

DNA is written in Triplicate

by Craig Paardekooper

Here is a demonstration that DNA is written in code that generates the same amino-acid sequence independent of whether you use **reading frame 1**, **reading frame 2** or **reading frame 3**.

When you start reading the words of a book starting from the first letter, the book will contain a sequence of words forming a narrative. What I have discovered in DNA is that if the book of DNA is read starting from the second letter it contains the same words forming the same narrative as when it is read starting from the first letter, but the words are displaced in position - the meaning /function and order of the words remain the same - they are simply displaced.

To achieve this effect, the author would need to be intelligent enough to write the same book in 3 different places simultaneously – using the same letters!

The following amino acid sequence is from chromosome 5 chimpanzee (pan troglodytes)

Lines 20-24 Frame 1

GMYTATCI METSTLLSAZTWKDLHRYLYKH IYTAICI KEISTPLSLZTWKZLHRYLYEH IYTAICI M ISTPLSIZIWKYLHRYLHKH
GIYTAISI MZTFPLSLZTWKYL HYAYKH YIYTTVSI MDIFPLSLZTWKYLHRHLYKL IHTAISV MEISTPPSLZTWKYLHRHLYKH
GIYTAVSTKMEISTPPSVZTWKYLHCRLCKH ICTAICI MEISTPPSLZTWKYLQRRLYKH IYTAMCI MEISTPPSVZTLKYLH HLYKH
GIYTTISI MEISTTPSLZTWKYPHSYVCKH IYTAICIIMEIPTPPSVZTWKYLHHYLYKH M PAICI MEISTPLSVZTWKYLLCYLYZH

Lines 20-24 Frame 2

EICTPLEVZTWKHLHCYLHKH KIYTAICI MEISTPLSVZTZKYLHRYLYKH YTAICM MEISTPLSVZTWEYLHRYPYKY IYTAICISM
EISTPLSLZTCKLLHRCLYKH IZTTPISM DISTPLSRZTWIYLHRYLYKHE IYTAISI LEIFTPPSLZTWKYLHRRPYKH IYTAICI M
EISTPLSLQZWKYLHHHLYKH IYTAVSV MEISAPPSVZTWKYLHHHLYKH IY AVSI MEISTPPCVZTWKYLHHHLYKH IYTPISI M
EISTPPSLZTWKYLQRRLYKH IHTAMSV MEISTPPSVZSWKYLHRHLYKH IYTIICI MEIWTPLSVZTWKYLHHYLYKH IYSAICI M

Lines 20-24 Frame 3

KYLHRYLYKHV FYTAVSI MEISKPLCLZAWIYLHHCLDKH YIYTAISI MKISTPPSLZTWKYSHRHLCKH IYTAVPI MEISTPPSVZTW
KYLHCRLYKH IYTTICI MEISTPLSLZTWKYLHRHLYKH IYTTISI MEISTTPSLZTWKYLHRHVYKH IYTTICI IEISTPPSLZTW
KYLHHHLYKH IY AVSI MEISTQLCLZTWKYLHRHLY H TYTAICI MEISTPLSVZTWKYEPYLYKH IYTTICI MEISTLLSVLTW
KYLLCYLYKH TYTAICI MZISTQISVZZCKYLHWYLYKHV TPLSMZTFZYLHHYLYKHV IYTAICT MZISIPLSVZTWKYLH YLYKQV

What is remarkable is that even though the reading frame is shifted by 1 nucleotide each time, the codons code for the same amino-acids, or for amino-acids that serve the same function.

We can align these sequences to see how close the fit is –

KYLH RYLY KHVN FYTA VSIN MEISKPLC LZAWIYLHHCLDKHGYIYTAISINMK ISTPPS LZTWKYS HRLCK HGNIYTAVPIN MEISTPPS VZTW

E ISTLPS LQZWKYL HHHLYK HGNIYTAVSVN MEISAPPS VZTW KYLH HHLY KHGN IYNA VSIN MEISTPPC VZTW KYLH HHLY KHWN IYTP ISIN M

Different reading frames produce sequences with either the same amino-acids, or with substitute amino-acids that have the same properties. And the sequences in one reading frame have positions in the DNA that are close to the same amino-acid sequences in another reading frame.

This phenomenon is similar to the cyclic permutation of 666 + 666 + 666 found in Genesis 1 whereby no matter what digit is used as the starting point, the sum is always the same, even in reverse. This is orders of magnitude more ingenious than writing an effective code in a single reading frame. By writing an effective code in 3 reading frames simultaneously, the author is ensuring that mutations will not cause failure of the production of critical amino-acids.

