25223), (57, 25232), (60, 25271), (68, 25340), (69, 25346), (74, 25379), (78, 25421), (81, 25433), (110, 25652), (112, 25664), (113, 25676), (115, 25691), (116, 25697), (123, 25778), (124, 25781),

Gene: PhriskyACE\_35 Start: 28658, Stop: 29575, Start Num: 20

Candidate Starts for PhriskyACE\_35:

(Start: 19 @28652 has 11 MA's), (Start: 20 @28658 has 84 MA's), (41, 28841), (42, 28847), (43, 28853), (61, 29039), (68, 29102), (69, 29108), (72, 29123), (83, 29222), (84, 29228), (87, 29240), (97,

29315), (99, 29339), (100, 29342), (105, 29378), (106, 29384), (108, 29396), (115, 29453), (119, 29498),

Gene: Pipp\_33 Start: 27701, Stop: 28627, Start Num: 19

Candidate Starts for Pipp\_33:

(Start: 19 @27701 has 11 MA's), (Start: 20 @27707 has 84 MA's), (30, 27824), (31, 27827), (41, 27890), (42, 27896), (43, 27902), (51, 28004), (61, 28088), (65, 28142), (66, 28145), (68, 28151), (72, 28172), (83, 28271), (87, 28289), (97, 28364), (100, 28391), (105, 28427), (115, 28502),

Gene: Pollux\_37 Start: 30910, Stop: 31827, Start Num: 20

Candidate Starts for Pollux\_37:

(Start: 19 @30904 has 11 MA's), (Start: 20 @30910 has 84 MA's), (22, 30934), (31, 31030), (42, 31099), (43, 31105), (54, 31228), (61, 31291), (65, 31345), (68, 31354), (72, 31375), (73, 31384), (76, 31414), (79, 31438), (94, 31546), (97, 31567), (100, 31594),

Gene: Popper\_34 Start: 26204, Stop: 27124, Start Num: 20

Candidate Starts for Popper\_34:

(Start: 20 @26204 has 84 MA's), (23, 26243), (34, 26360), (38, 26378), (40, 26390), (56, 26537), (60, 26585), (65, 26645), (68, 26654), (69, 26660), (74, 26693), (78, 26735), (81, 26747), (85, 26786), (110, 26966), (113, 26990), (115, 27005), (116, 27011), (123, 27092), (124, 27095),

Gene: Pucara\_31 Start: 24120, Stop: 25040, Start Num: 20

Candidate Starts for Pucara\_31:

(Start: 20 @24120 has 84 MA's), (34, 24276), (38, 24294), (40, 24306), (56, 24453), (57, 24462), (60, 24501), (68, 24570), (69, 24576), (74, 24609), (78, 24651), (110, 24882), (113, 24906), (116, 24927), (123, 25008), (124, 25011),

Gene: Pytheas\_34 Start: 28853, Stop: 29788, Start Num: 18

Candidate Starts for Pytheas\_34:

(14, 28799), (Start: 18 @28853 has 4 MA's), (31, 28985), (45, 29102), (51, 29162), (52, 29165), (55, 29186), (64, 29297), (68, 29309), (78, 29390), (86, 29444), (88, 29450), (90, 29468), (97, 29528), (99, 29552), (100, 29555), (105, 29591), (106, 29597), (117, 29675), (121, 29735),

Gene: QuinnAvery\_38 Start: 27407, Stop: 28369, Start Num: 15

Candidate Starts for QuinnAvery\_38:

(Start: 15 @27407 has 1 MA's), (Start: 20 @27449 has 84 MA's), (34, 27605), (38, 27623), (40, 27635), (56, 27782), (57, 27791), (60, 27830), (64, 27887), (68, 27899), (69, 27905), (74, 27938), (77, 27962), (78, 27980), (81, 27992), (110, 28211), (113, 28235), (115, 28250), (116, 28256), (123, 28337), (124, 28340),

Gene: RadFad\_36 Start: 24572, Stop: 25492, Start Num: 20

Candidate Starts for RadFad\_36:

(7, 24443), (12, 24470), (Start: 20 @24572 has 84 MA's), (28, 24686), (38, 24746), (40, 24758), (45, 24815), (56, 24905), (60, 24953), (68, 25022), (69, 25028), (74, 25061), (77, 25085), (113, 25358), (115, 25373), (116, 25379),

Gene: Raphaella\_36 Start: 24506, Stop: 25423, Start Num: 20

Candidate Starts for Raphaella\_36:

