

eolf-othd-000001
SEQUENCE LISTING

<110> SNIPR TECHNOLOGIES LIMITED

<120> ALTERING MICROBIAL POPULATIONS & MODIFYING MICROBIOTA

<130> SNR0001-1 WO

<160> 122

<170> PatentIn version 3.5

<210> 1

<211> 5

<212> DNA

<213> Bacterial

<400> 1

ttgac

5

<210> 2

<211> 6

<212> DNA

<213> Bacterial

<400> 2

tataat

6

<210> 3

<211> 8

<212> DNA

<213> Bacterial

<400> 3

tatgaaaa

8

<210> 4

<211> 7

<212> DNA

<213> Bacterial

<400> 4

atttgag

7

<210> 5
 <211> 8
 <212> DNA
 <213> Bacterial

<400> 5
 atttgagg 8

<210> 6
 <211> 3
 <212> DNA
 <213> Bacterial

<400> 6
 gag 3

<210> 7
 <211> 4
 <212> DNA
 <213> Bacterial

<400> 7
 gagg 4

<210> 8
 <211> 4
 <212> DNA
 <213> Bacterial

<400> 8
 tgag 4

<210> 9
 <211> 5
 <212> DNA
 <213> Bacterial

<400> 9
 tgagg 5

<210> 10
 <211> 5
 <212> DNA

<213> Bacterial

<400> 10

ttgag

5

<210> 11

<211> 5

<212> DNA

<213> Bacterial

<400> 11

tgagg

5

<210> 12

<211> 6

<212> DNA

<213> Bacterial

<400> 12

tttgag

6

<210> 13

<211> 7

<212> DNA

<213> Bacterial

<400> 13

tttgagg

7

<210> 14

<211> 7

<212> DNA

<213> Bacterial

<400> 14

atttgag

7

<210> 15

<211> 8

<212> DNA

<213> Bacterial

<400> 15

aatttgag	8
<210> 16	
<211> 8	
<212> DNA	
<213> Bacterial	
<400> 16	
catttgag	8
<210> 17	
<211> 8	
<212> DNA	
<213> Bacterial	
<400> 17	
gatttgag	8
<210> 18	
<211> 8	
<212> DNA	
<213> Bacterial	
<400> 18	
tatttgag	8
<210> 19	
<211> 9	
<212> DNA	
<213> Bacterial	
<400> 19	
cgatttgag	9
<210> 20	
<211> 10	
<212> DNA	
<213> Bacterial	
<400> 20	
acgatttgag	10

<210> 21
 <211> 9
 <212> DNA
 <213> Bacterial

<400> 21
 tcatttgag 9

<210> 22
 <211> 10
 <212> DNA
 <213> Bacterial

<400> 22
 ttcatttgag 10

<210> 23
 <211> 10
 <212> DNA
 <213> Bacterial

<400> 23
 atcatttgag 10

<210> 24
 <211> 11
 <212> DNA
 <213> Bacterial

<400> 24
 tttcatttga g 11

<210> 25
 <211> 11
 <212> DNA
 <213> Bacterial

<400> 25
 aatcatttga g 11

<210> 26
 <211> 12
 <212> DNA

<213> Bacterial

<400> 26

aattcatttg ag

12

<210> 27

<211> 12

<212> DNA

<213> Bacterial

<400> 27

aaatcatttg ag

12

<210> 28

<211> 13

<212> DNA

<213> Bacterial

<400> 28

aaattcattt gag

13

<210> 29

<211> 13

<212> DNA

<213> Bacterial

<400> 29

aaaatcattt gag

13

<210> 30

<211> 14

<212> DNA

<213> Bacterial

<400> 30

aaaattcatt tgag

14

<210> 31

<211> 3

<212> DNA

<213> Bacterial

<400> 31

gtt	3
<210> 32	
<211> 4	
<212> DNA	
<213> Bacterial	
<400> 32	
gttt	4
<210> 33	
<211> 5	
<212> DNA	
<213> Bacterial	
<400> 33	
gtttt	5
<210> 34	
<211> 6	
<212> DNA	
<213> Bacterial	
<400> 34	
gttttt	6
<210> 35	
<211> 7	
<212> DNA	
<213> Bacterial	
<400> 35	
gtttttg	7
<210> 36	
<211> 8	
<212> DNA	
<213> Bacterial	
<400> 36	
gtttttgt	8