It would take a super-computer to design a code like this. I don't think humans can do it. The best that the NWO can hope for is just to disrupt and smash the DNA – they won't be able to upgrade it in any way.

What About Human Chromosomes ?

Human chromosome 5

Reading Frame 1 : Position : 187158

SCPEVLZTSPOE VLPQMEESP VRDPEZPEHQACA WZCP RWCQAAYAPLV TZSLPTRTT QHQHZPPQZ AAD TAPTQAPAE LSWRE D T PRZ AQLT RRRHZPPQZ SAQ TAPTQAI
AE LSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE FSS D ADT PRZ AQLZ RRRHZPPQZ AAD ZATTQAPAE LSS D DDT PRZ AQLT RRRHZPPQZ AAD TAPTQAI
AE FSS D D T PRZ VOLZ RRRHZPPQZ AAD TAPTQAPAE RSWRD ADT PRZ VOLZERRQHZZPPQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RQHZLP AE FSS D D T PR
RZ AQLT RRRHZPPQZ AAD TAPTQAPAE FSS D D T PRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE FSS E D T SPQZ SAQ TATTQAPAE RSWRD ADT PRZ AQLT RRRHZ
PQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAQ ZATTQAPRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE RSWRD ADT PRZ AQLT RRRHZPPQZ SAQ TATTQ
PAE FSS D DDT PRZ AQLT RRRHZPPQZ AAD TAPTQAPAE FSS D ADT PRZ AQLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D ADT PRZ AQLZ RRRHZPPQZ SAD TAPTQ
PAE LSS DSADT PRZ AQLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE FSS D ADT PRZ AQLT RRRHZPPQZ SAQ TAPTQ
PAE LSS D DDT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D ADT PRZ AQLZ RRRHZPPQZ SAQ TAPTQAPAE LSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQ
PAE LSS D DDT PRZ AQLZ RRRHZPPQZ SAQ TAPTQAPAE RSWRD ADT PRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAD TAPTQ
PAE FSWRDRRRHZPPQZ SAD TAPTQAPRZ ARLZ RRRHZPPQZ SAD TATTQAPAE FSS D DDT SPQZ SAD TATTQAPAE R WRD DDT PRZ VOLZ RRRHZLP AE R S D DDT
PRZ ARLT RRRHZPPQZ SAQ TATTQAPRZ ARLT RRRHZPPQZ AAD TAPTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE FSS D DDT PRZ ARLZ RRRH

Reading Frame 2 : Position : 187159

AAQZSCZPVPZZESSPZWZZARVC ILZ Q TZQA Q DAPAA AZLHMRWWAPDPSQH RPDST T PRZ AQLT RRRHZPPQZ SAD ZATTQAPAE RSWRD ADT PRZ VOLZ RRRHZPP
QZ SAQ TAPTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE LSS D ADT PRZ AQLT RQHZZPPQZ SAQ TATTQAPAE RSWRD ADT PRZ AQLT RRRHZPP
QZ SAQ TATTQAPAE FSS D DDT PRZ AQLT RRRHZPPQZ AAD TAPTQAPAE FSS D D T PRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE FSS E D T SPQZ SAQ TATTQAP
AE RSWRD ADT PRZ AQLT RRRHZPPQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAQ ZATTQAPRZ VOLZ RQHZZPPQZ AAD TAPTQAPAE RSWRD ADT P
RZ VOLZERRQHZZPPQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RQHZLP AE FSS D ADT PRZ VOLZ RQHZZPPQZ AAD TAPTQAPAE RSWRD ADT PRZ VOLZERRQHZZ
PQZ SAQ TATTQAPAE RSWRD ADT PRZ AQLT RRRHZPPQZ SAQ TAPTQAPAE LSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE LSS D ADT PRZ VOLZ RRRHZPP
PQZ SAQ TAPTQAPAE LSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE LSWRD ADT PRZ AQLZ RRRHZPP
PQZ SAQ TATTQAPAE FSS D ADT PRZ AQLZ RRRHZPPQZ SAQ TAPTQAPAE LSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D ADT PRZ AQLZ RRRHZPP
PQZ SAQ TATTQAPAE LSS D DDT PRZ AQLZ RRRHZPPQZ AAD TAPTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE FSS D ADT PRZ VOLZ RRRHZPP
PQZ SAD TADT PRZ VOLZ RRRHZLP AE R S D DDT PRZ ARLT RRRHZPPQZ SAQ TATTQAPRZ ARLT RRRHZPPQZ AAD TATTQAPAE FSW D ADT SPQZ AAQ TATTQA

