Lexicon Genetics Incorporated – Genentech Project Materials

Genentech ID:	UNQ332	**Date of Submission:**	10-5-04
Lexicon Contract Name:	DNA068	**Mutation Type:**	X Standard Knock out
LexVision Name:	MEM641N1		☐ Conditional
Reference accessions:	NM_053141	**Is this gene X-linked?**	No

Required Materials:
☐ pKOS clone DNA(s) __KOS18, KOS23, KOS46_____
☐ Target Vector DNA __pKOS46TV_____
☐ Targeted ES Cell DNA __2A10_____
☐ Genomic Map

Southern Blot Analysis:
External/Internal Probe Strategies

	5' External	**3' External**
Name of Probe:	**24+25**	**20+21**
Restriction Enzyme for Genomic Digest:	**BamHI**	**KpnI**
Predicted Wild-type Band (kb):	**35.7 kb**	**19.7 kb**
Predicted Mutant Band (kb):	**8.1 kb**	**11.5 kb**
Probe Size:	**582 bps**	**893 bps**

PCR Strategies:
For standard knockouts, give wildtype and mutant-specific strategies
For conditionals, give 5' loxP and cre-excision strategies

Wild type-specific (absent in targeted allele)		**Mutation-specific product (absent in wt)**	
5' Primer Name:	32	5' Primer Name:	Neo3A
3' Primer Name:	33	3' Primer Name:	26
Predicted Wild-type Band (bp):	235 bps	Predicted Wild-type Band (bp):	none
Predicted mutant band (bp)	none	Predicted mutant band (bp)	502 bps

5' loxP strategy		**Distinguish Cre-excised and wt**	
5' Primer Name:		5' Primer Name:	
3' Primer Name:		3' Primer Name:	
Predicted Wild-type Band (bp):		Predicted Wild-type Band (bp):	
Predicted mutant band (bp)		Predicted mutant band (bp)	

Primer sequences:

Southern probes
24 5' – CTGTGGCAGAGGAAACCGAG
25 5' – CCAAGGCTGTCCCAGATCTG
21 5' – GCTGAGGTTAACTCTGACAGC
20 5' – AGATGAGCGAGTCCAGGGCCA

PCR Genotyping
32 5' – GGGCACACAATGGAGAGGTAC
33 5' – GCCAAGGCTATGACCAGGTACAAT
Neo3A 5' – GCAGCGCATCGCCTTCTATC
26 5' – TTGAGCATTGCTATGTCGGGTGT

Genomic Sequence Deleted:

GCAGGAAGCTCATTTGCAGACAAAGGCAAGTCCTTTTTTTCTTTCTCCTATTAGGCTTCCCTCTAACGACTGCAGGGGAA
CTGAGGCGCTATTCTGTGGTGGAGGAAAAGGAGGGTAGGTCCTTTGTAACCAATTTAGTAAAAGACCTGGGTCTTGGG
CAGCTGGAACTCTCCCGGAGAGGAGCTAAGGTCATTTCTAAAGGTAACAAACTACATTTGCAGCTGGATCAGGAGACA
GGGGATTTGCTGTTAAATGAGAAAGTGGACAGGGAAAAACTGTGTGGGCATACAGAGCCATGCTTGCTAAGCTTCCAA
GTGTTGCTAGACAACCCCTTGGATATTTTTCAAGCTGAGCTAGAAGTCACAGACATAAATGACCACTCACCAGAATTCC
TGGACAAAGAGATCATGCTAAAGATATCAGAAAGCAGTCTTCCTGGAGCTACATTTCCTCTGAAGAATGCTCAGGACA
TGGATGTAGGCCAAAACGGTATTGACAAGTATCTGATCAGTTCCAATTCCTATTTTCGAGTGCTCACTCGGAAACGAAG
CGATGGCAAGAAATACCCTGAACTGGTACTAGACAGAGCACTGGATAGAGAGGAGGAAGCTGAGCTCAGGCTAACCC
TCACAGCACAGGATGGTGGCTCTCTGCCTAGGTCTGGAACCACTGAAGTCCACATTGAAGTCCTGGACATCAATGATAA
CGCTCCTCAATTTGAGCAGCTTTTTTACAAAGCACAGATCCCTGAGGATAGTCCAATAGGCTTTCTGATCATCACTGTCT
CTGCTACAGACAAGGACATTGGAGTCAATGGACAGATCTCCTATTCACTTTTCCAGGTTTCAGATGATATTAGCAAAAC
ATTTTCAATCCACCCCTTGACAGGGGAAGTGCGATTGAAAGAACACCTTGATTTTGAAAAGACTCAGTCCTATGAAATC
AATATTGAAGCAAGAGACGCTGGGACCTTTTCTGGAAAATGCACGATTCTGGCCCAAGTCTTGGATGTGAATGACCATG
CTCCAGAGATTATCCTGTCTGCATTTACCAACTCCATTCTTGAAAACTTACCAGAAACCATGGTGGCAGTTTTTAGCGTT
TCTGATCTAGATTCCGGAGAAAATGGGAAAGTAAGTTGTTCCATTCAGGACGATCTACCCTTCTTCCTAAAGCCTTCTG
GGGAAAACTTTTATACGCTGTTATCACAAAAACCACTGGACAGAGAGAGTGTAGCAGAATACAACATCACCATCACCG
TTGCAGACATGGGGAGTCCCATCCTGAAAACACAAGTCAACTTAACAGTGCAGGTATCTGACATCAACGACAACGCCC
CCATCTTCACCCAAACCTCCTATACCATGTTCATCCGTGAGAACAACAGCCCTGCCCTGCACATAGGCACCATCAGTGC
CACAGACTCAGACTCAGGCTCCAATGCTCACATCACTTACTCGCTGCTGCCGCCCCATGACCACCAGCTGGCCCTCGCC
TCGTTCATCTCCATCAACGCAGACAATGGGCAGCTGTTCGTGCTCAGGGCACTGGACTATGAGGCCCTGCAGGCCTTTG
AATTCCATGTGGGTGCCACAGACGGAGGTTCGCCCGCTCTCAGCAGCCAGGCGCTGGTGCGCATGGTGGTGCTGGACG
ACAATGACAATGCGCCCTTCGTGCTCTACCCGATGCAGAACGCCTCTGCACCCTACACTGAGCTGCTGCCCAGGGCGGC
AGAGCCCGGATACCTGGTCACCAAGGTGGTGGCTGTGGACCGCGACTCTGGACAGAATGCCTGGCTGTCGTTCCAGCT
GCTCAAAGCTACGGAGCCCGGGCTGTTCAGTGTGTGGGCACACAATGGAGAGGTACATACCTCCAGGCTGCTGAGCGA
GCGCGATGTGCACAAGCACAGGCTGATACTGCTAGTCAAGGACAATGGCGATCCTCCGCGCTCTGCCAGTGTCACACT
GCATGTGCTGCTGGTGGATGGCTTCTCTCAGCCCTACCTGCCTCTGCCAGAGGTGGCACGTGATCCTGATCATGAGGAC
AGTGAGCTCACATTGTACCTGGTCATAGCCTTGGCTTCTGTGTCTTCTCTCTTCCTGGTGTCTGTGCTGCTGTTTGTGGGG
GTGAGGCTGTGCAGGAGAGCCAGGGAGGTCTCTCTGGGTGGCTGCTCTGTGCCTGAGGGACACTTTCCTGGCCATCTGG
TGGATGTCAGTGGCACAGGGACCCTGTCTCAGAGCTACCAATATGAGGTGTGTCTTACTGGAGACTCTGGGACTGGTGA
GTTCAAATATCTGAAACCAATTTTACCTAATTTTCAAGACCATTCTTTTAGACCAGAAATGGGTGAAAATCCCAACTCT
AGGAATGACTGGAGTTTTGGTATTCAGTTAAAATAACTGCTTTTC

Genomic Locus: ***(the deleted sequence represents nt15,108-17,515-in the sequence below)***

GAGCTTGCCTGCAGAGAGTACTCTGACCACTGAAACTCAGGAGAGAGCTAGTCTCCCAGGTCTGCTGATAGAGGCTAA
CGGAATCACAAGAGGAACAAGCTCTAACCAGAGACAACTATAACAACTAACTCCAGAGATTACCAGATGGCTAAAGG
AAAACGTAAGAATCTTACTAACAGAAACCAAGACCACTCACCATCATCAGAACCCAGGACTCCCACCTCAGCCAGTCC
TGGATACCCCAACACACCAGAAAAGCTAGACCCAGATTTAAAAGCATATCTCATGATGATGGTAGAGGACATTAGGAA
GGACTTTAATAACTCACTTAAAGAAACACAGAAGAATACTGCTAAAGAGGTACAACTCCTAAAGAAAAACAGGAAAA
CACAACCAAACAGGTAGAAGTCCTTAAAGAAAAACAGGAAAACACAACCAAACAGGTGATGGAATTGAACAAAACCA
TACAAGACCTAAAAAGGGAAGTAAACACAATAAAGAAAACACAAAGTGAGACAACGCTGGAGATAGAAAACCTAGG
AAAGAAATCTGGAACCATAGATGCGAGCATCAGCAACCGAATACAAGAGATGGAAGAGAGAATCTCAGGTGCAGAAG
ATTCCATAGAGAACATAGGCACAACAATCAAAGAAAATGCAAAATGCAAAAAGATCCTAAGTCAAAACATCCAGGAA
ATCCAGGACACAATGAGAAGACCAAACCTACGGATAATAGGAGTAGATGAGAATGAAGATTTTTTCAACTTAAAGGGC
CAGCAAATATCTTCAACAAAATTATAGAAGAAAACTTCCCAAACCTAAAGAAAGAGATGCCCATGAACATACAAGAAG
CCTACAGAACTCCAAATAGACTGGACCAGAAAAGAAATTCCTCCCAACACATAATAATCAGAACAACAAGTGCACTAA
ATAAAGATAGAATATTAAAAGCAGTAAGGGAAAAAGGTCAAGTAACATATAAAGGCAGGCCTATTAGAATTACACCA
GACTTTTCACCACAGACTATGAAAGCCAGAAGATCCTGGACAGATGTTATAGAGACACTAAGAGAACACAAATGCCAG
CCCAGGCTACTATACCCAGCCAAACTTTCAATTACCATAGATGGAGAAACCAAAGTATTCCATGACAAAACCAAATTC
ATAGAATATCTTTCCACGAATCCGGCCCTTCAAAGGATCATAACAGGAAAAAAAAAACAATGCAAGGACAGGAACTAC
GCCCTAGAAAAAGCAAGAAAGTAATCCTTCAATAAACATAAAAGAAGACAGCCACAAGAACAGAATTCCAACTCTAA
CAATAAAAATAATAGGAAGCAACAATTACTTTTCCTTAATATCTCTTAATATCAATGGACTCAATTCCCCAATAAAAGA
CATAGACTAATAGACTGGCTACACAAACAGGACCCAACATTTTGCTGCTTACAGGAAACCCATCTCAGGGAAAAAGAT
AGACACTACCTCAGAGTAAAAGTCTGAAAAACAATTTTCCAAGCAAATGGTCTGAAGAAACAAGCTGAAGTAGCCATT
CTAATATCAAATAAAATTGACTTCCAACCCAAAGTTATCAAAAAAGACAAGGAGGGGCACTTCATACTCTTCAAAGGT
AAAATCTTCCAAGAGGAACTCTCAATTCTGAATATCTATGCTCCAAATGCAAGGGCAGACACATTCATTAAAGAAACTT
TAGTAAAGCTCAAAGCACACATTGCACCTCACACCATAACAGTGGGAGACTTCAACACACCACTTTCATCAATGGACA

GATCATGGAAACAGAAACTAAACAGGGACACAGTGAAACCAACAGAAATTATGAAACAAATGGATCTAGCAGATATC
TACAGAACATTTTATCCTAAAACAAAAGGATATACCTTCTTCTCAGCACCTCATGTTACCTTCTCCAAAATTGACCATAT
AATTGGTCACAAAACAGGCCTCAACAGATACAAAAATATTGAAATTGTCCCCATGCATTCTATCAGATCACCATGGACT
AAAGCTGGTCTTCAATAACAACATAAATAATAGAAAGCCAACATTCACGAGGAAACTGAACAACACTCTACTCAATGA
TACCTTGGTCAAGGAAGGAATAAAGAAACTAAAGACTTTTTAGAGTTTAATGAAAATGGAGCCACAACATACCCAAAC
TTATGGGACACAATGAAAGCATTTCTAAGAGGAAAACTCATAGCTCTGAGTGCCTCCTAAAAGAAACTAGAAAGAGCA
CACACTAGCAGTTTGACAACACACCTAAAAGCTCTAGAACAAAAGGAAGCAAATACACCCAAGAGGAGTAGACGGCA
GGAAATAATCAAACTCAGGGGTGAAATCAACCAAGTGGAAACAAGAAGAACTATTCAAAGAATCAACCAAATGAGGA
GCTGGTTCCTTGAGAAAATCAACAAGATAGATAAACCCTTAGCCAGACTCACTAGAGGGGACAGGGAAAGTGTCCTGA
GCTATCATTCTCGCCGGCAAGAACACACTCGGACAACTGGATTCTTCTGCGGCAAGCTTTATTGCTTCTTAAGAAGGGA
AGACCCAGACCCTGGAAAATGGTGCTGCTTATATAGCCCTTAGCATGGTGTTTCAGCACCTGATGTGGCCTGTCAGCTC
CTGATTTGTTGCTCGCCCATCACCTCATTACAACGCCCCGAGATGGGCAGTGACTAGGTGTGAGTTCACTCTCGCACTTG
CACACAAGGCTTGTTTACTAGTTAGGCACAGTGGAAGCCAGCACCATCTTATAATGGTGATTTCTCACGGCACGGCTCT
CCACAGGAAAGGATCCTAATTAACAAAATCAAAAACGAAAAGGGAGACATAACAACAGATACTGAAGAAATCCAAAA
CACCATCAGATCCTTCTACAAAAGGCTATACTCAACAAAACTGGAGAACTTGGATGAAATGGACAAATTTCTAGATAG
GTACCAGGTACCAAAGTTTAATCAGGATCAGATTAATGATCTAAACAGTCCTATATCCCCTAAAGAAATAGAAGCAGT
CATTAATAGTCTCCCAACCAAAAAAAGCCCAAGACCAGATGGGTTTAGTTCAGAGTTCTATCAGACCTTCAAAGAAGA
CCTAATTCCAGTTTTTCACAAACTATTCCACAAAATAGAATCAGAAGGTACTCTACCCAATTCATTCTATGAAGCCACA
ATTAATCTGATACCTAAAATACAGAAAGACCCAACAAAGATAGAGAACTTCAGACCAATTTCCCTTATGAATATCGTTG
CAAAAGTACTCAATAAAATTCTCGCTAACCGAATCCAAGAACACATCAAAACAATCATCCATCCTGACCAAGGAGGTT
TCATTCCCAGGATGCAGGGATGGTTTAATATAAGGAAATCCATCAACATAATCCACTATATAAACAAACTCAAAGACA
AAATCCACATGACCATCTCCTTAGATGCGGAGGAAGCATTTGACAAAATCCAACACCTATTCATGATAAATAGTCTTGG
AAAGATCAGGAATTCAAGGCCCATACCTAAACATGATAAAAAGCAATCTACAGCAAACCAGTAGCCAACATCAAAATA
AATGGTGAGAAGCTGGAAGCAATCCCACTAAAATCAGGGACTAGACAAGGCTGCCCACTTTCTCCCTACCTATTCAATA
TAGTACTTGAAGTCCTAGCCAGAGCAATTCGACAACAAAAGGAGATCAAGGGGATACAAATTGGAAAGGAAGAAGTA
AAAATATCACTATTTGCAGATGATATGATAGTATATATAAGTGACCCTAAAAATTCCACCAGAGAACTCCTAAACCTGA
AAAGCAGCTTCAGTGAAGTAACTGGATATAAAATTAACTCAAACAAGTAAATGGACTTTCTCTACACAAAGGATAAAC
AGGCTGAGAAAGAAATTAGAGAAACAACACCCTTCACAATAGTCACAAATAATATAAAATACCTTCATGTGACTCTAA
CTAAGGAAGTAAAAGATCTGTATGATAAGAACTTCAAGTCTCTGAAGAAAGAAATCAAAGAAGATCTCAGAAGATGG
AAAGATCTCCCATGCTCATGTATTGGCAGGATCAATATAGTAAAAATGACTATCTTGCCAAAAGCAATCTACAGATTCA
ATGCAATCCCCATCAAAATTCCAACTCAATTCTTCAACGAATTGGAAAGGGCAGTTTGCAAATTCATCTGGAATAACAA
AAAACCTAGGATAGCAAAAACTCTTCTCAAGGATAAAAGAACCTCTGGTGGAATCACCATGCCTGACTTAAAGCTGTA
CTACAGAGCAATTGTGATAAAAACTGCAAGTTACTGGTATAGCCAAAGACAAGTAGACAAATGGAATAGAATTGAAGA
CCCAGAAATGAACCCACACACCTATGGTCACTTGATCTTTGACAAGGGAGCTAAAACCATCCAGTGGAAAAAAGACAG
CATTTTCAACAAATGGTGCTGGCACAACTGGAGGTTATCATGTATAAGAATGTGAATTAATCCATTTTTATATCCTTGTA
CTAAGGTCAAATCTAAGTGGATCAAGGAACTCCACATAAAACCAGAGACACTGAAACTTATAGAGGAAAAAGTGGGG
GAAAGCCTTGAAGATATGGGCACGGGGGGGGGGGGTATTCCTGAATAGAACAGCAATGGCTTGTGCTGTAAGATCGAG
AATCGACAAATGGGACCTCATAAAATTGCAAAGCCTCTGTAAGGCAAAAGACACTGTCAATAAGACAAAAAGGCCACC
AATAGATTGGGAAAGGATTTTTACCAATCCTAAATTAGGTAGGGGCCTAATATCCAGTATATATATATATATATATCAA
GAAGGTGGACTCCAGAAAATGAAATAACCCCATTAAAAATGGGGCTCAGAGCTAAACAAAGAATTTTCACCTGGGGAA
TACCGAATGGCTGAGAAGCACCTGAAAAAAAAATGTTCAGCATCCTTAATCATCAGGGAAATGCAAATCAAAACAACC
CTGAGATTCCACCTCACACCAGTCAGAATGGCTAAGATGAAAAATTCAGATGACAGCAGATGCTGGTGAGGATGCGGA
GAAAGAGGAACACTCTTCCATTGTTGGTGGGATTGCAAGCTTGTACAACCACTCTGGAAATCAGTCTGGTGGTTCCTCA
GAAAATTGGACATAGTCCTACCGGAGGATTCTGCAATACCTCTTCTGGGCATCTATCCCGAAGATGTTCCAACCGGTAA
GAAGGACACATGCTCCACTATGTTCATAGCAGCCTTATTTATAATAGCCAGAAGCTGGAAAGAACCCAGATCCCTCAAC
AGAGGAATGGATACAGATAATGTGGTATATTTACACAATGGAGTACTACTCAGCTATTAAAAAGAATGAATTTATGAA
ATTCCTAGGCAAATGGATGGACCTGGAGGGCATCATCCTGAGTGAGGTAACCCAATCACAAAAGAACTCGCATGATAT
GTACTCACTGATAAATGGATATTAGCCCAGAAACTTAGAATACCCAAGATACAAGTTGCAAAGCATGAAACTCAAGAA
GAACGAAAACCAAAGTGTGGACATTTCACCCCTTCTTAGAATTGGGAACAAAACACTCATGAAAGGAGTTACAGAGAC
AAAGTTTGGAGCTGAGATAAAAGGATGGACCATCTAGAAACTGCCATACTGAGGGATCCATCCCATAATCAGCCTCCA
AATGCTGACACCATTGCATACACCAGCAAGATTTTGCTGAAAGGACCCTGATATAGCTGTCTCTTGTGAGGCTATGCCA
GGGCCTGACAAACACAGAAGTGGATGCTCACAGTCAGCTATTGGATGGAACAGAGGGCCCCCAATGGAGGAGCTAGA
GAAAGTACCCAAGGAGCTAAATGGGTCTGCAACCCTATAGGTGGAACAACAATATGAACTAACCAGTACCTCCGGAGC
TCATGTCTCTAGCTGCATATGTACCAGAAGATGGCCTAGTCTGCCATCACTGGAAAGAGAGGCCCCTTGGTCTTGCAAA
CTTTATATGCCTCAGTACGGGGGAACGTAAGGGCCAAGAAGTGGGAGTGGGTGGGTAGGGGAGTGAGGGGGGAGGGT
CTGGGGGACAGTTGGGATAGAATTTGAACTGTAAATGAAGAAAATACCTAATTTTAAAAAATAAAACAAAAAAAGAA
AACCAATGAAGATTCTGATATCAACCACACACATGCACATGCACGTGCAAGCACACACACACACACACACAGCATC
CATCCATCCATCCACATGCACATGTGCAGATAAATACAAATACCACATGCACTCAAAAATATTTTTTCAAAGATCGTAA
CAAACCTCTCATACATTCTTTTCATACATCCTTTTCTGGGAACTATAAAGTCCTTTCATACAACCATTTTCTGGAAACTAT