<210> 37
 <211> 9
 <212> DNA
 <213> Bacterial

<400> 37
 gtttttgta 9

<210> 38
 <211> 10
 <212> DNA
 <213> Bacterial

<400> 38
 gtttttgtac 10

<210> 39
 <211> 11
 <212> DNA
 <213> Bacterial

<400> 39
 gtttttgtac t 11

<210> 40
 <211> 12
 <212> DNA
 <213> Bacterial

<400> 40
 gtttttgtac tc 12

<210> 41
 <211> 13
 <212> DNA
 <213> Bacterial

<400> 41
 gtttttgtac tct 13

<210> 42
 <211> 14
 <212> DNA

<213> Bacterial

<400> 42

gtttttgtac tctc

14

<210> 43

<211> 15

<212> DNA

<213> Bacterial

<400> 43

gtttttgtac tctca

15

<210> 44

<211> 16

<212> DNA

<213> Bacterial

<400> 44

gtttttgtac tctcaa

16

<210> 45

<211> 63

<212> DNA

<213> Bacterial

<400> 45

caaggacagt tattgatattt ataatcacta tgtgggtata aaaacgtcaa aatttcattt

60

gag

63

<210> 46

<211> 103

<212> DNA

<213> Bacterial

<400> 46

aaacaaagaa ttagctgac ttttaataata aggaaatggt acattaaggt tgggtgggttg

60

tttttatggg aaaaaatgct ttaagaacaa atgtatactt aga

103

<210> 47

<211> 1053

eolf-othd-000001

<212> PRT

<213> Bacterial

<400> 47

Met Lys Arg Asn Tyr Ile Leu Gly Leu Asp Ile Gly Ile Thr Ser Val
1 5 10 15

Gly Tyr Gly Ile Ile Asp Tyr Glu Thr Arg Asp Val Ile Asp Ala Gly
20 25 30

Val Arg Leu Phe Lys Glu Ala Asn Val Glu Asn Asn Glu Gly Arg Arg
35 40 45

Ser Lys Arg Gly Ala Arg Arg Leu Lys Arg Arg Arg Arg His Arg Ile
50 55 60

Gln Arg Val Lys Lys Leu Leu Phe Asp Tyr Asn Leu Leu Thr Asp His
65 70 75 80

Ser Glu Leu Ser Gly Ile Asn Pro Tyr Glu Ala Arg Val Lys Gly Leu
85 90 95

Ser Gln Lys Leu Ser Glu Glu Glu Phe Ser Ala Ala Leu Leu His Leu
100 105 110

Ala Lys Arg Arg Gly Val His Asn Val Asn Glu Val Glu Glu Asp Thr
115 120 125

Gly Asn Glu Leu Ser Thr Lys Glu Gln Ile Ser Arg Asn Ser Lys Ala
130 135 140

Leu Glu Glu Lys Tyr Val Ala Glu Leu Gln Leu Glu Arg Leu Lys Lys
145 150 155 160

Asp Gly Glu Val Arg Gly Ser Ile Asn Arg Phe Lys Thr Ser Asp Tyr
165 170 175

eolf-othd-000001

Val Lys Glu Ala Lys Gln Leu Leu Lys Val Gln Lys Ala Tyr His Gln
180 185 190

Leu Asp Gln Ser Phe Ile Asp Thr Tyr Ile Asp Leu Leu Glu Thr Arg
195 200 205

Arg Thr Tyr Tyr Glu Gly Pro Gly Glu Gly Ser Pro Phe Gly Trp Lys
210 215 220

Asp Ile Lys Glu Trp Tyr Glu Met Leu Met Gly His Cys Thr Tyr Phe
225 230 235 240

Pro Glu Glu Leu Arg Ser Val Lys Tyr Ala Tyr Asn Ala Asp Leu Tyr
245 250 255

Asn Ala Leu Asn Asp Leu Asn Asn Leu Val Ile Thr Arg Asp Glu Asn
260 265 270

Glu Lys Leu Glu Tyr Tyr Glu Lys Phe Gln Ile Ile Glu Asn Val Phe
275 280 285

Lys Gln Lys Lys Lys Pro Thr Leu Lys Gln Ile Ala Lys Glu Ile Leu
290 295 300

Val Asn Glu Glu Asp Ile Lys Gly Tyr Arg Val Thr Ser Thr Gly Lys
305 310 315 320

Pro Glu Phe Thr Asn Leu Lys Val Tyr His Asp Ile Lys Asp Ile Thr
325 330 335

Ala Arg Lys Glu Ile Ile Glu Asn Ala Glu Leu Leu Asp Gln Ile Ala
340 345 350

Lys Ile Leu Thr Ile Tyr Gln Ser Ser Glu Asp Ile Gln Glu Glu Leu
355 360 365

eolf-othd-000001

Thr Asn Leu Asn Ser Glu Leu Thr Gln Glu Glu Ile Glu Gln Ile Ser
370 375 380

Asn Leu Lys Gly Tyr Thr Gly Thr His Asn Leu Ser Leu Lys Ala Ile
385 390 395 400

Asn Leu Ile Leu Asp Glu Leu Trp His Thr Asn Asp Asn Gln Ile Ala
405 410 415

Ile Phe Asn Arg Leu Lys Leu Val Pro Lys Lys Val Asp Leu Ser Gln
420 425 430

Gln Lys Glu Ile Pro Thr Thr Leu Val Asp Asp Phe Ile Leu Ser Pro
435 440 445

Val Val Lys Arg Ser Phe Ile Gln Ser Ile Lys Val Ile Asn Ala Ile
450 455 460

Ile Lys Lys Tyr Gly Leu Pro Asn Asp Ile Ile Ile Glu Leu Ala Arg
465 470 475 480

Glu Lys Asn Ser Lys Asp Ala Gln Lys Met Ile Asn Glu Met Gln Lys
485 490 495

Arg Asn Arg Gln Thr Asn Glu Arg Ile Glu Glu Ile Ile Arg Thr Thr
500 505 510

Gly Lys Glu Asn Ala Lys Tyr Leu Ile Glu Lys Ile Lys Leu His Asp
515 520 525

Met Gln Glu Gly Lys Cys Leu Tyr Ser Leu Glu Ala Ile Pro Leu Glu
530 535 540

Asp Leu Leu Asn Asn Pro Phe Asn Tyr Glu Val Asp His Ile Ile Pro
545 550 555 560

eolf-othd-000001

Arg Ser Val Ser Phe Asp Asn Ser Phe Asn Asn Lys Val Leu Val Lys
565 570 575

Gln Glu Glu Asn Ser Lys Lys Gly Asn Arg Thr Pro Phe Gln Tyr Leu
580 585 590

Ser Ser Ser Asp Ser Lys Ile Ser Tyr Glu Thr Phe Lys Lys His Ile
595 600 605

Leu Asn Leu Ala Lys Gly Lys Gly Arg Ile Ser Lys Thr Lys Lys Glu
610 615 620

Tyr Leu Leu Glu Glu Arg Asp Ile Asn Arg Phe Ser Val Gln Lys Asp
625 630 635 640

Phe Ile Asn Arg Asn Leu Val Asp Thr Arg Tyr Ala Thr Arg Gly Leu
645 650 655

Met Asn Leu Leu Arg Ser Tyr Phe Arg Val Asn Asn Leu Asp Val Lys
660 665 670

Val Lys Ser Ile Asn Gly Gly Phe Thr Ser Phe Leu Arg Arg Lys Trp
675 680 685

Lys Phe Lys Lys Glu Arg Asn Lys Gly Tyr Lys His His Ala Glu Asp
690 695 700

Ala Leu Ile Ile Ala Asn Ala Asp Phe Ile Phe Lys Glu Trp Lys Lys
705 710 715 720

Leu Asp Lys Ala Lys Lys Val Met Glu Asn Gln Met Phe Glu Glu Lys
725 730 735

Gln Ala Glu Ser Met Pro Glu Ile Glu Thr Glu Gln Glu Tyr Lys Glu
740 745 750

eolf-othd-000001

Ile Phe Ile Thr Pro His Gln Ile Lys His Ile Lys Asp Phe Lys Asp
755 760 765

Tyr Lys Tyr Ser His Arg Val Asp Lys Lys Pro Asn Arg Glu Leu Ile
770 775 780

Asn Asp Thr Leu Tyr Ser Thr Arg Lys Asp Asp Lys Gly Asn Thr Leu
785 790 795 800

Ile Val Asn Asn Leu Asn Gly Leu Tyr Asp Lys Asp Asn Asp Lys Leu
805 810 815

Lys Lys Leu Ile Asn Lys Ser Pro Glu Lys Leu Leu Met Tyr His His
820 825 830

Asp Pro Gln Thr Tyr Gln Lys Leu Lys Leu Ile Met Glu Gln Tyr Gly
835 840 845

Asp Glu Lys Asn Pro Leu Tyr Lys Tyr Tyr Glu Glu Thr Gly Asn Tyr
850 855 860

Leu Thr Lys Tyr Ser Lys Lys Asp Asn Gly Pro Val Ile Lys Lys Ile
865 870 875 880

Lys Tyr Tyr Gly Asn Lys Leu Asn Ala His Leu Asp Ile Thr Asp Asp
885 890 895

Tyr Pro Asn Ser Arg Asn Lys Val Val Lys Leu Ser Leu Lys Pro Tyr
900 905 910

Arg Phe Asp Val Tyr Leu Asp Asn Gly Val Tyr Lys Phe Val Thr Val
915 920 925

Lys Asn Leu Asp Val Ile Lys Lys Glu Asn Tyr Tyr Glu Val Asn Ser
930 935 940

eolf-othd-000001

Lys Cys Tyr Glu Glu Ala Lys Lys Leu Lys Lys Ile Ser Asn Gln Ala
945 950 955 960

Glu Phe Ile Ala Ser Phe Tyr Asn Asn Asp Leu Ile Lys Ile Asn Gly
965 970 975

Glu Leu Tyr Arg Val Ile Gly Val Asn Asn Asp Leu Leu Asn Arg Ile
980 985 990

Glu Val Asn Met Ile Asp Ile Thr Tyr Arg Glu Tyr Leu Glu Asn Met
995 1000 1005

Asn Asp Lys Arg Pro Pro Arg Ile Ile Lys Thr Ile Ala Ser Lys
1010 1015 1020

Thr Gln Ser Ile Lys Lys Tyr Ser Thr Asp Ile Leu Gly Asn Leu
1025 1030 1035

Tyr Glu Val Lys Ser Lys Lys His Pro Gln Ile Ile Lys Lys Gly
1040 1045 1050

<210> 48
<211> 1368
<212> PRT
<213> Bacterial

<400> 48

Met Asp Lys Lys Tyr Ser Ile Gly Leu Asp Ile Gly Thr Asn Ser Val
1 5 10 15

Gly Trp Ala Val Ile Thr Asp Glu Tyr Lys Val Pro Ser Lys Lys Phe
20 25 30

Lys Val Leu Gly Asn Thr Asp Arg His Ser Ile Lys Lys Asn Leu Ile
35 40 45

eolf-othd-000001

Gly Ala Leu Leu Phe Asp Ser Gly Glu Thr Ala Glu Ala Thr Arg Leu
50 55 60

Lys Arg Thr Ala Arg Arg Arg Tyr Thr Arg Arg Lys Asn Arg Ile Cys
65 70 75 80

Tyr Leu Gln Glu Ile Phe Ser Asn Glu Met Ala Lys Val Asp Asp Ser
85 90 95

Phe Phe His Arg Leu Glu Glu Ser Phe Leu Val Glu Glu Asp Lys Lys
100 105 110

His Glu Arg His Pro Ile Phe Gly Asn Ile Val Asp Glu Val Ala Tyr
115 120 125

His Glu Lys Tyr Pro Thr Ile Tyr His Leu Arg Lys Lys Leu Val Asp
130 135 140

Ser Thr Asp Lys Ala Asp Leu Arg Leu Ile Tyr Leu Ala Leu Ala His
145 150 155 160

Met Ile Lys Phe Arg Gly His Phe Leu Ile Glu Gly Asp Leu Asn Pro
165 170 175

Asp Asn Ser Asp Val Asp Lys Leu Phe Ile Gln Leu Val Gln Thr Tyr
180 185 190

Asn Gln Leu Phe Glu Glu Asn Pro Ile Asn Ala Ser Gly Val Asp Ala
195 200 205

Lys Ala Ile Leu Ser Ala Arg Leu Ser Lys Ser Arg Arg Leu Glu Asn
210 215 220

Leu Ile Ala Gln Leu Pro Gly Glu Lys Lys Asn Gly Leu Phe Gly Asn
225 230 235 240

eolf-othd-000001

Leu Ile Ala Leu Ser Leu Gly Leu Thr Pro Asn Phe Lys Ser Asn Phe
245 250 255

Asp Leu Ala Glu Asp Ala Lys Leu Gln Leu Ser Lys Asp Thr Tyr Asp
260 265 270

Asp Asp Leu Asp Asn Leu Leu Ala Gln Ile Gly Asp Gln Tyr Ala Asp
275 280 285

Leu Phe Leu Ala Ala Lys Asn Leu Ser Asp Ala Ile Leu Leu Ser Asp
290 295 300

Ile Leu Arg Val Asn Thr Glu Ile Thr Lys Ala Pro Leu Ser Ala Ser
305 310 315 320

Met Ile Lys Arg Tyr Asp Glu His His Gln Asp Leu Thr Leu Leu Lys
325 330 335

Ala Leu Val Arg Gln Gln Leu Pro Glu Lys Tyr Lys Glu Ile Phe Phe
340 345 350

Asp Gln Ser Lys Asn Gly Tyr Ala Gly Tyr Ile Asp Gly Gly Ala Ser
355 360 365

Gln Glu Glu Phe Tyr Lys Phe Ile Lys Pro Ile Leu Glu Lys Met Asp
370 375 380

Gly Thr Glu Glu Leu Leu Val Lys Leu Asn Arg Glu Asp Leu Leu Arg
385 390 395 400

Lys Gln Arg Thr Phe Asp Asn Gly Ser Ile Pro His Gln Ile His Leu
405 410 415

Gly Glu Leu His Ala Ile Leu Arg Arg Gln Glu Asp Phe Tyr Pro Phe
420 425 430

eolf-othd-000001

Leu Lys Asp Asn Arg Glu Lys Ile Glu Lys Ile Leu Thr Phe Arg Ile
435 440 445

Pro Tyr Tyr Val Gly Pro Leu Ala Arg Gly Asn Ser Arg Phe Ala Trp
450 455 460

Met Thr Arg Lys Ser Glu Glu Thr Ile Thr Pro Trp Asn Phe Glu Glu
465 470 475 480

Val Val Asp Lys Gly Ala Ser Ala Gln Ser Phe Ile Glu Arg Met Thr
485 490 495

Asn Phe Asp Lys Asn Leu Pro Asn Glu Lys Val Leu Pro Lys His Ser
500 505 510

Leu Leu Tyr Glu Tyr Phe Thr Val Tyr Asn Glu Leu Thr Lys Val Lys
515 520 525

Tyr Val Thr Glu Gly Met Arg Lys Pro Ala Phe Leu Ser Gly Glu Gln
530 535 540

Lys Lys Ala Ile Val Asp Leu Leu Phe Lys Thr Asn Arg Lys Val Thr
545 550 555 560

Val Lys Gln Leu Lys Glu Asp Tyr Phe Lys Lys Ile Glu Cys Phe Asp
565 570 575

Ser Val Glu Ile Ser Gly Val Glu Asp Arg Phe Asn Ala Ser Leu Gly
580 585 590

Thr Tyr His Asp Leu Leu Lys Ile Ile Lys Asp Lys Asp Phe Leu Asp
595 600 605

Asn Glu Glu Asn Glu Asp Ile Leu Glu Asp Ile Val Leu Thr Leu Thr
610 615 620

eolf-othd-000001

Leu Phe Glu Asp Arg Glu Met Ile Glu Glu Arg Leu Lys Thr Tyr Ala
625 630 635 640

His Leu Phe Asp Asp Lys Val Met Lys Gln Leu Lys Arg Arg Arg Tyr
645 650 655

Thr Gly Trp Gly Arg Leu Ser Arg Lys Leu Ile Asn Gly Ile Arg Asp
660 665 670

Lys Gln Ser Gly Lys Thr Ile Leu Asp Phe Leu Lys Ser Asp Gly Phe
675 680 685

Ala Asn Arg Asn Phe Met Gln Leu Ile His Asp Asp Ser Leu Thr Phe
690 695 700

Lys Glu Asp Ile Gln Lys Ala Gln Val Ser Gly Gln Gly Asp Ser Leu
705 710 715 720

His Glu His Ile Ala Asn Leu Ala Gly Ser Pro Ala Ile Lys Lys Gly
725 730 735

Ile Leu Gln Thr Val Lys Val Val Asp Glu Leu Val Lys Val Met Gly
740 745 750

Arg His Lys Pro Glu Asn Ile Val Ile Glu Met Ala Arg Glu Asn Gln
755 760 765

Thr Thr Gln Lys Gly Gln Lys Asn Ser Arg Glu Arg Met Lys Arg Ile
770 775 780

Glu Glu Gly Ile Lys Glu Leu Gly Ser Gln Ile Leu Lys Glu His Pro
785 790 795 800

Val Glu Asn Thr Gln Leu Gln Asn Glu Lys Leu Tyr Leu Tyr Tyr Leu
805 810 815

eolf-othd-000001

Gln Asn Gly Arg Asp Met Tyr Val Asp Gln Glu Leu Asp Ile Asn Arg
820 825 830

Leu Ser Asp Tyr Asp Val Asp His Ile Val Pro Gln Ser Phe Leu Lys
835 840 845

Asp Asp Ser Ile Asp Asn Lys Val Leu Thr Arg Ser Asp Lys Asn Arg
850 855 860

Gly Lys Ser Asp Asn Val Pro Ser Glu Glu Val Val Lys Lys Met Lys
865 870 875 880

Asn Tyr Trp Arg Gln Leu Leu Asn Ala Lys Leu Ile Thr Gln Arg Lys
885 890 895

Phe Asp Asn Leu Thr Lys Ala Glu Arg Gly Gly Leu Ser Glu Leu Asp
900 905 910

Lys Ala Gly Phe Ile Lys Arg Gln Leu Val Glu Thr Arg Gln Ile Thr
915 920 925

Lys His Val Ala Gln Ile Leu Asp Ser Arg Met Asn Thr Lys Tyr Asp
930 935 940

Glu Asn Asp Lys Leu Ile Arg Glu Val Lys Val Ile Thr Leu Lys Ser
945 950 955 960

Lys Leu Val Ser Asp Phe Arg Lys Asp Phe Gln Phe Tyr Lys Val Arg
965 970 975

Glu Ile Asn Asn Tyr His His Ala His Asp Ala Tyr Leu Asn Ala Val
980 985 990

Val Gly Thr Ala Leu Ile Lys Lys Tyr Pro Lys Leu Glu Ser Glu Phe
995 1000 1005

eolf-othd-000001

Val 1010	Tyr	Gly	Asp	Tyr	Lys	Val 1015	Tyr	Asp	Val	Arg	Lys 1020	Met	Ile	Ala
Lys 1025	Ser	Glu	Gln	Glu	Ile	Gly 1030	Lys	Ala	Thr	Ala	Lys 1035	Tyr	Phe	Phe
Tyr 1040	Ser	Asn	Ile	Met	Asn	Phe 1045	Phe	Lys	Thr	Glu	Ile 1050	Thr	Leu	Ala
Asn 1055	Gly	Glu	Ile	Arg	Lys	Arg 1060	Pro	Leu	Ile	Glu	Thr 1065	Asn	Gly	Glu
Thr 1070	Gly	Glu	Ile	Val	Trp	Asp 1075	Lys	Gly	Arg	Asp	Phe 1080	Ala	Thr	Val
Arg 1085	Lys	Val	Leu	Ser	Met	Pro 1090	Gln	Val	Asn	Ile	Val 1095	Lys	Lys	Thr
Glu 1100	Val	Gln	Thr	Gly	Gly	Phe 1105	Ser	Lys	Glu	Ser	Ile 1110	Leu	Pro	Lys
Arg 1115	Asn	Ser	Asp	Lys	Leu	Ile 1120	Ala	Arg	Lys	Lys	Asp 1125	Trp	Asp	Pro
Lys 1130	Lys	Tyr	Gly	Gly	Phe	Asp 1135	Ser	Pro	Thr	Val	Ala 1140	Tyr	Ser	Val
Leu 1145	Val	Val	Ala	Lys	Val	Glu 1150	Lys	Gly	Lys	Ser	Lys 1155	Lys	Leu	Lys
Ser 1160	Val	Lys	Glu	Leu	Leu	Gly 1165	Ile	Thr	Ile	Met	Glu 1170	Arg	Ser	Ser
Phe 1175	Glu	Lys	Asn	Pro	Ile	Asp 1180	Phe	Leu	Glu	Ala	Lys 1185	Gly	Tyr	Lys

eolf-othd-000001

Glu	Val	Lys	Lys	Asp	Leu	Ile	Ile	Lys	Leu	Pro	Lys	Tyr	Ser	Leu
1190						1195					1200			
Phe	Glu	Leu	Glu	Asn	Gly	Arg	Lys	Arg	Met	Leu	Ala	Ser	Ala	Gly
1205						1210					1215			
Glu	Leu	Gln	Lys	Gly	Asn	Glu	Leu	Ala	Leu	Pro	Ser	Lys	Tyr	Val
1220						1225					1230			
Asn	Phe	Leu	Tyr	Leu	Ala	Ser	His	Tyr	Glu	Lys	Leu	Lys	Gly	Ser
1235						1240					1245			
Pro	Glu	Asp	Asn	Glu	Gln	Lys	Gln	Leu	Phe	Val	Glu	Gln	His	Lys
1250						1255					1260			
His	Tyr	Leu	Asp	Glu	Ile	Ile	Glu	Gln	Ile	Ser	Glu	Phe	Ser	Lys
1265						1270					1275			
Arg	Val	Ile	Leu	Ala	Asp	Ala	Asn	Leu	Asp	Lys	Val	Leu	Ser	Ala
1280						1285					1290			
Tyr	Asn	Lys	His	Arg	Asp	Lys	Pro	Ile	Arg	Glu	Gln	Ala	Glu	Asn
1295						1300					1305			
Ile	Ile	His	Leu	Phe	Thr	Leu	Thr	Asn	Leu	Gly	Ala	Pro	Ala	Ala
1310						1315					1320			
Phe	Lys	Tyr	Phe	Asp	Thr	Thr	Ile	Asp	Arg	Lys	Arg	Tyr	Thr	Ser
1325						1330					1335			
Thr	Lys	Glu	Val	Leu	Asp	Ala	Thr	Leu	Ile	His	Gln	Ser	Ile	Thr
1340						1345					1350			
Gly	Leu	Tyr	Glu	Thr	Arg	Ile	Asp	Leu	Ser	Gln	Leu	Gly	Gly	Asp
1355						1360					1365			

eolf-othd-000001

<210> 49

<211> 56115

<212> DNA

<213> Bacterial

<400> 49

atgaaaatca ccatttttagc tgtagggaaa ctaaaagaga aatactggaa gcaagccata	60
gcagaatatg aaaaacgttt aggcccatac accaagatag acatcataga agttccagac	120
gaaaaagcac cagaaaatat gagtgacaaa gaaattgagc aagtaaaaga aaaagaaggg	180
caacgaatac tagccaaaat taaaccacaa tccacagtca ttacattaga aatacaagga	240
aagatgctat cttccgaagg attggcccaa gaattgaatc aacgcatgac ccaaggccaa	300
agcgactttg tattcgatcat tggcggatca aacggcctgc acaaggacgt cttacaacgc	360
agtaactact cactatcatt cagcaaaatg acattcccac atcaaagat gcgggttgtg	420
ttaattgagc aagtgtatag agcgtttaag attatgagc gagaaagctta tcataaataa	480
aactaaaaat taagtttgtt ataatttaaa aagttaatga gatgtggagg gattacatat	540
atgaaatatt ggattatacc ttgcaatatt atatgatgtt tatagagtgt ttaataaagg	600
ttctgttgca aagttagaaa aatatagcta attactatct tatcatgtcg ttgttcctt	660
aactggctaa catatgccta atttcgtggc atggcgaaaa tccgtagatc tgaagagacc	720
tgcggttctt tttatataga gcgtaaatac attcaatacc ttttaaagta ttctttgccg	780
tattgatact ttgatatctt gtctttctta ctttaatatg acggtgatct tgctcaatga	840
ggttattcag atatttagat gtacaatgac agtcgggatt cagtttaaac gctttaatta	900
ctttagccat tgctaccttc gttgaagggt cctgatctgt aatcaccttt tgagggttac	960
caaattgttt aatgagacgt ttgataaata catatgctga atgattatct cgttgcttac	1020
gcaaccaa atctaatgta tgtccctctg catcaatggc acgatataaa tagctccatt	1080
ttccttttat tttgatgtac gtctcatcaa tacgccattt gtaataagct tttttatgct	1140
ttttcttcca aatttgatac aaaattgggg catattcttg aacccaacgg tagaccgttg	1200
aatgatgaac gtttacacca cgttccctta atatttcaga tatatcacga taactcaatg	1260

eolf-othd-000001

tatatcttag atagtagcca acggctacag tgataacatc cttgttaa	1320
atggtttatattc tgaaaatagtt catacagaag actccttttt	1380
gttaaaatta tactataaat tcaactttgc aacagaaccg	1440
tattatggaa tagagatggt ggtaacattt atacaggatc	1500
attatactta agtttaattt cgttattaca gaaccacaca	1560
ttccaaccag aagagaaagt atgtctattt agttatgggt	1620
caggagcagt aggagaaatc tttagtgggt caatcgtaa	1680
aggatatgac aaagcattag ataaagagaa acacttaa	1740
aat atgctagaat ctagagagca attatcagtc gaagaatacg	1800
aaacattctt taacagattt gataatcaag aatttgattt	1860
cgaacgtgaa ttgacacaag atccatattc aaaagtatac	1920
ttatacagta tagaagacca tatcagaaca tataagatag	1980
agaaaataaac tagtggccga ttgtgcttga tgagcttggg	2040
acataaatcc taactcgaaa taaataagca tatcactaaa	2100
ctgatttttt aaagtttaca gtgatatgct tattttttta	2160
tcttacgatt ttgtacgtgc atgcttgccct aggggtatgg	2220
ctcgagccct ggagccatta gtctctcgca catactattc	2280
cctcaggcgt cagcacttac aaaatcggtt gtaattttca	2340
tttttatacg cattcttact gagattatac taataagagg	2400
aatagtaaaa gcaattctaa gtaaaaattgc agataagagg	2460
tttgttaaaa gcagttctaa gtaaaaattgc agataagagg	2520
tacgttaaaa gcaattccat gcaaaaattgc tgataagggg	2580
taagttaaaa gcagttctca gtaaaaattgc agataagagg	2640
tacgttaaaa gcagttctag gcaaaaattgc agataagagg	2700
tgcgtaaaa gcagttctca gtaaaaattgc tgataagggg	
taagttaaaa gcaatcctaa gtaaaaattgc agataagggg	
tacagaaaaa ctagacttga ttacaaaatg gagcttggga	
cataaatgat tttttaaaaa tgagatgaga cgtagattaa	
ctccataatc aatacgaatc tatcgacttc tttatttatg	
atattcatct ctttttaatg gaaataaaaag tgcgattaat	
gtgataatac agttacgtta attaaaaaaa taaaaatgca	
aggagaggta atatgctaac tgtatatgga catagaggat	
tacctagtaa agctccggaa aatacaattg catcatttaa	
agctgcttca gaagtagaag gtataaactg gttggagtta	
gatgttgcaa ttacaaaaga tgaacaactg	

eolf-othd-000001

attatcattc atgatgatta tttagaacgg actacaaata tgtccgggga aataactgaa	2760
ttgaattatg atgaaattaa agatgcttct gcaggatctt ggtttggtga aaaattcaaa	2820
gatgaacatt tgccaacttt cgatgatgta gtaaaaatag caaatgaata taatatgaat	2880
ttaaatgtag aattaaagg tattactgga ccgaatggac tagcactttc taaaagtatg	2940
gttaagcaag tggaagaaca attaacaac ttaaatacaga atcaagaagt gctcatttca	3000
agctttaatg ttgtgcttgt taaacttgca gaagaaatca tgccacaata taacagagca	3060
gttatattcc atacaacttc gtttcgtgaa gactggagaa cacttttaga ttactgtaat	3120
gctaaaatag taaacactga agatgccaaa cttactaaag caaaagtaaa aatggtaaaa	3180
gaagcggggt atgaattgaa cgtatggact gtaaacaac cagcacgtgc aaaccaactt	3240
gctaattggg gagttgatgg tatctttaca gacaatgcag ataaaatggg gcatttgtct	3300
caatagaaaag ttagagggtga gtcttacgtt tcagtgcagg tagacttacc tttaacatgt	3360
tacatactaa aaaattaatt tgaataagaa agagagacat atatgaaata cgatgatatt	3420
atagtaggag aaacattcaa aacaaaaagc cttcatatta cagaagaaga aattatccaa	3480
tttgcaacaa cttttgatcc tcaatatatg catatagata aagaaaaagc agaacaaagt	3540
agatttaaag gtatcattgc atctggcatg catacacttt caatatcatt taaattatgg	3600
gtagaagaag gtaaatacgg agaagaagt gtagcaggaa cacaatgaa taacgttaaa	3660
tttattaaac ctgtataccc aggtaataca ttgtacgtta tcgctgaaat tacaataag	3720
aatccataa aaaaagaaaa tggactcggt acagtgtcac tttcaacata caatgaaaat	3780
gaagaaattg tatttaaggg agaagtaaca gcacttatta ataattcata ataaaacagt	3840
gaagcaacca tcgttacgga ttgcttcact gttttgttat tcatctatat cgtatttttt	3900
attaccgttc tcatatagct catcatcac ttacctgag attttggcat tntagctagc	3960
cattccttta tcttgatcat ctttaacatt aatagccatc atcatgtttg gattatcttt	4020
atcatatgat ataaaccacc caatttgtct gcctgtttct cttgtttca ttttgagttc	4080
tgcagtaccg gatttgccaa ttaagtttgc ataagatcta taaatatctt ctttatgtgt	4140