Reading frame 3 : Position : 187158

QLEPZ FVDQSPQ SPPPD EP CA SWEAZTP ZR ZVEMRPLVP CICTA HQIPP TDDR TAPTQAPAE RSWRD ADT PRZ AQLT RQHZZPPQZ AAD TAPTQAPAE FSS D ADT PR
RZ AQLZ RRRHZPPQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE RSWRE D T PRZ AQLZ RRRHZPPQZ AAD TAPTQAPAE RSWRD ADT PR
RZ VOLZERRQHZZPPQZ SAQ TATTQAPAE RSWRD ADT PRZ AQLT RRRHZPPQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAQ ZATTQAPRZ VOLZ RQHZZ
PQZ AAD TAPTQAPAE RSWRD ADT PRZ VOLZERRQHZZPPQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RQHZLP AE FSS D D T PRZ AQLT RRRHZPPQZ AAD TAPTQ
PAE FSS D D T PRZ VOLZ RRRHZPPQZ SAQ TATTQAPAE FSS E D T SPQZ SAQ TAPTQAPAE FSS D D T PRZ AQLT RRRHZPPQZ AAD TAPTQAPAE FSS D D T
PRZ VOLZ RRRHZPPQZ AAD TAPTQAPAE RSWRD ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE FSWRD ADT
PRZ AQLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAD TAPTQAPAE LSS DSADT
PRZ AQLZ RRRHZPPQZ SAQ TAPTQAPAE LSS D ADT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE FSS D ADT PRZ AQLZ RRRHZPPQZ SAQ TAPTQAPAE LSS D ADT
PRZ AQLZ RRRHZPPQZ SAQ TATTQAPAE LSS D ADT PRZ AQLT RRRHZPPQZ SAQ TATTQAPAE FSS D DDT PRZ VOLZ RRRHZPPQZ SAQ TAPTQAPAE FSWRD ADT
PRZ VOLZ RPTQAPAE FSWRD ADT SPQZ AAQ TATTQAPAE L WRD DDT PRZ VOLZ RRRHZLP AE L WRD DDT PRZ ARLT RRRHZPPQZ SAE TAPTQAPRZ ARLZ RRRHZ

So different reading frames code for almost exactly the same sequence. The position of the sequences in each reading frame are close to one another, but displaced by about the same number of codons from each other.

It is remarkable that the three different reading frames should generate almost identical amino-acid sequences.

This phenomenon may not apply to the entire chromosome, but certainly is found in these select sequences of DNA, so perhaps it is used to protect vital sequences from mutations that cause deletions.

Another example is from Human Y Chromosome :