(7, 24377), (10, 24383), (Start: 20 @24506 has 84 MA's), (34, 24662), (37, 24677), (40, 24689), (56, 24836), (57, 24845), (60, 24884), (63, 24929), (68, 24953), (69, 24959), (74, 24992), (78, 25034), (80, 25043), (85, 25085), (97, 25169), (113, 25289), (115, 25304),

Gene: Richie\_36 Start: 24587, Stop: 25504, Start Num: 20

Candidate Starts for Richie\_36:

(7, 24458), (10, 24464), (Start: 20 @24587 has 84 MA's), (37, 24758), (40, 24770), (45, 24827), (56, 24917), (57, 24926), (60, 24965), (63, 25010), (68, 25034), (69, 25040), (74, 25073), (78, 25115), (80, 25124), (85, 25166), (97, 25250), (113, 25370), (115, 25385),

Gene: Ryan\_36 Start: 26903, Stop: 27823, Start Num: 20

Candidate Starts for Ryan\_36:

(Start: 15 @26861 has 1 MA's), (Start: 20 @26903 has 84 MA's), (34, 27059), (38, 27077), (40, 27089), (56, 27236), (57, 27245), (60, 27284), (68, 27353), (69, 27359), (74, 27392), (77, 27416), (78, 27434), (81, 27446), (85, 27485), (110, 27665), (113, 27689), (115, 27704), (116, 27710), (123, 27791), (124, 27794),

Gene: Sakai\_36 Start: 24515, Stop: 25432, Start Num: 20

Candidate Starts for Sakai\_36:

(7, 24386), (10, 24392), (Start: 20 @24515 has 84 MA's), (34, 24671), (37, 24686), (40, 24698), (56, 24845), (57, 24854), (60, 24893), (63, 24938), (68, 24962), (69, 24968), (74, 25001), (78, 25043), (80, 25052), (85, 25094), (97, 25178), (113, 25298), (115, 25313),

Gene: Samman98\_36 Start: 27315, Stop: 28232, Start Num: 20

Candidate Starts for Samman98\_36:

(Start: 19 @27309 has 11 MA's), (Start: 20 @27315 has 84 MA's), (42, 27504), (43, 27510), (51, 27612), (55, 27636), (61, 27696), (66, 27753), (68, 27759), (69, 27765), (83, 27879), (84, 27885), (87, 27897), (97, 27972), (99, 27996), (100, 27999), (105, 28035), (106, 28041), (108, 28053), (119, 28155),

Gene: Sashimi\_35 Start: 25890, Stop: 26810, Start Num: 20

Candidate Starts for Sashimi\_35:

(7, 25755), (8, 25758), (11, 25773), (12, 25782), (Start: 15 @25848 has 1 MA's), (Start: 20 @25890 has 84 MA's), (34, 26046), (35, 26052), (38, 26064), (40, 26076), (56, 26223), (57, 26232), (60, 26271), (63, 26316), (68, 26340), (69, 26346), (81, 26433), (89, 26490), (96, 26550), (97, 26556), (100, 26583), (113, 26676), (115, 26691), (124, 26781),

Gene: Satrap\_36 Start: 24680, Stop: 25600, Start Num: 20

Candidate Starts for Satrap\_36:

(7, 24551), (Start: 20 @24680 has 84 MA's), (38, 24854), (56, 25013), (60, 25061), (63, 25106), (68, 25130), (69, 25136), (71, 25145), (74, 25169), (81, 25223), (89, 25280), (97, 25346), (113, 25466), (115, 25481), (124, 25571),

Gene: Schism\_38 Start: 27082, Stop: 28002, Start Num: 20

Candidate Starts for Schism\_38:

(Start: 15 @27040 has 1 MA's), (Start: 20 @27082 has 84 MA's), (34, 27238), (38, 27256), (40, 27268), (45, 27325), (56, 27415), (57, 27424), (60, 27463), (65, 27523), (68, 27532), (69, 27538), (74, 27571), (78, 27613), (81, 27625), (85, 27664), (110, 27844), (113, 27868), (115, 27883), (116, 27889), (123, 27970), (124, 27973),

Gene: Seahorse\_38 Start: 26187, Stop: 27107, Start Num: 20

Candidate Starts for Seahorse\_38:

