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author: Akshara Balachandra title: Find a Gene Project (BGGN 213) date: May 15, 2019 —

Question 1: Name of the protein

Name: Sonic Hedgehog protein isoform 1 preprotein (SHH)

Accession: NP_000184.1

Species: Homo sapiens

Question 2: BLAST search

Method: TBLASTN (2.7.1) search against Xenopus ESTs

Database: Expressed sequence tags (est)

Organism: Xenopus (Taxid: 8353)
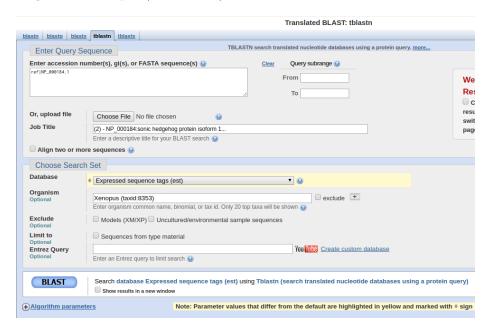

Figure 1: BLAST parameters

```
Query  26   PGRGFGKRRHPKKLTPLAYKQFIPNVAEKTLGASGRYEGKISRNSERFKELTPNYNPDII  85
            PGRG GKRRHPKKLTPLAYKQFIPNVAEKTLGASGRYEGKI+RNS+RFKELTPNYNPDII
Sbjct  304  PGRGIGKRRHPKKLTPLAYKQFIPNVAEKTLGASGRYEGKITRNSDRFKELTPNYNPDII  483
```

```
Query   86    FKDEENTGADRLMTQRCKDKLNALAISVMNQWPGVKLRVTEGWDEDGHHSEESLHYEGRA   145
              FKDEENTGADRLMTQRCKDKLNALAISVMNQWPGVKLRVTEGWDEDGHHSEESLHYEGRA
Sbjct   484   FKDEENTGADRLMTQRCKDKLNALAISVMNQWPGVKLRVTEGWDEDGHHSEESLHYEGRA   663

Query   146   VDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAHIHCSVKAENSVAAKSGGC   198
              VDITTSDRDRSKYGMLARLAVEAGFDWVY+ESKAHIHCSVKAENSVAAKSGGC
Sbjct   664   VDITTSDRDRSKYGMLARLAVEAGFDWVYFESKAHIHCSVKAENSVAAKSGGC   822
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