Reading Frame 1 : Position 7198

QATKKDES V SEFSSTDZ RVK LPI LEEITQEVLTFTASZALCZPTCQHCED IFZSEVSLSPZKLTHTLFCZLL VZVSLZADZDQTVQPLESAL L LIE ZZZADCATFZVCI PZ
SHW QIESTLC LZSLHWA VVSLZTDZEQTVQPLESAL LRLIE ZZZTD ATFTVCI PZSHW QVESRLY LZSLHWA VVSLZADZEQTVQPLESAL L LIEBZZZADCATFZDCIEPE
SHW QIESZLC HZSLHWA VVSLZAHZEQTVQPLESAL L LIEDZZZADCATFZVCI SZAHW QTESZLCKLZSLHWA VVSLZADZEQTVQPLESEL L LIEBZWZADCATFZVCI PZ
SHW QIESZLC LZ LHWTVSLZTDZEQTVQPLESAL L LIEDTYZADCATFTVCI P SHW QIETZLC LZSLHWA VVSLZADZEQTVQPLESAL L LIEBZZZADCATFZVCI PZ
SHWEQIESILC LZSRHWA VVSLZTDZDQTVQPLESAL L LIEDZZZADZATIZV T PZSHW QIZSZLC LZSLHCA VVSLZTDZEQTVQPLESAL L LIEBZZZADCATSZVCI PZ
SHW HLESZLR LZSLHWA VVSLZADZEHTVQPLESAL L LIEDZZZPDCA FZVCI PZSHW QIE ZLC LZSLHWA VVSLWTDTEQTVQPLESAL L LIE ZZZAHCVTFZVCI PZ
SHW PIESZLC LZSLHWA VVSLKTDZDQTVQPLEFALDL LIE ZZZA CATFZVCI PZSHW QIESZLC LZSLHWA VVSLZTDZEQTVQPLESAL L VIEDZKZPDCA FZVCI PZ
SPW QIDSZLC LZSLHWA VVSLRTRDZEQTMQPLESAL L LIQDZZZADCATFZVSI PZSHW QIES LC LZSLHWA VVSLZADZEQARQPLESAL L LIEBZZZAYYATFZVCI PZ
SHW HIESZLC LZSLHWA VVSLZTVZEQTVQPLESAF L LIEDZ ZPECATFZVSI PZSHW QIESZLZKLYSLHWA VVSLZSDZEQTVQALASAL L LIEBZZZADCA SZVCI PZ
SHW QIETZLC VZSLHWA VVSLZAVZEQTVQPLESAL L LIESZZZAHCA FZV I PZSHW QIET LC LZSLHWA VVSLZTDZEQTVQPLESALV L LIEBZYZADCATFZVCI PZ
SHW QIATZLC LZSLHWA VVSLZAVZEQTVQPLESAL L LIESZZZAHCATSZV I PZSHW QIETZLLKLZSLHWA VVSLZTDZ QTVQPLESTM L ISEDKZZ DCATFZVCT PZ
SLW QTESZMCKLZSLHWA VVSLZTDZDQTVQPLESAL L LLEVZQTADSATFZVCI PZS C QIDSZLC VZSLHWA VVSLRTRDZEQTMQPLESAL L LIEBZZZADCATFZVSI PZ
SHW QI S LC LZSLHWA VVSLZADZEQARQPLESAL L LIEBZZZACYATFZVCT PZSHW HIESZLC LZSLHWA VVSLZTVZEQTVQPLESAF L LIEBZKZPECA FZVCI PZ
SHW QIESZLZ LYSLHWA VVSLZSDZEQTVQALASALV L LIEBZZZTDCATFZVCI PZSHW QLESZLCKLZSLHWA VVSLZADZEHTVQPLESAL L LIEBZZZPDCA FZVCI PZ
SHW QIE ZLC LZSLHWA VVSLZTDZEQTLQPLESAL L LIE IZZPYCA FZVCI SZSHW EIESZLCKLQSLH VVSLZTDZEQTMQLZSLP PZSHW QIESZLRKLZSLHWA VV
SLZTDZEHTVZPLEFAK L LIEBZZZADCATFZVCI P SHW KTESZLC LZSLHWA VVSLZADZEQTVQPLESAL L LIEBZZZADCATFZVCI PZSHW QIESZLCKLYSLHWA VV
SLZTDZEQTVQPLQSA L LIQEZZZPECATFZVCI PZSLESZZZADCATFTVCI PZSHW PIESZLWKLZSLHWA VVSLZTHZEQTVQPLESAF L LIEBZWZAHCATFZVRI PZS
HW QIETZLC LZSLHWA VVSLZADZEQTVQPLESAL L LIEBZZZADCATFZLCI P SHW QIE ZLC LZSLHWA VVSVZTDZEETVQPLESAL L LFEDZQZADCA FZVCT PZC
HW QIETZLC LZSLHWA VVSLZSDZQQ LQPLESAL L LIADZZTADCATFZVCI PZS C QIESZLC VZSLHWA VVSLZTDZEQTVQPLESLL L LIEBZZ EDCATFZVCI PZS
HW QIESZL PZSLHWA VVSLZTDZEHTMQPLESAL L LIEBZZZADCATFZVCI PMSHW QLESZLC LYSLHLA VVSLZTEZDQSAQTLESAL L LIEBZZZADCATFZVCI PZS
HW QIESZLCKLZSLHWA VVSLZTDZEQTVQPLESAL L LIE SZZADCATFZVCI PZSHW QIESTLC LZSRHWA VVSLZTDZDQTVQPLESAL L LIEBZZZADCATFZVCI PZS