eolf-othd-000001

tttattttacg acttggtgca taccatcagt taatagattg atatttttctt tggaaataat	4200
atattttcttc caaactttgt ttttcgtgtc ttttaataag tgagggtgcgt taatattgcc	4260
attatttttct aatgcgctat agattgaaag gatctgtact gggttaatca gtatttcacc	4320
ttgtccgtaa cctgaatcag ctaataatat ttcattatct aaatttttgt ttgaaatttg	4380
agcattataa aatggataat cacttggtat atcttcacca acacctagtt ttttcatgcc	4440
tttttcaa at ttcttactgc ctaattcgag tgctactcta gcaaagaaaa tgttatctga	4500
tgattctatt gcttgtttta agtcgatatt accatttacc acttcatatc ttgtaacggt	4560
gtaaccaccc caagatttat ctttttgcca acctttacca tcgattttat aacttgtttt	4620
atcgtcta at gttttgttat ttaacccaat cattgctggt aatatttttt gagttgaacc	4680
tggtgaagtt gtaatctgga acttggtgag cagagggttct tttttatctt cggttaattt	4740
attatattct tcgttactca tgccatacat aaatggatag acgtcatatg aagggtgtgct	4800
tacaagtgct aataattcac ctgtttgagg gtggatagca gtacctgagc cataatcatt	4860
tttcatgttg ttataaatac tcttttgaac ttttagcatca atagttaggt gaatatcttt	4920
gccatctttt ttctttttct ctattaatgt atgtgcgatt gtattgctat tatcgtcaac	4980
gattgtgaca cgatagccat cttcatgttg gagcttttta tcgtaaagtt tttcgagtcc	5040
ctttttacca ataactgcat catctttata gcctttatat tctttttgtt ttaattcttc	5100
agagttaatg ggaccaacat aacctaatag atgtgaagtc gctttttcta gaggatagtt	5160
acgactttct gtttcattag ttgtaagatg aaattttttt gcgaaatcac ttaaataattc	5220
atccattttt ttaacggttt taagtggaac gaaggatatca tcttgtaacc aattttgatc	5280
catttggtgt ttgatatagt cttcagaaat acttagttct ttagcgattg ctttataatc	5340
tttttttagat acattctttg gaacgatgcc tatctcatat gctgttcctg tattggccaa	5400
ttccacattg tttcggctca aaattttacc acgttctgat tttaaatttt caatatgtat	5460
gctttggtct ttctgcattc ctggaataat gacgctatga tcccaatcta acttccacat	5520
accatcttct ttaacaaaat taaattgaac gttgcatca atgttaccgt agtttgtttt	5580

eolf-othd-000001

aatTTTatat	tgagcatcta	ctcgtTTTTT	atTTTtagat	actTTTTTTT	TTTTacgatc	5640
ctgaatgTTT	atatctTTTaa	cgcctaaact	attatatatt	TTtatcggac	gttcagtc	5700
ttctacttca	ccattatcgc	TTTTagaaat	ataactgcta	tctTTataaa	cttgTTtgaa	5760
atTTTtatct	tcaattgcat	caatagtatt	attaatttct	ttatctTTtg	aagcataaaa	5820
atatatacca	aacccgacaa	ctacaactat	taaaataagt	ggaacaattt	ttatctTTTT	5880
catcaatatc	ctccttatat	aagactacat	ttgtagtata	ttacaaatgt	agtatttatg	5940
tcaaaataat	gttataattt	ttgtgatatg	gaggtgtaga	aggtgttatc	atctTTTTtg	6000
gttctgttgc	aaagtaaggt	tctgttgcaa	agtaaaaaat	atagctaacc	actaatttat	6060
catgtcagtg	ttcgcttaac	ttgctagcat	gatgctaatt	tcgtggcatg	gcgaaaatcc	6120
gtagatctga	agagacctgc	ggttctTTTT	atatagagcg	taaatacatt	caataccttt	6180
taaagtattc	tttgctgtat	tgatactttg	ataccttgtc	tttcttactt	taatatgacg	6240
gtgatcttgc	tcaatgaggt	tattcagata	tttcgatgta	caatggcagt	caggtttaag	6300
tttaaaagct	ttaattactt	tagccattgc	taccttcggt	gaaggTgcct	gatctgtaat	6360
taccttttga	ggtttaccaa	attgtttaat	gagacgtttg	ataaacgcat	atgctgaatg	6420
attatctcgt	tgcttacgca	accaaataatc	taatgtatgt	ccctctgcat	caatggcacg	6480
atataaatag	ctccattttc	cttttatTTT	gatgtacgtc	tcatcaatac	gccatttgta	6540
ataagctTTT	ttatgctTTT	tcttccaaat	ttgatataaa	attggggcat	attcttgaac	6600
ccaacggtag	accgttgaat	gatgaacgtt	tacaccaagt	tcctttaata	tttcagatat	6660
atcacgataa	ctcaatgcat	atcttagata	gtagccaacg	gctacagtga	taacatcctt	6720
gttaaattgt	ttatatctga	aatagttcat	acagaagact	ccttttggtt	aagattatac	6780
tataaattca	actttgcaac	agaacctctt	aatcttattg	gatacaataa	ctaacttaaa	6840
cacattatct	acaagtaaaa	acttgtaaaa	agaacatgtg	ttcttaatta	gtgtataatt	6900
agtttaaaatt	gattatgggg	tgatgtaatg	aatgagagta	atcaaattat	attcgatcat	6960
ataacaaagg	ctattgaaaa	tatgaaaaat	aaaggctggg	aaacaaggta	tgggcaagaa	7020

eolf-othd-000001

actttaatgt atgatgtatt tgatgcttat gattcaagag aaaatttaat agtagaagcg	7080
caagtaggta taggaaaatc atttggatat ttaattcctg gtatatgtat ttcaaaaagt	7140
actaaaaaac ctttaattgt aacgacttcc tcaattcaat taactgagca actagtcaat	7200
gatatacagc aagttgaaga aattttacat atatctgttg attgtatagt aggtaaaggt	7260
gtaactaact atccttgttt taaagaaatt catcgtaaaa atttaagtaa attaaattta	7320
atggaggcctt tagatatagc aaataatggg ttaacaaaac aaactgtacg tgagactaat	7380
ttaaaatgga atcaaataatc taccaataat tgtattatga gttaaagtca ctataaaaat	7440
gaatgcgctt attttataat gagaaataag ttaaaagagg gaaatagata tattagactc	7500
aatgaatata agccgaaaagt cataatcggt aatcaagata tgttaatgat gaattttaaa	7560
aagttaacct ttggaaaaga gagtttaatc tatgatgatc cttgtatgct aatcgtagat	7620
gaagttcaca acttagaaga gaaacaacgt gctaacaatga ctaaaactat taactctaaa	7680
actatgataa ataaaaataaa agaaggcgca aaccgagttg gtagtagatc tcggtattta	7740
aaaaatataa aaatgattga agattgggtt aatcttcaaa aggatagtgc caaaagtgag	7800
atatacaaaa atggtaattg tttatctact ggacgagttg atataaaacc tgtagtcat	7860
catcaaatgg ccaaattaat tagtatgaca aaggaaatag ttgaagaatt cgatgttaat	7920
aatattgttg tatttaaaaca atcttcgtta gttagtaatg aacaattaga aatagctaat	7980
aatctgttaa cattatttaa aaatcttcaa aataacagcg acaaatatat attttggact	8040
gaaataacta agcaagacca aattgatatt tcattttgtc ccaataatat tgctgaaaca	8100
cttagaaaaa cagtttttag tacaagttac ccagttgtat gtctttctgc aacaattact	8160
aataaaacta ataataaaaa tagctatgag tacattaaag aaataattgg ttttaaaggc	8220
tatgaggaag atattaagta taatgatttt ccgtacaagg aaagcaggct ctacatacct	8280
ccaaacttac caaaatttga taaacgtgat gttaaataat atgaagaaat aggtaaacat	8340
atttttgaat tggcaagcca aaataaggga ggcactttga tattgtttac tgctaaagat	8400
gacattgacg gtgtatataa tgatttatca aaaaggaaat ttaataaaac tatctatgta	8460

eolf-othd-000001

gatgatggta gtaaaagtca aaatgaaatt attgaatcat ttaaaaaaac taaaggtgta	8520
atattgggta cgggagtatt ttgggaagga atagacttaa aaaatgaatt attaacatta	8580
ttagttattg tcagattacc ttttcctacg attgatccaa ttacaaaata taagattact	8640
aaattaaatg atagtaatga agcagttata gttcctgaaa tgataattaa actgaaacaa	8700
ggtgtaggaa gattagtaag aacaaagcag gataaagggt tattagtgtt attagattca	8760
agaatgaata aaccatttta taagcataaa gaagcagtat tagatgcatt accaattaa	8820
aatatgattc ataaagatga agtcaaagat ttccttaata acatttaaag taagtagtaa	8880
tagttatcca atattttcta gttgattctc ttataatatg tccaattaag tgtagacgat	8940
tcaagatgat attgagggaa ggatgagaat gtgtctttta ggtagctcat ttgatgataa	9000
ccttaaacad aatattttact ttcattcctgc tgaaaaaaga gggtacagtt tcaagccgat	9060
agaatacatt gggctatata aagacaaagc aataaaagct atcggaaaag tagacaaagt	9120
aatagtacg gaaataaatg agagctcatt atccttgaag acagtttatc ctgtaggtac	9180
tgagttatcg attgatgagt atgaaatagt taaaaataaa ataatgggtgc ttgggaaaga	9240
aaagtggact aatctattga acgaacccca ttattattac ttaattgaag attttataga	9300
gacagactac aagaaaacat ctaaagggtg atcgatggga gttaagtatt ttaatgtgaa	9360
tgaaattttg aataggggatt gcttaaccac cgaacaaatc gctaaagaat tatgtaataa	9420
agattgggaa tgataaatag tgaatgaagc tataatgcaa taatgtatgt ataacataat	9480
caagtaatga aattaatgat aaggagatg ggagtaaaga attgaattag ttgcatggt	9540
ctatgtatct taaagggtgt gaaggagata caccgaagta tgcagtacca attcttgaaa	9600
cagactttag tgattttacca tctacacata cgacagtcgg atcacttgat cggtttcgag	9660
ataagacaat gagcattaac agaagcggga gtaactgttg aattccattt atatccagtt	9720
agatactaga gtttgaagtg ataaatcttg attcggatgc tgaaataagt aaaagagcag	9780
ttactgaata taatataagt ataagtatgc cactagatat ttttaaggggt atttattcac	9840
ttttataaaa tcatctgcta agatagtgtg gaagattttt ataggagctg attataatgc	9900

eolf-othd-000001

gacatatataa tatgtcatatc atcatatcgct atagtactct aactcaaaga taagaagtac	9960
ttagttatga atagcattca tttcacaaag tacttcaaca aaaatggagg aatatgaaat	10020
gaataaaata gaagtgtata agtttggttaa agtaaagcag ttagtatatc aattgattaa	10080
gttatatcgt acaaacgata tgaattccca taaaacacaa aaagatTTTT tactaaatga	10140
aattaatgat atcttttaaag aaaaagatat tgatatctcg gactttatta catcgattga	10200
cgatgtaaaa ttaactaaga aaaaagcaga acatctttta aatgaattaa aagtgtacat	10260
ccaagatTTTT gaaatacctt catcaagtca actggagaaa atttttcgta aagtaaaaaa	10320
attaaagaga ccagatatata atttaattga taaaaagaa atttcatatt taggatggaa	10380
tgataattct tctaaccgaa aatatatcgt ttataaaaaat ttagatgata aattcgaagg	10440
tatatatggc gaaatttcac caaataaagt aaaaggattc tgtaaaattt gtaatcagga	10500
atctgatata tcactctttc tcaataaaac taaacataat aagagtagtg gaacatatatc	10560
taaaaaagga gattacattt gttatgacag ttttaaattgt aatcagaacc tagatgatat	10620
aaataatctt tacgaattta ttgttaaaat aaaatagatc caaacagccc tgatcttttag	10680
aactaatgat cagggttggtt atatttttgta cctcactctt aatcgatacg ctgagcctta	10740
taataaataa agctaagatt ggtagtggtg taactttatg caatttgaaa agatataatg	10800
aaataagaga gttttggtga tgatattaat atttaaataag atctatagac aattaatcgc	10860
tggttgatttt taacaaatca attcaattta gttatgtttt gtgatggcat actaattaaa	10920
aaaagaagaa ctaggttttg tgccctagtt cttcttttta ttttaattggtt attcctattt	10980
cttaataagc gtaatgaatt aagtatgaca agtatcgag cgctgtatc acttaatact	11040
gccaacccaaa gtgttaatag cccaggaaat acaagaatga atgcaatcaa ttttatgatg	11100
atagaaaaat atatgttttg cttaatgata tttttagctt ttttacttat agaaatcgta	11160
cgtgttaatt gatttatatc atctgacata agtacgacat cagctgtttc cattgctgta	11220
tctgaaccaa tacctcccat tgcaatacct acgtcacttt gtgctaaagc aggggcatca	11280
tttatgccgt ctccaatcat agcgacacga tatcctttat tttgcaaadc ttttattgca	11340

eolf-othd-000001

gctaatttgt caccaggcat taattcagca taaacttctt taataacctga aagttgtgcg	11400
atTTTTtggg cagtaccttt attatctcct gttagcatta tagtgTTTT aatgtgagta	11460
ccatttaatt gttgtattat ttgcttgata tttgaacgta atgggtctgc aatagtaatc	11520
aagccatgaa tcatgctaga agatgcaata atgatgacgg taaaaccttc ttgctcatat	11580
ttgtttatTT cttctttata gttgttaatt tttttgtaa tagactcaat taattttacg	11640
ttaccagcat aaacgtaact ttcattttatt ttacctttga tgccttgacc aacgatattt	11700
tcaaaatcag ttacataagc ttttttaaca ttttaattgca ttgcgtaatc tacgatagcg	11760
ttgctaatag ggtgggttga gtaggattcc aaactcatag caatatttag caatgttggt	11820
tcattagcat ctatagTTTT aatcgtatcc acctttggac gaccttcagt caaagtacct	11880
gttttatcaa aagccaacgc agataaagta cctagacctt ctaaattgggt accacccttg	11940
ataagtacgc cattttttgc tgcacttcca atcgcagtaa cgatagctac cgggtgtgaa	12000
atgacaagtg cacatggaca tgcgataact agtaattcaa gccctttata taaccattcg	12060
ccccacgtac ctaaagagaa tagagggtgg atgaccatga ctaataatgc taatacaaag	12120
acgatagggtg tataaatttc tgaaaatcga tctataaaag cttgcgtcgg tgctttatTT	12180
tcttTtgctt cttcaaccat atgaatgatt ttagaaagcg ttgtatcttc taccaattta	12240
gacacccgga tgtataaagt accattttca ttgatagagc ctgcatatac ttcatcgta	12300
atcgTTTTat caacagggtat cgattcaccg gtaatagggt cttggtttaa actggaactt	12360
ccatcggtaa ttgttccatc taaagggacg cgatcacctg gtttgataag taagatttca	12420
ccaactcgta tatctgtcaa atcttttagta gttgttccgt tttctgttat gacatttgct	12480
gttgtggaag taatatccat taatgattgt atagaattac gtgttttatc tattgaaatt	12540
gtttgcagca aggttccaat tgtaaataac aatacaacaa tcgcaccttc aaaatattca	12600
ccaatgaata tagcgccaat aacagctacg gacatcaaca cattcatatc taagctttta	12660
gatttaaatgg cataatatgc gcttttcaat ggTTTTatgc cactaacaat aatggctatg	12720
atatacatta aatttgcaat taatactggc aatgttgtca gagttacaac taaaccaagg	12780

eolf-othd-000001

ataagaaata atgttgaaat gataggtttt ctgaatactc tccatttgga attactactt	12840
ttttttgttg gacttaatgt tgcagaataa ccgatttttag aaacttcttt ttcaatattt	12900
ttagttttat taccttcaaa aggttctgtt gcaaagttga atttatagta taattttaac	12960
aaaaaggagt cttctgtatg aactatttca gatataaaca atttaacaag gatgttatca	13020
ctgtagccgt tggctactat ctaagatata cattgagtta tcgtgatata tctgaaatat	13080
taagggaacg tgggtgtaaac gttcatcatt caacggctca ccgttgggtt caagaatatg	13140
ccccaatttt gtatcaaatt tggaagaaaa agcataaaaa agcttattac aaatggcgta	13200
ttgatgagac gtacatcaaa ataaaaggaa aatggagcta tttatatcgt gccattgatg	13260
cagagggaca tacattagat atttggttgc gtaagcaacg agataatcat tcagcatatg	13320
cgtttatcaa acgtctcatt aaacaatttg gtaaacctca aaaggtaatt acagatcagg	13380
caccttcaac gaaggtagca atggctaaag taattaaagc ttttaaactt aaacctgact	13440
gtcattgtac atcgaaatat ctgaataacc tcattgagca agatcacctg catattaaag	13500
taagaaagac aaggatatcaa agtatcaata cagcaaagaa tactttaaaa ggtattgaat	13560
gtattttacgc tctatataaa aagaaccgca ggtctcttca gatctacgga ttttcgccat	13620
gccacgaaat tagcatcatg ctagcaagtt aagcgaacac tgacatgata aattagtgg	13680
tagctatatt tttttacttt gcaacagaac cttttttgca ataatacatt taattaaaac	13740
cttgttttta acatcgatga caagatctaa tgtaggacgt ggagacatca ttttcggaat	13800
gatataaata aatccataaa tggagataaa tcgaaaacat ttatacccat aggggggtatg	13860
tgttatagta taagtatagc taatataata ttttcataaa taggaggggt taatttgaat	13920
aataatgggtg aagagcataa tcctcaaaat cacatgaatc attccaatca catgcatcat	13980
gataaccatg cctcacatca tcatagtggc catgcacatc atcatggaaa ttttaaagtt	14040
aagttttttg tttcattaat tttggcaata cctatcattc ttttatcgcc aatgatgggt	14100
gttaacttac cttttcaatt cacattttcca gggtctgaat gggtagtggt aatattaagt	14160
acaattttat tcttttatgg tggtaaaccg ttcttgtctg gtggtaaaga tgaaattgct	14220