AGGATGCTGCCTATAAAACAAAAAAGTAACACAGACATTTAAAAAAAACAGAAAAGAGAACATACAAAATGGGGGAA
ACAGGAAATGAAAATCTGTGTGATGGTTTCTGGATGACAACTGTATCTCAAGCTGAGCAAACAATAGTTCTCCAGTCTG
AATCTTTGTGACAAGAGTGAATGGCATCTTGCAGAATATTTATCAGTGAATCCTTTAAAACCATATCATCTTTTCAGTAT
TAGGAACCTGTGTTATTTCTTAAAGCCAATGAGCAAATAGAAAAATGGAGTGATACAAAAATTCCATAACTGGGAAAT
TTAACTAGAATAAAAGAAAATCCCATAGATGACAACAATGAGAAGTTCCAAGATGACAGCTGTGTGACAGCCGTGTGA
CAGGCGATGTAGAAAGCAACCATGCAGAACAATGGAGAAACAGACTGAGACAGAGAGAAAAGGCCCCACACACAGG
AACCAAGGAGCAGAGAGCTGGTCTCCCAGGAGTGCTGACAAGCCTGTGAGCACAGGTATGACTACCACTTCTCCTCAG
AGGGACCCACCCAGAGACCTCAGGACACAGGAACTGAGGAGCAGCCTGGGACAGGATCCTTCTGGTTTCTGTCTGAGC
CAAGAGCCAATCATGTGGCACAGTGGTCATATTATACCCAAATATTTTCACGAGAGAGCTGGTCTCCCA:GGACTAATG
ACACACCTGTGAGCAAAGGAAAGACCACCATTTCTGCTCAAATTCCTGGCCCAAGAGGAACCTGCACAGAGCCATCAG
GACACAAAACCAAGAAACAGCCAGGGACAGGATCATTCTAGTTTCTGCCTGTAGCCCAGAGCTGCCCCTGTGCCACAG
CTCTCCATACTCAAAATCCTCCTGGAGAGAACTGGTCTCCCAGGAGTACTGGAACACAGGCTTGCAGGAGGGACAAGC
CACAATCAGAGACAGCAAGACCAGCTAACGCCAGAGATAACCAGATGGCAAGAGGCAAGGGCAAAAACCTTACCAAC
AGAAACCAAGGCTACTTGGCATCATCAGAACCCAGTTCTCCCACCACAGCAAGCTCTTATAGCCCAACACATCAGAAA
AGCAAGATTAAGATCCAAAATCAGTTCTCCTGATGATGATAGAGGACTTTAAGAAGGGAGTAAATAATTCCCTTAGAG
AAATACAGAAGAATGCAGATAAACAGGTAGAAGTCCTTAAAGAAGAGACACAAGAATCCCTTAAAGAATTACAGGAA
AACACAACCAAACAGGTGAAGAAATAGAATAAAACTATCTAGAATCTAAAAATAGAAACGGAAACAATAAAGAAATC
ATGAAGGGAGACAACCCTGGAGAAAGAAACCCTATGAAAGAGATCAGGAGTCAGATGCAAGTATCACCAACAGAATA
CAAGAGATAGAAGATAGAAACTCAGGTGCAGAAGATACCATAGAAAACATTGACACAACAGTCAAAGAAAATGCAAA
AGGCAAAAAGCTCCCAACACAAAACATCCAAGAAATTCAGGACACAATGAGAAGACCAAACCTAAGGATAATAGGTA
TAGAAGAGAGTGAAGAGTCCCAACTTAAAGGGCCAGTAAATATCTTCAACAAAATTATAGAAGAAAACTTCCCTAACC
TGAAGAGATGCCCATAAACATACAAGAGGCCTGAAGAACTCCAAATAGATTGGACCAGAAAAGAAATTCCTCTTGTCA
CATAATAGTTAAAACACCAAGTACACAAATCAAAGAAAGAATATTGAAAGCAGTAAGGGAAAAAGATCAAGGAACAT
ATAAAGGCAGACCTACAGAATTACACCAGGGCCAGGCAGTGGTGGTGCACGACTTTAATCCCAGCACTTGAGAGGCAG
GCAGATTTCTGAGTTCGAGGCCCACCTGGTCTTCAGAGTGAGTTCCAGGACAGCCAGGGATATAAAGAGAAACCCTGT
CTCGAAAAACAAAAACAAACGAACAAACAAACACAAAAAGCAGAATTATACCAGACTTCTCACCAGAGACTATGAAA
GCTAGAAGATACTGGGAAGATGTTATATAGACCCTAAAAGAACACAAATGCCAGCCCAGGTTACACTACCTAACAAAA
CTCTTAATTGCCATAGATAGAGAAACCAAGATATTCCATGACAAAACCAAATTTACACAATATCTTTCAACAAATCTAG
TCCTATCAAGCATAATAAATGGAAAATGCCAACACAAGGAGGGAAACTACACCCTAGAAAAAGCAAGAAAGTAATCT
TCTTTCAACAAACACAAAAGAAAATAGCCACATAAACATAAAAATAACATCAAAAATAAAAGGAAGCAACAATCACT
ATTCCTTAATATCTCTTAACATCAATGGACTCAACTTCCCAATAAAAAGACATAGACTAATAGACTGGATATGTAAACA
GGACCCAGCATTTTGCTGCATACAGGAAAGGCACCTCAGTGTCAAAGACAGACATTACCTCAGAGCAAAGGGATGAAA
AACAATTTTCCAAGGAAATGGTCCCAAGAAACAAACAGGAGCAGTCATTCTAATATCAAATAAAATCAACTTTCAACC
AAAAGTTATCAAGAAGGATAAGGAATCATACTACATACTCATCAAAGGGAAAATCTACCAAGAAGAACTCTCAACTCT
GAACATTTATGCCTCAAATGCAAGAGCACCCACATTCATAAAAGAAACTTTACTAAAGTTTAAAGGACACATTGCACCC
CACAATAATAGTGAGAGACTTCAACACCCCACTCTCATCAATGGACAGATCATAGAAACAGAAACTAAACAGAGACAC
ATTGAAACTAACAGAAGTTATGGACCAAATATATTTAACAGATCTCTTTATAACATTTCATCCTAAAACAAAAGAATAT
ACTTTCTTCGCAGCACCTCATGGTACCCTCTCCAAAATTGACCATATAATCAGTCACAAAACAGGCCTCTACAGATACA
AGAAGACTTAAATAATCCCTTGCGTCCTATCAGATCTCCATGGACTAAGGCAGGTCTTCAATAACAACAAAAACAGAA
AGCCCACATACACATGAAAGCTGAACAATGCCCTACTCAATGATAATTTGGTCAAGGAAGAAATAAAGAAAGAAATTA
AAGACTTTTTGGAATTTTATGAAAATGAAGGCATAACATACCCAAACTAATGGGCCACAATGAAAGCAGTGCTAAGAG
GAAAACTCTACTCTGAGTGCCTCCAAAAAGAAACTTGGAGAGAGCATACACTAGCAGCTTGTCAGCACACCTGAAAGC
TCTAGAACAAAAAGAAGCAAATACACCCGAGAGGAGCAGACAGCAGGAAATAATCAAATTCAGAGCTGAAATCAACC
AATTAGGAACAAGAAGAACTATACAAAGAACCAACAAAACCAGGAACTGGTTCTTTGAGAAAATCAACAAGATAGTA
TAAACCTTAGCCAAACTAACCAGAGGGCACAGAGACAGTATCCAAGTTAACAAAAGCAGAAATGAAAAAAGGAGATA
TAATAACAGAAACTGGGGAAATACAAAAAATAATCAAATCCTACAAAAGCCTATATTCAACAAAACTGGAAGACCTGG
AAGAAATGGACAATTTTCTAGACAGTTACTAAATAAGGGTGGGAAGCATAATTATTACACAACAATTTTCCTAATACAT
TGCAAGTGAAAACAGACATTAAAGACTTCAAATGTAACCCAGCTTACAAAGGACTCAGTTGATGTCTGGAGACTAAGA
TACATTTTTAAAATCAGTAGCAGAGGTGTGACTAAAAACCAGAGAAGGTGAGAAAAAGGCAGGCTCATTGTATTTTAC
ACCTGTTGGTGTTCCTGGGTTTTTGGTGGTGGTGGTGTTTTTTTTTTCTTGAGATAAAAGCTACATTTTATTTGGGGGGGG
GGGGGACATGGATTTTAAAACTATCAATTACCTGAAGTTTTTACAAGTCTCATCACAAGTAGAAGGTAGATAGGATATG
AGACACTGCTGACAATATTAGGAAAAGATAAATAATGCTAACAACTTTTCAGATTTTCTTAAATTTTGGTAGGGAGTCC
GAGTTAAGTATAAACACTGGTGAGGAGTGCTTTTAAGCCAAGATAATTTTTTTGTTGTTGTTCTACTCTTGAGAAAGAG
AATAGCACTCACAAAACGCAAGGTGGCGCTGCAGGCTAAAAAGAGGAAAGGTATGGAAAGGGAAAGGGGAGGGATG
CACAAAGGATATATATTTCAGACTTCCGACAAAGCCATAGGAAATGATATAGCTAGCGGTAGCAAGCCCTGGAGAAGG
CACCCCTCTCTTCTCACAGGAATTGCTAGTGTCCAGGTCATTCCTAAGGATTCCAGCTGCAGGCATTCCAGGGAGCTGC
TTGAGGCTAAATGGAAGGAATTTGGGGTTTTATTTTGAAAGTCTTGGAAAGAATGGAGGCCAGATTGGAACAAGCTGT
GCAGAAAAGGCAAGTACTGTTTCTTTATGTGTTTCTTGGAGCGTCTTGGGCTAGCGCCGAACAGCTTCAGTATTCTGTG
GCAGAGGAAACCGAGAGAGGGACTTTCCTAGCCAATCTAGCAAAGGATTTGGGGCTGGGGCTGGGGGAACTGTCAGCC