Reading Frame 2 : Position 7198

PZPQZKMSQWAL SPAQT DESK SQSDLKZSRZKSWRSRRA LCV QHASTVZIIFF PPFPPWAAPE LHTECSADSWECZSHZ QIETZLC LZ LHWA VVSLZA ZEPTVQPLESAL Q
LIEVZZZAHCATFZDCIEP SHW QIESZLC LZSLHWA VVSLZADZEQTVQPLQSA L LIE ZZZADCTTFZVCI PZSHW QIESZRC LZSLHWA VVSLZTDZEQTVQPLETALS
SLIEDZZZADCATIZVCI PZSHW HIESZLC LZSLHWA VVSLZTDZEQTVQPLESAL L PIE ZQZADCA FZVSI PZSHW QIESZLC LZSP WASVSLZTD EQTVQPLESAL L
LTEDKZZADCATFZDCI PZSHW QIESZL LZSRHWA VVSLZTHIEQTVQPLQSA L LIEBZZZPDCA FZVCI PZSHW QIESZLC LZSLHWA VVSLZTDZEQTVQPLESAL L
LIESZZZAYCATFZV I PZSHW QIETZLC LZSLHWA VVSLZTDZEQTVQPLESALV L LIEBZYZADCATFZVCI P SHW QIESZLC LZSLHWA VVSLZTDZEQTVQPLESAL L
LIE IZZADCATFZVCI PZSHWEQIESTLC HZSRHWA VVSLZTDZDQTVQPLESAL L LIEBZZZADCATFZVCI PZSHC PIQSZLC LZSLHWA VVSLZADZEHTVZPLESAZ L
LIEBZZZADCAIFZVCI P SHW QIETZLC LZSLHWTZVSLZADZEQTVQPLESAL L LIEBZZZADCATFZVCT PZSLW QTESZLCKLZSLHWA VVSLZTEZDQTVQPLESAL L
LLEVZZTADCATFZVCI PZS C QIESZLC VZSLHWA VVSLZTDZEQTVQPLESLL L LIEBZZZADCATFZVCI PZSHW QIESZL PZSLHWA VVSLZTDZEHTMQPLESAL L
LIEBZZZADCATFZVCI PMSHW QLESZLC LZSLHLA VVSLZTETDQSVQPLESAL L LIEBZZZADCATFZVCI PZSHW QIESZLCKLZSLHLA VVSLZTDZEQTVQPLESAL L
LIE ZZZPDYATFZVCI PZSHW QLESZLC LZSLHWA VVSLZADZEHTVQPLESAL L LIEBZZZPDCA FZVCI PZSHW QIESZL HZSRHWSVSLZTDIEQTVQPLESAL L
LIEBZZZPDCA FZVCI PZSHW QLESZLC LZSLHWA VVSLZADZEHTVQPLESAL L LIEBZZZPDCA FZVCI PZSHW QIE ZLC LZSLQWAVSVZT ZEETVQPLESAL L
LFEDZQZAECA FZVCT PZSHW QIETZLC LZSLHWA VVSLZSDZQQTLQPLESAL L LIADZZTADCATFZVCI PZS C QIESZLC VZSLHWA VVSLZTDZEQTVQPL SLL L
LIEBZZ ADCA FZVCI PZSHW QIESZL PZSLHWA VVSLZTDZEHTMQPLESAL L LIEBZZZADCATFZVCI PMSHW QLESZLC LZSLHLA VVSLZTEZDQSVQPLESAL L
LIEBZZZADCATFZVCI PZSHW QIESZLCKLZSLHLSVSLZTDZEQTVQPLESAL L LIE SZZADCA FZVCI PZSHWEQIESTLCKLZSRHWA VVSLZTDZDQTVQPLESAL L
LIEBZZZADCATFZVCI PZSHW QIESZLCKLZSLHWA VVSLZAYZDHTVQPLESAL L LTEEZZZADFA FZVCI PZSHW LIESZLC FZVCLAL LIEBZZZADCA FZVCI PZ