eolf-othd-000001

acaaaaaaaaac caggcatgat gaccttagtt gccctaggta tttcagtagc ttatatattat	14280
agcttgatatg ctttttatat gaataacttt agtagtgcaa ctggtcatac aatggacttt	14340
ttttgggaat tagcaacctt aattttaatt atgctattag gacattggat agaaatgaat	14400
gctgtcggaa atgctggaga tgctttaaag aaaatggcag aactgttacc taatagtgt	14460
attaaagtta tggataatgg ccaacgcgaa gaagttaaaa tatcagacat catgactgat	14520
gatatcgtcg aagtaaaagc cggagaaagc attccgacag atgggtattat cgttcaagga	14580
caaacatcta tagatgaatc cctagtcact ggagaatcta aaaaagtaca aaaaaatcaa	14640
aatgacaacg tcatcggggg ttctattaat gggctctggaa caatacaagt caaggttaca	14700
gctgtggggag aagatggata tctttctcaa gttatgggac ttgttaatca agcacaaaat	14760
gataaatcta gtgctgaatt gttatctgat aaagtagcgg gttatttatt ctactttgct	14820
gtaattgttg gcgtgatttc ttttattgtc tggatgctca ttcaaaatga tgttgatttt	14880
gcattagaac gtcttgtaac tgtgttagtc attgcttgct cacatgcttt aggcttggca	14940
ataccttttag tcactgcacg ttctacttca attgggtgcac ataatggttt aattattaaa	15000
aatagagagt ctgtagaaat agctcaacat atcgattatg taatgatgga taaaactgg	15060
actttaactg agggtaactt ttctgtgaat cattatgaga gctttaaaaa tgatttgagt	15120
aatgatacaa tattaagcct tttcgctca ttagaaagtc aatctaatac cccattagct	15180
ataagtattg ttgattttgc gaaaagtaaa aatgtttcat ttactaatcc acaagacgtt	15240
aataatattc cagggtgtcgg attagaaggt ctaattgata ataaaacata taaaataaca	15300
aatgtctctt atcttgataa acataaactt aattatgacg atgacttatt tactaaatta	15360
gctcaacaag gtaattcaat cagctattta attgaggatc aacaagtcac tggcatgatt	15420
gctcaaggag atcaaattaa agaaagctca aaacaaatgg tagctgattt actatcaaga	15480
aatattacac cagtcacgct tacagggtgac aataatgaag tggcacacgc tgtcgcaaaa	15540
gaattaggta ttagtgatgt ccacgcacaa ctcacgccag aagataagga aagcattata	15600
aaagattatc aaagtgtcgg taataaagtc atgatgggtcg gagacggtat caacgatg	15660

eolf-othd-000001

ccgagtctta taagagccga tattggtata gcaattgggtg caggcacaga tgttgcagta	15720
gattcaggtg atactatact tgttaaaagt aatccatcag atattattca tttcttgacc	15780
ctttcaaata atactatgag aaaaatgggtg caaaacttat ggtgggggtgc aggttataat	15840
attgttgctg tacctttagc agctgggtatt ttagcgttta tcggcttgat tttatcacct	15900
gcaataggtg ctattttaat gtcgctaagt acggttattg ttgcaattaa tgcctttaca	15960
ttaaaattaa aataaaagat aggagtttta ttatgattaa aaaattatatt tttatgatat	16020
taggatcatt actaatatta tcagcttgct ccaataatga tgaaaaagat aaagacacta	16080
atgaccaaaa aagtgagagc catatgaagc ataatgatga aagtaaagtt cctgaaggta	16140
tgaaatcgac taatgagggt gaatttaaaag taggagataa agtaacgatt acagcagggc	16200
atatgccagg tatgaaaggt gcagaagcta ctgtaaaagg tgcgtataaa acatatgctt	16260
atgttgtaag ttataaaccc acaaattggaa atgaaaaagt aaacaatcat aaatgggtcg	16320
taaacgaaga gatcaaagat gcacctaaag atggatttag taaggcgat actgttaa	16380
tagaagcaag tcatatgtct ggtatgaaag gtgctacagt caatatagat aacgtgaaaa	16440
agactactgt ttacgtagtt gattacaaat ccaaagataa tggtaaaatc attaaaaatc	16500
ataaatggat gacaggaaat gaactgaaag cacgataaaa atctagttct agattgagaa	16560
ataaatagat ataaagatat cctccttaat caataattta aataacttat tattgttaag	16620
gaggatattt tttagtgtgt aaattaaaaa gaattttaga agaataacat ttatcaaaaa	16680
actgttcatt accttattaa atgaaattat ataattaaaa accgcatcat taaccgatac	16740
gcagaagcgt accacaaata aaactaaaaa atagattgtg aaaaatttat ctttgaaagg	16800
ggtcgaatga gagacataga agtagaaaaa gcctataaga tgatgaaaga acaaggtaaa	16860
ataaatttta gtgaatacca taagacacta ttacatatac atactctagg atcacatgat	16920
ttaaaattat atgatgaatg gaacaaacaa tatttctatc tattagccaa gatgaaatat	16980
ttagaattgc taaaaaagaa aatattcttt acagtgagta ttctaataa aatgatttaa	17040
aggaattaga tattttttaag aactataaaa atctaaagga aatgctttct tattttat	17100

eolf-othd-000001

tggtatacag catatatact aatggaatat caatagttgt tgttgcagat cataatactg	17160
tgtgaagaat ggaataaaga attctgtacg gcttctgttc tactcttttt tattaataaat	17220
atataataaa gaatttttta aaatagtaaa atttatactt tgattaactt ttgacataat	17280
tatgaacatc taaataagta aaaatcaaat atttgaaatt gtgttaatat gaatgtagaa	17340
actaaggtaa taatttcatt taaaatagct tttaaaattt atatacatat tagcgttgtg	17400
atacacgtag aaagggggaa tcaaaagtgg aaacgctaat ggttaaagca atggggacgg	17460
tgatacgttt atcgattgaa catcaacatt cgagtacatt acttcaagaa gctgaattaa	17520
aaattcatga ttgggaatct caatttagtg ctaatgatcc aaaatcagat ttgatgaatg	17580
tgaatcaaca tgcaggatc gcaccagtca aggttaatcc tgagatgttt aacatgatac	17640
gttatggtta tgaaactaca ctatcttcta attttaagat gaacatattg atagggccat	17700
tagttaaatt atggaaaatt ggtttcaaag atgcattgaa acctaaagaa gaagatatac	17760
aacgcgcttt aatgtgtatg aatcctgaaa atcttgttct aaattcaaag acacatgaag	17820
tatttcttac acgaccagga atggagattg atttaggagc cattgtaaaa ggttattttg	17880
ctgatcaatt acagcaatac tttttatctc atgggtgtagc ttctgccatt atcgatttag	17940
gtggtaatgt tttacaatt ggtagacaac cggaaactct agaaaaatgg catgtaggta	18000
tacgcaatcc tttttataaa gatgcattat cactcgttac attaaatgta gagcatcaat	18060
cagttgttac ttcaggcatc tatgaacgct atttcataca ggaacatcaa ttatttcac	18120
atattttgga ttccaataca gggatcctg tagataatga tatcgctagc gtgacaatca	18180
tatctgatca tgggattgat ggcgaggat ggagtacaat ttgtagtttt ggtcaatcac	18240
aacaaaatat tgaattatta aacctcatag atgggtgttgaggatcatt gtgacaagag	18300
atggaaacgt tttaatgact tcaaaaatgc aaaggatattt ataaaatttt aaaaaatact	18360
cataaagagt attttatttt taagtataaa tgtgaaaaaa atcacaatgt attaggagga	18420
attgctatga gtaaagaatt atttgatact tttaaaattt aatgtggtgc cgaattaaaa	18480
aatagagtat taatggcgcc catgactatc caagctggat attttgatgg aagtgttaca	18540

eolf-othd-000001

tcagaaatga ttgattatta tcaatttagg gctggatgatg cttcagcaat tattgttgaa	18600
agttgttttg ttgaaaacca tgggagaggc ttcccaggag ctataggtat tgataacgat	18660
gacaaaatac ctggacttaa acgtctagca gaagcgattc aatctaaggg gtcaaaagcg	18720
attttacaac tttatcatgc tggaagaatg gcgaatccta agttcaatga aggtgaacaa	18780
cccatatctg cgagtcctat tgcagcatta agacctgatg cggtagcacc aagagaaatg	18840
acacatgctc aaatcaatca gatgatagaa gatttcggag aagcgacacg tcgtgctata	18900
gaagcaggat ttgatgggtg tgaaattcat ggtgccaaca catacttatt acaacaattt	18960
ttctctccgc attctaactg aagagaagat acatggggag gcagtcgtga aaaacgtacg	19020
cgattcccaa tcgaagtact aacaaaagtt caacatgtcg ttgatgaaaa tgaagcttct	19080
caatttataa taggatatcg attctcacct gaagaaattg aagagccagg catacgtttt	19140
gaagatacaa tgtttttact aaatacttta gcaaaatatg aacccgatta cttccatata	19200
tcagcaaaca gttatcaacg tacgtccata gtgaatcaag aagatacaga acctttaatt	19260
aataaatatc ataaaatgca aagtgacaaa ttggcacaaa ttccattaat cgggtgttgg	19320
agtattgcgc aacgaaaaga tgcagaacat gcccttgaac tcggttataa tcttttaagt	19380
gttgggaaaag cctatttagt agaacctcaa tggacggata aaatttcaca aaacgaagaa	19440
gttgaacaat ttgtcgatat acatgaccaa aaaatacttc acataccatc tcctctatgg	19500
aaagtgatgg acttcatgat tttagataaa gaagaagaac atcgtaaata tgaaagatta	19560
aaagcactac aaaataaaaa agtgaaattt aacaaaggca cgtatcatgt ttatgcaaaa	19620
ggtcataatg gcaatctacc aatgaaagtt caattgtcgg aagataaaat tgtaagtatt	19680
gaagtagatg atagtggaga gtctgaagggt atagcgaacc cagtttttga acgtttacct	19740
caagatatca tcaatggaca aacgttaaata gtcgatgtca tatcagggtgc gacagtaaca	19800
agtgaaggca tcgtacaggg cattgcagat gcaattgaac aagcaggcga agatccagat	19860
attttacgag cacgtcctaa accagtcgtt cagtggctctg atgaggctgt tgaagagacg	19920
actgacgtag tcgtgattgg tacagggtgg gctgggttta gtgcagctgc tacgggttta	19980

eolf-othd-000001

gacgaaggaa aagaagtcacat catgcttgag aaatttgcgg ctataggtgg caataccatc	20040
cgaacaggtg gtcaagtcaa tgctgctgag cctaaatggc aaagtgcatt ccctgcactc	20100
gctggtgaaa aagacacatt gatacagtta ttaaatacatg atgaaaagga tatagatgag	20160
gcttatcttg aagatttcaa tacttttaaag cgtcaaatta aagattacct tgaaaaaagt	20220
agcaataaag atgattatct tttcgattct gttgaattac atcgcattca aacgtatcta	20280
ggtggaagac gtaaagatcg taataatgtc gaaatttcag gtgattatga tttagttaaa	20340
acactcacag ataatgtttt ggaatcagta tactggttga aagataaagg ggtacatttt	20400
gatcgttcat ttgtagatat gcctgttggt gcactatggc gtcgtggtca taaaccaatg	20460
aaagcacaag gtttagagta cattgaaaat ctaggagact acgttaaaca gcatcatggt	20520
cgtattttta cagaaactac tgcagaaaaa ttaattaaag aaggtaatca agttgttggt	20580
attgaagcac gtaaagcaaa tgggtgctaaa gttaagattc acactcgtca cggcgtagt	20640
ttggccacag gtggttttgg agcgaatact aaaatgatac aacaatataa tacgtattgg	20700
gataacattc cagatgatata taaaacaaca aattctcctg caattacagg tgatggtata	20760
cgtttaggtg tgcaagcagg cgctgacatc gtaggtatgg gattctctca aatgatgccg	20820
atttctgatc ctaagacagg tgcattattc acaggattaa tcgtgacacc ttcaaacttc	20880
gtcttcatta ataaggaagg ccatcgtttt gttaacgaat ttgaaagtag agatgtatta	20940
tctaaggcag cattagaaca aaaagacggc atcttctata ttattgcaga cgcaaatatt	21000
aaagcgctag ctatgaatac gactgaagac aaaataaatc aagaattaga agatggcact	21060
ttaataaaaag ctgatacctt agaagtgtta gctcaaaaat taaacataga tgcaactact	21120
tttgtgaata cgattgaaag atataatact ttcgtagaac taggacatga tgaagatttc	21180
aataaaaaatg catttgattt aaaaatcgaa aaagcaccat tctatgcgac accacgaaaa	21240
cctgcaatac atcatactat ggggtggttg aaaatcaaca tacatgcaca agtcgttgat	21300
gtagaaggtc atatcattaa aggattgtat gcagctggtg aagttgctgg tggatatacat	21360
gcgggtaacc gtctaggtgg taatgcactg gcagatattt tcacttttgg tcgcatcgct	21420

eolf-othd-000001

gggtcaaagtg ctgtaatgaa ataaataaag aagaacagga ggacatttaa tgatgagtga	21480
acagttttaat aaaggaaaaac aactcattgt agcgattatt ttagggattc tcacatattg	21540
gttgtttgca cagtctttct tgaatatcgc accacatggt caacgtttct atgatgtaga	21600
tatgagtatt gttaacattg cggtcagtct cacatcactc ttaactgggtg tatttatagt	21660
tgtagcagga ggtttatctg ataagttagg tcgagttaaa attacttacg caggtttgat	21720
acttagtata cttgggtcta ttgcactgat tatactctcat gcgccacttt tattattgggt	21780
aggtcgagtg ttacaagggt tatctgcagc atgcctactt ccagcaacta ttgcgttaat	21840
taattcattc tttcatgggt aagaaagaca aaaggcacta agttattgggt catttggttc	21900
atatgggtgga acaggattag catcactatt tgctggaatg atagccactt ttattgagtg	21960
gcgttggatt ttcgtgttgt caatcatttt ctcaattctt gccttaatat tgcttaaagg	22020
cataccagaa tctaaagatg aatctgcaca taataaaaaa tttgatatta ttggtattat	22080
tatttttgtc attatgatgt taagtattaa catagtaata acccaagggt atagaattgg	22140
atggttaaat cctattattg taatattaat tgccatattc attgtgacat taatagcttt	22200
ctatatattt gaaaaacgtc aaaatgaacc tttcatagat tttagtttat tttcaaataa	22260
tatttatatt ggcacaacat tagctaattt aatgggtgaat atggatatag gctcacttgc	22320
attatttaat atctatgttc aagatgataa acatttaaca ggagcacaag caggtttaat	22380
tacaattcca tatatgttgt gtagtttatt aatgatacgt gtaggtgaac gttttatgca	22440
aaatcgagga ccgcaattgc cacttatgct aggtcctata tcaattacag tgggtattat	22500
acttttagcc ttcacttcgt tgcctaacat gatttattat attgtagcgt gcatcggctt	22560
tatctttata ggtttaggat taggtttctt tgcgacacca gcgctatcta cagctgtatc	22620
taatgttccg tcagaaaaag cagggtactgc atcagggatt atcaaaatga cttctacact	22680
cgggtgcagca tttggtatcg ctgttgtaac tacaatctat acggcattgt ccgtcaatca	22740
tccagcaciaa tttgcagcta caatcgcatt tatcgtgggg gcaggttttag tgtttatcgc	22800
atttattgcc gcgtattgtt taattcctag aaagaatgta gatgcttaaa tcgagagttg	22860

eolf-othd-000001

gcgcagtaaa tatcattgct tgaatthttga tctgatgttg aatgatgaat aaatagttaa	22920
acttgatgat agtcttgaaa taggagatgc gtttgaagcc ttttcttcag aattacgctt	22980
ggaagatatc aatcaccatc cgctgttgca aacttagtat cattcttagc ttctaagtat	23040
tctgactata ttactgggtca attcattthta actgatgggtg gattagtgtat tagataaaaa	23100
gggatacttc gtcatgataa ttaatggata aaaaaagcgt ttaaataattt atatataatg	23160
attgtgtgct tatacaaaat gtcaactcaa tgcattcatg tgagagtggg atgatgagtc	23220
tgagacataa agtctctgga taagtcaata aagacaattt ctattgaaat aatatagaaa	23280
ttgtctthttt tataatthttt tgattatthtt cagattattg agctgctact tttcttatat	23340
tgagtgccat taatacaaat ccaagttctc tthttaattt atttattcct ctaatggata	23400
ttcgaatgaa acccgthtcta gtaatttagt tttgaacca cctaaatgaa tatatgagtt	23460
atthttttata ctataaaata tattcagatt tcaatagtga cataaaatag gcatctthtat	23520
atthacctth agtgtagaat tgctctthga gtaatccttc agthtttaaat ccttggtgatt	23580
cgtatatatg cacagctthtt ttgttatctg tatcaacata tagataaatt ttgtgcatat	23640
ttaatatatc taatgcataa thttatcgctt thtcgaatgc gaatthttgca taacctthtac	23700
cactgaactc aggtthtaata attatthtga thtcacaatt acgatggatg taattaattt	23760
ctactaatth aacaattcct atgacttgat thtcatcttc aacaataaaa cgtctctctg	23820
attcatctaa taaatgctta tcaaataaat attgaagthc cgthaaggat tcataaggct	23880
cttcaaacca ataagacata atagaatatt cattatthta thcatgaaca aaaagtaaat	23940
cactatactc taatgctctt agthttcataa thccactcct aaaatthttcc tatatatthg	24000
cattataaat ataaataacg aataagthtat cattcactgt gaatactcta thttaacaat	24060
tcactacata ctaattctca thttctthatt attctctaatt atctctgatt tattactctt	24120
actatgaaac atataaaaact gtcacattthg thttatattaa taataaatac atcaatgata	24180
acaaaaagaa aataaaaaaa taaaaataga gcatccctca ccgtaaaaagt gaaggatgct	24240
thattthttat tagaatatag thttcattth gatagataat ggttaataat tgtctataaa	24300