CGGGAAGCTAGAATTGTTTCAGACCAGAACACACGATTTTTACTGCTCAGTCCGCTTACTGGAGAATTAATTCTAAATG
AGAAGCTGGACCGAGAGGAACTGTGCGGCCCCACAGAGCCCTGTGTGCTGACTTTCCAGTTGCTGTTGGAAAGACCAT
TTCAGATTTATCGCGCTGCACTACATATCAAAGATATAAATGATAATTCTCCAGTATTCCTAGACAAAGAAATACTCTT
GAAAATATCAGAAAGTACCACTCCAGGGGCGACGCTTCTCTTGGAAAGGGCACAGGATGCCGATGTGGGAACGAACA
GCCTGAGTAACTACACCATCAGCCCCAATGATTATTTCCATATTCACGTGCATGATGGAGGGGAGGGGCCTATCATTCC
TGAACTGGTACTGGATAAAATGCTGGACCGGGAAGAAATACCAGAATTCACTTTAACTCTCACAGCCTTAGATGGTGG
CTCTCCACCCAGATCTGGGACAGCCTTGGTGCAAATCTTGGTGTTGGACATAAATGACAACTCCCCTCAATTCGTGCAG
TCACTTTACAAAGTTCAGTCACCTGAAAACACCCCTGTTGGCTCCTTGGTTGTCGCTGTGTCTGCCAGGGACTTAGACAC
AGGAAGTTACGGACAAATAGACTACACATTTTTTTATGCCACAGAAAGAATTCTCCAAACGTTTCAAATCAATTCTACA
TCTGGCGAACTTTATCTTAAACGCGAACTCAACTATGAAGCGATTCAAACTTATTCGATAACTATTCAGGCCAGAGATG
GTGGTGGACTTTCTGGGAAATGTGCTGTGGTTGTAGAGGTAATGGACGTGAATGATAACCCACCTGAATTTCTCTTGTC
GTCACTTAATAGCCCAATTCCAGAAAATTCACAAGAGACAGTTGTTGCTGTATTTAAAATTAGAGACAGAGATTCGGGG
AACAATGGAAAAACCCTGTGCTCCATTGCGAATGATCTCCCTTTCGTCCTGAAGCCATCTGTGGAAAATTTCTATACTCT
GGTAACAGAGAAGCCTTTAGATAGAGAATCAAACACTGAATACAACATCACCATCACAGTCACCGACATGGGCATACC
CAGGCTCACAACCCAGCACACCATAACAGTGCAGGTCTCTGACATCAACGACAACGCCCCCACCTTCACCCAAACCTC
CTACACCATGTTCGTCCGCGAGAACAACAGCCCCGCCCTGCACATTGGCACCATCAGCGCCACAGACTCAGACTCAGG
CTCCAATGCCCACATCACCTACTCGTTGCGGCTGCCTCACGACCCGCAGCTGGCCCTGGACTCGCTCATCTCCATCAAT
GCAGACAATGGGCAACTGTTCGCGCTCAGGGCTCTGGACTATGAGGCCCTGCAGGCCTTCGAGTTCCACGTGGGTGCA
ATAGACCAAGGCTCCCCTGCGCTCAGCAGTCAGGCTCTGGTGCGCGTGGTGATACTGGACGACAATGACAATGCGCCC
TTCGTGCTCTACCCGATGCAGAACGCCTCTGCACCCTACACTGAGCTGCTGCCCAGGGCGGCAGAACCCGGATACCTGG
TCACCAAGGTGGTGGCAGTTGACCGTGATTCTGGCCAGAACGCCTGGCTGTCATTTCAGTTGCTTAAGGCCACAGAGCC
CGGACTGTTTAGTGTGTGGGCGCACAATGGTGAGGTGCGCACCACCAGGCTACTAAGCGAGCGAGATGTGCCCAAGCA
TAAGCTGCTAGTGGTGGTCAAGGATAATGGAGAGCCTCCACGCTCTGCCAGTGTCACACTGCATGTGTTGCTGGTCGAT
GGCTTCTCTCAGCCCTTCCTGATTCTGCCAGAGGTGGCGCGCGACCCTGCACAAGAAGATGATGAGCTAACACTCTACC
TGGTCATTGCCTTGGCTTCTGTGTCTTCTCTCTTCCTGGTATCTGTGCTGCTGTTCGTTGGAGTAAGACTCTGCAGGAGG
GCCCGGGCAGCCTCTCCGGGTGTCTGCTTTGTGCCTGAAGAACACTTTCCTGGCCACCTGGTGGATGTCAGCGGTGCAG
GGACCCTGTCCCAGAACTACCAGTATGAGGTGTGTCTGACTGGAGGATCAGGGATAACCAGTGAATTTAAGTTTCTAAG
TCCAATTGCCTCTAACTTCCTAACCGAAAGCACAGGGAGAGAAATAGAATAAAAGCTAAACCCTTCTGCCCATGGATG
AAGCTCTAATGTAAACTATACCCTTGTTGTGTAATGAAGAATGATTTCATGTTAACATCTAGAAGTTAACTAATTTAGG
ACAGAAAAGAATACCTGTATTTATTCCCAAAAACCTTTTCTTTAATTTATGAAATGCATGTGTTGTGTGCTATCTCAAAT
CTAATTTGATTTCTCTTTGTTTTTTAAGATTTGTTGAACTGCAATCTATTAAACAACAAATCTTGGTAGAGATTGTTTAAG
CTGTTTTTCCATATCTACATTTTTCATTTATAATTATGTTCTGAGTCTATTGGAATTACATATAAATGTAGACATACCCTA
CATTTGAGAGGTTATATTATATAGATTTTTCAAAGTTTCTTTAGTAATTACTGTGCATCATACATGATTTCATCACCTTGG
GGACATGGTCTCTCTGTGTCCATGTCCAGGATAGCTTTGAACTTTTGATTTTCCTGCCCCAGACTTTCAAGTTGCAGCTA
CCACAGGCCTCAGCCTATCGCCTTCTTTATTTCAGAAGAAGCCAATAAGTGGCGGTATCTCAATGATGAGCAAGTAGAA
GTTGGTAGAGACTTGGTAAGATCCATAATTATTAACTGGCAGAGCAGAGCCAAACAATCTCCTGATTGTTTCCATTTTG
TTTTTCTTGTTTGAAGTGTGGAAGGTTCCTTGTTCTGTCCATCTCCAGGCAGGTGACTTGGCAACATTATGCTGTTTTCTA
TTACTAGATATCATGTGTCCTACTCACATTGCTCATCAGCCTCTTCTGTATTCAGAAATAGCTACACTCTGCTTAGCCTA
GCCTGCAGCCTCACTTCCTTATAAACTCACACACACACACACACACACACACACACCATTGGGAGTTTATTATCCAACTAC
TATTTAAGCTCTCAGTTAACTAAATCTTAACGTCTAAAAGAGTTGAGTGTTGGGCATGGTAAAACGCACCTTTAATCCC
AATACTTGGGAGGCAGATACAGGGGGAATCTCTGTGAATTTGGAAGCAGCCTGGTCTATGAAAGAGTTCCATGATACC
CAACGGCTACATAGAGAGACCTTGTCTCAGTAAGCAAGAGGAGATGGGGAGAAGAAGGAGGGGAGAAAGAGGGGGTT
CTCTACATCAAATTTCCATATAGTGTTGGGTTACTCTCCCTCCAGAAACTCCTGTTTCTTGTTTGTGAAAATGGAGAATT
CACAACACTCCTTGGACCTAGGCACTATTATCTCATCTGTAGATAAGGAATCTAGAGCAAAGAGGATAAATAACTTGCA
CAAGATTCACAGCTACTCTTTCTGTGGTTCATCACACTAAAAGTAGATAAATCCCCAAATCTTCAGTTACTAGAAACAT
ACATGCAAACACATGTATATATTTCTTGCAAATATTTTTCCTTACAGGTTGTGATTTAAAAGCGTATCTTTTGCCCCAAA
CGCAATAAGAATTATTGAATCATTACTCTCCAGCAATGACATTTCTCTTGTGTGACCTTCAGGAAGTTGTCTGCCCAAGA
AGGCACAGCAATAAGGGAGGTGGGACTTTTATCTTGCCCACTGCCAGATAAAGGTAGCTTTAGGTTTTTAACATCCATT
TTTATCACATAAAATGTTAAGATGCTGTGAGAACACAAGGCGGCGCTGTAGGATAAGGAAGCAAAACCTAGAAGGCAG
TTGTGGTTCCATTAATAGGGGAAAAGAAAAAAAAATCCTGCAGAAGCCCGGAAGCCCAGAGAAGCCCGGACTGGATG
CTTCAGAAAGGAGGTCTCAGCCCTCGGAAAAGGACTGAAAGAATTCTCAGGTATCTGGTGAGATAACTACAGTACCAG
ATACTAGGGGTGTTTATAGTTCTGCTGAAACATCCTTCAGGACTCTGTACCACCAAGAACAATGGAGGCCAGCAGGAA
GCTCATTTGCAGACAAAGGCAAGTCCTTTTTTTCTTTCTCCTATTAGGCTTCCCTCTAACGACTGCAGGGGAACTGAGGC
GCTATTCTGTGGTGGAGGAAAAGGAGGGTAGGTCCTTTGTAACCAATTTAGTAAAAGACCTGGGTCTTGGGCAGCTGG
AACTCTCCCGGAGAGGAGCTAAGGTCATTTCTAAAGGTAACAAACTACATTTGCAGCTGGATCAGGAGACAGGGGATT
TGCTGTTAAATGAGAAAGTGGACAGGGAAAAACTGTGTGGGCATACAGAGCCATGCTTGCTAAGCTTCCAAGTGTTGC
TAGACAACCCCTTGGATATTTTTCAAGCTGAGCTAGAAGTCACAGACATAAATGACCACTCACCAGAATTCCTGGACAA
AGAGATCATGCTAAAGATATCAGAAAGCAGTCTTCCTGGAGCTACATTTCCTCTGAAGAATGCTCAGGACATGGATGTA
GGCCAAAACGGTATTGACAAGTATCTGATCAGTTCCAATTCCTATTTTCGAGTGCTCACTCGGAAACGAAGCGATGGCA

AGAAATACCCTGAACTGGTACTAGACAGAGCACTGGATAGAGAGGAGGAAGCTGAGCTCAGGCTAACCCTCACAGCA
CAGGATGGTGGCTCTCTGCCTAGGTCTGGAACCACTGAAGTCCACATTGAAGTCCTGGACATCAATGATAACGCTCCTC
AATTTGAGCAGCTTTTTTACAAAGCACAGATCCCTGAGGATAGTCCAATAGGCTTTCTGATCATCACTGTCTCTGCTACA
GACAAGGACATTGGAGTCAATGGACAGATCTCCTATTCACTTTTCCAGGTTTCAGATGATATTAGCAAAACATTTTCAA
TCCACCCCTTGACAGGGGAAGTGCGATTGAAAGAACACCTTGATTTTGAAAAGACTCAGTCCTATGAAATCAATATTGA
AGCAAGAGACGCTGGGACCTTTTCTGGAAAATGCACGATTCTGGCCCAAGTCTTGGATGTGAATGACCATGCTCCAGA
GATTATCCTGTCTGCATTTACCAACTCCATTCTTGAAAACTTACCAGAAACCATGGTGGCAGTTTTTAGCGTTTCTGATC
TAGATTCCGGAGAAAATGGGAAAGTAAGTTGTTCCATTCAGGACGATCTACCCTTCTTCCTAAAGCCTTCTGGGGAAAA
CTTTTATACGCTGTTATCACAAAAACCACTGGACAGAGAGAGTGTAGCAGAATACAACATCACCATCACCGTTGCAGA
CATGGGGAGTCCCATCCTGAAAACACAAGTCAACTTAACAGTGCAGGTATCTGACATCAACGACAACGCCCCCATCTT
CACCCAAACCTCCTATACCATGTTCATCCGTGAGAACAACAGCCCTGCCCTGCACATAGGCACCATCAGTGCCACAGAC
TCAGACTCAGGCTCCAATGCTCACATCACTTACTCGCTGCTGCCGCCCCATGACCACCAGCTGGCCCTCGCCTCGTTCAT
CTCCATCAACGCAGACAATGGGCAGCTGTTCGTGCTCAGGGCACTGGACTATGAGGCCCTGCAGGCCTTTGAATTCCAT
GTGGGTGCCACAGACGGAGGTTCGCCCGCTCTCAGCAGCCAGGCGCTGGTGCGCATGGTGGTGCTGGACGACAATGAC
AATGCGCCCTTCGTGCTCTACCCGATGCAGAACGCCTCTGCACCCTACACTGAGCTGCTGCCCAGGGCGGCAGAGCCCG
GATACCTGGTCACCAAGGTGGTGGCTGTGGACCGCGACTCTGGACAGAATGCCTGGCTGTCGTTCCAGCTGCTCAAAGC
TACGGAGCCCGGGCTGTTCAGTGTGTGGGCACACAATGGAGAGGTACATACCTCCAGGCTGCTGAGCGAGCGCGATGT
GCACAAGCACAGGCTGATACTGCTAGTCAAGGACAATGGCGATCCTCCGCGCTCTGCCAGTGTCACACTGCATGTGCTG
CTGGTGGATGGCTTCTCTCAGCCCTACCTGCCTCTGCCAGAGGTGGCACGTGATCCTGATCATGAGGACAGTGAGCTCA
CATTGTACCTGGTCATAGCCTTGGCTTCTGTGTCTTCTCTCTTCCTGGTGTCTGTGCTGCTGTTTGTGGGGGTGAGGCTGT
GCAGGAGAGCCAGGGAGGTCTCTCTGGGTGGCTGCTCTGTGCCTGAGGGACACTTTCCTGGCCATCTGGTGGATGTCAG
TGGCACAGGGACCCTGTCTCAGAGCTACCAATATGAGGTGTGTCTTACTGGAGACTCTGGGACTGGTGAGTTCAAATAT
CTGAAACCAATTTTACCTAATTTTCAAGACCATTCTTTTAGACCAGAAATGGGTGAAAATCCCAACTCTAGGAATGACT
GGAGTTTTGGTATTCAGTTAAAATAACTGCTTTTCATCATGTGTACTGGATTTTATCATATACTCAACTACTTTTCTTGCT
GTGCCCATTTTGAACTTCTAAAACATACTTAAAACTTGTTTGCAGGCTATTCTCTCCATGGTTTTAGAAAGTATCTCAGC
TTTTCTCCAAACTGGAAGATGAAATGTTTTAATCTTGTTTGGTTTTGTTTGTTTGTTTGTTTAATGTATCACTAGTT
GCACAAATCTTTGTTCTGGGATGGTTTGGAAATGTACAAGAGGGTAAAAAGGGGAAATCAATTCAACCGAATCAGATG
GAATTCAGGGTGTGTTCTCTCACTGAATACACCCGACATAGCAATGCTCAAACACAACGAGGTCTAATCAGATAGGAG
AACGAGGGGCTCACTGGGACCTCTGCCTTTTGCTTTATTTGGCCTCTACTGGACTGTCTTTGTTGATGTTTTCTCTTAAAA
ATCTTACTTAGCCACATGGTTCCTCATTAGCTTGCTATTAGTTTTCATATCACTACTTTAAGCTGCTTTCTACTTTGTTCG
TTTGCTTGCTTGCTTGCTTGCTTGCTTGTTTTTTGGTTGGTGTTGAGGTTTCAGAATGGTGTCCCTTATTTACCTGGT
AGGTTGAAAGAGCATAGCAGTAGCATTGAGTTTTCACTTCTGTTAAATACTTGCCAGTCAGAGAAACTGCATCAGCCAG
TATTGATTTTTTTTCCTTTCTTTGTTGCCATTCCACATTTCTTTCTTGCCAGTCATGTGCTTAGTTAAAAGAATACATTTTC
ACTGTCTTTTTTTTTTTCTCTAGCAAATAGATTAGGGCATATGGTTAGCTTATAGTGAGATGTAAGATGTGGTGCCTTCC
ACAGCTCTTCAGTTGAAGAGAAACTGGGGGGGGGACCTATGCATACCAAGTAAGGTCTGTCTCTCTGATCTACCACTTT
CAATACCCAAGAACACTTGTAAAGGGAGATGTCTCACCTGGAAAGGGATTTCACCCTTTGTTCATGTTATGTTCTTCCTA
GGATGTTCGTGGTATAATGAGCGCACAAATACTCATGTTGGCTCTGTGATAGGTGTGACGGGCTAAAGTAGCATGAAAT
GGACTTAGCTGTGATGATCCCTGGCAACTCAGGAGTTCTCATATTATTCCCCGCGTTGCCAATTTCTTAGCCTTTTTAAA
CATTCAGAAATAAAGGAAGTCCCATGTCATTATTCTAGCTTTTATGCTATGGTCAGTTCTTATGCTATGGAATCTATTTG
TGTGTTTGTGTGTTTGTGTGCCTGTTGGTGCATGAGTGCTTGCAGATGTCCTTGCGCCTCTGCATGTTGAGGTCGGAAGT
TGATGTCTACCTTCGTTGCTCAGTTATCTAGACTAGCCAGGGAGCTCTGTGGAAACACTGACTAACTGGTCATGATTCTG
GGCAATAAAAGGAAAAGTCTGAGATCCAATCCTAGTTACCTGATTCTAATGACCCAGTTCTTAGTAATATGCTTTACTG
ATAAGCATATACTGGTAGCATTATTTTCCTATGAAGAGAAATCCATTTGTCCCACTCCATGAATAAAATGACCCTGTGT
AAATGTAATCTTTAGCTCATAGTTTGTATTTCTTTCTATAGCAGTGACCACACTGCTTAGAAAATAACCCAAAGGGCTCA
CAAAAATCAATGACCTAAGTAAATTGGATCACACTACAACTGCTCTCTTCATGACGAAGAAATCAGCCTGATTATATTC
TTGTGGGCACTCAATGAGTCACATGCTTTATTGTGGAAGTGAGTTGTCCTATATGGGCAGCAGAATCACTCTATGGTTG
TGTTTATTGGACCTTATCTGTCTCTTCAGTCATCTTCTATAAACTCTAAAATATTATACACTTCATATTCAGTGGGCCCAT
TATTAAAATTAAATATCTTATGCTCACTTCAGCATTGTGTATGTGTTTGAAAGCAATTGCTTTCTAGAAGTTTAGCTGAA
AACTAATTTTAAGAAAACTACAAGCAATATTATGGATGAATTTTCACACTTAAATAACTGAGAGATTCTTGAAATTCTG
TAAAAAAAATGATGTTTCTAATTACTTTCTGGTGCAGTTAACCTTTTATCTTTGGCAAAATAATGCCCGTTGATGCCTTC
TTTTAAATAATACTATAAAACATCAGAGGACCATACATGACTTTTTAAGAAGAATGATTTGGCACAACTGAATAAGAA
ATTCTTTAGCACTTAATTATGCTATTCATATAGAAGCTATCAGTTTTTGGTGTTTTCAAACAATAATCCATATTTATGTCC
TGTTCTGTTTCTCTGTTGCTGTCAGAAAATTCACAAGAAGTTGCTTAAAACAATAAAATGTATTATCCCATAGTTTTGTA
AATAAAAAAAAAAAACCAATAAGTGTCTAATTGAACTAACAAGAGAAGTCCATGGGAACACATTGTGCTCTGGAGACT
TTATAGAACCTTTTTTGTCTTTTCCATCCAGATGTTGCCCACATTACATGGTGCATGGTCCCTTCAACTTCACAGCATGTA
ACGTTTCTTGTATAGCCATTTTCTCTGACCCACTCTGAAAATATTCTTTGAATAAAAGTTCTTTATCAAAATAAATAAAT
AAATAAATAAATAAATAAATTCTTTATCCAAATTTGATAAGTCTCCTATTTAGATAATGAAGGACAATCTCCTATTCAA
AGAATCTTAAACTTAATCAGCTTTGCAATGGATTCTCTTGCCAGATTAGATAATATAATTACAGATTCTATGGTATATTT
GAGTGGCTATTATTCTGCCTAGCAATACCACCTACTGTCAAATGGAGGCACATAAAGCTTATTATAACAGGAGTTTAAG