Reading Frame 3 : Position 7198

P HKEZWVS LWILQHZQ TSQZAP RTWZDHA SPDVH EQ SVZA MPALW ZYFLIHRFLERPKTYTHFVLQTP SV LIK ZZZPDCATFZICI PZSHW QVESRLC LZSLHWAK
VSLZSDZEHTVQPLETALS LIEDZZZADCATFZVCI PTSHW QIE ZRC LYSLHWAZVSLZA ZEPTVQPLESAL L LIE ZZZAD ATFZVCI PZSHW QIESZLC LZZLHWA
VSLZTDZEQTVQPLESAL L LIE TZZADCATFZVCI PZSHW QIESZLC LZSLHWVZ PLZADZEQTVQTLESAL L LIEDZZZADCATFZVRI PRSHW PMESZLC LZSLHWA
VSLZT ZEQTVQPL TALDL LIEDZZZADZATFEV T PZSHW HIZSZLC LYSLHWA VSLZTDZDQTVQPLESAL L LIE ZZZADCATFZVCT PZSHW QIESZLC LZSLHWA
VSLZADZEHTVQPLESAL L LIEDZZZPDCATFZVCI PZSHW QIESZL HZSRHWSZVSLZTDIEQTVQPLESALCL LIEDZZZADCATFZVCT PZSHW QIESZLC LZSLHWA
VSLZAFZEQTAQPLESAL L LIESZZZAHCA TTZV I PZSHW QIETZLCKLZSLHWAZVSLZTDZ QTVQPLESAL L LIVDRYADCATFZVCT PZSHW QIESTLC LZSLHWA
VSLZTDZEQTVQPLESAL L LIEDZZZPDCATFZVCI PZSHW QIESKLC LZSLHWAZVSLZTDZEQTVQPLESAL L LFEDZQZADCA FZVCT PZCHW QKETZLC LZSLHWA
VSLZSDZQQTQPLESAL L LIADZZZADYATFZVCI P SHS QIESZLC LZSLYWAZVSLZTDZERTVQPLESAL L LIE ZZZA SATLZVCI PZSYW QIESILC LZSLHWA
VSLZTHZEQTVQPLESAL LCLIEDSZZADCATFZVCIWPZSHW QKQTZVC LZSQHWAZVSLZTDZEQTVETLZSAL L LIEVZZZADCASFVCTWPZSHW QIESZLCKLZSLHWA
VSLZADZDQTMORLESAL L LIE SZZADCATFZVCI PZSHWEQIESTLCQLZSRHWAZVSLZTDZDRTVQPLESAL LRLIEDZZZADZATIZV T PZSHW QIZSZLC LZSLHWA
VSLZTDSQTVQPLESAL L LIE SZZADCATFZVCI PZSHWEQIESTLC LZSRHWAZVSLZTDZDQTVETLESAL L LIEDZZZADCATFZVY GPZYQW QIEZZLC LZSLHWPZ
VSLZTDZEQ VQTLESAL L LIEDZZZPDCATFZVCI PZSPW QTDSZLC LZSLHWAZVZLRTDZQQTQORLESAL L LIADZZZADYATFZVCI P SHW QIESZLC LZ LYWA
VSLZTDZERTVQPLESAL L LIE ZZZA SATLZVCI PZYHW QIESMLC LZSLHWAZVSLZTHZEQTVQPLESAL LCLIEDSZZADCATFZVCIWPZSHW QKETZVCKLZSLHWA
VSLZTDZEQTVELZSAL L LIEVZZZADCASFVCTCPZSHW QIE ZLC LZSLHWAZVSLZAVZEQTVQTLESAL L LIESZZZAHCA SZV I PZSHW QIETZLCKLZSLHWA

You can see that this amino-acid sequence is maintained regardless of reading frame – so this must be an important protein.

Here is an example where this triplicate coding is not present in the form of identical amino-acids, but might be present in the form of synonymous amino-acids, i.e. those that have similar chemical properties, or triplicate coding may be totally absent.