eolf-othd-000001

tcattattaa ggaccgttgt aatacaatcg tcattcataa aattttcata gattttatcc	24360
aatatttttt catcttcaat tgctgtgaaa tgatatacta gcccttttac tattgataca	24420
tactttcttc ttatgagggt ttagcatttc catcacttgt tcgacacgtt ctacaacaac	24480
tggtcgcttc gcataagcac cataagctag aatcactgtg tcactttcgc taatcgcttt	24540
catcaagtga atatcagtgt gctcatcgta tggatttttg atgtgtttga gattttctgg	24600
acttttaata ttagagaata gattttacaag atatacagca ccgtatcttt ctgaattagc	24660
taattgggtg aggatgagaa cagttgtgag atcgagtgat aatacaccat ctaaagagg	24720
atacatcgtt atcactgtac aaacagggtt cttttcatcc cacgtctttt tgagtaagta	24780
tcggtgtttt tcatcgtcgc taaatatcgc ttctgtgtat atcgtacttt tgattgtatt	24840
catcatcttc actcctttta gtattcttct ggtaaaagca tcacataata aaaagtgctt	24900
acatcatctt cacgaatgac gtagactttc ttaggtactg cattttgatt ttttacatag	24960
tttgtatagt gatattccaa tttgtatgcg ggctgttctt gttcatgagt aatagagagt	25020
atattattat cttctttagt tttaaaaatg tgtaggtaat ctgtatgacc ttgttgatct	25080
ctttctttta ccatattcca aagtaagatt tgaaggctta gagatagttg ttcactaatg	25140
cctcttgtag tgatcgtt gattttcata ctattttcct ccattttgct tttctttcat	25200
gatgtcaatc acttcgttaa tgactgtaac agatatttat gccactttga tccaattatt	25260
catagttatt cctccttct cttagtaa atgacgttcac gataatcgta ttttttagtat	25320
ctgtgaggta tagaaagtcc atatcaaaat gatccagata accaatgctg atgagttggt	25380
tattggcgta cattagaaat ggatagatac ttagctcatg tagctcatta ttatagtagg	25440
tataagtttc aagtatgaga tgtgccagtg gagaattatt aataaaacgt tccggtagaa	25500
tattttctgc tgcttcttct aacgcttcac attcccatgt ttcgttgta gatagttgga	25560
atagatgagt tatatattgt ttgagttctt gagtgattgt ttccatatca ttgcctccta	25620
gatagtgtga tagtgatgta gttcatatac atcaatggga taatatatat ttgattgtc	25680
atttattacg aatcccggta agaataagag aaaattccga tcaaaaaccc gtgataaacg	25740

eolf-othd-000001

ttggtgtaac aaggaaatcc cggaatccca ctcattttga cgaacaatca actcattatt	25800
tataagtatt gatgataggg ttgggtttct gcttccttat atatattatt tatttataaa	25860
gaataacggg attttgggat tgtgcttgca caatccttct gcttcttcga gtaagcaa	25920
cccattcatt tcccgttaaa aaatcatcgt gggatgttct ttagcaattt caatataagc	25980
ttcgtgtagt agtagataga taatgcaatt tgctaccata ttagataagt gttattgaaa	26040
ttgataaaga gaattccttat aaatagttat aaaaagtaat cagaagaaga aaataaagaa	26100
ctttctataa taaaaagtct tcactattaa atttttagtga agacttttta cttaaaattt	26160
tattattttat aaaactaagc caataatact tgctgaaata attgatgcta atgttgcacc	26220
taataataat cttagggcaa aagaagctac tttattttccc tgtttactat caataccttt	26280
aatagctcct accataattc caacagtacc aaagttagca aagcttaca gataaacaga	26340
tattatacct tgagtctttg gagatagaga agaggcaatt ttttgaaaat ctaacattgc	26400
tacgaactca tttgtaatta actttgttgc cataattgat ccagcacgta tagcttcact	26460
ccatggaata cccataatga aagcgatagg agcaaataatg taaccaatca attttttaaa	26520
atctagaccg actaaatcaa atacaatagt aattcctttc attaaagata taaaagctaa	26580
caacattatt gctacagtaa tagcaattct gaagccatca atagcacttt caccaatcat	26640
ttgaaagaaa gttgtttttt taatatTTTT ttctgattca gcttctaatt ctttattatc	26700
atttttgtaa ggattaatga cgctagcaat tatcaaagca ctgaaaatat ttaaaacaac	26760
tgcagtaact acatatttag gatcgatcat ttgcatatat gagcctagca tagccatact	26820
gacagcactc atacctgaag tagcgatagt atataacttt tcttttgaca agcttggaat	26880
aatattttta actgttaaat aaacctctgg ttgacctaac atagaagtag atattgcat	26940
atagctttca agttggccca tatgagttat tttattaatt atccaacct taattttaat	27000
tagaaaaggT aaaaatttta aatagtttaa cataccaatt aaaactgaaa taaaaactaa	27060
aggtagtaat acatttagaa agaaattata gccgttttta ttttgtaa atccaaaaac	27120
gaattcaata ctttctttac taatattcat taaaccttca aaaaatgtac tcattgcggt	27180

eolf-othd-000001

taataaatta agacctattg atgtattcat cataaataaa acaagaacaa tttgtattac	27240
tatcataatc attgggttttt ttatatctat agcttttcta ttaaaactaa aaatatatgc	27300
aactaataaa gcaaaaacta ttcctaataaa tgtgaagatt attgacatag tcaagcacct	27360
acatttttgct gaaagctaca gctatttttag ctcctaataac agcggttttt tctaccaact	27420
taatatattgt ttctaagctt ttgccatctg ttttttcaac gattgtttta agaaggaaag	27480
gtgtagagtc ttttccacta attccattgg caatagaatc ttttaacagct tcttcaatta	27540
tagtgtcaat ataatcttta gaaagtccat gttcttttagg aacaggattt gcaatgacca	27600
ttccaccatg taaatttaac tccatttttg tcttgaaaat ttcagctatt tctgtaggtt	27660
cctcaactga actatttagt ttttaaccgc tttctctagt gaaaaaagca ggtagttcag	27720
ttgtttgata tccaattacc ggaacacctt tagtttctaa gtattcaagc gttttaggca	27780
aatctaaaat agattttgct cctgcgcata taactgtaac atttgtatgc gctagttcct	27840
ctaaatctgc tgaaatatcc atactagttt ctacgccctt atgaacacca ccaattccac	27900
cagtgacaaa aaatggatatc ccagctaatt ctgaacaaat catagtagaa gcaacagttg	27960
tagccccaat ttttttagta gcaactattt ctgctaagtc gcgacgagat acttttagcga	28020
cattaggact atttgctaga gtctccaagt cattttcggt taaaccaatt tttattttcc	28080
catccattat ggcaatagta gcagggtgtg cgccattgtc tcgtattatt tgttcaactt	28140
tttttgccat ttcaatgttt tgtgggtagg gcataccatg agagattatt gtagattcta	28200
aagctactat gggactattg ttttttttg cttcttcaac ttctgtagaa aattcaagaa	28260
attttttcat ttttaaatc ctccaattca atttctaatt gtttttgatc taaattttgt	28320
ctaacagtgt aattagtttc aacagttttc ttcgagttta acaaagctaa gttaataatg	28380
tcttcattag tataattttt tagccaacta tatattactg cgctagtaaa tgaatcacca	28440
gcaccagtta catcaactac attttttagat gaaattactg agtgaaatga ttctgaacta	28500
ttatctttga aaatgagtgg ttttagtcca tttgtaataa tgacgtaga cacaccaaga	28560
ttaattaatt tctcagcagc aatactcatg tcatcattac tatcaatttt catttttaaa	28620

eolf-othd-000001

aaagtttcag tttcatcgcg attaataatt aaccaatcaa ttgaatgtag tgaattaggc	28680
atatggatca ttttaggtga agatactggt acaattacta acttaatat gtttttttct	28740
gcgaatgaag tgagggtactc aatagatttt ttgggtaaat ttaaactctat tactaaacat	28800
ttagctttta ataagataga tgactgcttt gacagaaatt cagggtgtaat ttcctcgtaa	28860
atattcatat ctgcaaaacc atactgcata tcaccttttt tatctataat agctgtatat	28920
gacacctgtac ttgcattttc tatagggtga atataatttg tattcataaa aggctcagat	28980
agttttttta tcaaactcca ttcgctatca tttccagctg ctgttaaaaa tgtaacattt	29040
tcaccaagtc tccctaagtt ttcagcaata tttcttgcta cacctccaat cgattttggt	29100
gatttttactg gattggaagt catagattgt agatcagtat cacaataaaa ctttctatca	29160
acattagcag ctccaatata gattatggaa tcttcctcat taacaatgta tgcttttcct	29220
aatatatatt tcttttttat taaaccagat attatatag ctgtggctgg ccttgataaa	29280
ccaatacggt ctgctaactc ttgttgagta ataaaaggat tttttttaat ttcgtttaaa	29340
ataaattgct ctttattttt caaaatagca cctcctttta aagaaacaat agttcacaaa	29400
caaaacattt gtttgtttca ttcaaagaga taataacata tatacatttt tgtgtaaacg	29460
ttttcttgaa gggttttatt ttttattcta ttaaaagata attatactca ctttatttac	29520
taaataataa gatacagtgt ttgggacaaa aataagaggc tgggacaaaa taaaatgtct	29580
cagcctattt tatcattttg tcagtagctg actgatttga aaatgcgctt gaatcaagct	29640
tttttcaaac ctagtcatcc ttgctggggg aggacaacga aataaatttt gagaaaatat	29700
tatttctgtc ccactcccaa gtggatgggt attaaatagt tgtttgataa tctcattatt	29760
cagtttgagc gtaacgtaaa attgcttctt atgatgctca tcttttctta tgtcaatacg	29820
atcgatgatt gttagatata gtgatttcaa ctgagatttc tctaatttgt ctatatcttt	29880
gaatattgct tgtaatacat tagcaatcat atctgcatca taatgtggag attccgcttg	29940
tttatcttgt tctagttgat ggatttgatt atttatttga ttcaattcat cttggtagct	30000
aagtattggt ggtttcaata cgctatctaa gtcaggggag tcttcgatag ttttcgttag	30060

eolf-othd-000001

tgtatgcatt ttggctttta tttcttcaca ttgtgactgt ttataggcaa tatcatgatt	30120
caaagaagat acgtctatth gacttctttc attttaccttt tcaaccaatt gcttcaatac	30180
cttttttgctt ttgataatth ccaatatctg atccataaca tttttttcta gtacatctgc	30240
tctaacacta ttggctgaac aaacttttga acctttgttt ctaaaattac tacatgagta	30300
atatctgatt cttttcttag tgccatcttt taatgtattg gtcgtattac ttgcggccat	30360
tgctgcacca catttcggac attttacaat gccagtcagt aggttagtcc ctttaccgtg	30420
aacttgtggt ttcttgcgac tctcttggcg tttaaactgt actttatccc gtaaagcttt	30480
atcaataata ggcgcatgct taccatctgc aatgattggt tcttcattga gtccttttcg	30540
ttttttatcg ctccagtgtc tatacttcgc aaactgtatc tttccaatgt aaaaagggtt	30600
tgagatgatg taagtaatgg acgaaatgct aaaaggtttc gctttcttag tcacataacc	30660
tttatgattc aatgcgttcg caatcttacg ataaccatga ctttagcgt atgactcaaa	30720
aatatattha acaatattcg cttcatgttg attgatcatg agctcttttt tactgtcagg	30780
tactttatca tagcctaaag gtaaattacc ttggtaataa cttcaatcg ctcgttgtct	30840
ttgaccgtta taaacgtttt ctataatcgt atttctttca aattctgcga agctggctaa	30900
aatttggagc atcaatttac ctgttgagct ggcaatttct attttttcag ttagactaaa	30960
aaattcgaca ttgattttat acaatttttc cacaatattt aataagtctg aggtatttct	31020
agctaaacga ttggttttgt agaccataat acagtctaac ttaccgtcat ttgcatcttt	31080
taacatacgt tgtaattctg gacgttccat tgttttaccc gatataccac gatcggata	31140
ttcatcaacg acctcataac cttgaaattg acaatactct gtaagtgggt ttaattgacc	31200
ttgaatactg taaccatttt tttgagtttc agtcgataca cgggcatata atccaatatg	31260
tttcttttta agttgtttca tattacttcc atcctttcag atattattaa atgtgattgt	31320
tcaacgatat tgagtggact atttttaaag tagatacctt gtaattgttt agtttgagtt	31380
attgtaatgt cattaatcaa aggtgctatg gtttctaata tcaatttatc tttgattata	31440
tgacggattg tttcggtaat ttgtttatgt gaataattag agtaacgttc ttctctttca	31500

eolf-othd-000001

aagccagcag ataaacgttt aaacgtttcg atatcaattt gatthttgtgc cagthttttcg	31560
atgagttgtt cttgtgttaa atgtgattgt ctgtgtttca tttgttggtg ttttagagct	31620
tttagtattg tcttatttaa tttgtcatga aatgacggat tatcacaata tgctttacaa	31680
gtgttgagga cctctgtttc aatcatttgc gcattgatac ctttaaattg acacgtatga	31740
taggcttcat tcatattctt aggacaaaca tagtaacgta gggagtgttt ctcttttttt	31800
atcgtttaagt ttgttaattg tgattgacag taaggacatt tgattcgtcg ctttagctta	31860
tttctagaat tggatcgatt gtgttgctta tgaatacgac gctcttgtgc ttcttcaaac	31920
atatcaacat caataatagg cggaacgata tcattaaatg tgccatattht attaattgaca	31980
cgaccgcaat agttaggatt caagagaata tttctaactt gatagggctt acgaggaata	32040
agcttaggat ggttattctaa atgttgggaa atctthttgt agcctagacc gtgtaagtac	32100
cagcgataaa ctgctttgac tgtataggct tcttcttcat gtacaacaaa atgaccttgt	32160
ctataacgat acccaaaaagg tgcattgagtt gtgattagct taccttgttt ggctthttct	32220
cttgtcccat ttcgtgtctg ttcactgata ttatttagact ccatttcagc tagactcatg	32280
agtatgttta agcgaaagca atcaaacttt taagacaaat caaaatatcc atcgtttaaca	32340
ctgatgattg tgacgtgatg cthttttacaa atttcaaaga attgtatggc atthtttcaaa	32400
ttacgatgga gccgatttaa gcgatagcaa cataatactt tacattttcc agatgtaatc	32460
atttctacca tthttttgata acccgaatgt tttgtatgtc gacctgtttt cttatcatca	32520
taaaatgtta cattggacca tccatattgc ttagcagtgt ctataatgag ggatttctga	32580
gtcgctaagc tttgttgttt gagtgtactt tgacgtacat aagcaataac ttcttccatg	32640
ttatacacct ccaaaaaagat aatatatatt tgtgagttaa ttcaaataaa ggtccaacgt	32700
gcttctaaca cgttggaccg caatgattaa taatcatgat tttattthttc aataaagtaa	32760
ttagttagtg atgtaataag tttatatthtc aaatatgaat tatttaataa atattgtaaa	32820
atttcattaa gttattttatg ataaaataa attaaaacgt tattthttatt ttatagtga	32880
aggattaata ataattgaaac acatgcattt atctgtthta gcttatagta caggtctaca	32940

eolf-othd-000001

tcctgcctct tggagactac cacattcata tgttgaagaa gttggagata ttgattttca	33000
aattaagtta gcgaaattag ccgaaaaagg taaactggat gcattcttct taggtgatgg	33060
tcaatatatt tctggagaag aaacaggaca tatttcttat tattttgaac cactaacggc	33120
gcttgctgcc atttcacgtg aaacacattc aattggtttg ataggtacca tgtcttcttc	33180
tttttatgaa ccttatcttg cagcacgtat gctttcaagt ttacatcaaa tatctcatgg	33240
gcgtattggg gcaaattattg taacatctca atttgattta gaagcacaaa actactcgat	33300
gcaagcttta ccacatcttg aaaaacgtta tgaacgagca gatgagttta ttaatgtaat	33360
gaaaaaatta tgggaatcat ttactgtaga ggctatcggt aatcacaaaa actcaggaat	33420
tggcttaaat catcagtata ttcatccact tcattatcaa ggaaagtatt ttcaagttgc	33480
cggagctatt aacattccaa caccxaaata tggctgacca cgtttatttc aagcaggaac	33540
ttccattcca ggtcgtgatt tagcagtacg acacgtggat gctatTTTTT caattgcatg	33600
gaatttaca gatggccaac agttcagaca agacattcat caacgtgcca tggaagcaaa	33660
tcgtcaaccc cctcttgat taccaggtct cactgtttat gttgatgaga atgaagagga	33720
tgcttataaa cttaaagcaac aattagatga tatgattcca cttgaaaaac gcaagaaaca	33780
attatctaaa gctattggtc tagatataag tgaatggaaa ctagatgaag ttataccgtc	33840
cttaccagat tatgaaacat tatcgaaaaa ggtcgtaaaa tcagtatatg aagccataca	33900
acgtgccatt aagactgagc atcttacatt aagagattta ttagatcggt ttggtacttg	33960
ggtagggcac aagacaatag taggaactcc cgaacaagtg gcggatgaaa tgatcgaatg	34020
gtttaaaaaa gaagcgtgcg atggttttat gttgatggcc ccgacgtatc cagaatcatt	34080
tgaaaaattt attcatttag tgataccaat tcttcaagaa cgtggagtgt ttagaagaga	34140
ttatgagagt catctgttaa aaaatcattt ggggtataaaa aactaaaaat aaaccgcatc	34200
attaaccgat acgcagaagc ttatcacaaa taaaactaaa aaattggtaa gtagatgaag	34260
agtgtaaatc agagtaatta ataataatgt atcaaatTTT aacaaagggg tctttaagta	34320
tgaatttaag aggtcatgaa aataggctta aatttcttga gaaatatgat gtgacaccta	34380