(7, 26058), (10, 26064), (Start: 20 @26187 has 84 MA's), (28, 26301), (36, 26352), (38, 26361), (40, 26373), (45, 26430), (56, 26520), (57, 26529), (60, 26568), (68, 26637), (69, 26643), (71, 26652), (74, 26676), (77, 26700), (98, 26874), (113, 26973), (115, 26988), (124, 27078),

Gene: Shlim410\_35 Start: 30765, Stop: 31682, Start Num: 20

Candidate Starts for Shlim410\_35:

(Start: 19 @30759 has 11 MA's), (Start: 20 @30765 has 84 MA's), (40, 30945), (42, 30954), (43, 30960), (59, 31131), (61, 31146), (66, 31203), (68, 31209), (69, 31215), (72, 31230), (83, 31329), (84, 31335), (87, 31347), (97, 31422), (99, 31446), (100, 31449), (105, 31485), (106, 31491), (108, 31503), (119, 31605),

Gene: Shukran\_39 Start: 25561, Stop: 26481, Start Num: 20

Candidate Starts for Shukran\_39:

(Start: 20 @25561 has 84 MA's), (28, 25675), (38, 25735), (40, 25747), (56, 25894), (57, 25903), (60, 25942), (63, 25987), (68, 26011), (69, 26017), (71, 26026), (74, 26050), (78, 26092), (79, 26095), (80, 26101), (85, 26143), (89, 26161), (97, 26227), (100, 26254), (113, 26347), (115, 26362),

Gene: Sixama\_89 Start: 47436, Stop: 48350, Start Num: 21

Candidate Starts for Sixama\_89:

(Start: 21 @47436 has 1 MA's), (26, 47481), (33, 47538), (35, 47568), (39, 47586), (47, 47667), (49, 47685), (62, 47796), (63, 47853), (67, 47874), (68, 47877), (89, 48027), (91, 48063), (95, 48072),

Gene: SonDevVon\_36 Start: 24920, Stop: 25837, Start Num: 20

Candidate Starts for SonDevVon\_36:

(Start: 20 @24920 has 84 MA's), (34, 25076), (37, 25091), (40, 25103), (56, 25250), (60, 25298), (63, 25343), (68, 25367), (69, 25373), (72, 25388), (74, 25406), (78, 25448), (80, 25457), (97, 25583), (100, 25610), (115, 25718), (124, 25808),

Gene: SpicyFrank\_36 Start: 24807, Stop: 25724, Start Num: 20

Candidate Starts for SpicyFrank\_36:

(7, 24678), (10, 24684), (Start: 20 @24807 has 84 MA's), (34, 24963), (37, 24978), (40, 24990), (56, 25137), (60, 25185), (63, 25230), (68, 25254), (69, 25260), (74, 25293), (78, 25335), (80, 25344), (81, 25347), (87, 25392), (97, 25470), (110, 25566), (113, 25590), (115, 25605), (124, 25695),

Gene: Spooky\_35 Start: 27760, Stop: 28698, Start Num: 18

Candidate Starts for Spooky\_35:

(16, 27748), (Start: 18 @27760 has 4 MA's), (27, 27853), (35, 27925), (44, 27976), (50, 28054), (55, 28093), (58, 28132), (64, 28204), (68, 28216), (71, 28231), (72, 28237), (75, 28261), (78, 28297), (88, 28357), (90, 28375), (92, 28408), (97, 28435), (99, 28459), (100, 28462), (104, 28495), (105, 28501), (117, 28585), (119, 28621), (126, 28690),

Gene: Sporco\_37 Start: 24563, Stop: 25480, Start Num: 20

Candidate Starts for Sporco\_37:

(7, 24434), (10, 24440), (Start: 20 @24563 has 84 MA's), (34, 24719), (37, 24734), (40, 24746), (56, 24893), (57, 24902), (60, 24941), (63, 24986), (68, 25010), (69, 25016), (74, 25049), (78, 25091), (80, 25100), (85, 25142), (97, 25226), (113, 25346), (115, 25361),

Gene: Sprinklemunch\_42 Start: 31103, Stop: 32026, Start Num: 19

Candidate Starts for Sprinklemunch\_42:

(Start: 19 @31103 has 11 MA's), (Start: 20 @31109 has 84 MA's), (30, 31226), (31, 31229), (42, 31298), (43, 31304), (54, 31427), (55, 31430), (61, 31490), (65, 31544), (68, 31553), (72, 31574), (83, 31673), (84, 31679), (94, 31745), (97, 31766), (100, 31793), (106, 31835), (111, 31868), (126, 32018),

