

## Assignment 2 (14 marks total)

Download the data associated with this assignment using:

```
$ cd ~
$ wget \
  "https://www.dropbox.com/scl/fi/wylre1ooep90c759qgk\
  vb/assignment_2.tar.gz?rlkey=kjgyit995rmpjbyjuu08y\
  0waz&dl=0" \
  -O assignment_2.tar.gz
$ tar xvzf assignment_2.tar.gz
```

### Question 1

**10 marks**

Question text goes here

#### Answer

Information for marking

```
Can have text in texinfo blocks
```

```
echo "Or code in bash blocks"
```

### Question 2

**2 marks**

Another question

#### Answer

Answer info

## Assignment 2

### Question 3

2 marks

A question with an image:

NCBI Resources How To Sign in to NCBI

Gene Gene Search Advanced Help

### Gene

Gene integrates information from a wide range of species. A record may include nomenclature, Reference Sequences (RefSeqs), maps, pathways, variations, phenotypes, and links to genome-, phenotype-, and locus-specific resources worldwide.

Using Gene	Gene Tools	Other Resources
<a href="#">Gene Quick Start</a>	<a href="#">Submit GeneRIFs</a>	<a href="#">OMIM</a>
<a href="#">FAQ</a>	<a href="#">Submit Correction</a>	<a href="#">RefSeq</a>
<a href="#">Download/FTP</a>	<a href="#">Statistics</a>	<a href="#">RefSeqGene</a>
<a href="#">RefSeq Mailing List</a>	<a href="#">BLAST</a>	<a href="#">Protein Clusters</a>
<a href="#">Gene News</a>	<a href="#">Genome Workbench</a>	
<a href="#">Factsheet</a>	<a href="#">Splign</a>	

### Representative queries

Find genes by...	Search text
free text	<a href="#">human muscular dystrophy</a>
chromosome and symbol	<a href="#">(ll[chr] OR 2[chr]).AND adh*[sym]</a>
partial name and multiple species	<a href="#">alive[prop] AND transporter[title] AND ("Drosophila melanogaster"[orgn] OR "Mus musculus"[orgn])</a>
associated sequence accession	<a href="#">M11313[accn]</a>
gene name (symbol)	<a href="#">BRCA1[sym]</a>
publication (PubMed ID)	<a href="#">11331580[PMID]</a>
Gene Ontology (GO) terms or identifiers	<a href="#">"cell adhesion"[GO]</a> <a href="#">10030[GO]</a>
genes with short variants of medical interest	<a href="#">"clinvar_gene_specific"[Filter]</a>
chromosome and species	<a href="#">Y[CHR] AND human[ORGN]</a>
Enzyme Commission (EC) numbers	<a href="#">1.9.3.1[EC]</a>

Figure 1: An image

### Answer

Information for marking

Can have text in texinfo blocks

## Assignment 2

```
echo "Or code in bash blocks"
```

NCBI Resources How To Sign in to NCBI

Gene Gene ((Bos taurus[Organism]) AND 13[Chromosome]) AND 47039937:47060168[Base Position] Search

Create RSS Save search Advanced Help

Full Report Send to: Hide sidebar >>

Showing Current items.

**PRNP prion protein [ *Bos taurus* (cattle) ]** Download Datasets

Gene ID: 281427, updated on 12-Feb-2021

**Summary**

**Official Symbol** PRNP provided by [VGNC](#)

**Official Full Name** prion protein provided by [VGNC](#)

**Primary source** [VGNC:VGNC:33356](#)

**See related** [BGD:BT10271](#)

**Gene type** protein coding

**RefSeq status** VALIDATED

**Organism** [Bos taurus](#)

**Lineage** Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Artiodactyla; Ruminantia; Pecora; Bovidae; Bovinae; Bos

**Also known as** PrP; prn; AltPrP

**Orthologs** [human](#) [mouse](#) [all](#)

**NEW** Try the new [Gene table](#)

Try the new [Transcript table](#)

**Genomic context**

Location: chromosome: 13 See PRNP in [Genome Data Viewer](#)

Exon count: 3

Annotation release	Status	Assembly	Chr	Location
<a href="#">106</a>	current	ARS-UCD1.2 ( <a href="#">GCF_002263795.1</a> )	13	NC_037340.1 (47039937..47060168)
<a href="#">105</a>	previous assembly	Bos_taurus_UMD_3.1.1 ( <a href="#">GCF_000003055.6</a> )	13	AC_000170.1 (47400392..47418507)

**Chromosome 13 - NC\_037340.1**

[ 46527492 ] [ 47198189 ]

DIP2C LOC112449447 ZNF7011 PRNP PRND

**Table of contents**

- Summary
- Genomic context
- Genomic regions, transcripts, and products
- Bibliography
- Interactions
- General gene information
  - Markers, Clone Names, Homology, Gene Ontology
- General protein information
- NCBI Reference Sequences (RefSeq)
- Related sequences
- Additional links

**Genome Browsers**

- Genome Data Viewer
- UCSC

**Related information**

- 3D structures
- BioProjects
- BioSystems
- Conserved Domains
- Full text in PMC
- Full text in PMC\_nucleotide
- Functional Class
- Gene neighbors
- Genome
- GEO Profiles

Figure 2: An image