eolf-othd-000001

tatcacattt	aaaattatta	gaagatcaaa	agaaagacgg	tgaagggtggc	atactgacag	34440
atagctatta	ctgtttttca	tacagcttaa	aaggtaattc	taaaaaagtt	ttaggtacgt	34500
ttaattgtgg	ttatcatatt	gctgaagact	tactaaaatt	atcaaatcaa	gacaaattac	34560
ctttgtttaa	cccgtttaaa	gtaattaatg	aaggtaatca	attgcaggaa	gtagcgaata	34620
aaggtaattt	agatattaat	aggcaaagaa	aacagtataa	tgaagtagct	ttacagcttt	34680
caaatgctat	aaatttaatc	atattttgtt	atgagggtaa	tattaaagaa	ccactttcaa	34740
caataaaaca	cgaaaccgat	aaatattatt	atagtaaacc	atatgatcgt	aaaattaaag	34800
cagtaaatac	tattatcggg	aatttgtttg	ataagaaatt	agttgagaaa	atatctgaaa	34860
ttaatggaaa	tcaggaaaatt	agaaaatttg	atttttcatt	actcactgat	gtaattaaaa	34920
aacacgagat	acaaaataat	tttgaataat	aagtggatgt	aagaagatat	taaatattga	34980
agctagtatt	aaggatattc	aaaatattat	aaattatttt	actgaatgtg	gcgtgaataa	35040
taagtattat	gagagtgaga	aaagaagtag	tctaggaaaag	ttggtaagtg	ttattggaca	35100
cgaagaaaat	gtagaaaatc	caaaaataacc	tgaattagat	tttgaagatt	tcatatctga	35160
atgtataagt	gaaaaacaaa	aaagaattag	acataaacta	ggaggcagag	tatgatgtca	35220
tcgaatgaga	tagtaaaaaa	attatattca	aaggaagata	ttcgcataga	attagagctc	35280
actccacata	agtttaaaaa	aagaatggaa	accattacta	agctttttta	aattgatatg	35340
aaaatttttc	acaattacaa	aggccaagat	aaaaataatc	aatacacatt	taatggcgtc	35400
gcaaaagaat	taataaagggt	gctactaaaa	agtattgact	attacccagt	ggatataaat	35460
tccaaagctt	ttaaacaata	cggaaaatct	aaaaaagaga	tgattgaaaa	tataaaagca	35520
tctagttaca	tggaatatac	ttatcagtta	atgaaatcta	tcaatgaaat	taaatacaaa	35580
agattaattg	cagacataca	tacgaaagac	gtatatcaaa	atactaaagc	atggttaagt	35640
attggtgaat	caattaataa	aaaggaacaa	gaattatacc	aatatatgac	acctttgccc	35700
atacataaaa	gaattgagct	acaaaatgaa	gtattaaaaat	ctatagatga	aacgattttt	35760
caatttatgg	caaaagaacg	tagaaacacc	caaataaaaag	aaaataatga	attagaagaa	35820

eolf-othd-000001

tacacaaatg caataaaaaga aggtaagtat cccaaaaagg attacgaatt aaaccaccta	35880
ttatacgaga aaaatgaaat gccattagat agcttaatta aagatgtatg ggactatgat	35940
gaaacagagt atatggagct tgattggtta attgcagata tgctaaaacg ttcacaaaga	36000
gctgatatga attttatcga aagtttagat aagaaaaaca aattgagaaa aaatattcat	36060
aaagaatcta ttaaaaagtat atctaagttg attgatcatg aattgggttaa aaataataga	36120
aagtgggacg tagcagaatt ttataagaat caacaatttt ggaacaatag tacattaaga	36180
cgtagctctc aaaatttttg gattttatat tacaaaaaaaa ataggttaca tacaatgaac	36240
caaagtaata ttattaaaaa aataaaaaatt atcgaggcta atatagagag tgcaaataaa	36300
cagccgagct atttagatgt ctttttaca gctaagtttg acttagagag gttagaaagt	36360
gaattaatga aatatagcat taatccgaaa tattttaata agataaatag tgattacgta	36420
agatatgcta ttgaagatgt acataatgca attattaaaa ttgacagata tataagtaac	36480
gataaagtga agttaaaacta ttcaaatgcc caaatggtag tgagaaacga aataacagaa	36540
caaggaagct actttgtaaa ccaggcattg aatacactgt caaaggtaga agagtctggc	36600
tacagctttg ataatttcat ggtaggacct ttcgtagaag actttaaaaa agcaattaaa	36660
aatcgtagat ttggttctaa aacagattaa gattgttttt tagagttaaa cataagaata	36720
aatttaata aaaaaacaaa cccaacaaac cttgttatat caacgtttgt tgggtttatt	36780
tttttggtga ttttttaata actcaattac accttagtat aatattgcta aattatacat	36840
tgctgaggcc aagacaaata aaaaattaaa gcaaaagtta gcgcgcaact ttctgccata	36900
aaggagcaga tttatatgga gacaagagac aaactgatgt cattgactca aagtgacaaa	36960
acacaacaat ggtaaatgaa caaatcatct aaccaaactg atgttcaaca attgcagcaa	37020
caattcagtc agcagcttga ccaacaatat aatgcacttt tagctgatga acaagctaaa	37080
ttagatcaat atgtggaagt ccatcatgaa ttggaagcat taaaggaaga aattgaagca	37140
gaacctatta cacttaatat tgataaatta cccgatatca aagcgataat gcttgaaaag	37200
gctaagaaca atgaacattc tgataaaatc gaacagttat ttgatagatt agatcagtca	37260

eolf-othd-000001

ttaaatggta cgaatcgatt atatacacaa ttatcgttga ttggtacacg aacacatcga	37320
atcacaaacta aaaatttttaa tattcagggc ttacctaaag cagtccaatg cacgatttta	37380
ccttcaaaaat ataagaaggt atatactgtc gatttttaaatt catttgaacc ttcggttggt	37440
gcgtacatga ctcaagattc aaaactgatt gacttttttaa atcagaaaga cggattgtat	37500
gacgcattgc taagtgaatt aggcttatca tatgagctac gagtatttgt taaacgtgca	37560
tttattgggtt cgtttctatt tgggtggcaac ttcgatagcg ctaaattcaa gttgaaacaa	37620
tatgtaagtg aagtgcaatg gttggatgcg gtcagccaat ttacaaaagt cattgaactt	37680
aagaaacaaa tcgaagagca taaaaccatt cctatgcctt atggcattga acatgatatg	37740
agcgcatttc aaggtagcag tattatagca ttttatgtac aaactgtagc gagttatggt	37800
ttcaagcata ttctgttga agtgtacaaa gcacaatgcg aacaaaaaac gtttaaaatt	37860
attgtaccta tacatgatgc gattatgatt gaatgtgatg atgaagaaac ggcgcaaaat	37920
gtatcgcagc taatgaaaag taaggcaaat gaattgttta atggtgagtt tgcacacgtg	37980
acagtggaag cattaggggg tgtaaacaat gaataatgat agaggaaaaa gtttacaaat	38040
tccaaaaagc atagccctaa ctgaaggata tatatatgtt gcttcattat attctgtaac	38100
ccaaacagat ttcaatgggg atgttaaaca tcagtttacg tatgaaatag aggtagatca	38160
gaaagttatt tatgtaaatc gtagtatctt gaaagatgct accgataagc agttgtcaat	38220
caatgattgg cttaaaccatc acagtaatta tagctccact cataagaatt atgcccccta	38280
cattgataga aagcatttaa tccatgtagg ttgctttaac ggtaattatt atgtacaaga	38340
tgtagcatca ttaaatgaag atggaggatt attataatga aacatatatt cgatatgtta	38400
acaaaaataa taagtgtggc taaggaggca gtcgaccgtc aaggctctgat tgctatccta	38460
accatgagta ttggcaatga tgatgaaata gaagaaacgg tacaaggatga aacagtgtat	38520
aacgaactta tcgatcagtt acgacttaat atcccaaaag atacggatta tcgacctaac	38580
atctatagct atttcggtat taagaagaaa ccaagtgaca caatattaat agacatgatg	38640
ataaaagttt ttcatatcaa acgcttcaat tcggaactgt atatattcaa aattaacggt	38700

eolf-othd-000001

tggcaaaagc taagtgaaga cgagttaaaa ggatttgtat caaaaatgat acaagtactg	38760
ttaatcgggtt atacgcctac gcaaagtgca ctgaataatg tggttgaagg tctgcaaaaa	38820
tcaacagatg tagaagaact tgtcgagaac gagcactata ttggttgtgg tgaaaatatg	38880
ttcgatctta atacattcaa agtcgttaaa aattcaatcg acatttttcc aaaaacgcga	38940
ttaaatttag cgtagataa aaatgatgag attactgacc agatacccaa acatttcaat	39000
caatatatgt tagaacttgc aaattatgac gatgatttac aatactttct ttttcaacat	39060
acagcagtgt tattgacggc tgatactaaa taccgtcgag gtctcatatt atatggtgga	39120
gctaagaatg ggaaatctgt atatattgaa ctagttaaat catttttcta tagcaaagat	39180
atttgtgtcta agccacttaa tgagcttgaa ggtcgctttg acaaagaaag ttttaattgac	39240
aaaagtctaa tggcaagtca tgaaataggg caatctagga ttcaagaaca gattgtaaat	39300
gacttcaaaa agttattatc tgtagaatca atgcatgttg atcgtaaagg aaaaactcaa	39360
gtggaagtca ctttggattt gaaacttatt tttagtacaa atgcggtact taattttcct	39420
cctgaacatg cgaaagcttt ggagcgtcga attaataatta ttccatgtga gtattatgtt	39480
gaaaaagcgg acacttcatt gattgataag ctccagagtg agaagaaaga aatctttctt	39540
tacttgatgt atgtgtatca acagattgta aaagcagata tcgagtacct tgaaaatagt	39600
cgtgtcactg aaattactca cgattgggta aattttggat atgaatttgt ttctagcagg	39660
tccgcaagta ttgcaaatca gaaagagtgt attaatttac tcagaaaact tatagaaatc	39720
aaaccaggat cacgaatcaa agtatccgag ttaaataaag ttattaatga agaaataaag	39780
gtgagttctc aggttattaa acagttaatt caagaaaact ttgatactca aaccaaacta	39840
tacaatggct acgattattg gattgattta ggttggaaaag aagccgataa aaaagagatt	39900
catgatattt cgaaaaaaga taatattatt tcattagaaa aaaatgaaaa tataacagac	39960
gatgaggcat tagatgaaga gaatttggac tttgattggg aggactttga cgatgaataa	40020
tgaacaaatt gaagcatttg tagaagtact tgtgcctatc atagaagaac gtatcaataa	40080
aggtaagtaa tctaattacg tactacaggc agttgcctgt agtactcata tgattaagtg	40140

eolf-othd-000001

ggaaaagtga taaaaatgaa acgaaattat aaatatatat tatccatatg atgttacaag	40200
accgatgggtc tgtagcaata atctaataaa aggagcggta tgatatgaag ggtaaaattg	40260
cactttattc acgcgttagt acgtcagagc agtcggagca tgggtactca atccatgagc	40320
aagaacaagt actcatcaaa gaggttgtga aaaactatcc aggttatgac tatgaaactt	40380
atatcgattc tggatatatca ggtaaaaaata ttgaaggctg accagcaatg aaacgtctat	40440
tacaagatgt taaggataat aaaatcgaaa tgggtgttaag ttggaaattg aatcgtatct	40500
cacgatcaat gagagacgtg tttaatatta ttcatgaatt caaagaacat ggcgtaggggt	40560
ataaatcgat ttctgagaat attgatacat ccaatgcttc tggngaagtt ttagttacaa	40620
tgtttgggtt aataggatct atagaacgcc agactttgat ttccaatgtg aaactttcta	40680
tgaatgctaa ggcacggagc ggagaggcaa tcaccggctg tgtttttaggc taaaaattat	40740
cacttaatcc attgacacag aaaaatgatt tagttattga tgaaaatgaa gctaattattg	40800
tacgtgaaat tttcgattta tatttgaatc ataataaagg acttaaagca atcacgacaa	40860
ttctaaatca aaaaggatat cgcaccatta atcaaaaacc attttcagtg ttcggcgtga	40920
aatatatattt gaataatcca gtctataaag gttttgtag atttaataac catcaaaact	40980
gggcagttca gcgaagaggt ggtaaaagtg atgaaaatga tgtgatattg gtcaaaggta	41040
agcatgaagc cattataagt gaagatgtat ttgatcaagt tcatgagaaa ctagcttcta	41100
aaagttttta accgggtcga cctattgggtg gagatttcta cttacgtgggt cttattaaat	41160
gcccagaatg cggaaataat atggtatgtc gacggactta ttataaaacg aaaaagtcaa	41220
aagaacggac aatcaaacgc tattacattt gttcattatt taaccgttct gggagttctg	41280
cttgtcatag taattccatc aatgctgaag tcgtcgagcg tgtaattaat gttcatttga	41340
atcgtatttct gtctcaacca gatattatca agcagattgc gtcaaattgtg atcgaagaac	41400
tgaaacaaaa gcatagtaac caaacagaaa ttaaatatga cattgatagt ttagaaaaac	41460
aaaaagctaa gcttaaaaaca caacaagaac gattattaga tttatatattg gatgaggaaa	41520
tagatagcga aatattgaaa gataaacaaa gtcaaatgaa tcaacagtta gaagtattag	41580

eolf-othd-000001

atcaacaaat taaagaagcg caacaagcaa atcaatcaca ggatgaaata cccaattttg	41640
ataaattaaa aggacgactc attttgatga taacacgatt cagcgtgtac ttaagagagg	41700
ctacacccga atctaataaat caacttatga aaatgttaat tgattcaatt gaaattacga	41760
cagataaaca agtaaaactt gtaaggatata aaattgacga aagtccttatc ccgcaatcca	41820
ttaaaaagga ttgtgggaat ttttttatgc ctaaatttaa ctttgtgata aatgtcacaa	41880
ataaaaatag gattgaaaat ttatcacttt taccactttt ttagagtgac aaaagtggag	41940
gagttttgaa atattttata aatatatatt ttatttatgg agtacacatt attaattaag	42000
gaggtcatta tagtgacgct aagcaaaca cttaaaacgt atattactga acgatttaaa	42060
ttaaattatc aagaaaacttg gagttgtgaa accgtagacg cggtggctga agacgtatta	42120
cctgaaaaat atattaaaaa tagtccactc gaacataaaa tattgaacac atttacttat	42180
tataacgatg aattacatga aatcagtatt tatcctttct tatactattt agataaggaa	42240
ttaatagcaa taggttattt agataatfff gatttagact ttatatffff aaatgacact	42300
catcaaatta ttattgatga acgctacttg ttacaaaaag ggggcgagta attatgaact	42360
ggattaaggt tgctcaacta tctgttacag tcattaacga agtgattgag atcatgaaag	42420
aaaagcagaa tggaggaaaa tagtatgaac atcaatcgat acatcacaag aggcattagt	42480
gaacaactat ctctagacct tcaaatctta ctttggcaca tggtagaaga aaaagataac	42540
cagcctcata ccgattacct acacattttc aaactacaag atgatgataa tatgttgtca	42600
attacacatg aacaagaaca gcccgatac aagttagaat atcactatac aaactatgaa	42660
aaaaatcaaa atgcattacc taagaaagtc tacgtcattc gtgaagatga tgtagacgtt	42720
ttttattatg tgatgctttt accagaagaa tactaaaagg agtgacgttg atgaatacaa	42780
tcaaaagtac gatacacaca gaagctatat ttagcgatga tgaacaacac cgctacttac	42840
tcaaaaagac gtgggatgaa aagaaacctg tttgtacagt gataacgatg tatcctcatt	42900
tagatggcgt attatcactc gatcttacta ctgttcttat cctcaaccaa ttagcgaatt	42960
ctgaacaata tggcgctgta tatctagtga atctattctc taatattaaa acaccagaga	43020

eolf-othd-000001

atcttaaaca	tattaaagaa	ccttatgata	aacacacaga	catccatttg	atgaaagcaa	43080
ttagtgagag	tgatacagtg	attctagctt	atggtgctta	tgcgaaagcga	cccgttgctg	43140
tcgaacgtgt	tgagcaagta	atggaaatgt	taaaatctca	taaaaagaaa	gtcaaaaaac	43200
tcataaaccc	agcaacgaat	gacattatgc	atccgcttaa	tcctaaagca	cgtcaaaaat	43260
ggacattgaa	ataaaggagg	attatatatg	aaccataaca	ctacacaatc	agattggcga	43320
atagttgcta	gttgcttagc	atcacaaaat	tatatatcta	tcgtaaaagg	attagtagcat	43380
cattttacag	cgattgcaga	tgaggaaaca	cttgataaaa	tctatgaaga	ttttatgaat	43440
gatgactcta	taaccacggt	acttaataat	gatttacaga	caattattaa	ccattatctg	43500
tcaaaatgaa	aattatattc	taataaaaact	agagcatcct	tcacttagtg	gtgagggatg	43560
ctcttatctt	tatTTTTTTg	attaatatTT	tactcaggaa	attttacatt	aaatttaaaa	43620
gtattataca	attaaattat	tagtttctag	tgaagaaata	cgtattaaat	ttattattaa	43680
ctgtagcaca	ttatcaagca	attgtactgt	taaaagggat	tggtcattca	atgagacaat	43740
atgtttatca	aaatgatatt	aatttaataa	actctttata	tgagagtgat	ttttggaaga	43800
taataaaaaga	agacgcagca	tattatcata	aaaataataa	attcaagaaa	gataatgcta	43860
tacgaatact	tgaatctcta	attaaatcaa	tatatgtaga	tcctgatggg	tttgataaag	43920
ctcttgagc	tgaaatgcaa	gatttctata	acaaaatgca	aaaatcacaa	tacatcaaag	43980
agtcttatta	tcttagtatt	aatcaccaga	aatgtagtct	agatgctctc	atcggatgga	44040
aaccactttt	ccgatttaga	aatgggtgata	aaaaatgggt	agatgactta	gaacttatta	44100
gagggaaatag	aatgggccat	ttagcttttc	cagtacaaaa	aaattctctt	aatcaactaa	44160
gaggaatttt	attaaaagat	agaattgatt	atactctatt	tgatattaaa	ttattttatg	44220
aaaatgcagc	tcattttaaaa	ttacagaaag	cttatgaaca	agaaccaaca	cgaaaatggc	44280
taaaatcatt	tggtaccttt	aatcaattta	tagagcgtat	gcaattgaac	tacttcgtct	44340
ataaagatcc	aatcacatta	aaatatgatg	ttattgactt	atcattgcca	tataataatg	44400
ataagtcaca	ttgcttaaaa	gaaattccaa	aaaaaattaa	ggtcgaagaa	acttatatta	44460