Gene: Squiddly\_37 Start: 28992, Stop: 29930, Start Num: 18

Candidate Starts for Squiddly\_37:

(16, 28980), (Start: 18 @28992 has 4 MA's), (35, 29157), (44, 29208), (55, 29325), (64, 29436), (68, 29448), (71, 29463), (72, 29469), (73, 29478), (75, 29493), (78, 29529), (83, 29568), (88, 29589), (90, 29607), (92, 29640), (97, 29667), (99, 29691), (100, 29694), (101, 29697), (103, 29721), (105, 29733), (115, 29808), (116, 29814), (117, 29817), (124, 29901), (126, 29922),

Gene: ThayneTheZag\_36 Start: 24729, Stop: 25649, Start Num: 20

Candidate Starts for ThayneTheZag\_36:

(Start: 20 @24729 has 84 MA's), (38, 24903), (40, 24915), (53, 25050), (56, 25062), (57, 25071), (60, 25110), (63, 25155), (67, 25176), (68, 25179), (69, 25185), (74, 25218), (78, 25260), (80, 25269), (97, 25395), (110, 25491), (113, 25515), (115, 25530),

Gene: Thimann\_34 Start: 26659, Stop: 27576, Start Num: 20

Candidate Starts for Thimann\_34:

(Start: 19 @26653 has 11 MA's), (Start: 20 @26659 has 84 MA's), (42, 26848), (43, 26854), (51, 26956), (55, 26980), (61, 27040), (66, 27097), (68, 27103), (69, 27109), (83, 27223), (84, 27229), (87, 27241), (97, 27316), (99, 27340), (100, 27343), (105, 27379), (106, 27385), (108, 27397), (119, 27499),

Gene: Tiff81\_32 Start: 21991, Stop: 22911, Start Num: 20

Candidate Starts for Tiff81\_32:

(7, 21862), (Start: 20 @21991 has 84 MA's), (28, 22105), (38, 22165), (40, 22177), (56, 22324), (60, 22372), (63, 22417), (68, 22441), (69, 22447), (81, 22534), (89, 22591), (97, 22657), (100, 22684), (113, 22777), (115, 22792), (124, 22882),

Gene: ToastyOats\_39 Start: 26923, Stop: 27843, Start Num: 20

Candidate Starts for ToastyOats\_39:

(1, 26617), (2, 26629), (3, 26695), (5, 26767), (7, 26791), (12, 26818), (Start: 20 @26923 has 84 MA's), (34, 27079), (38, 27097), (40, 27109), (44, 27133), (56, 27256), (57, 27265), (60, 27304), (65, 27364), (68, 27373), (69, 27379), (74, 27412), (78, 27454), (81, 27466), (84, 27499), (85, 27505), (87, 27511), (93, 27562), (97, 27589), (110, 27685), (113, 27709), (115, 27724), (116, 27730), (123, 27811), (124, 27814),

Gene: Toodles\_37 Start: 26753, Stop: 27673, Start Num: 20

Candidate Starts for Toodles\_37:

(1, 26447), (2, 26459), (3, 26525), (5, 26597), (7, 26621), (12, 26648), (Start: 20 @26753 has 84 MA's), (Start: 21 @26777 has 1 MA's), (34, 26909), (38, 26927), (56, 27086), (57, 27095), (60, 27134), (68, 27203), (69, 27209), (74, 27242), (78, 27284), (85, 27335), (110, 27515), (113, 27539), (115, 27554), (123, 27641), (124, 27644), (125, 27656),

Gene: Tuti\_37 Start: 28202, Stop: 29125, Start Num: 19

Candidate Starts for Tuti\_37:

(Start: 19 @28202 has 11 MA's), (Start: 20 @28208 has 84 MA's), (42, 28397), (43, 28403), (61, 28589), (66, 28646), (68, 28652), (69, 28658), (83, 28772), (84, 28778), (87, 28790), (97, 28865), (99, 28889), (100, 28892), (105, 28928), (106, 28934), (108, 28946), (115, 29003), (119, 29048),

Gene: Twinkle\_35 Start: 31824, Stop: 32741, Start Num: 20

Candidate Starts for Twinkle\_35:

(Start: 19 @31818 has 11 MA's), (Start: 20 @31824 has 84 MA's), (40, 32004), (42, 32013), (43, 32019), (59, 32190), (61, 32205), (66, 32262), (68, 32268), (69, 32274), (72, 32289), (83, 32388), (84, 32394), (87, 32406), (97, 32481), (99, 32505), (100, 32508), (105, 32544), (106, 32550), (108, 32562), (119, 32664),

