**BGGN-213: FOUNDATIONS OF BIOINFORMATICS**

**The find-a-gene project assignment**

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**Q1.**

Name: probable ATP-dependent RNA helicase DDX6Organism: Mus musculus

Accession: NP\_851841.2

Species: *Mus musculus*

**Q2.**

Method: TBLASTN search against nematodes ESTs

Database: Expressed Sequence Tags (est)

Organism: Nematodes (Taxid: 6231)

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Chosen match: Accession JZ594105.1, H06\_f\_PDF\_8\_025 Panagrolaimus davidi 4 degree Panagrolaimus davidi cDNA, mRNA sequence

(the fourth hit)

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Alignment details:

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**Q3.**

Chosen sequence:

>Panagrolaimus davidi Ddx6 (translated using EMBOSS Transeq, and ORF extracted)

MAVEAQNKTNDDWKAQLQLPAKDMRYKTLDVTNTRGLDFEEFSLSRDLLKGIFEKGWERPSPIQEASIGIALSGQDILARAKNGTGKTGAYCIPVIERLDTSKDCIQALIIVPTRELALQTSQICVELGKHIGLKVMVTTGGTDLRDDILRLNSAVHLIVATPGRIIDLMEKGVAEVQDCKMLVLDEADKLLSQDFQGVLDRLVSFLPAGRQIMLYSATFPRTVASFMESHMKNPYEINLMEELTLLGVTQFYAFVTEKQKVHCLNTLFRKLQINQSIIFC

Name: *Panagrolaimus davidi* Ddx6

Species: *Panagrolaimus davidi*

Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Nematoda; Chromadorea; Rhabditida; Tylenchina; Panagrolaimomorpha; Panagrolaimoidea; Panagrolaimidae; Panagrolaimus

**Q4.**

A BLASTP search against NR database yielded a top hit result is to a protein from *Halicephalobus sp. NKZ332.*

(see below)

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