eolf-othd-000001

caaatatact taattatatt aaaaaatatg gcgaaaaatt atctactatc catgtggact	44520
taatgattga ttatcatgta taaataaaaag aacaaccctt caccgtaaag tgaagggtgc	44580
tcttttagctt ctttcattat ttacaaatth catctctttt ttgatacaa ttctaactta	44640
attaaatata atgctactct ataaatctcc tacatatthta tagctcatat cctctaaaat	44700
aaccagttag tatctataca tatatthttat ggtaacgtag gctthtttcta gtttacatth	44760
tattgattac tcgctataag ttctgtttgc tcgacaactt gttcgacagt catctthttgt	44820
aaatcaggag gataaccata thttthtaagc aatcgtctaa aagttaagcg catthtttact	44880
tttgactat cgcgtthtaga taaattgacg cccatatthtt ttcactgtth tagtttagctc	44940
atgagcaatt gcacgtagth ctttatcacc attgcctctt tagttatthc atgtgatgaa	45000
gctaattgcat aataaaaatac aaggctcctta attactattg agatgtthaga aaatattaaa	45060
gaaagcaatt thttactaaat thtaaggaca ttacgtthttt ataattaaat taaagttagc	45120
thttataaga aagatatthca tactthaataa aaaaaaacta thaaatthttg thtgactaaa	45180
gttgtagatg acattatagth ataattacaa tactaatgtg thttgtactth atacctaaaa	45240
ttacagaatc tactaaaaaca aggcaaaatg ccgtgtthttat ctctgtcaact tgttggcgag	45300
atthttthttat atcaataata taaatthcat gtatctggga gtggctcatat gaaaaggaat	45360
tatatcttag gattagatat cggaattaca tcagtgggtt atggaattat tgattatgaa	45420
actagagatg tcatagatgc gggcgtacgt thattthaaag aggctaattg tgaataaat	45480
gaaggacgac gatcaaaaag aggtgccaga aggtthaaga ggcgtcgtag acatagaata	45540
caaagagtaa agaaactthtt atthtgattac aatthgttga cagatcatag tgagctaagt	45600
ggaatcaatc cttacgaggc gcgcgtaaag ggattaagtc aaaaattaag tgaagaggaa	45660
thttctgcgg cattgctaca thtagcaaag cgtagagggtg tacataatgt taatgaagtg	45720
gaagaagata caggtaatga attatccact aaagaacaaa thtcaagaaa tagtaaagcg	45780
thagaagaga agtatgttgc agaattacag thggaacgtt tgaaaaaaga cggatgaagt	45840
agaggttcga thtaaccgtth caaaacatct gactatgtaa aagaagcaaa gcagttatta	45900

eolf-othd-000001

aaagtacaaa aagcatatca tcaacttgat caatcattta tagacactta tattgattta	45960
ttggaaacaa gaagaacata ttatgaggga ccaggtgaag gtagcccatt tggatggaaa	46020
gatattaaag aatggtatga aatgttaatg ggacattgta cgtatttccc agaagaatta	46080
cgtagtgtga aatatgccta taatgctgat ttatataatg cgctgaatga tttgaacaac	46140
ttggttatta cacgagatga gaatgagaag ctagagtatt atgaaaaatt ccaaattatc	46200
gagaatgtct ttaaacaaaa gaaaaagccg acgcttaaac aaattgcgaa ggaaatcttg	46260
gtgaatgaag aagacatcaa aggctatcgt gtcacaagta caggtaaacc agaatttaca	46320
aacttgaaag tttatcacga tatcaaagat attacagcaa gaaaagaaat tatcgagaat	46380
gcagagctac tcgatcaaat agctaaaata ttaactatth accagtcatc agaagatata	46440
caagaagaat taacaaacct aaattcagaa ttgacacaag aagagattga acaaatttca	46500
aacttgaaag gttatacagg aactcataac ctttcactaa aggcaataaa tttaatatta	46560
gacgaattgt ggcatacgaa cgataatcaa atagctatth tcaatcgtht gaaacttgta	46620
cctaaaaagg tagattthaag ccaacaaaaa gaaattccta ctactthagt tgatgattth	46680
atactgtctc cagtagtgaa acgttcattth atacaatcta ttaaagttat taacgctatt	46740
attaaaaaat acggtthgcc aaatgatatt attattgaac ttgcgagaga aaagaattct	46800
aaagatgcac aaaaaatgat taatgaaatg cagaagagaa atcgtcaaac gaatgaacgt	46860
attgaggaaa ttataagaac gacaggtaaa gaaaatgcta aatattthaat tgaaaaaatt	46920
aagctgcacg atatgcaaga agggaaatgt ttatactcgt tagaagcaat ccctctagaa	46980
gatttactta ataatccatt caattacgaa gtagaccata tcattccacg ttctgtthct	47040
ttcgataact cthtcaataa taaagtgttg gtgaaacaag aagaaaatag taaaaaagg	47100
aatagaacgc catttcaata tthaagttct tcagattcta aaataagtta tgagacattc	47160
aaaaagcata thttaaatct tgctaaaggc aaaggtagaa tctctaagac gaaaaagaa	47220
tatttgtag aagaacgaga tatcaatcg cttcagtgthc aaaaagattt tattaaccgt	47280
aacttagtag atacacgcta tgcgacaaga gggthaatga acttattaag atcttattth	47340

eolf-othd-000001

agagtgaata	acttagatgt	caaagtgaaa	tcgattaatg	gcggattcac	aagtttctta	47400
agaaggaaat	ggaagttcaa	aaaagaaaga	aataagggct	acaaacacca	tgctgaagat	47460
gcactgatta	ttgcgaacgc	tgatttttatt	ttcaaagaat	ggaaaaaact	agataaagct	47520
aaaaaagtga	tggaaaatca	aatgtttgaa	gaaaagcaag	ctgaaagtat	gcctgaaatt	47580
gagactgagc	aagagtataa	agaaatTTTT	ataacgcctc	atcaaattaa	acatattaag	47640
gatttttaaag	attataaata	ttcacataga	gttgataaaa	agccgaatag	agagttaata	47700
aatgatacat	tatattctac	gagaaaagat	gacaagggtg	atacattaat	cgtaataaac	47760
ttaaatgggt	tatacgataa	agataatgat	aaattgaaaa	aattaattaa	taaatcacct	47820
gaaaaattat	tgatgtatca	tcatgatcca	caaacatatc	aaaaattaaa	attgatcatg	47880
gaacaatatg	gcgatgagaa	aaatccgctt	tataaatatt	atgaagaaac	aggcaattac	47940
ttaacaaaat	atagtaaaaa	agataacgga	ccagtcatca	aaaaaattaa	atattatggt	48000
aacaagctaa	atgcgcattt	agatattacg	gatgattatc	caaatagcag	aaataaagta	48060
gtaaaacttt	cattaaaacc	atatcgcttt	gatgtttatt	tagataatgg	ggtatataaa	48120
tttgtgacag	ttaaaaatTT	agatgttatc	aaaaaagaaa	actactatga	agttaattca	48180
aagtgttatg	aagaagcaaa	aaaactgaag	aaaattagta	atcaagcaga	atttatcgca	48240
agttttttaca	ataatgactt	gattaagatt	aacggagaat	tatatagagt	cataggtgta	48300
aataatgatc	tacttaacag	aattgaagta	aatatgatag	acatcacata	tagagaatat	48360
ttagagaaca	tgaatgataa	aagaccacct	agaataatta	aaacaatagc	aagcaaaaca	48420
caatctatta	aaaagtattc	tacagatatt	ctaggcaatc	tttatgaagt	gaagagtaaa	48480
aagcatcctc	aaatcataaa	gaaaggatga	ttggatattg	gcatggagaa	ttgtatatct	48540
ttcagaagta	gataagcttg	cattaaatTT	aaataactta	aaagtcgcaa	aaggggattt	48600
ggaggtaaaa	atccccctta	gcgatatttt	cgcaattgtg	attgaagatt	taacaactac	48660
tataacctct	aggcttatga	tagagctatc	taaatacaat	atttttagtga	ttttttgtaa	48720
tcaaaagcat	ttaccagagt	gcatgattca	accgattaat	ggtcatttta	atcaatatgg	48780

eolf-othd-000001

ccaaatgaag gaacaactac aatggtcgga agaaagaaaa gctgaattat ggaaacatat	48840
tctgtttcaa aaaatacaaaa atcaaattca gtgtatgaaa cattttggag tggatgaaga	48900
aagaataatt aaaatgaaaa aattacaatc aatggttaca tctaaagatg aaatgaatat	48960
agagggccaa gcggctaagt attatttttaa tacatttttc aaggacttca gacgcgatga	49020
tgatttttta gtagaaaata tggacttgga ttttgggtat actatttttaa attcagcaat	49080
cgcaaggacc attgtagcta aagggttaat tccagcattg ggaatacatc atattggcgc	49140
aagaaaccac tttaatttag catcagatat cattgaagta tttaggccat tggtagattt	49200
atatcttttg aaacatcctc cgaaagtgga atatatgact agagagtata gattagagct	49260
gattaacttg ctgcatgcta gagtacaaat tgatggaaag cagcatacag ttattagagc	49320
gattgaaatt atggttcaat caataattga gtatttttaga acggggagat ataaaacgct	49380
caaattacca aatattaagc aatattcatt ttataaatca tgagttataa gtttatgaga	49440
gtaatgatta tgtttgatct cccaactgac acaaaagaag aacgacggtt atatagtaag	49500
tttagaaagg gactcatttc ggaaggcttt ttgatgatgc agtattctat ttacattaaa	49560
tgttgtatta ataaagatgc ggcaaatagt agtgtaaatt atgtgaaacg tattttacca	49620
ccaaacggac atgttagagc tttaacaatt accgaaaagc aatataaaaa aatgaaaata	49680
ttattaggag atgaagataa aaatatcgaa atattaggag ataatcgtaac aattttattt	49740
taggagaaaa cctatgtatg aatcaatttt agaaatcaat attgatatgg tacccaaagt	49800
tattttaaat actagtgtat atacatctat atataatgaa gattcaacac atgaagaata	49860
tatttttagat atgcttaaga attattttca atctagaaat tcaaataagg atattgttac	49920
gattacagat atttcagatc atgaaagagt atctcataat cggttttagag gatttctctt	49980
agatcattct actattgaaa atgaacacca attatcatca tcgagtattt tgactaagaa	50040
gattgttaga gaaatgcaaa gtgatttgga aatagatggt tatattaatt ctatcaatgt	50100
actgttggat gacttacgag ataattttaa gggcacactg ccactttcta ttaagtcttt	50160
cgatttaaaa caattcataa agctactctc atttaaatat gattattcgg aagattatgc	50220

eolf-othd-000001

cagactaatt actcggttag aacaagtcgt cccattagta gtggatgaaa tgaattatca	50280
agtaaaagaa aaagcatttg taatctatctt atatccagaa gctggcctaa gcattaaaga	50340
acaaataaga tttagaaaaa tactaaataa cttacctgtt ccggtcattg ttctaaccga	50400
atcaccacgt tttttatctg aaagtattaa aggactaaat ttttttatta ataatgttca	50460
aatgatcaca gaatcttttt ttgaagatag ctattggaat gcaccaatta atgtagaaaa	50520
agaacagatt gaagagaggt ttgaatatctt atttgtaaaa tattgttcag ttttagaaat	50580
aaaaccgatt atttctaact atttacttgc ggatatcatt gtttttaatg atattgatct	50640
ttatatcctt gtttcatttt tgaaacactg taatttagag tataaattag atatcgataa	50700
aacaaaaatt tcattagcat tatcgtcata tctatcttct taattatttt gaggatttat	50760
aatgatgcta gaggttttag tactctgtaa ttttaggtat gaggtagacc aggtttgtac	50820
ccactgacac caacaagcgg ttttagtact ctgtaatttt aggtatgagg tagaccgtaa	50880
agactttaac gaatttatgg ataaagtctt agtactctgt aatttttaggt atgaggtaga	50940
caggaacaac ctgatttaaa tatgtggttg ggtttttagta ctctgtaatt ttaggtatga	51000
ggtagactgt agcttcttca agttctttta atagtctgtt ttagtactct gtaatttttag	51060
gtatgaggta gacaaagtgg cgatgttatt aatatcaaag gttgttttag tactctgtaa	51120
ttttaggtat gaggtagact aatgtttgcg gtagaagggt tacctgtacg ttttagtact	51180
ctgtaatttt aggtatgagg tagacaagtt ggtgaaattt tatataacgc aaacagtttt	51240
agtactctgt aatttttaggt atgaggtaga ctaacgcatg tgtaatgggt ctaccctgcc	51300
agtttttagta ctctgtaatt ttaggtatga ggtagacca ctgcaacaag tcgtcgtgag	51360
cgtgtgcgtt ttagtactct gtaatttttag gtatgaggta gacaaatata acgtggttta	51420
ttacgtcaga cgggttttag tactctgtaa ttttaggtat gaggtagaca aataccaaat	51480
tttgaattga acccaaactg ttttagtact ctgtaatttt aggtatgagg tatatctttt	51540
ttaggtcggc tttttatctt gaatagtttt agtactctgt aatttttagat atgaggtaga	51600
tagcaaaatc actgataggg agaggcgtat cataagtgat gagtttggtt attataagat	51660

eolf-othd-000001

atacgaaaaa	tattaattta	aagatatcag	agaaacatag	agtatttata	taactgttta	51720
gaagtataaa	ataatcattt	tttgtatcat	acagttgggt	ctataatgaa	tcactaagaa	51780
tgattgtatt	caataaatta	ataaaaagca	tatacatggg	attagcaa	atagaaattaac	51840
taggttttat	tggtttatag	cctttaaata	aatatatatta	atttaaattc	gcgattaggt	51900
agtagtaatt	aatgtttgag	attgaaaata	gatttaaata	tagcaattat	atattaacct	51960
attaaagtgt	taggctataa	tgattagaat	attctaggag	atataaataa	aatgaggaaa	52020
ttatacaatt	taaaagaatt	tttaaataatt	tattcaactg	aagatatagg	tttaattaat	52080
acatatatcg	aatctgataa	tagaccactt	aaagaaaatg	aagtagagga	tttaaaatca	52140
ttaataaaatc	tcttgaagct	aaattataaa	agttgtgaag	gtttttttct	tagttatgaa	52200
gttcctcata	tcggtcacga	aatagactta	ttgaaagtta	cggataatgc	tattttaaat	52260
atcgaattaa	aaagtagatc	tgagcttgca	aagataaata	aacaacaaaa	gtataattat	52320
ttttatctta	atacacttaa	caaaaatgta	gacattataa	cctataatag	acatgaagaa	52380
aagttttata	aatattgtca	agaaagtgag	aaatcacttg	aaataaatat	agataaagta	52440
agggataaaa	tttttgaata	tggaaataaa	gagtttattt	cagatattga	ttattttattt	52500
aaaccttcta	atttccttat	ttcacctttt	aatgatactg	acaaattttct	tgaagacaaa	52560
tattatttta	cggcccagca	agaaaaaata	aaaaaagaca	ttataaatca	taatgggact	52620
attgctatta	ttgaaggaag	accaggcaca	ggtaaatacac	ttttattata	tgatattgct	52680
aaaaaactaa	aaaaagagtt	taatataatta	ataatacatt	gtgcattggt	aatgaagga	52740
cacgaattaa	tgattaataa	aaattggaat	ataaaaaagt	ctcataaaaa	ttgggtatac	52800
gatgaagaga	attatgaagg	taaaaattat	atttttattg	atgaatcaca	taggttttac	52860
cctaaacaat	ttgagtatgt	aatagaaact	gcacttaaaa	aagatattaa	gataataaca	52920
actatagacc	cattacagta	tctaagagat	aatgaaaatg	attttgaaaa	cttacagaga	52980
ttaaaatctc	attctaacat	ctattataaa	aaaattgata	ataaaaattag	atctaatacca	53040
gaaatatcat	catttggttaa	aagtattatt	aatttaagaa	atataacctga	atataaattt	53100