CCTCATTGACTTAAGGAATCTAATTAAACAAACTTGTAGAGACATTACCAAAAACTATGAATTGATAAAGGCATCGGC
ATTTGTGTGGTCCTGGAGTTCAAACCCTGAGCTTCACAAAGGCTAAATGTGCTCTATCACTGAGCTCCCTGTCCTGTCCA
TTGTGAATTTTCACTGCAACTCAATTCAAATTATATAAACAGACAAACAAAAATACAAAGATAATGATGCAATTTCAAT
CTAAATTCAATATAGAATTTAAACTCTGTTTTATAATAGATTTAAAATCTAAATCTATTTCTCAAACTCTCACAGCTCAA
TTATTAAAAGATGAACAATTCAATTAAAAATAAGCAAAACCCAGAATAGACATTTATTTTCCATAGAAGATAAACCCA
TGGTTAATATGCACATGAAAAACTGTGCAACAACCTCATCAGGGAAACACAAATCAATATCACAGCAAGACACTCATA
CCTACTTGGATGGCTAGAACCAAAAAAAAATCAGATTTTGGGGAAGATGTCATAATATTGAAACCCTGATACACGGCT
GACAAAGTATAAAATGCTGCAGCCGTTTTTAAAGACAGCCTGCCAGATTTTCAAGTAGCCAAACATAGAGCTATCATAC
CGTAAGCAATTCAACTCCTAGAGAAACAAAAATATGTCCACAAAAATAGGTACGTAAATCTTCATAGAAACAATATTC
AGAAGAGCAGAGGGGTAGAAACATTCCAGATGTCCAAGTACACATGAGCCTGCATGAGCCAGAAGAAAGTAATGAAA
TACTGACACACGCTGGGATTTGGATGAACCATACAAGCGTCAGGCTAAGGGAAGGAAAGGTAGCCACAAGGTCCACAC
ATTCTGTCACTCTGGTCAGATGGAAGTTTACAATGGAGAATCAGTAGGGACCAGAAAGAGAGACTGATCATTCCCTTTA
GGCTCTGCATAGGGGGAAGGAGAAAATAATTGTTAAAGGATGCAAGGTTCTTCTTTGGTGTAAGATATACGCTCCAAA
ACTGACCTTGATGATGAGCAAATCACATGGTTACTATATTAAAAGGCTCGAAACTTTATACTTTCAAATGGAAGGATAT
ATTTAAATATACATTATATCCCAAAGCACAGACACTATTTATGCCAAATATAAGAATCGATAGAGGCCCACATATGTCT
ATTGTGAAATAATTTTCTGGTAGTTGAACACTGGGAAAACCTACGCTTCTCTCCCTTGGATATTGAAGAGAAGAAGCGA
TCCATCTGTACTTTAACAAAGCATGTCTATATTGTGTAGAATTTGCAGGTTGAAACTTTGCATTGACTACTCATTTGTTA
CTCTGTACTGTGTATGGTGGAAAATATGTGCGTGAAAAACTGTCCCCGGGTTATTTTTTTTTTGAGACATTTTTACCCCT
CGGTGTGTGTTCTCAGGTTAAATGTTGAATACACTATCTCATTTGGTTATTGACACAGCAACAGCGTTACATACTCAACA
CCATGAGTGAGAATTTAGTTTTGTACTTGTTTTCATACAATAGCTCAGTGTTTTGTCCATACACGTGAAAGCAACTTAGA
AAAAGAAGCCAGTGGTTGCGGTTACATAGTTTAGTTCATGGGTCTTGGAAAATTTTGCCTTTAAATCTGAAAATGTAAG
GCTCCGTGAGACCGCACGGTGGCGCTGCAGGTTAAGAAGACAGAGCATAGAAATTGCTTGTGTAATTCCCTTGTCAGG
GCCAGTTTCTCACCACCTAGAATCAAAGGGTGTGTCTTTTTCGGCCAAAGCATAGGCGAGTGTGAAACCTTAGATATTC
TATTTGGAGGCTTGATTCTCACGTTCTGGACTGTGAGATAGTGCTGTCACGATCCTGGACATATGTGAAGCTACTGTGA
AGCAAACGCCGAGGAAAGAGCCATGGAGACTGCATGGATGTGCAATCTGAGACAAAGGCAAGTCCTGGCTTTCTTTGT
TTTGCTGCATGTGTCAGGGGCAGGGGCAGAACTGGGCCCCTATTCCATAGAGGAAGAAACAGAGAGGGGCTCCTTTGT
GGCAAATCTTGGGAAAGATCTGGGGGTGGACCTGGCAGAGATATCCAATCGCAGGGCTCGGATCATTTCCCAAGAAAA
CAAAGAGCATTTGCAGCTCAACCTTCAATCTGGAGATCTGCTCATAAATGAGAAACTGGACCGAGAGGAGCTATGTGG
CCCCATTGAGCCGTGTGTTCTACACTTCCAAGTGTTAATGGAAAACCCTTTAGAGGTATTTCAGGCTGAACTGAGGGTG
ATGGACATAAATGACTATTCTCCGGTGTTCAGTGAAAGAGAAATGATACTGAGAATACTAGAAAACAGTGCTCTGGGA
GATACATTTCCTTTAAATAATGCTCTGGACTCAGACGTAGCAATCAACAATATCCAGACCTATAGGCTCAGCTCAAACT
CTCATTTCCTGGTTGTAACCCGCAACCGCAGTGATGGCAGGAAGTACCCAGAGCTGGTGCTGGAGAAAGAACTGGATC
GAGAGGAGGAACCTGAGCTGAGGTTAACTCTGACAGCTTTGGATGGTGGCGCTCCTCCCCGGTCTGGGACGGCACAGG
TTCTCATTGAAGTAGTGGACATCAACGATAATGCACCCAAGTTTCAGCAGCCAACATACCGAGTGCAAATTCCCGAGA
ACAGTCCCACCGGTTCTCTGGTACTCACAGTCTCAGCCAATGACTTGGACAGTGGAGATTATGGAAAAGTATTGTATGC
ACTTTCTCAGCCTTCAGAAGATATTAGCAAAACGTTAGAAGTAAACCCTGTAACCGGGGAGATTCGGCTACGAAAAGA
GGTGGATTTTGAAACTATTCCCTCTTATGAAGTGGATATCAAGGCCACGGATGGGGGAGGTCTCTCAGGAAAATGCAC
GCTGTTACTGAAGGTGGTGGACGTGAATGACAATGCCCCAGAAGTGATGCTATCTGCTCTTACCAGCCCAGTCCCAGAA
AACTCCCCGGACGAGGTAGTTGCTGTTTTCAGTGTTAAAGATCCTGATTCAGCGAACAATGGAAAAATGATTGCCTCCA
TCGAAGAAGATCTTCCCTTTCTTCTAAAATCTTCAGGGAAGAACTTTTACACTTTAGTGACCAAGAGAGCACTTGACAG
GGAAGAAAGAGAGAAATACAACATCACCATCACTGTCTCTGACCTGGGCACACCCAGGCTCACAACCCAGCACACCAT
AACAGTGCAGGTCTCTGACACCAATGACAACGCCCCCGCCTTCAACCAAACCTCATACACCCTGTTCGTCCGCGAGAAC
AACAGCCCCGCCATGCACATAGGCACCATCAGTGCCACAGACTCTGACGCTGGCTCCAATTCCCACATCAGCTACTCGC
TGTTGCCTTCCCACGACCCGCAGCTGGCCCTGGACTCGCTCATCTCCATCAACGCAGACAATGGGCAGCTGTTCGCGCT
CAGGGCGCTGGACTATGAGGCCCTGCAGGCCTTTGAGTTCCACGTGGGTGCAATAGACCAAGGCTCACCTGCGCTCAG
CAGCCAAGCGCTGGTGCGCGTGGTGGTGCTGGACGACAATGACAATGCGCCCTTCGTGCTCTACCCGATGCAGAACTC
CTCTGCGCCTTGCACAGAACTGCTGCCCAGGGCGGCGGAACCCGGATACCTGGTCACCAAGGTGGTGGCTGTGGATCG
CGACTCTGGCCAGAATGCCTGGCTGTCATTCCAACTTCTCAAGGCTACGGAGCCCGGGCTGTTCAGCGTGTGGGCGCAC
AATGGCGAGGTACGCACTACCAGACTGCTGAGCGAGCGCGATGTGCCCAAGCACAGGCTGGTCCTGCTGGTCAAGGAC
AATGGCGATCCTCCGCGCTCTGCCAGCGTCACGCTGCACGTGCTAGTGGTGGATGGCTTCTCTCAGCCCTACCTGCCTCT
GCCAGAGGTGGCGCGCAATCCCGCGCACGATGAGGACGCTCTAACACTGTATCTGGTCATAGCCTTGGCATCTGTGTCT
TCTCTCTTCCTCTTGTCTGTGCTGCTGTTTGTGGGGGTGAGGCTGTGCAGGAGGGCCAGGTCGGCCTCTCTGAGTGGTTA
TTCCGTGCCTGAGGGCCACATTCCTGGCCATCTGGTGGATGTCAGAGGTGTGGGGACCCTGTCCCAGAGCTACCAGTAT
GATGTATGTCTGATGGGCGATTCTTCTGGGACCAGTGAGTTTAACTTCTTAAAGCCAGTTTTCCCTAGCTCTCTAGACCA
GTGCTCTGGTAAAGAAATAGAGGAAAATTCCTCACTCCACAATAGTTTTGGATTTCATCATTAACAGAAAGCTTCTTAA
CAGTATTTACTTCCCAATATTGTTGTTGATTAGCTAATGTCTGTTCACCTGTGACTAGCAACAATTTTAATTTTCACTTTG
CCTGTCCTTTTTCAGGCTCGGACCTCATGTTTGGTTTTACTCATATTTGTAGCACAGGATTTTTCATAGGCTCTCAGAAA
ACCAAAAGGTTTTCTCTGCAGTTAATGCATTCGCTGAAACTTTTCTAGCACTTTGTTTTTCTTCCTCACTTGCTCTCCATG
TTTTATGTTCCTAGACTTCTTGAATTATTAAAATACTGTGTTGCATGCTATATACATACATAATAGTTGGTATTTCTGCAT