Chimpanzee Chromosome 4

Reading Frame 1 : Position of sequence start : 11592

TV ESK Z KLYFVLLLEVAZKYDII KZVTFZ HV TMPAKQTHHQ PLQZLZFSQSCKTLKKVSMST STYZILLHLLVLEAIVSIYZCY MVWTFZLVL VDIVLVL ADITLVL H
VDIITLVLEAMVWIZWVL H VDIITLVLE MVWIZWV HVDIITLVLEAMVWTZSVI HDVDITTLVLEVMVWIZSVI H VDIITLVLEAMVCIZSVI H VDIITLVLE MVWIZWV H
VDIITLLEVMVWIZSVT H VDIITLVLEAMVWTZSVI HDVDITTLVLEVMVWIZSVI H VDIITLVLEAMVWIZSVI H VYIITLVLE KVVIZWV H VDIITLVLEVMVWIZSVI H
VDITTLVLEAMVWTZSVI HEVDITTLVLEAMVWIZSVI H VDIITLVLEAMVWTKSVI HAVDIITLVLEVMVWIZWVL H ADIITLVLEAMVWTZSVI HDVDITTLVLEAMVWIZSVI H
VDIITLVLE MVWIZWVL H VDIITLVLEVMVWIZSLI H VDSITLVLEAMVWTZSVI HDVDITTLVLEAMVWTZSAI HDVDIITLVLEAMVWTZSVIRH VDIITLVLEAMVWTZSVI H
VDIITLVLEAMVWIZSVI HAVDIITLVQVMVWTZSVI HAVDIITLVLEAMVWIZWVL H VDIITLVLEAMVWIZSVL H VDIITLVLEAMVWIZWVLH VDIITLVLEAMVWTZSVI R
VDIITLVLEAMV TZSVI H VDIITLVLEAMVWTZSVI HDVDIITLVLEAMVWTZSVI HDVDIITLVLEAMVWIZWVL H VDIITLVLEAMVLIZSVIAQ VDIITLVLEAMVWIZSVI H
VDIITLVLEAMVCISVI H VDIITLVLE MVWIZWV H VDIITLLEVMVWIZSVI H VDMITLVLEAMVWTZSVI H VDIITLVLEAMVWTZSVI H VDIITLVLE MVWIZWV H
VDIITLVLEAMVWIZSVI H VDIITLVLE MVWIZWV H VDIITLLEVMVWIZSVI H VDIITLVLEAMVWIZSVL H VDIITLVLEAMVWIZWVL HRVDIITLVLEAMVWIZWAL H VDIITLVLEAMVCISVI H
VDIITLVLEAMVWIZSVI H VDIITLVLE MVWIZWV H VDIITLLEVMVWIZSVI H VDIITLVLEAMVWIZSVI H VYIITLVLEAMVWIZWV H VDIITLVLEAMVWIZSVI H
VDITTLVLEAMVWTZSVI HEVDITTLVLEAMVWIZSVI H VDIITLVLEAMVWTKSVI HAVDIITLVLEAMVWIZWVL H VDIITLVLEAMVWTZSVI HDVDITTLVLEAMVWIZSVI H
VDIITLVLEAMVWIZWVL H VDIITLVLEAMVWIZSLI H VDSITLVLEAMVWTZSAI HDVDITTLVLEAMVWTZSAIEHVDIITLVLEAMVWTZSVIPH VDIITLVLEAMVWTZSVI H

Reading Frame 2 : Position of Sequence start : 11592

LL LZEETSCILYKLLZ MTLLESKLLFKTTMSIFCQQSZHIKIHYZ YSSAKAVKPLKKSQCQQ PLTZYYYIYZYZZPLCQYISVTAWY HLDZCZ MVWILYWCW MVQILHZCZ MV
WILLHYZKRW LDEYZ MVWILLHYZK WC LDEWZ MMWILLHYZKRW LDQWZ MMWILLHYZKWWC LDQWZ MVWILLHYZKRWALDQWZ MVWILLHYZK WC LDEWZ MV
WILLHYWKWWC LDQWQ MVWILLHYZKRW LDQWZ MMWILLHYZKWWC LDQWZ MVWILLHYZKRW LDQWZ MCVILLHYZKZC LDEWZ MVWILLHYZKWWC LDQWZ MV
WILLHYZKRW LDQWZ MZWILLHYZKRW LDQWZ MVWILFHYZKRW L QWZ MLWILLHYZKWWC LDECZ MVRILLHYZKWWC LDQWZ MMWILLHYZKRW LDQZZ MV
WILLHYZK WC LDECZ MVWILLHYZKWWC LDHWZ MVWILHYZKRW LDQWZ MMWILLHYZKRW LDQRZ MMWILLHYZKRW LDQWY TVWILLHYZKRW LDQWZ MV
ZILLHYZKRW LDQWZ MLWILLHYZKWWC LDQWZ MLWILLHYZKRW LD CZ MVWILLHYZKRW LDQCZ MVWILLRZYKRW LDECY MLWILLHYZKRW LDQWZ VV
WILLHYZKQW LDQWZ TVWILLHYZKRW LDQWZ MMWILLHYZKRW LDQWZ MMWILLHYZKRW LDECZ MVWILLHYZKRWLDQWZKVVWILLHYZKWWC LDQWZ MV
WILLHYZKRWALDQWZMVWILLHZZK WC LDECZ MVWILLHYZKQW LDQCZ MVWILLHYZKRW LDECZ IVWILLHYZKRW LDERZ MVWILLHYZKWWCAL QWZ MM
WILLRZYKWWCALDQWZ MVWILLHYZK WC LDEWZ MVWILLHYWKWWC LDQWZ MVWILHYZKRW LDQWZ MVZILLHYZKRWZLDQWZ MVWILLHYZK WC LDEWZ MV
WILLHYCWKWWC LDQWQ MVWILLHYZKRW LDQWZ MMWILLHYZKWWC LDQWZ MVWILLHYZKRW LDQWZ MCVILLHYZKZWC LDEWZ MVWILLHYZKWWC LDQWZAMV
WILLHYZKRW LDQWZ MZWILLHYZKRW LDQWZ MVWILFHYZKQW L QWZ MLWILLHYZKWWC LDECZ MVWILLHYZKWWC LDQWZ MMWILLHYZKRW LDQZZ MV
WILLHYZKRW LDECZ MVWILLHYZKWWC LDHWZ MVWILHYZKRW LDQRZ MMWILLHYZKRW LDQRZSMMWILLHYZKRW LDQWYRMVWILLHYZKRW LDQWZ MV