Gene: Utz\_31 Start: 28505, Stop: 29425, Start Num: 20

Candidate Starts for Utz\_31:

(Start: 19 @28499 has 11 MA's), (Start: 20 @28505 has 84 MA's), (30, 28622), (31, 28625), (41, 28688), (42, 28694), (43, 28700), (51, 28802), (61, 28886), (65, 28940), (66, 28943), (68, 28949), (72, 28970), (83, 29069), (87, 29087), (97, 29162), (100, 29189), (105, 29225), (115, 29300),

Gene: Vopal\_39 Start: 27391, Stop: 28311, Start Num: 20

Candidate Starts for Vopal\_39:

(Start: 15 @27349 has 1 MA's), (Start: 20 @27391 has 84 MA's), (34, 27547), (38, 27565), (40, 27577), (56, 27724), (60, 27772), (63, 27817), (65, 27832), (68, 27841), (69, 27847), (72, 27862), (74, 27880), (78, 27922), (80, 27931), (85, 27973), (97, 28057), (100, 28084), (115, 28192), (124, 28282),

Gene: WinkNick\_38 Start: 28007, Stop: 28924, Start Num: 20

Candidate Starts for WinkNick\_38:

(Start: 19 @28001 has 11 MA's), (Start: 20 @28007 has 84 MA's), (42, 28196), (43, 28202), (51, 28304), (55, 28328), (61, 28388), (66, 28445), (68, 28451), (69, 28457), (83, 28571), (84, 28577), (87, 28589), (97, 28664), (99, 28688), (100, 28691), (105, 28727), (106, 28733), (108, 28745), (119, 28847),

Gene: Yonex\_36 Start: 26903, Stop: 27823, Start Num: 20

Candidate Starts for Yonex\_36:

(Start: 15 @26861 has 1 MA's), (Start: 20 @26903 has 84 MA's), (34, 27059), (38, 27077), (40, 27089), (56, 27236), (57, 27245), (60, 27284), (68, 27353), (69, 27359), (74, 27392), (77, 27416), (78, 27434), (81, 27446), (85, 27485), (110, 27665), (113, 27689), (115, 27704), (116, 27710), (123, 27791), (124, 27794),

Gene: YoungHarleezy\_36 Start: 24585, Stop: 25502, Start Num: 20

Candidate Starts for YoungHarleezy\_36:

(7, 24456), (10, 24462), (Start: 20 @24585 has 84 MA's), (34, 24741), (37, 24756), (40, 24768), (56, 24915), (57, 24924), (60, 24963), (63, 25008), (68, 25032), (69, 25038), (74, 25071), (78, 25113), (80, 25122), (85, 25164), (97, 25248), (113, 25368), (115, 25383),

Gene: YungMoney\_41 Start: 35216, Stop: 36133, Start Num: 20

Candidate Starts for YungMoney\_41:

(Start: 19 @35210 has 11 MA's), (Start: 20 @35216 has 84 MA's), (30, 35333), (31, 35336), (41, 35399), (42, 35405), (43, 35411), (61, 35597), (65, 35651), (66, 35654), (68, 35660), (72, 35681), (83, 35780), (84, 35786), (87, 35798), (97, 35873), (100, 35900), (105, 35936), (110, 35972), (115, 36011), (124, 36104), (126, 36125),

Gene: Zaheer\_36 Start: 26991, Stop: 27911, Start Num: 20

Candidate Starts for Zaheer\_36:

(Start: 20 @26991 has 84 MA's), (34, 27147), (38, 27165), (40, 27177), (56, 27324), (57, 27333), (60, 27372), (65, 27432), (68, 27441), (69, 27447), (74, 27480), (78, 27522), (81, 27534), (84, 27567), (85, 27573), (87, 27579), (97, 27657), (110, 27753), (116, 27798), (123, 27879), (124, 27882),

Gene: Zucker\_29 Start: 23884, Stop: 24804, Start Num: 20

Candidate Starts for Zucker\_29:

(Start: 15 @23842 has 1 MA's), (Start: 20 @23884 has 84 MA's), (38, 24058), (40, 24070), (56, 24217), (57, 24226), (60, 24265), (68, 24334), (69, 24340), (70, 24343), (74, 24373), (78, 24415), (97, 24550), (110, 24646), (112, 24658), (113, 24670), (115, 24685), (116, 24691),