TTCCTTTCTATACTGCCAGACTTGGTGATTAGCCACCTTTGATTTTTGTTATATATATATAATAGTTGTCTTAAGTTATGC
TAGTATTTTATAGCTTTATTTTTCTTTGTTTATATATCTTGATTTAAAAATTAATTTCTGTCATAAGTGATACAAGTATCT
AGTGAACCTGGAAATAAGAATAGTATTGTAAGATATTGAGTTGGTGTACATGTGCCTAAATTTGTGAAAATCGAGGTA
ATTTGGGCATTAGAAGGTATCAAATAGAAGTATATAAATTTTTCTTTTAATTCTGCATGAAAGCCTAGAAATTGACGTT
GAGTTTTCAATGGCTTACAATCTAGTCACACTCTTTTGAATAATCTTTTGAATAAACAATGTATATTTATCATCATATAA
ATGGTGTGATTTTTCCATTCAACAGAGATGGGATTTGGGGGTCAATCTAATCTTTTCTTATACACATTCTGAGGTTTGGT
CTACGTCACTTGCTTATATGGGAAAATTAGAATATTGTAGGCCTTTGAATAAAAAAACGAGGAAGATATTTTATCGCTA
TATCCTTGCTTTCAGCAATGTTAGGATCTGTACTGATTTGTCATGGTTCTGGTCTGTATTCAAGGCACAGTAAATAGATT
GTATTAGATTTCGTTAAGAGGGACATTTAAAGAAAGGTAAGGCTTTTCTTTAATTCTATTGATGAAGGCTGTTTTAAGG
AAATAAAGATAAACAAGAGGAAAGCAACAGAAACTTCAAAGTATGTGAAATGAAAAAGCGTGAATTTCAGATGGTAG
GAGCTGAAGGACACGTGCTGTTTCTTGTCCTCCTTACAGTTCATTTGTGCATTATTTTATTCAATAAATAGTAACTGAAT
GATTTTCCAACCAGAGATAAGGTACAGTTCCTGTCCAAATTAGTCACATATAGAGGGAAAGGTAGATTCTGATAAAACT
AGAAGCTATTCTATTTACATAATAAACAGAGTGTGTGCATAAGTCACAGTCATGTGCATTCTGGGGCACAGAAGGGGG
CAGCGTGATTGCTCAGTTATGGCTGCAAACTGGCGCTTCTGTTAGAGAATGTGATAGAGTTGGAATAAGTTTTCTGAGA
AATTAGTGAAACATTTCGTTTGCACGTTCCCTGTGTTCCTGTGCCTGTTTCCAGAACTATGAAATATGTTATCAGAAGGC
ATGCTCACATTGTCCCCTTTGTTTGCATGAGCGGGTGCCAGAGACAAAATAGAATTAGCATGGAGTTCAATACAGCGTT
GAAACAAAGTTACTGCTACAAATCTTTTATTCAACCATTAAAATTTTAACTTTCCTATGAATCTGTGAAGAACCAATTTG
AACGGATGTCTATCTCAACATTATTTTCAAAAATCCAACAAAAGAAGAAATGAGAAACCAAAATAACATGCTATGGGA
AATATTTCATAAAGATGTATGTGTGGGCACAAAAAATTAGATACAGCCATTTTTAATCTGTTGGAACCACATGGTGGCG
CTGCAGGCTAAAGAAATGCAAGGGAGATTAAAGTGAGTCTGCGCTAGAAGTCAAAAAAAAAAAAAAAAGAGCAAAATT
CTGACCGATGAGGGGGAAAGCTGAGGCTCCTCACAACTGAAGGAAAAATATATCCTAGATCCTTCCAGCTAGGTGGAA
CATCTGAGGTGTATGACTGCTAGGAGCTGTGCTGACACCTGTAGTAAAGAAAGAAGAAGCAATGGCAGCCAGAGGATC
ATGTGTCTCCAGACAAAGGCAAGTGCTATTTCTCTTCCTGCTCGGGGGTCTGTGTTTGGCAGGTTCTGAGCTTGGACGTT
ATTCAGTGACTGAGGAAACAGAAAGGGGATCATTTGTGGCGAACCTAGCAAAGGATCTAGGGCTAGGGGTGGAAGCA
CTGGCTGCAAAGAGAACTAGGGTGGTTTGTGATGATAACAAACAGCACTTGTTTCTGGATTCTCACACTGGAGATTTGC
TCACAAATGAGAAACTGGACCGTGAGAAGCTGTGCGGCCCCACAGAGCCCTGCATGCTTTATTTCCAAATTTTAATGGA
TAACCCCTTTCAGATTTACCGGGCTGAGCTGAGAATTCTGGATATAAATGATCACTCACCCATATTCCAGGACAAAAAG
ATGATTTTAAAAATACTAGAAAACACAGCTGTGGGAACAACATTTCGATTAGAAAGAGCACAAGACTCAGATGGCGGA
CGGAATGGCATCCAAAACTACACCATCAGCCCCAACACTTTTTTTCATATTACCGTTCATAACAGCGATGAAGGAATGA
TATATCCTGAGCTTGTGCTAGACAAAGCTCTGGATTGGGAGGGGCAGCCAGAGTTCAGTCTAACACTCACTGCACTTGA
TGGTGGGTCTCCACCCAGGTCTGGGACAGCCACTATACATATTCTGGTTTTGGACATCAATGATAATGCCCCACAGTTT
CCCCAAGAACTGTATGAAATCCAGGCTCCAGAAAACAGTCCAATAGGCCTTGTTGTCATTAAAGTCACCGGAGAAGAT
GTAGACTCTGGAGTCAATGCAGAAATATCCTATTCGTTTTTTGATGCTTCTGAGGATATTCGAGCAACCTTTCAAATCAA
TCCTTTCTCTGGGGAAATCACTCTCAAAGCCTTGCTTGACTATGAGTTCATAAAGTCCTATAAGTTAAATGTACAAGCA
GTTGATGGTGGGGGCCTTTCGGCGAGATGTACGGTTCTAGTGCGGGTTTTAGACGTTAATGACAACGCCCCTGAACTGA
TCATGTCATCACTTGTCAACGAAGTTGTTGAGAACTCACCTGAAACCGTGCTGGCAGTTTTTAGGATTAATGACAGAGA
CTCTGGAGAGAATGGAAAAATGGTTTGCCACATTCAAGAAAATCTACCTTTCCTTTTAAAACCTTCCGTGGACAATTTTT
ACATCCTAATGACAGAAGGAGCACTGGACAGAGAGAGCAGAGCTGAATACAACATCACCATCACTGTCTCTGACCTGG
GCACACCCAGGCTCACAACCCAGCACACCATAAGAGTACAGGTATCTGATATCAATGACAACGCCCCCGCCTTCAACC
AAACCTCATACACCCTGTTCGTTCGCGAGAACAACAGCCCCGCCATGCACATAGGCACCATCAGCGCCACAGACTCTG
ACGCTGGCTCCAATGCCCACATCACCTACTCGCTGCTGCCAACCCAAGACCTACAGATGACCCTCACCTCGCTGGTCTC
TATCAATGCTGACAACGGGCAACTGTTTGCAATCAAGGCTCTGGACTATGAAGCCTTACAGGCCTTCGAGTTCCACGTG
GGTGCCACAGACCGAGGCTCACCTGAGCTCAGCAGCCAGGCTCTAGTGCGCGTGGTGGTGCTGGACGACAATGACAAT
GCGCCCTTCGTGCTCTACCCGATGCAGAACGCTTCTGCGCCCTACACCGAGCTGCTGCCCAGGACCGCAGAGCCCGGCT
ACCTGGTCACCAAGGTGGTGGCTGTGGACCGCGACTCTGGACAGAATGCCTGGCTGTCATTCCAGCTACTCAAGGCCAC
GGAGCCCGGGCTGTTCAGTGTGTGGGCTCACAATGGCGAGGTGCGCACCACCAGGCTGCTGAGCGAGCGCGATGTGCC
CAAGCACAGGCTGCTGCTGCTAGTCAAGGACAATGGCGATCCTCCGCGCTCTGCCAGTGTCACACTGCAGGTGCTGCTG
GTGGATGGCTTCTCTCAGCCCTACCTGCCTCTGCCAGAGGTGGCGCACAATCCCACTCAAGGGGAAGAGGATGTGCTCA
CGCTGTACCTGGTCATAGCCTTGGCATCTGTGTCTTCTCTCTTCCTCTTGTCTGTGCTGCTGTTTGTGGGGGTGAGACTGT
GCAGGAGGGCCAGGGCGGCCTCTCTTGGGGGCTGCTCCGTGCCAGAGGGACACTTTCCTGGACACCTTGTGGACGTCA
GCGGTACAGGAACACTGTCCCAGAACTACCAATATGAGGTGTGTCTAATGGGAGGTTCCTCTGGTACCAGTGATTTCAA
GTTCTTGAAATCGATTTACCCTGAAGTTCATGCTTATAGTTCCCAGGACAATAGTGATGGGAATCCCACATTTTGAAGTT
TCTAATTTAATTTTGAGTAATGTTTCATTCCATTTAACATATAATACAGCCATATGAATATTAATTTGTATAGTAGTTGCT
ACACAGCAAAACTAACTTCGTTTTCAACTTCCAAGTAGGTCACATTTAGATTTTTACAGTGTTTTTACTTTAGTACTTTA
GTGGTTGTTTCATGCTTGTGGTTTTTGTTTGTCTATTTATGTTTTTGTTTTCTTTTCTTTCTAGTAGAGTATTGTCACTTTA
AATTTGAGGTTTTATCGTACTCATACTGTACGATTATTTGGTTTTATTTCTCATTATAGAAAACTGAAGCTTGAGGTTTC
GTTGTTATTGTTCTCTTTTCTTTTGTTGCTAAGAATTGACCAAGCCTTTTGCATGGTAAGAAAATGCTCCACCATAGAGC
TCTATCTCCAGCCAGGCATGCTTTATACTCACTTTTAAAAGCTGTATATTCTTTTAACTTTCACTGAGTCCGTTTTTGGCA
GTTTCATGCATCTATCTCCTGCATTCTGTTTATGATAATCTCTTGATTAATCTCCTTGCAACCCCTATTCCTCCCTTACAA

ATCCCTTGGCATGTTGCTGATTTTGAGTGTTCTGGTAATTTTATGCACTATGTTAATTAATGACTTCTGCATGCATGGAG
TCATACTTTGGACTCAATCATTCCTAACTCTTGTGTCCCACTTGTTTCCTTCCTTTTCCAAGCAAGTACCCCATGCTGCTT
TCTAAACATGGCTACTTCATTGCCCTTATTTCCCATCTTCCTTAAGAGTTCTTTCTTTTTTATCTTTTCTTTGTTTTCAAAC
CAGAGTTGCTTTATGTAGATCTGGTATATCTTGCATATAATTTTAATATGCAAATTAATTGTATCCTAAAATTAGTTCTG
CAGACCAGGCTGACCTCAAACTCATAGAGATCCACCCACCTCTGCTGCCCGAATGCTGGGATTAAACTTATGTATCACT
ACCACCCAGCAAGAGCTCAGTTTTATGTTCATTCTTGGTGACATATATGGCAAATTGTGTCATATAATGCTAATACAAT
GTGATAGTCTGCATGTAAATCAGCATAAATTTGAGCACATTTAAATTTTATTTGACAATATTGATGGACTGGTTGGAAA
GATAACTTTCTTGTTATATTGAAACTTTAAAAGTTGTCAAATTTAAACATTGAAATAAATTAATGGTTACAGAAAGTTTT
CTCTCCAGTCCCTTTCTATACAGTTGTTCTTCGACTTTGACCTACTTCCAGACAATGTTTAACTGCCTTATCTTTATAATC
AGCTTTTATGTGTTACCCACTTTTTGCAGTTCTTATTTCACATTAATAGACACACTTACAAAAGGAACTCATTTCCCTTAT
CCTAGGGTTTTTGTAGAATAATCATAAAATGTTATCAGTTTTGTTTCTGTGGGTTTCTATGCTCAAACCCAAGGCCTCTT
AAATGAATACCATCCTGAAGTAAAACTAATATTAATGTCCACCTGTATAGGTTTCCTATGTACACATACTTAGTAGTGC
AGTATGATTACACTTTGTTTTTTGGAAAAAACATCTTTTCCAAAGCTAACAGTTGCTGTTTTAGATTTGGCTTTATTTCCA
TTCGTGGTTAGTGATTTTTCTGCTCCTCTCTTTCCATATTAAGCGATCAATCAAAGCAGTGAGTTACCTTGAGCTGCACT
CTCTGTTCTCACTACTGTTTTTTACATCATATCCCTCTTGAATATTATCTTCTTGCCTTCAAATATTCAAATATATAAGAT
GCAAATTATTGTGTTTATGTACTAGGAGCTTTCGTTCATAGGTCTTCTTTTAGATGGTTTACCTTGTGGCTGTCATGCTTT
AATACTTTTTCCACACTGCTGGCCTTTTATAGGACCCAGTATCATGTCTGAGTTTACTTTCTTACTTGGTTGACAGACAA
TTTCATTGAAATAGATGCAGAGGCACTTAGGAGAAATAAAACAACTTTTGATACTTTACATAGTGAAGCAATAGTTTCA
TTTGATTGATAGTTTGACTGGGTATAAAAGTATAATTTGAAAATTTCTCCCTCAACGTTAAAAAGCACTTCTCCTTTTCT
TAATTGTGTAGAACTACTTTTCACAGGGACAATTCCATTCTAAAGCCTATCTCTTTTTCTGAAATTTTCCCCCATACATTC
TGGAAGCATTGGAAAACTTACCCTCAGTAGTCTGAGAATACTGTAGCTGTGGCTATTTCTTTGTTAACCCATTCATGAG
GATAAATCCTGTTGATGTTGAGATTCACAATTTAGAAAATAACTCATTTTAGCTTGCTATAATTTCTCACTTGTATTTTCT
AAAAATCTTGATTAAATATTTAATTAACTGGAAGAGTTCTATGAGACCCTAAGCTCATTTCATTTTGTATTTTCACTCTA
TTTGGTCCATGTTCTACTTTCTTGCACTGCTCATTTAATCATTCAATCTTGACTTGTAAGCTTGCTTTTTGGTAAATAAAT
ACTTTTAGAAGTTTTTTGGTTTTGTTATTTTTTTGAACAGTGTGCATTGGAAGTGTAATATTTTTCTTACCTGTAATTTAC
CACCTTAGACTATATTATGAAAATATGCTGTATAATATTATTAGTATCATATTGTCATTCTAAAAATTAAGTGTGAGTCA
CAAAAGTTGAAGAATTTTACCAAAATTATACAGTTTGTAAGGGACACTGAAGTCTCCTAATCAGTTTTGTTACCTTTTTC
AACTTTGAATCAGGGTCTCAACTACACAGTCAGGGTATTCTCCAATTTACAATCTTTCTGACTCTGCCTCTTGTATATTG
AAACTACAGGCATATATAATCCAATATGCCCCATCATTTCTCTTATAATAAGAACAATACTCCATACAAATGTTATTAA
CATGAAATGGGTACATGCATTTGAAACACAAAGAATCATGGAAGATGTAAGGAAACATTTGTTTTGTGGATTTTATTTT
TCTGGAGATATTGATCAGATATTTCCTCTTGTTTCTTTTTGTTTTGTAGTTGTATTGGTGTGTGTGCGTGTGTGTGTGCAT
GTGCGTGTGTGTGTTGACAATTCTCTTGTCTGCATCTACTGTCTGTGCTTTGACTAAAGATGTGCAGTACTGGATCTGCT
TTTTTAATGGATACTAGTGACTAAACTCAGATCCAGCTTTGCACAGAAAGTGTTTTACTCACCACATTATCTTTATGGCC
ATGGACATTGGTTTGGGCCCTTCTACTTCATGTTATAGATATCCTCTCAAATATCATGTAGTCCTTGGCTGTGTTCTCATA
ATGAAGAATTCTGCATCTAAAACACTGGGTATCAACCCTCTGTGACTGAACAGGCATGGACAGCAAGGCTTCATTCCAA
TGTTACCATGCTAAGGCAGAGGTTTTTCTAGGCAGAGCCACATCAGTAAATATAAGAATTTATTTGAGCTTTCACGCTTT
TCATGTTAGAATTCTGGAAAAACTTGTGTGTGAGGTTATCTGTCAATAGCACACCTTGTGTTCTACAGTCTGAGAATGTT
GCTTGAGAAGATACTTGAAGTCTTAGAATTTAAAAATCTAAATCTAAAAATCTAAATCTAAAAATCTAAAGTTCTACTT
TTGTTTAGCATGACTTAAGTGTCAAAGACTAAAGAAAGTTTGCTAATCTCTTCAAATCAAGTATCCATTCTCTACTATGA
GTGACTTTTTTTTGTCTCTGTAGACATTGAGAACAGAGAATTCAACCTTACTGTAAATACAGTTTCAATTAATAACTTGT
TCATCTCAAGATTAATTTAATCTTCCCATTTCTTTGAATCTGAAATGTAAATGCTATTTTGTTAGACAAACATGTTAATTT
CTGTTTCTCCAGTGGTGGATTTTTTAGCCATTTCCTAGAAGTTCTTAGTGAGTTTCTTCCTACTGCTTTCTATCATTAAAC
ACATGTGTGCTACCTGTATACCTTAATTTTGTGAGTTCACAATAATCATTACTTTTCTATCAGCTTAATGGATATTTTAAA
GGTGGAAAGATAACTGTGCATATATCCAGGCCACATACCTTTCAATTTTTCTCTTTTGTGCTGGTTTTTTTCAACCATAT
ATAGAACTTACATTTTTAAAAATTCAACTCAAATTAGCATTTTTCCATTGGAACTGTTTCGAATGAGCTGGGGAACTTTT
GAAACTGTCAATAGTGGATATCATTGATGAGTTCCTAGCATTTATTCCCAACATTCTCCTCCTTCAGTGGCAATTGTGAA
CTCCAGCCAGGGCCAAGTTTCAGAGATGGTTCTAGTCAGAGTGAAGCAAGCACACATTAGGCTCTGTCACTAAAAGCT
ATCCTCATTAATGCTATATTCAAGTAGCCATATACTGCTTCATTAGCAGGAACATGGCATTAATTGATTGCATTTACAGA
TTAAATATTTGCTTTCCTTAGGAAATCAAATGTCTATCCTTTTTCCTCTCTGAACTGCTGTGTGTAGTTGGCAGAATACAT
CCTAAGGTCAGCCTTAGGAGAGTATGAGTGTCCTTTACTCAAAATGGCACAATTGAATTGTGCACCACTTACTGAATTG
TTGTAACTTGTAAGAAACTGCAACTAAACTATGACTTTTTATAATGTATTCCCTAAAGTATGCCATCTTTCATAATCCAA
GGATAACCTCTGAAACGTTCCGTGAACACTATCTCTTTGCCTTTTCACCTAACCAAGGCCAAGTGATAAAGGGATGTGT
TAAACTTAACAATGTTATAGTCCTGAAATACCAAGTGCTTTAAAACAAACACTGACATCATCATGAGCCATAAAGAAC
ACTAATGAAAAAATATACTAATCACCACAAAATAAATATTTGTCTCTGAGAGAAATTTGATGTGAAGGAAACTTAAGT
AGCATTCATCAAATTGTGAAAACCTGTGAAGACACATGGTGGCGCTGCAGGATAATGTTACAGGAAAAAAGGAATTAC
ATTAAATGCCGCAGACACAGCCCAAGTGAGCACAGAAAACTAGAAAGAAAAAGAAGCCAGGAGGGTGCTACGTAGAA
ACCTTTTGTCCTTCGGATTCTGAGGATTCCGTGGACAAATCAAGGGGCACGTTTTGCAGAAGTGTGTGGTGAAGCAGAA
GTGATTCTGCCAGAAGCCTTCTGGAAAGCAACTATGGAGAATCAAGAGGGACTCTATCTGCAGACAAGGCAAGTCCTG
CTTCTCTTTGTTTTCCTAGGAATGTCTCAAGCACACTCTGAGGCTGGGAGACTTTCAGTGGTGGAGGAAATGCTGAGTG