Reading Frame 3 : Position of sequence start : 11592

W I Z K K Q V V F C T T T S C L E I W H Y W K V S Y F L K Q P C Q Y H A S K A D T S S K S I T E A I V Q P K L Z P Z K S L V Z V H L L D I I T F I S I Z H C V I L V L R H M D I Z I S V Z E W C Y C I V E W C Z Y Y I S V Z A W C
Y Y Y I S I Z S D V D Z M S I Z A W C Y Y Y I S I Z Z D V D Z M S Z A W C Y Y Y I S I S D V D Z I S D Z A W C Y Y Y I S T S D V D Z I S D Z A W C Y Y Y I S T Z S D V H Z I S D Z A W C Y Y Y I S I Z Z D V D Z M S Z A W C
Y Y Y I T I S D V D Z I S D Z A W C Z Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I Z S D V D Z I S D Z A W C V Y Y Y I S I Z Z E V D Z M S Z A W C Y Y Y I S I S D V D Z I S D Z A W C
Y Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I S D V D Z I S D Z A W C Y Y S I S I Z S V D Z I S D Z A C C Y Y Y I S I S D V D Z M S V Z A W C Y Y Y I S I S D V D Z I S D Z A W C Y Y Y L S I S D V D Z I S Z A W C
Y Y Y I S I Z Z D V D Z M S V Z A W C Y Y Y I S I S D V D Z I T D Z A W C Z Y Y I S I Z S D V D Z I S D Z A W C Y Y Y I S T S D V D Z I S D Z A W C Y Y Y I S I S D V D Z I S D T A R C Y Y Y I S I S D V D Z T S D Z A W C Z
Y Y Y I S I Z S D V D Z I S D Z A C C Y Y Y I S M T S D V D Z I S D Z A C C Y Y Y I S I S D V D Z M V Z A W C Y Y Y I S I S D V D Z I S V Z A W C Y Y Y V S I Z S D V D Z M S V M A C C Y Y Y I S I Z D L D Z I S D Z A W C
Y Y Y F S I Z S N C D Z I S D Z A R C Y Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I S D V D Z M S V Z A W C Y Y Y I S I S D V D Z I S D S A Z C Y Y Y I S I S D V D Z I S D Z A W C
Y Y Y I S I Z S D V H L I S D Z S W C Y Y Y I S Z Z D V D Z M S V Z A W C Y Y Y I S I Z S V D Z I S V Z A W C Y Y Y I S I Z S D V D Z M S V Z A S C Y Y Y I S I S D V D Z M S V Z A W C Y Y Y I S I Z S D V H Z I S D Z A W C
Y Y Y V S I Z S D V H Z I S D Z A W C Y Y Y I S I Z Z D V D Z M S Z A W C Y Y Y I T I S D V D Z I S D Z A W C Y D Y I S I S D V D Z T S D Z A W C Z Y Y Y I S I Z S D V D Z I S D Z A W C Y Y Y I S I Z Z D V D Z M S Z A W C
Y Y Y I T V S D V D Z I S D Z A W C Z Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I Z S D V D Z I S D Z A W C V Y Y Y I S I Z Z D V D Z M S Z A W C Y Y Y I S I S D V D Z I S D Z P W C
Y Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I S D V D Z I S D Z A W C Y Y S I S I Z S S V D Z I S D Z A C C Y Y Y I S I S D V D Z M S V Z A W C Y Y Y I S I S D V D Z I S D Z A W C Y Y Y I S I S D V D Z I S Z A W C
Y Y Y I S I S D V D Z M S V Z A W C Y Y Y I S I S D V D Z I T D Z A W C Z Y Y I S I Z S D V D Z I S D Z A W C Y Y Y I S T S D V D Z I S D Z A W C Y Y Y I S I S D V D Z I S D T A W C Y Y Y I S I S D V D Z T S D Z A W C Z

All of the sequences we have looked at so far are repeats, because they are easier to locate visually.