eolf-othd-000001

aagaatattt caatagaata tttgtcaaaa gaagatgatt ggaaatcata tttgctaaat	53160
ttacgtgata gaggatggac atatttacct tatacgaaaa gtagagataa tattagttat	53220
cataaatatt gttcggctaa tactcattta aatactcata gaattattgg gcaagaattt	53280
aataaagtta ttgttatttt agatgaagga tttaaatatg ttgatggata tttaggatat	53340
tacggagatt attattataa tcctagacaa atgttgttcc aaaatttaac tagagctaga	53400
gaaaaataa aaattataat cattaataat acagatttat ataaaaagat taatcaagt	53460
ttaactaagt cttctaataa aaatgagtta tcacttaaat tttttattcc tgaacttaat	53520
aatgataaat taaaatcatt ttatagtgat attttaggtt ttaagttaat tagtaatcaa	53580
aaacaaccgc ctggaaaaag aaagataagt tttcaaatag gtgaaacaaa tttagggttt	53640
tatgaaaaag gagatatttc taaaaacaat aaatgcgaaa taaatatagt tgtaagtaat	53700
ttgaaagatt taaagaaaag aatatcaaat gaaaatatgg tattgattag tgaagaagaa	53760
ggtaaaaaaa gtaaatttgt tactttaaat gatccattaa acaactattt aaagttaata	53820
gagtatatat aactagtatt ttgaattatt taaagattta ttgaagtttt gatattaatt	53880
tgtcgaaaaa cgaaccaaat tattaatatgc tacacaaaag aatatcaagt ataagttatt	53940
aatcataaat cagattgggt actcacctat tggaagtga gatgccaaac tattattcca	54000
attaatagat ttaaggtagt agaagaaaag tacaatagtt accacaaata tcaaattcaa	54060
cttatgtaac gaaatatttg atgattccaa aatcgcaaat gcgattttgg ataggatatt	54120
gcatcattca agcgtagtta aaatcacagg taaatcatat agattaaaag atcattcacc	54180
taagaaggaa attacttagc aaacaatttt gtacattctt atacaatcat ttatgtacat	54240
ttttatatatg acattttacaa gtaagcaagt gaacttatct gctccagctg taagagaaaag	54300
ggtaaataaa cttgaagagc aagggtattat acaaggttat acaattaaca tagattataa	54360
acaattaggt tacgatgtag aaaaattaat tgagttaact ataaagaata atagatacag	54420
ccatatgggc agacaaaatg tcagtttatc ttttcatcag ttgtctaaac tacatggaaa	54480
aagtttaata agcataggaa agatttttta cagagagaag tgacttattt tggaatataa	54540

eolf-othd-000001

atcttacaac	aaaatgagta	ataatat	atctatcttg	ttaagtgaaa	aaaatttcga	54600
taataaaatg	gtagtctcaa	caggtagtta	tattttgtct	gagttgccat	gtattgttgc	54660
ctataaaaat	aatgatattg	tggggctact	aacgtataaa	gtttatgatg	agtacattga	54720
aatcatttct	ttagatagtt	ttgtagagaa	caaggggtatt	ggtagtcatt	tacttaatta	54780
tgctgaaata	attgcctcag	atatgagtaa	aagaagtatc	cgtgttatta	ctacaaatga	54840
aaatattaag	gcactctatt	tctatcaaaa	aaataaatat	agaatcacag	acgttatttt	54900
tgatgctgta	acagaagcta	ggaaaataaa	gccgtcgatt	cctacaattg	ataaaaatgg	54960
cattgaaatt	agagatgaaa	ttgttttgag	gaaatgtttg	taatgtataa	atacactcag	55020
ctttaaatca	ccctagttca	tacctaaaag	actttaacac	aaacaaaaaa	ggaggaacat	55080
taaattcctc	ctcaaccttt	attactcata	ctacaattct	attttaacgt	cttcgtccat	55140
ttgggcttca	aattcatcta	gaagtgtctt	tgcttctgca	attgattgtg	tgttcatcaa	55200
ttgatggcga	agttcgctag	cgcctcttat	gccacgcaca	tagattttaa	agaatctacg	55260
caagctcttg	aattgtcgta	tttcatcttt	ctcatatttg	ttaaacaatg	atagatgcaa	55320
tctcaacaga	tctaatagtt	ctttgcttgt	gtgttcacgt	ggttcttttt	caaaagcgaa	55380
tggattgtgg	aaaatgcctc	taccaatcat	gacgccatca	atgccatatt	tttctgccag	55440
ttcaagtcct	gtttttctat	cgggaatatc	accgttaatt	gttaacaatg	tatttggtgc	55500
aatttcgtca	cgtaaatttt	taatagcttc	gattaattcc	caatgtgcat	ctactttact	55560
catttcttta	cgtgtacgaa	gatgaataga	taaattggca	atgtcttggt	cgaagacgtg	55620
cttcaaccaa	tctttccatt	catcgatttc	atagtagcca	aggcgtgttt	taacacttac	55680
cggaagccca	cctgctttag	tcgcttgaat	aatttcggca	gcaacgtcag	gtcttaagat	55740
taagccggaa	cccttaccct	ttttagcaac	atttgctaca	ggacatccca	tatttaagtc	55800
tatgccttta	aagcccat	tagctaattg	aatactcggt	tcacggaact	gttctggctt	55860
atctcccat	atatgagcga	ccatcggctg	ttcatcttca	ctaaaagtta	agcgtccgcg	55920
cacactatgt	atgccttcag	ggtaggcaaaa	gctttcagta	tttgtaaatt	cagtgaaaaa	55980

eolf-othd-000001

cacatccggt ctagctgctt cacttacaac gtgtcgaaag acgatatctg taacgtcttc	56040
cattggcgcc aaaataaaaa atggacgtgg taattcactc caaaaatttt ctttcataat	56100
atattttatac cctct	56115

<210> 50
 <211> 23
 <212> DNA
 <213> Bacterial

<400> 50	
cctggcctgc cccaagtgc agg	23

<210> 51
 <211> 32
 <212> DNA
 <213> Bacterial

<400> 51	
gtcgcccccc acgcgggggc gtggattgaa ac	32

<210> 52
 <211> 28
 <212> DNA
 <213> Bacterial

<400> 52	
tggagcggga aacgggattt gaacccgc	28

<210> 53
 <211> 29
 <212> DNA
 <213> Bacterial

<400> 53	
gtgttcccc a cgggcgtggg gatgaaccg	29

<210> 54
 <211> 25
 <212> DNA
 <213> Bacterial

<400> 54
aacctttctg caaaaagggtt tcccc 25

<210> 55
<211> 23
<212> DNA
<213> Bacterial

<400> 55
ccgctggatc cggctgcagc gcc 23

<210> 56
<211> 28
<212> DNA
<213> Bacterial

<400> 56
gttcactgcc gcataggcag ctcagaaa 28

<210> 57
<211> 32
<212> DNA
<213> Bacterial

<400> 57
cacccgacta ttgaagtcgg gcctcattga ag 32

<210> 58
<211> 36
<212> DNA
<213> Bacterial

<400> 58
gtcaaaaacc ataccgatat ggatacctct tttgag 36

<210> 59
<211> 36
<212> DNA
<213> Bacterial

<400> 59
gtcaaaaacc ataccgatat ggatacctct tttgag 36

<210> 60
 <211> 36
 <212> DNA
 <213> Bacterial

<400> 60
 gtcaaaaccc ataccgatat ggatacctct tttgag 36

<210> 61
 <211> 36
 <212> DNA
 <213> Bacterial

<400> 61
 gtcaaaaccc ataccgatat ggatacctct tttgag 36

<210> 62
 <211> 36
 <212> DNA
 <213> Bacterial

<400> 62
 ctcaaaagag gtatccatat cggatatgggt tttgac 36

<210> 63
 <211> 28
 <212> DNA
 <213> Bacterial

<400> 63
 gttcactgcc ggataggcag cttagaaa 28

<210> 64
 <211> 32
 <212> DNA
 <213> Bacterial

<400> 64
 gtcgccccct gcgcgggggc gtggattgaa ac 32

<210> 65
 <211> 29

<212> DNA
 <213> Bacterial

 <400> 65
 ttttctgagc tgcctatgcg gcagtgaac 29

 <210> 66
 <211> 46
 <212> DNA
 <213> Bacterial

 <400> 66
 catcgacgac gaacccgggc accgcctgat ggtccacgcc gtcattg 46

 <210> 67
 <211> 32
 <212> DNA
 <213> Bacterial

 <400> 67
 gtcgcccctc acgcgggggc gtggatagaa ac 32

 <210> 68
 <211> 32
 <212> DNA
 <213> Bacterial

 <400> 68
 gtttcaatcc acgccccgc acggggggcg ac 32

 <210> 69
 <211> 28
 <212> DNA
 <213> Bacterial

 <400> 69
 tttctgagct gcctatgcgg cagtgaac 28

 <210> 70
 <211> 36
 <212> DNA
 <213> Bacterial

<400> 70
gaccgaagac ctgtcggaaa cgacggggat tgagac 36

<210> 71
<211> 29
<212> DNA
<213> Bacterial

<400> 71
cggttcatcc ccgcgagtgc ggggaacat 29

<210> 72
<211> 28
<212> DNA
<213> Bacterial

<400> 72
tttctgagct gcctgtgcgg cagtgaac 28

<210> 73
<211> 29
<212> DNA
<213> Bacterial

<400> 73
gttttatctg aacgtagtgg gatataaag 29

<210> 74
<211> 29
<212> DNA
<213> Bacterial

<400> 74
cggttcatcc ccgcgggtgc ggggaacac 29

<210> 75
<211> 28
<212> RNA
<213> Bacterial

<400> 75
guuagcagcc gcgauaggcug cuuaaaua 28

<210> 76
 <211> 33
 <212> DNA
 <213> Bacterial

<400> 76
 aatttaaata gggaagataa gcaaagggtt gac 33

<210> 77
 <211> 31
 <212> DNA
 <213> Bacterial

<400> 77
 tttaaataagg gaagataagc aaagggttga c 31

<210> 78
 <211> 11
 <212> PRT
 <213> Bacterial

<400> 78
 Asn Leu Asn Arg Glu Asp Lys Gln Arg Val Asp
 1 5 10

<210> 79
 <211> 32
 <212> DNA
 <213> Bacteriophage

<400> 79
 cattgcaact atgcaaaatg atgaagctaa aa 32

<210> 80
 <211> 32
 <212> DNA
 <213> Bacteriophage

<400> 80
 tgtagagtc ggtagtatct ggatgatcga ta 32

<210> 81
<211> 32
<212> DNA
<213> Bacteriophage

<400> 81
ttatgtattg accccgacac gccccccgac tg 32

<210> 82
<211> 32
<212> DNA
<213> Bacteriophage

<400> 82
ttacagacga cctaactctt cagtaccatg at 32

<210> 83
<211> 32
<212> DNA
<213> Bacteriophage

<400> 83
tacataagct gcaacacggt gttcgtttaa gt 32

<210> 84
<211> 32
<212> DNA
<213> Bacteriophage

<400> 84
aaaatacgcc tttttccctt catcgtttaa ag 32

<210> 85
<211> 32
<212> DNA
<213> Bacteriophage

<400> 85
accaacaaat ccataaact gataaccacg tt 32

<210> 86
<211> 32
<212> DNA

<213> Bacteriophage

<400> 86

gtcaaccctt tgcttatctt ccctatttaa at 32

<210> 87

<211> 32

<212> DNA

<213> Bacteriophage

<400> 87

tgttaaccac cgcttgaaat aatcatgatg ca 32

<210> 88

<211> 32

<212> DNA

<213> Bacteriophage

<400> 88

tgtgtctata ctcaaccaat ttaagcgccg ca 32

<210> 89

<211> 32

<212> DNA

<213> Bacteriophage

<400> 89

ctactctccc caatattagc cattccta at tc 32

<210> 90

<211> 32

<212> DNA

<213> Bacteriophage

<400> 90

gtcaccttac cgtaagacag gcagtaaa at ta 32

<210> 91

<211> 32

<212> DNA

<213> Bacteriophage

<400> 91

aaactagtgg acgtaatgca gtattcacgg tt 32

<210> 92
 <211> 32
 <212> DNA
 <213> Bacteriophage

<400> 92
 atccacacta caaatagaac actcaaccgt ga 32

<210> 93
 <211> 32
 <212> DNA
 <213> Bacteriophage

<400> 93
 tgtgtctata ctcaaccaat ttaagcgccg ca 32

<210> 94
 <211> 32
 <212> DNA
 <213> Bacteriophage

<400> 94
 ctactctccc caatattagc cattcctaatt tc 32

<210> 95
 <211> 32
 <212> DNA
 <213> Bacteriophage

<400> 95
 aaactagtgg acgtaatgca gtattcacgg tt 32

<210> 96
 <211> 32
 <212> DNA
 <213> Bacteriophage

<400> 96
 ataatcgttt tgagtctcac cagcttttag gc 32

<210> 97
 <211> 32
 <212> DNA
 <213> Bacteriophage

 <400> 97
 atccacacta caaatagaac actcaaccgt ga 32

<210> 98
 <211> 32
 <212> DNA
 <213> Bacteriophage

 <400> 98
 tattgattgg tctctaacct tgggatgatt aa 32

<210> 99
 <211> 32
 <212> DNA
 <213> Bacteriophage

 <400> 99
 ttcacgggta gcaacagggt aataaaccaa ta 32

<210> 100
 <211> 32
 <212> DNA
 <213> Bacteriophage

 <400> 100
 cattgcaact atgcaaaatg atgaagctaa aa 32

<210> 101
 <211> 32
 <212> DNA
 <213> Bacteriophage

 <400> 101
 tgtagagtc ggtagtatct ggatgatcga ta 32

<210> 102
 <211> 32
 <212> DNA

<213> Bacteriophage

<400> 102

tagaagagta ataggagcta ctgcaaactt gt 32

<210> 103

<211> 32

<212> DNA

<213> Bacteriophage

<400> 103

taactatgtg tggtttatat tttgtgtgca ag 32

<210> 104

<211> 32

<212> DNA

<213> Bacteriophage

<400> 104

ttttgaaact attgacagaa ggttggaac ct 32

<210> 105

<211> 32

<212> DNA

<213> Bacteriophage

<400> 105

ttgaggtga acctcttccg gttcctcttc tg 32

<210> 106

<211> 32

<212> DNA

<213> Bacteriophage

<400> 106

gtgtattgct tgcagtgggt tacacacaag aa 32

<210> 107

<211> 47

<212> DNA

<213> Bacterial

<400> 107

eolf-othd-000001

gttgtgattt gctttcaaatt tagtatcttt gaaccattgg aaacagc 47

<210> 108
 <211> 29
 <212> DNA
 <213> Bacterial

<400> 108
 atttcaattc cataaggtac aattaatac 29

<210> 109
 <211> 32
 <212> DNA
 <213> Bacterial

<400> 109
 gtttcaatcc acacacccgt atagggtgtg ac 32

<210> 110
 <211> 47
 <212> DNA
 <213> Bacterial

<400> 110
 actgtttctg atatgtcaaa gataaaattt tgaaagcaaa tcacaac 47

<210> 111
 <211> 23
 <212> DNA
 <213> Bacterial

<400> 111
 gaaaaaatac agtttcgctc tca 23

<210> 112
 <211> 32
 <212> DNA
 <213> Bacterial

<400> 112
 gtcgctctc acgtaggcgc gtggattgaa ac 32

eolf-othd-000001

<210> 113
 <211> 47
 <212> DNA
 <213> Bacterial

<400> 113
 attgtgcttg ctactgcaaa gatacacatt ttgaagcaat tcacaac 47

<210> 114
 <211> 37
 <212> DNA
 <213> Bacterial

<400> 114
 ctcaatgagt atcttccatt aaaacaagga ttaagac 37

<210> 115
 <211> 36
 <212> DNA
 <213> Bacterial

<400> 115
 gttgttttta ccttgcaaac agcaggcaga tacaac 36

<210> 116
 <211> 47
 <212> DNA
 <213> Bacterial

<400> 116
 gttgtatttg ccaatgcaaa gatactaatt ttaaagctaa tcacaac 47

<210> 117
 <211> 36
 <212> DNA
 <213> Bacterial

<400> 117
 gttgtatatc attcctttcc tacatcaaac cacaac 36

<210> 118
 <211> 487
 <212> DNA

<213> Synthetic

<400> 118

gcggaataca attactagag aaagaggaga aatactattc ttctcctctt taaataacga 60
 aaacaccctg ccataaaatg acaggggtgtt gatttcggca tgaagcctta tctttgtagc 120
 ttctgcaaga tttaagtaac tgtgtaaggc gtcccttaca cttgcatgta tagttattat 180
 accaggggga cagtgaatg tcaagaataa actgtagaat gactagtgac ttaaactctg 240
 agagtacaaa aacccgttgg aatcgtgatt aatagtaact gttgttgtag agttacttaa 300
 atcttgagag tacaaaaacg gccgagaaaa ggagctgatt cataggacag ttgtacagtt 360
 acttaaatct tgagagtaca aaaactcaaa cttgcccgtg gtttatctta tagccgttgt 420
 acagttactt aaatcttgag agtacaaaaa catttacctc ctttgattta agtgaacaag 480
 tttatcc 487

<210> 119

<211> 221

<212> DNA

<213> Streptococcus thermophilus

<400> 119

ttaaactctg agagtacaaa aacccgttgg aatcgtgatt aatagtaact gttgttgtag 60
 agttacttaa atcttgagag tacaaaaacg gccgagaaaa ggagctgatt cataggacag 120
 ttgtacagtt acttaaatct tgagagtaca aaaactcaaa cttgcccgtg gtttatctta 180
 tagccgttgt acagttactt aaatcttgag agtacaaaaa c 221

<210> 120

<211> 112

<212> DNA

<213> Streptococcus thermophilus

<400> 120

ttaaataacg aaaacaccct gccataaaat gacaggggtg tgatttcggc atgaagcctt 60
 atctttgtag cttctgcaag atttaagtaa ctgtgtaagg cgtcccttac ac 112

eolf-othd-000001

<210> 121
<211> 30
<212> DNA
<213> Streptococcus thermophilus

<400> 121
tgtcctatga atcagctcct tttctcggcc 30

<210> 122
<211> 30
<212> DNA
<213> Streptococcus thermophilus

<400> 122
ggctataaga taaactacgg gcaagtttga 30