GGGCCTTGGTAGGGAATTTGGTAAAGGACCTGGGGCTCCAGGTGGATGAGCTGTCTGCACGAGAGGCTCAAGTGGCCT
CTAGTGATAATAAACTGCCTTTGCAATTGAACATAAATACAGGAGATTTGCTCCTTAGTGAACCGCTGGACAGGGAGG
AGCTGTGTGGCTCCACTGAGCCCTGTGTGCTCCATTTCCAGGTGTTACTGAAAAACCCCTTAAAGATTTTGCAAGCTGA
GCTTCAGGTCACGGATGTAAATGACAACTCCCCCGTATTCTTGGAAAAGGAGATGGTTTTAGAAATCCCAGAGAACAG
CCCTGTTGGTGCTGTGTTCTTGTTGGAAAGTGCGATCGATTTAGATGTAGGAATCAATGCTGTTAAAAGCTACGAGATA
AGCCAGAACTCTCATTTCCACGTTACCATGAGAGTTAATCCCGATGGCAGGAAATACCCAGAGCTAGTTTTGGACAAGG
CGCTGGATTACGAGGAGCAGCATGAGCTTCGTCTCATCCTCACTGCTTTGGATGGAGGGACGCCACCCAGGTCTGGGAC
TGCATTGGTCCGAGTGGAGGTCATAGATATTAACGACAACTCCCCCGAGTTTGACCACATGTTCTATGAAGTGACGGTT
CCAGAGAATAGCATGCTTGGCTCACTGCTTATCACTGCCTCGGCTTGGGATTTAGACTCAGGAATTAATGGTGAAGTAT
CGTACGCCTTTTCCCATGCATCAGAGGATATTCGAAAAACATTTGCAATTAATGAACATTCTGGAGAAATACGTTTAAA
AGGCTATTTGGACTTTGAAACAACTGAATCCTACTCGATAATCATTAAAGCTACTGATCGGGGAGGACTTTTTGGGAAA
TCTACAGTAAGAATTCAGGTGATGGATGTGAACGACAATTTTCCTGAAATCATTGTGTCATCGTTTATCAGTCCAATCCC
AGAAAATACCGCAGAGACTTTAGTTATGATTTTTAGCATTCGAGACAAGGACTCGGGTGAGAATGGCAAGATGGTGTG
TACTATTCCGGAGGGTCTCCCGTTTGTGCTAAAATCTTCTATTGAAAATTACTACCACTTAGAAACGGATGGAGCACTG
GACAGAGAGAGCATAGCTGAATACAACATCACCATCTCTGTTACAGACCTGGGCACACCCAGGCTCACAACCCAGCAC
ACCATAATAGTGCAGGTGGCCGACATCAATGACAATGCCCCTGCCTTCACCCAAACCTCCTATACCATGTTTTTCCATG
AGAACAACAGCCCTGCATTGCACATAGGCACCATCAGCGCCACAGACTCTGACGCTGGCTCCAATGCCCACATCACCT
ACTCGCTGATGTCTGCTCAGGACCTTCAAATGGCCCTCTCCTCGCTAATCTCCATTAACGCTGACAACGGGCAGCTGTTC
GCGCTCAGGGCGCTGGACTATGAGGTCCTGCAGGCCTTCGAGTTCCAAGTGGGTGCGACAGACCGAGGCTCACCTGCA
CTCAGCAGCCAGGCTCTGGTGCGCGTGGTGGTGCTGGACGACAATGACAATGCGCCCTTCGTGCTCTACCCGATGCAGA
ACGCCTCTGCTCCCTGCACAGAGCTGCTGCCCAGGGCGGCGGAGCCCGGATACCTGGTCACCAAGGTGGTGGCTGTGG
ATCGCGACTCTGGCCAGAATGCCTGGCTGTCGTTCCAGCTGCTCAAGGCTACAGAGCCAGGGCTGTTCAGCGTGTGGGC
ACACAATGGCGAGGTGCGCACCACCAGGCTGCTGAGCGAGCGCGATGCACCCAAGCACAGGCTGCTGCTGCTGGTCAA
GGACAATGGCGATCCTCCGCGCTCTGCCAGCGTCACGCTGCACGTGCTAGTGGTGGATGGCTTCTCTCAGCCCTACCTG
CCTCTGCCAGAGGTGGCGCGCAATCCAGCGCACGAAGAGGACGCCCTAACACTCTACCTAGTCACTGCCTTGGCATCTG
TGTCTTCGCTCTTCCTCCTCTCTGTAATGCTGTTTGTGGGAGTAAGGTTGTGCAGGAGGGCCAGGGCAGCCTCTCTGGGT
GGCTGTACTGTGCCTGAGGGACACTTTCCTGACCATCTCATGGGCATTAACAGTGCGGGAACTCTGTCCCAGAGCTACC
AGTATGAGGTGTGTCTGATGGGAGGTAGTGGGACAAATGAGTTCAGATTCTTGAAGCCAGTTTCCCCCAATTTACAACC
TCAGTTCCCTGGGAAAGAAATAGAGGAAAGCTCTACTTTGCGCAATAGTTTTGGGTTATTTAGGGACTGTAATTGATGC
TGTATTTTATTTTGTGGCTATTCCATGCTAATGTGTATTTCTCCGAATTTGCATGATCTTTAAATCTAATGTTTGCATTTT
ATTATGTCCCTCCCACTTTTCAATTTATGCCAGCGCTTGTAATAAGATGGTAATTTATTCTGTAGCCCATTCTCTCTGATG
ACCTAACTCGTAAAAAATTTACCCTGCTCCCCTTCCCACCTGTCTTTTCCAACACTTTGACTTGCATTTTTGCTTATGATG
AAATAAACAGACCATTTTAGGAGTAGTTAAAAATTTTAAGCATATCTTTTGTTAACTTGTGGCTTGTTATTATGGGTGCT
ATTTTCAAGAAAACTTTTTTAAAGCACCCTAGTTTAATTTTTTAATGTTTGTTACTATTGAATATATTGATTGCATTGGAA
AATCTATTCTGTGGTACAACTATTAGGCCTGTTGAGAAGGAGCCAATAGTGAGTTTGGGGACAGCTCAGTGATAGATAC
CCAAATAGATAAAAACACATAATAAACAAGTGGGGACAGGTGGTGGTAAGCTCCTTACTAACACTATCTTATGTATTCT
GGAAGGTGGCTACAGGGGTACATGAATACTGGGGTTACTTATAAAATCTTGAAATATAAGGCCTTAATTTTACAAGTGT
CTCACTAACTTTATGAGGACAGAATGTAAGCCAGGTGGAAGAAATGGCACCTAAACAATCCTGTGAATAGGAGAAAGC
AAGCCTGTGAGATAATATACAATTTTGCTTATGTTCCCCCATGAAATAAAGGAATGTGCACTGAGTACTAATTCACAAG
TACACACATTTGCTGTGCATATTATGCAACATTCAAATCTAATGGAAAGAGTACTTAGTCTATTGTGAGTTTGAAACTTC
CTCTCTTATTCTATTGCTTGAATTTCCTGATATGGTCATAAGCCACTGAGTCTGTCTCAGATTCCACTGAAGAGCAGCAT
CCAAAAGTATGATGACCACATTTTTTTAACATATGAATGTGTCATGTCCTAATTGTAAATAATAATAATAATAATAATA
ATAATAATAATAATTTCAACCACCACAGGGGAGAGTTTTATCTTGGGTAGAGAATGACCAGTCTATAACAGTTCTTGTC
CTTGAAGACTGACAATTACTGGGAAATATAATTGTTTTACATGAATAGTACGTACGTAATTACAGGGAAAATGTAACGG
TTGAGAGAGGAAGTCTCCTGTGAATTTCCTAACAAGTCTAAAGTCTGTATTTCTAGAAGGAGGAAAATGAGAGATGAT
GAGCATCATGGAGAGAGAAAGATGGTAAAGACGTGACAATAAAGGATGTGAGGGCGAACTAAGAGAATGCTCCCCAT
CCCATGGACTAGAGACAGCGTCTGCCAGAAACATTCTTTCAAAGAAACTTAACACTGTGTTACTTAACATTTTAATTAG
TTAGTTAAAACCCCTCCCACATCCAAGACAACCCAGTGTTTATACTTTTTGAAAGATTCCATTGCATTATTAGTCCCTCA
AACTATGGAATCTTTGCATCCACGCAAAATGTGCATATGGGCTAATTAAGTTTAATTTCTTACTTTGGAAAGTATAAGTT
GGAAACAGAAAGTCTTTTGGCAGTTATCTAAGGCTGGGAAAATGTGTAGGAATGGAGAGTAGTTGGGTACAATTTATG
TGGGGGATAAATTGGAAATGATTTTAAATTAGAAATACTACTAATAGTTGTAGAGTTCTACAACTATAGGAATAAGCAC
TGAGCTGTATAGCTCAAGTGTGTGAGATACTATGATGACTCTATTTCAACAAAGACGTTTAAAGCAATAGAGAACAACT
CTAGAAGACTATGATTCCACGTAAGCTAGGTCTTCTTTAAACCACCCAGGCACAGGAGTTGTACAGACAGGAGAGCAG
ACTCAACAGAAGGTCCAGGTAACTGTCTTGTTGCTTCAAGCTTTTCCAGACATATGAGCACCAAGACCTCTCTATTTTTG
AAGGAACTGTGTTTCCTAACTCTAGTGGAGAGTAACCAAGACTTCACTTTTGGGAGCTTCTGTGTTCACATACAAGTCA
CTAACCAATTTTCTAAAATGTGAGCTTTTCAGCAGTCAGTCTCTGAGCCAACAATTACATCTGATGAATAAAAGTTACC
CTTACATTAACGAAGGGTAGTTTCATTTTCTTTGCAACCATTCTACTGAAAATTCTATTTTAAAGGTCATAAATAATGTC
TATAAACACTAAATAACACTCTGTCACCAAAAGAAAGAGATGCAACTACACATTGCTTTGTAATGTCTTTCTCTTTCTTG
TGACGGTGTCAATGAAAATGGTTGTATAAAGGGAGCAACTTTGCCCTCGTGGTTCTTCTAGAATCAGATTTCACTCCAA

ATGACTGCTCCAGCATTGTCTATGGCAAACTAATAGTCTGTATGGCTGCAACTTCTAGCTGTCGTACCTGTGTTCTAGAT
GGCTTGGGGAAAGGATGGTCATTTAGAACTCTTCTGTCCCAGACAAAATAGAAGTAAAGACAGTTGTCAATCCATCTGT
AAAATTGCCAAGGTCAAACAAAACCACAAAGAGGCAGGTCAGCTAAGTTGTCGTGTGTCTTAGTTACCTTTCTATTTCT
GTGATAAAACATATGATCATGGCAACTTATTCTAAAAAAAAAAAAATGCTTAACTCTGGACTTACAGTTTCAGAGGGTTA
GAATCCAGGATGGCACAGCAAATGTTTGCTGGCAGGAACAGCTGAGAGCTCACATCTTGATCTGCACATTGGAAGCAG
AGAGAAAACTCTAGGAATGGTGTGAGTGTTTTGAAATCTCAAAGCTCCAATGACACACTTCCTCCAACCAGGCCATACC
TCCTAATCCTTTCCAAGTAGTTCTACCAGGTAGGGATCGAGTATTCAAACATAGAAGCCCATGGCAAGCATTCTCATTC
ATACTTCAACATTGTGTGTTTGGGTACGTGTAGAAGCATGGTACATATTTTAGCAGTCATCTATCAGGGTCAACCACAA
ATACTGCTTTAAATACAATAGACAATGTTAACATTTACTTTATTCTTGACTTTGAGGTATTTGCTGCTGGTTTTCTTGGTC
TTTTTAAAGTCTGATTGTCTTTCAAAGAATGATTTTGAAGCCGTAGTCTTTTTTTGTTTTAAGAAAGATACTCGTTTTTCT
TTTTCCTTTTTTCTTTTAAATAAGTGAAGGTTGGCTCTACTGCCCTGTGTACAAGGAAATTCACAGACACTATTTAAAAA
AAGTAAGACTAGCACTTGTCCGTGAACTACATACTCATATATTTTAAATTATTCCTGGATTAGGTATAATACCCAATACC
TAGTAACAAGAGAGTATCATACATACTCAATATAAATGAAATTTGGTGGCTATGTTGTAATTGTTATATTTAATTTTATT
TTGGAGATAAGGATTGAACCAGGACTTCAATGAGCATATCATACACTCACATCACTACTGAGGTAATGCCACATAAATT
ACTTGTTTTCTCTTAAAAGACTTTTAGTTAATTTTCTTCTGGTTGCTCTGCAAATGTCAGCTTACAAATTTCAGTGACTAA
AACCTTTGGAGGCAACACTATAGATAAGGAGACAAAGGTACATACTTTCTCCAGGTCTATAGAGCGTGAGTGACAGAA
CCATGATTCAGTGTTCCTAAATATTATCCATTTCCTAGGGTGCAGTTACATGTCTCTTCAAGATGTTTCTGTTATTCTTTA
CCTCTGCAGTGTTATATCTTTAGTTACTAGCTAATCGATTTTTTATTCCCTTCAAGTTCCATAGAAAGATCATCTTACTGT
GTCATATCCTCCCATATGCACATGAGCACATGTTTGTATGCATGTGTGTATATGTGTCTTCAGACACCGTGTCCCTACAT
ACTCTCAGTGATGCATATGTGTATATGTGTCTTCAGACACGGTGTCCTTACATACTCTCAGTGACATGGAGCTCACTGTG
TAGACCATACTCACCTTAAACTCTATAGGTCCCCCTACTTCTGCCTTTCAAGTGTTGGCATTGAAGGTTTGAGCCACTGC
ACCTTACTGTGTTTTTAATGTAAAAGCAAGGAATCCAATATTACCTTGTCTTAAGTTCACTACTAACAAAGAAGTAGTG
TGTTGTGTAGTTTTCATGACTCATGAGTGTATGTTTGTGTGTAAGTGTAAATGGTAATGTAATTGGATAATGAACTCACC
CCAACAAATATTTACCAAAGCGGTGGTAAATATTTGTAACTACTAAAGAATTGTCATGAAATAAATATTTTTTATTAAT
TTGGGGACACTTTATTGTATCTTTTTGAGCTGAACATTCAAAGCACTAATGATTTCATACAGAGTATGGTCTGTGTTTGG
ATTCCAATTCAAACAAACCAACAACACAAGACATTTTGTAGAAAAACGGGAAAGCTCAAACAGACTGAGTTATAAGCT
ATATGCAAAAAGTATTTCTACACATCTATTGTGGTAATGATTTGTAATTATATTTTAAAGGCTTTGATAATTATAAATAA
CAGATGAATATTTAGAAATAAATGCAATCTATGTGACATTTGCTTTTGAATATTCTAGATAGACATAAAATTTTAGGAG
AAAAATATTAAATGAAAAAATTCACAGAGACACATGGTGGCGCTATAGGATAAGATGAAACTGCATAGCCAGCCCTGT
GGGCTCCAGTATCTAAAGGACCAGAGAACAGACGATTCCATGAGAAGAGAGGTATTACAGGAGCTTCACCGGCAGAG
CTGCCAAGGGACTTTCAATAGAAATATCGGACCTTTACCTGTAAAATTTGGGACTGGGTTTAAATTTTGGAGTAAAAGA
AGTCACCTGAAGGAACCATGGGAAGGAGAAGGGCTCTCATCCTGCAGAAAAGGCAAGTCTTGGTTTTCTTTGTTTTCCT
GGGATTGTCTCAGGCGAGTGCTGAATCTTTGCGCTATTCTGTAGCAGAGGAAACAGAAATTGGCTCTTTTGTGGCTAAT
CTGGCAAAGGATTTAGGACTGGGGGTTGCGGAGCTGTCCTCCAGGGAGGCCAGGGTAGTGTCAGATGATAATAAAAAG
CATTTACTCCTTAATTTGCTGACTGGAGATATGCTCCTGAATGAGCGACTGGATCGTGAAGAGCTATGTGGCTCCACCC
AGCCCTGTGTGCTGCCCTTTCAGGTGGTACTGGAAAACCCCTTACAGTTCTATCGAGCTGAGCTGCACGTCAGAGATAT
AAATGATCACTCCCCTACATTCCTAGACAAGGAAATAACTATTAAAATATCAGAAAGCACTACTATCGGAGCCACATTC
TTAATTGAGAATGCACAAGATCTGGACATAGGAAGCAACAGTCTTCAGGACTACAGCATTAGCCCCAGTTCTTATTTCT
ATGTTAAAATTCATGACAGTGGCGATGGAAAGATATACCCGGAGCTGGTTCTGGACAAAGCTTTAGATCATGAGGAGG
AATCTGAGCTTAGATTGACACTTACAGCATTAGATGGTGGGTCTCCACCCAGGTCTGGGACAACACTGATTGTCATAAA
AGTCTTGGACATCAACGATAATGCTCCAGAGTTCGCTCAGAGTTTCTATGAGGTGCAGGTCCCAGAGGACATGCCTATT
GGCTCCAGTATTACTGCCATCTCTGCTAAAGATTTAGATATGGGAATTTATGGGAAAATTTCATATTCATTTTTGCATGC
ATCAGAAGATATTAGAAAAACCTTTGAAATCAACCCAACATCTGGGGAAGTCAATTTGAGATCACTAATGGATTTTGA
AGTAATACAGTCCTATTCTGTAAATATCCAAGCAACAGATGGTGGAGGTCTTTCTGCAAAATGCACTCTTTCGGTTAAA
GTATTAGATATAAATGACAATGCACCAGAAGTGATCATGTCGTCGGTTACAAAGGCAATTCCAGAAAATGCTTCAGAG
ACCCTGGTCGCTCTATTCAGTGTCCGAGATCAAGACTCTGGAGACAACGGAAGGATCCTTTGC

