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Task1:

You are requested to search for complete coding sequence of P53 (mus musclus) using NCBI databases

A. What is the accession number of retrieved sequence? **AB021961**....

B. Obtain the protein sequence encoded by this mRNA molecule, what is the accession number of this protein sequence? .... **BAA82344**.......

C. Download the FASTA format of this protein sequence then using python convert all amino acid letters from one letter format to three letter format, please refer to this table https://www.fao.org/3/Y2775E/y2775e0e.htm

Code:

```
from Bio.SeqUtils import seq3
from Bio import SeqIO
print(seq3(SeqIO.read("sequence.fasta", "fasta")))
```

Converted Sequence:

MetThrAlaMetGluGluSerGlnSerAspIleSerLeuGluLeuProLeuSerGlnGluThrPheSerGlyLe
uTrpLysLeuLeuProProGluAspIleLeuProSerProHisCysMetAspAspLeuLeuLeuProGlnAsp
ValGluGluPhePheGluGlyProSerGluAlaLeuArgValSerGlyAlaProAlaAlaGlnAspProValThr
GluThrProGlyProValAlaProAlaProAlaThrProTrpProLeuSerSerPheValProSerGlnLysThrT
yrGlnGlyAsnTyrGlyPheHisLeuGlyPheLeuGlnSerGlyThrAlaLysSerValMetCysThrTyrSerPr
oProLeuAsnLysLeuPheCysGlnLeuAlaLysThrCysProValGlnLeuTrpValSerAlaThrProProAl
aGlySerArgValArgAlaMetAlaIleTyrLysLysSerGlnHisMetThrGluValValArgArgCysProHisH
isGluArgCysSerAspGlyAspGlyLeuAlaProProGlnHisArgIleArgValGluGlyAsnLeuTyrProGl
uTyrLeuGluAspArgGlnThrPheArgHisSerValValValProTyrGluProProGluAlaGlySerGluTyr
ThrThrIleHisTyrLysTyrMetCysAsnSerSerCysMetGlyGlyMetAsnArgArgProIleLeuThrIleIl
eThrLeuGluAspSerSerGlyAsnLeuLeuGlyArgAspSerPheGluValArgValCysAlaCysProGlyAr
gAspArgArgThrGluGluGluAsnPheArgLysLysGluValLeuCysProGluLeuProProGlySerAlaLy
sArgAlaLeuProThrCysThrSerAlaSerProProGlnLysLysLysProLeuAspGlyGluTyrPheThrLeu
LysIleArgGlyArgLysArgPheGluMetPheArgGluLeuAsnGluAlaLeuGluLeuLysAspAlaHisAla
ThrGluGluSerGlyAspSerArgAlaHisSerSerTyrLeuLysThrLysLysGlyGlnSerThrSerArgHisLys
LysThrMetValLysLysValGlyProAspSerAsp