Selection Cassette:

CGCTCTAGAGGCCATAGCGGCCATTTAAATGGCGCGCCGGATCCCGGGCCGCTCTAGCTAGACTAGTCTAGCTAGAGA
ATTCCGCCCCCCCCCCCCCCCCCCCCCTCTCCCTCCCCCCCCCCTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGT
GTGCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGGAAACCTGGCCCTGTCTTC
TTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTC
CTCTGGAAGCTTCTTGAAGACAAACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCACCTGGCGACAGGT
GCCTCTGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACGTTGTGAGTTGGA
TAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCAGAAGGTACCCCATT
GTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAAACGTCTAGGCCCCCC
GAACCACGGGGACGTGGTTTTCCTTTGAAAAACACGATGATAAGCTTGCCACAACCATGGAAGATCCCGTCGTTTTACA
ACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAAT

AGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTTGCCTGGTTTCCGG
CACCAGAAGCGGTGCCGGAAAGCTGGCTGGAGTGCGATCTTCCTGAGGCCGATACTGTCGTCGTCCCCTCAAACTGGC
AGATGCACGGTTACGATGCGCCCATCTACACCAACGTGACCTATCCCATTACGGTCAATCCGCCGTTTGTTCCCACGGA
GAATCCGACGGGTTGTTACTCGCTCACATTTAATGTTGATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATTATTTTT
GATGGCGTTAACTCGGCGTTTCATCTGTGGTGCAACGGGCGCTGGGTCGGTTACGGCCAGGACAGTCGTTTGCCGTCTG
AATTTGACCTGAGCGCATTTTTACGCGCCGGAGAAAACCGCCTCGCGGTGATGGTGCTGCGCTGGAGTGACGGCAGTTA
TCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATTTTCCGTGACGTCTCGTTGCTGCATAAACCGACTACACAAATC
AGCGATTTCCATGTTGCCACTCGCTTTAATGATGATTTCAGCCGCGCTGTACTGGAGGCTGAAGTTCAGATGTGCGGCG
AGTTGCGTGACTACCTACGGGTAACAGTTTCTTTATGGCAGGGTGAAACGCAGGTCGCCAGCGGCACCGCGCCTTTCGG
CGGTGAAATTATCGATGAGCGTGGTGGTTATGCCGATCGCGTCACACTACGTCTGAACGTCGAAAACCCGAAACTGTG
GAGCGCCGAAATCCCGAATCTCTATCGTGCGGTGGTTGAACTGCACACCGCCGACGGCACGCTGATTGAAGCAGAAGC
CTGCGATGTCGGTTTCCGCGAGGTGCGGATTGAAAATGGTCTGCTGCTGCTGAACGGCAAGCCGTTGCTGATTCGAGGC
GTTAACCGTCACGAGCATCATCCTCTGCATGGTCAGGTCATGGATGAGCAGACGATGGTGCAGGATATCCTGCTGATGA
AGCAGAACAACTTTAACGCCGTGCGCTGTTCGCATTATCCGAACCATCCGCTGTGGTACACGCTGTGCGACCGCTACGG
CCTGTATGTGGTGGATGAAGCCAATATTGAAACCCACGGCATGGTGCCAATGAATCGTCTGACCGATGATCCGCGCTGG
CTACCGGCGATGAGCGAACGCGTAACGCGAATGGTGCAGCGCGATCGTAATCACCCGAGTGTGATCATCTGGTCGCTG
GGGAATGAATCAGGCCACGGCGCTAATCACGACGCGCTGTATCGCTGGATCAAATCTGTCGATCCTTCCCGCCCGGTGC
AGTATGAAGGCGGCGGAGCCGACACCACGGCCACCGATATTATTTGCCCGATGTACGCGCGCGTGGATGAAGACCAGC
CCTTCCCGGCTGTGCCGAAATGGTCCATCAAAAAATGGCTTTCGCTACCTGGAGAGACGCGCCCGCTGATCCTTTGCGA
ATACGCCCACGCGATGGGTAACAGTCTTGGCGGTTTCGCTAAATACTGGCAGGCGTTTCGTCAGTATCCCCGTTTACAG
GGCGGCTTCGTCTGGGACTGGGTGGATCAGTCGCTGATTAAATATGATGAAAACGGCAACCCGTGGTCGGCTTACGGC
GGTGATTTTGGCGATACGCCGAACGATCGCCAGTTCTGTATGAACGGTCTGGTCTTTGCCGACCGCACGCCGCATCCAG
CGCTGACGGAAGCAAAACACCAGCAGCAGTTTTTCCAGTTCCGTTTATCCGGGCAAACCATCGAAGTGACCAGCGAAT
ACCTGTTCCGTCATAGCGATAACGAGCTCCTGCACTGGATGGTGGCGCTGGATGGTAAGCCGCTGGCAAGCGGTGAAG
TGCCTCTGGATGTCGCTCCACAAGGTAAACAGTTGATTGAACTGCCTGAACTACCGCAGCCGGAGAGCGCCGGGCAAC
TCTGGCTCACAGTACGCGTAGTGCAACCGAACGCGACCGCATGGTCAGAAGCCGGGCACATCAGCGCCTGGCAGCAGT
GGCGTCTGGCGGAAAACCTCAGTGTGACGCTCCCCGCCGCGTCCCACGCCATCCCGCATCTGACCACCAGCGAAATGG
ATTTTTGCATCGAGCTGGGTAATAAGCGTTGGCAATTTAACCGCCAGTCAGGCTTTCTTTCACAGATGTGGATTGGCGA
TAAAAAACAACTGCTGACGCCGCTGCGCGATCAGTTCACCCGTGCACCGCTGGATAACGACATTGGCGTAAGTGAAGC
GACCCGCATTGACCCTAACGCCTGGGTCGAACGCTGGAAGGCGGCGGGCCATTACCAGGCCGAAGCAGCGTTGTTGCA
GTGCACGGCAGATACACTTGCTGATGCGGTGCTGATTACGACCGCTCACGCGTGGCAGCATCAGGGGAAAACCTTATTT
ATCAGCCGGAAAACCTACCGGATTGATGGTAGTGGTCAAATGGCGATTACCGTTGATGTTGAAGTGGCGAGCGATACA
CCGCATCCGGCGCGGATTGGCCTGAACTGCCAGCTGGCGCAGGTAGCAGAGCGGGTAAACTGGCTCGGATTAGGGCCG
CAAGAAAACTATCCCGACCGCCTTACTGCCGCCTGTTTTGACCGCTGGGATCTGCCATTGTCAGACATGTATACCCCGT
ACGTCTTCCCGAGCGAAAACGGTCTGCGCTGCGGGACGCGCGAATTGAATTATGGCCCACACCAGTGGCGCGGCGACT
TCCAGTTCAACATCAGCCGCTACAGTCAACAGCAACTGATGGAAACCAGCCATCGCCATCTGCTGCACGCGGAAGAAG
GCACATGGCTGAATATCGACGGTTTCCATATGGGGATTGGTGGCGACGACTCCTGGAGCCCGTCAGTATCGGCGGAATT
CCAGCTGAGCGCCGGTCGCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAATAACCGGGCAGGCCATGTCTGCCC
GTATTTCGCGTAAGGAAATCCATTATGTACTATTTAAAAAACACAAACTTTTGGATGTTCGGTTTATTCTTTTTCTTTTAC
TTTTTTATCATGGGAGCCTACTTCCCGTTTTTCCCGATTTGGCTACATGACATCAACCATATCAGCAAAAGTGATACGGG
TATTATTTTTGCCGCTATTTCTCTGTTCTCGCTATTATTCCAACCGCTGTTTGGTCTGCTTTCTGACAAACTCGGAACTTG
TTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATTTAATTAAGGCCGCGGGATCGA
TCCCGTCGAGCAGTGTGGTTTTCAAGAGGAAGCAAAAAGCCTCTCCACCCAGGCCTGGAATGTTTCCACCCAATGTCGA
GCAGTGTGGTTTTGCAAGAGGAAGCAAAAAGCCTCTCCACCCAGGCCTGGAATGTTTCCACCCAATGTCGAGCAAACC
CCGCCCAGCGTCTTGTCATTGGCGAATTCGAACACGCAGATGCAGTCGGGGCGGCGCGGTCCCAGGTCCACTTCGCATA
TTAAGGTGACGCGTGTGGCCTCGAACACCGAGCGACCCTGCAGCCAATATGGGATCGGCCATTGAACAAGATGGATTG
CACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATG
CCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAACT
GCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTGA
AGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAA
AGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAA
CATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAAGAGCATCAGGGG
CTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTGACCCATGGCGAT
GCCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACC
GCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCCTCGTGCT
TTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGGGGATCGGCAAT
AAAAAGACAGAATAAAACGCACGGGTGTTGGGTCGTTTGTTCGGATCCGAATTCCTCGAGGGCGCGCCATTTAAATGG
CCAGCGAGGCCGGTACCCAATTCGCCCTATAG

Targeted Locus:

GTGAATTTAAGTTTCTAAGTCCAATTGCCTCTAACTTCCTAACCGAAAGCACAGGGAGAGAAATAGAATAAAAGCTAA
ACCCTTCTGCCCATGGATGAAGCTCTAATGTAAACTATACCCTTGTTGTGTAATGAAGAATGATTTCATGTTAACATCTA
GAAGTTAACTAATTTAGGACAGAAAAGAATACCTGTATTTATTCCCAAAAACCTTTTCTTTAATTTATGAAATGCATGT
GTTGTGTGCTATCTCAAATCTAATTTGATTTCTCTTTGTTTTTTAAGATTTGTTGAACTGCAATCTATTAAACAACAAATC
TTGGTAGAGATTGTTTAAGCTGTTTTTCCATATCTACATTTTTCATTTATAATTATGTTCTGAGTCTATTGGAATTACATA
TAAATGTAGACATACCCTACATTTGAGAGGTTATATTATATAGATTTTTCAAAGTTTCTTTAGTAATTACTGTGCATCAT
ACATGATTTCATCACCTTGGGGACATGGTCTCTCTGTGTCCATGTCCAGGATAGCTTTGAACTTTTGATTTTCCTGCCCC
AGACTTTCAAGTTGCAGCTACCACAGGCCTCAGCCTATCGCCTTCTTTATTTCAGAAGAAGCCAATAAGTGGCGGTATC
TCAATGATGAGCAAGTAGAAGTTGGTAGAGACTTGGTAAGATCCATAATTATTAACTGGCAGAGCAGAGCCAAACAAT
CTCCTGATTGTTTCCATTTTGTTTTTCTTGTTTGAAGTGTGGAAGGTTCCTTGTTCTGTCCATCTCCAGGCAGGTGACTTG
GCAACATTATGCTGTTTTCTATTACTAGATATCATGTGTCCTACTCACATTGCTCATCAGCCTCTTCTGTATTCAGAAATA
GCTACACTCTGCTTAGCCTAGCCTGCAGCCTCACTTCCTTATAAACTCACACACACACACACACACACACACCATTG
GGAGTTTATTATCCAACTACTATTTAAGCTCTCAGTTAACTAAATCTTAACGTCTAAAAGAGTTGAGTGTTGGGCATGGT
AAAACGCACCTTTAATCCCAATACTTGGGAGGCAGATACAGGGGGAATCTCTGTGAATTTGGAAGCAGCCTGGTCTAT
GAAAGAGTTCCATGATACCCAACGGCTACATAGAGAGACCTTGTCTCAGTAAGCAAGAGGAGATGGGGAGAAGAAGG
AGGGGAGAAAGAGGGGGTTCTCTACATCAAATTTCCATATAGTGTTGGGTTACTCTCCCTCCAGAAACTCCTGTTTCTT
GTTTGTGAAAATGGAGAATTCACAACACTCCTTGGACCTAGGCACTATTATCTCATCTGTAGATAAGGAATCTAGAGCA
AAGAGGATAAATAACTTGCACAAGATTCACAGCTACTCTTTCTGTGGTTCATCACACTAAAAGTAGATAAATCCCCAAA
TCTTCAGTTACTAGAAACATACATGCAAACACATGTATATATTTCTTGCAAATATTTTTCCTTACAGGTTGTGATTTAAA
AGCGTATCTTTTGCCCCAAACGCAATAAGAATTATTGAATCATTACTCTCCAGCAATGACATTTCTCTTGTGTGACCTTC
AGGAAGTTGTCTGCCCAAGAAGGCACAGCAATAAGGGAGGTGGGACTTTTATCTTGCCCACTGCCAGATAAAGGTAGC
TTTAGGTTTTTAACATCCATTTTTATCACATAAAATGTTAAGATGCTGTGAGAACACAAGGCGGCGCTGTAGGATAAGG
AAGCAAAACCTAGAAGGCAGTTGTGGTTCCATTAATAGGGGAAAAGAAAAAAAAATCCTGCAGAAGCCCGGAAGCCC
AGAGAAGCCCGGACTGGATGCTTCAGAAAGGAGGTCTCAGCCCTCGGAAAAGGACTGAAAGAATTCTCAGGTATCTGG
TGAGATAACTACAGTACCAGATACTAGGGGTGTTTATAGTTCTGCTGAAACATCCTTCAGGACTCTGTACCACCAAGAA
CAATGGAGGCCACGCTCTAGAGGCCATAGCGGCCATTTAAATGGCGCGCCGGATCCCGGGCCGCTCTAGCTAGACTAG
TCTAGCTAGAGAATTCCGCCCCCCCCCCCCCCCCCCCTCTCCCTCCCCCCCCCCTAACGTTACTGGCCGAAGCCGCTTGG
AATAAGGCCGGTGTGCGTTTGTCTATATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGGAAACCT
GGCCCTGTCTTCTTGACGAGCATTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCTGTTGAATGTCGTGA
AGGAAGCAGTTCCTCTGGAAGCTTCTTGAAGACAAACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCCAC
CTGGCGACAGGTGCCTCTGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACG
TTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCAGA
AGGTACCCCATTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAAACG
TCTAGGCCCCCCGAACCACGGGGACGTGGTTTTCCTTTGAAAAACACGATGATAAGCTTGCCACAACCATGGAAGATC
CCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCC
AGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTT
GCCTGGTTTCCGGCACCAGAAGCGGTGCCGGAAAGCTGGCTGGAGTGCGATCTTCCTGAGGCCGATACTGTCGTCGTCC
CCTCAAACTGGCAGATGCACGGTTACGATGCGCCCATCTACACCAACGTGACCTATCCCATTACGGTCAATCCGCCGTT
TGTTCCCACGGAGAATCCGACGGGTTGTTACTCGCTCACATTTAATGTTGATGAAAGCTGGCTACAGGAAGGCCAGACG
CGAATTATTTTTGATGGCGTTAACTCGGCGTTTCATCTGTGGTGCAACGGGCGCTGGGTCGGTTACGGCCAGGACAGTC
GTTTGCCGTCTGAATTTGACCTGAGCGCATTTTTACGCGCCGGAGAAAACCGCCTCGCGGTGATGGTGCTGCGCTGGAG
TGACGGCAGTTATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATTTTCCGTGACGTCTCGTTGCTGCATAAACCG
ACTACACAAATCAGCGATTTCCATGTTGCCACTCGCTTTAATGATGATTTCAGCCGCGCTGTACTGGAGGCTGAAGTTC
AGATGTGCGGCGAGTTGCGTGACTACCTACGGGTAACAGTTTCTTTATGGCAGGGTGAAACGCAGGTCGCCAGCGGCA
CCGCGCCTTTCGGCGGTGAAATTATCGATGAGCGTGGTGGTTATGCCGATCGCGTCACACTACGTCTGAACGTCGAAAA
CCCGAAACTGTGGAGCGCCGAAATCCCGAATCTCTATCGTGCGGTGGTTGAACTGCACACCGCCGACGGCACGCTGAT
TGAAGCAGAAGCCTGCGATGTCGGTTTCCGCGAGGTGCGGATTGAAAATGGTCTGCTGCTGCTGAACGGCAAGCCGTT
GCTGATTCGAGGCGTTAACCGTCACGAGCATCATCCTCTGCATGGTCAGGTCATGGATGAGCAGACGATGGTGCAGGA
TATCCTGCTGATGAAGCAGAACAACTTTAACGCCGTGCGCTGTTCGCATTATCCGAACCATCCGCTGTGGTACACGCTG
TGCGACCGCTACGGCCTGTATGTGGTGGATGAAGCCAATATTGAAACCCACGGCATGGTGCCAATGAATCGTCTGACC
GATGATCCGCGCTGGCTACCGGCGATGAGCGAACGCGTAACGCGAATGGTGCAGCGCGATCGTAATCACCCGAGTGTG
ATCATCTGGTCGCTGGGGAATGAATCAGGCCACGGCGCTAATCACGACGCGCTGTATCGCTGGATCAAATCTGTCGATC
CTTCCCGCCCGGTGCAGTATGAAGGCGGCGGAGCCGACACCACGGCCACCGATATTATTTGCCCGATGTACGCGCGCG
TGGATGAAGACCAGCCCTTCCCGGCTGTGCCGAAATGGTCCATCAAAAAATGGCTTTCGCTACCTGGAGAGACGCGCC
CGCTGATCCTTTGCGAATACGCCCACGCGATGGGTAACAGTCTTGGCGGTTTCGCTAAATACTGGCAGGCGTTTCGTCA
GTATCCCCGTTTACAGGGCGGCTTCGTCTGGGACTGGGTGGATCAGTCGCTGATTAAATATGATGAAAACGGCAACCCG
TGGTCGGCTTACGGCGGTGATTTTGGCGATACGCCGAACGATCGCCAGTTCTGTATGAACGGTCTGGTCTTTGCCGACC

GCACGCCGCATCCAGCGCTGACGGAAGCAAAACACCAGCAGCAGTTTTTCCAGTTCCGTTTATCCGGGCAAACCATCG
AAGTGACCAGCGAATACCTGTTCCGTCATAGCGATAACGAGCTCCTGCACTGGATGGTGGCGCTGGATGGTAAGCCGC
TGGCAAGCGGTGAAGTGCCTCTGGATGTCGCTCCACAAGGTAAACAGTTGATTGAACTGCCTGAACTACCGCAGCCGG
AGAGCGCCGGGCAACTCTGGCTCACAGTACGCGTAGTGCAACCGAACGCGACCGCATGGTCAGAAGCCGGGCACATCA
GCGCCTGGCAGCAGTGGCGTCTGGCGGAAAACCTCAGTGTGACGCTCCCCGCCGCGTCCCACGCCATCCCGCATCTGAC
CACCAGCGAAATGGATTTTTGCATCGAGCTGGGTAATAAGCGTTGGCAATTTAACCGCCAGTCAGGCTTTCTTTCACAG
ATGTGGATTGGCGATAAAAAACAACTGCTGACGCCGCTGCGCGATCAGTTCACCCGTGCACCGCTGGATAACGACATT
GGCGTAAGTGAAGCGACCCGCATTGACCCTAACGCCTGGGTCGAACGCTGGAAGGCGGCGGGCCATTACCAGGCCGAA
GCAGCGTTGTTGCAGTGCACGGCAGATACACTTGCTGATGCGGTGCTGATTACGACCGCTCACGCGTGGCAGCATCAGG
GGAAAACCTTATTTATCAGCCGGAAAACCTACCGGATTGATGGTAGTGGTCAAATGGCGATTACCGTTGATGTTGAAGT
GGCGAGCGATACACCGCATCCGGCGCGGATTGGCCTGAACTGCCAGCTGGCGCAGGTAGCAGAGCGGGTAAACTGGCT
CGGATTAGGGCCGCAAGAAAACTATCCCGACCGCCTTACTGCCGCCTGTTTTGACCGCTGGGATCTGCCATTGTCAGAC
ATGTATACCCCGTACGTCTTCCCGAGCGAAAACGGTCTGCGCTGCGGGACGCGCGAATTGAATTATGGCCCACACCAGT
GGCGCGGCGACTTCCAGTTCAACATCAGCCGCTACAGTCAACAGCAACTGATGGAAACCAGCCATCGCCATCTGCTGC
ACGCGGAAGAAGGCACATGGCTGAATATCGACGGTTTCCATATGGGGATTGGTGGCGACGACTCCTGGAGCCCGTCAG
TATCGGCGGAATTCCAGCTGAGCGCCGGTCGCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAATAACCGGGCAG
GCCATGTCTGCCCGTATTTCGCGTAAGGAAATCCATTATGTACTATTTAAAAAACACAAACTTTTGGATGTTCGGTTTAT
TCTTTTTCTTTTACTTTTTTATCATGGGAGCCTACTTCCCGTTTTTCCCGATTTGGCTACATGACATCAACCATATCAGCA
AAAGTGATACGGGTATTATTTTTGCCGCTATTTCTCTGTTCTCGCTATTATTCCAACCGCTGTTTGGTCTGCTTTCTGACA
AACTCGGAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATTTAATTAAG
GCCGCGGGATCGATCCCGTCGAGCAGTGTGGTTTTCAAGAGGAAGCAAAAAGCCTCTCCACCCAGGCCTGGAATGTTT
CCACCCAATGTCGAGCAGTGTGGTTTTGCAAGAGGAAGCAAAAAGCCTCTCCACCCAGGCCTGGAATGTTTCCACCCA
ATGTCGAGCAAACCCCGCCCAGCGTCTTGTCATTGGCGAATTCGAACACGCAGATGCAGTCGGGGCGGCGCGGTCCCA
GGTCCACTTCGCATATTAAGGTGACGCGTGTGGCCTCGAACACCGAGCGACCCTGCAGCCAATATGGGATCGGCCATT
GAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAGACA
ATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTGTCCG
GTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTGC
TCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCT
TGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTC
GACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGAC
GAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTC
GTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGC
TGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTG
ACCGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCT
GAGGGGATCGGCAATAAAAAGACAGAATAAAACGCACGGGTGTTGGGTCGTTTGTTCGGATCCGAATTCCTCGAGGGC
GCGCCATTTAAATGGCCAGCGAGGCCGGTACCCAATTCGCCCTATAGATCATGTGTACTGGATTTTATCATATACTCAA
CTACTTTTCTTGCTGTGCCCATTTTGAACTTCTAAAACATACTTAAAACTTGTTTGCAGGCTATTCTCTCCATGGTTTTAG
AAAGTATCTCAGCTTTTCTCCAAACTGGAAGATGAAATGTTTTAATCTTGTTTGGTTTTGTTTGTTTGTTTGTTTGTTTAA
TGTATCACTAGTTGCACAAATCTTTGTTCTGGGATGGTTTGGAAATGTACAAGAGGGTAAAAAGGGGAAATCAATTCAA
CCGAATCAGATGGAATTCAGGGTGTGTTCTCTCACTGAATACACCCGACATAGCAATGCTCAAACACAACGAGGTCTA
ATCAGATAGGAGAACGAGGGGCTCACTGGGACCTCTGCCTTTTGCTTTATTTGGCCTCTACTGGACTGTCTTTGTTGATG
TTTTCTCTTAAAAATCTTACTTAGCCACATGGTTCCTCATTAGCTTGCTATTAGTTTTCATATCACTACTTTAAGCTGCTT
TCTACTTTGTTCGTTTGCTTGCTTGCTTGCTTGCTTGCTTGTTTTTTGGTTGGTGTTGAGGTTTCAGAATGGTGTCCC
TTATTTACCTGGTAGGTTGAAAGAGCATAGCAGTAGCATTGAGTTTTCACTTCTGTTAAATACTTGCCAGTCAGAGAAA
CTGCATCAGCCAGTATTGATTTTTTTTCCTTTCTTTGTTGCCATTCCACATTTCTTTCTTGCCAGTCATGTGCTTAGTTAAA
AGAATACATTTTCACTGTCTTTTTTTTTTTCTCTAGCAAATAGATTAGGGCATATGGTTAGCTTATAGTGAGATGTAAGA
TGTGGTGCCTTCCACAGCTCTTCAGTTGAAGAGAAACTGGGGGGGGGACCTATGCATACCAAGTAAGGTCTGTCTCTCT
GATCTACCACTTTCAATACCCAAGAACACTTGTAAAGGGAGATGTCTCACCTGGAAAGGGATTTCACCCTTTGTTCATG
TTATGTTCTTCCTAGGATGTTCGTGGTATAATGAGCGCACAAATACTCATGTTGGCTCTGTGATAGGTGTGACGGGCTA
AAGTAGCATGAAATGGACTTAGCTGTGATGATCCCTGGCAACTCAGGAGTTCTCATATTATTCCCCGCGTTGCCAATTT
CTTAGCCTTTTTAAACATTCAGAAATAAAGGAAGTCCCATGTCATTATTCTAGCTTTTATGCTATGGTCAGTTCTTATGC
TATGGAATCTATTTGTGTGTTTGTGTGTTTGTGTGCCTGTTGGTGCATGAGTGCTTGCAGATGTCCTTGCGCCTCTGCATG
TTGAGGTCGGAAGTTGATGTCTACCTTCGTTGCTCAGTTATCTAGACTAGCCAGGGAGCTCTGTGGAAACACTGACTAA
CTGGTCATGATTCTGGGCAATAAAAGGAAAAGTCTGAGATCCAATCCTAGTTACCTGATTCTAATGACCCAGTTCTTAG
TAATATGCTTTACTGATAAGCATATACTGGTAGCATTATTTTCCTATGAAGAGAAATCCATTTGTCCCACTCCATGAATA
AAATGACCCTGTGTAAATGTAATCTTTAGCTCATAGTTTGTATTTCTTTCTATAGCAGTGACCACACTGCTTAGAAAATA
ACCCAAAGGGCTCACAAAAATCAATGACCTAAGTAAATTGGATCACACTACAACTGCTCTCTTCATGACGAAGAAATC
AGCCTGATTATATTCTTGTGGGCACTCAATGAGTCACATGCTTTATTGTGGAAGTGAGTTGTCCTATATGGGCAGCAGA
ATCACTCTATGGTTGTGTTTATTGGACCTTATCTGTCTCTTCAGTCATCTTCTATAAACTCTAAAATATTATACACTTCAT

ATTCAGTGGGCCCATTATTAAAATTAAATATCTTATGCTCACTTCAGCATTGTGTATGTGTTTGAAAGCAATTGCTTTCT
AGAAGTTTAGCTGAAAACTAATTTTAAGAAAACTACAAGCAATATTATGGATGAATTTTCACACTTAAATAACTGAGAG
ATTCTTGAAATTCTGTAAAAAAAATGATGTTTCTAATTACTTTCTGGTGCAGTTAACCTTTTATCTTTGGCAAAATAATG
CCCGTTGATGCCTTCTTTTAAATAATACTATAAAACATCAGAGGACCATACATGACTTTTTAAGAAGAATGATTTGGCA
CAACTGAATAAGAAATTCTTTAGCACTTAATTATGCTATTCATATAGAAGCTATCAGTTTTTGGTGTTTTCAAACAATAA
TCCATATTTATGTCCTGTTCTGTTTCTCTGTTGCTGTCAGAAAATTCACAAGAAGTTGCTTAAAACAATAAAATGTATTA
TCCCATAGTTTTGTAAATAAAAAAAAAAAACCAATAAGTGTCTAATTGAACTAACAAGAGAAGTCCATGGGAACACAT
TGTGCTCTGGAGACTTTATAGAACCTTTTTTGTCTTTTCCATCCAGATGTTGCCCACATTACATGGTGCATGGTCCCTTCA
ACTTCACAGCATGTAACGTTTCTTGTATAGCCATTTTCTCTGACCCACTCTGAAAATATTCTTTGAATAAAAGTTCTTTAT
CAAAATAAATAAATAAATAAATAAATAAATAAATTCTTTATCCAAATTTGATAAGTCTCCTATTTAGATAATGAAGGAC
AATCTCCTATTCAAAGAATCTTAAACTTAATCAGCTTTGCAATGGATTCTCTTGCCAGATTAGATAATATAATTACAGAT
TCTATGGTATATTTGAGTGGCTATTATTCTGCCTAGCAATACCACCTACTGTCAAATGGAGGCACATAAAGCTTATTATA
ACAGGAGTTTAAGCCTCATTGACTTAAGGAATCTAATTAAACAAACTTGTAGAGACATTACCAAAAACTATGAATTGAT
AAAGGCATCGGCATTTGTGTGGTCCTGGAGTTCAAACCCTGAGCTTCACAAAGGCTAAATGTGCTCTATCACTGAGCTC
CCTGTCCTGTCCATTGTGAATTTTCACTGCAACTCAATTCAAATTATATAAACAGACAAACAAAAATACAAAGATAATG
ATGCAATTTCAATCTAAATTCAATATAGAATTTAAACTCTGTTTTATAATAGATTTAAAATCTAAATCTATTTCTCAAAC
TCTCACAGCTCAATTATTAAAAGATGAACAATTCAATTAAAAATAAGCAAAACCCAGAATAGACATTTATTTTCCATAG
AAGATAAACCCATGGTTAATATGCACATGAAAAACTGTGCAACAACCTCATCAGGGAAACACAAATCAATATCACAGC
AAGACACTCATACCTACTTGGATGGCTAGAACCAAAAAAAAATCAGATTTTGGGGAAGATGTCATAATATTGAAACCC
TGATACACGGCTGACAAAGTATAAAATGCTGCAGCCGTTTTTAAAGACAGCCTGCCAGATTTTCAAGTAGCCAAACATA
GAGCTATCATACCGTAAGCAATTCAACTCCTAGAGAAACAAAAATATGTCCACAAAAATAGGTACGTAAATCTTCATA
GAAACAATATTCAGAAGAGCAGAGGGGTAGAAACATTCCAGATGTCCAAGTACACATGAGCCTGCATGAGCCAGAAG
AAAGTAATGAAATACTGACACACGCTGGGATTTGGATGAACCATACAAGCGTCAGGCTAAGGGAAGGAAAGGTAGCC
ACAAGGTCCACACATTCTGTCACTCTGGTCAGATGGAAGTTTACAATGGAGAATCAGTAGGGACCAGAAAGAGAGACT
GATCATTCCCTTTAGGCTCTGCATAGGGGGAAGGAGAAAATAATTGTTAAAGGATGCAAGGTTCTTCTTTGGTGTAAGA
TATACGCTCCAAAACTGACCTTGATGATGAGCAAATCACATGGTTACTATATTAAAAGGCTCGAAACTTTATACTTTCA
AATGGAAGGATATATTTAAATATACATTATATCCCAAAGCACAGACACTATTTATGCCAAATATAAGAATCGATAGAG
GCCCACATATGTCTATTGTGAAATAATTTTCTGGTAGTTGAACACTGGGAAAACCTACGCTTCTCTCCCTTGGATATTGA
AGAGAAGAAGGGATCCATCTGTACTTTAACAAAGCATGTCTATATTGTGTAGAATTTGCAGGTTGAAACTTTGCATTGA
CTACTCATTTGTTACTCTGTACTGTGTATGGTGGAAAATATGTGCGTGAAAAACTGTCCCCGGGTTATTTTTTTTTTGAG
ACATTTTTACCCCTCGGTGTGTGTTCTCAGGTTAAATGTTGAATACACTATCTCATTTGGTTATTGACACAGCAACAGCG
TTACATACTCAACACCATGAGTGAGAATTTAGTTTTGTACTTGTTTTCATACAATAGCTCAGTGTTTTGTCCATACACGT
GAAAGCAACTTAGAAAAAGAAGCCAGTGGTTGCGGTTACATAGTTTAGTTCATGGGTCTTGGAAAATTTTGCCTTTAAA
TCTGAAAATGTAAGGCTCCGTGAGACCGCACGGTGGCGCTGCAGGTTAAGAAGACAGAGCATAGAAATTGCTTGTGTA
ATTCCCTTGTCAGGGCCAGTTTCTCACCACCTAGAATCAAAGGGTGTGTCTTTTTCGGCCAAAGCATAGGCGAGTGTGA
AACCTTAGATATTCTATTTGGAGGCTTGATTCTCACGTTCTGGACTGTGAGATAGTGCTGTCACGATCCTGGACATATGT
GAAGCTACTGTGAAGCAAACGCCGAGGAAAGAGCCATGGAGACTGCATGGATGTGCAATCTGAGACAAAGGCAAGTC
CTGGCTTTCTTTGTTTTGCTGCATGTGTCAGGGGCAGGGGCAGAACTGGGCCCCTATTCCATAGAGGAAGAAACAGAGA
GGGGCTCCTTTGTGGCAAATCTTGGGAAAGATCTGGGGGTGGACCTGGCAGAGATATCCAATCGCAGGGCTCGGATCA
TTTCCCAAGAAAACAAAGAGCATTTGCAGCTCAACCTTCA