Gene Search Engine

This project uses serverside API to retrieve information on a gene inputted by the user. The webpage will return basic information about that gene and its protein product such as amino acid length, phenotypes associated, expression patterns, sequence, gene structure and recent research publications. The user has the option to configure their search to yield more extensive information such as protein isoforms, subcellular locations, and similar proteins.

User story:
When a user loads to the webpage, then they are presented with the search input query.
When a user makes a search based on keyword (gene name or ID) and species name, then they are presented with a summary of the gene that best fits their search and it is added to their search history.
When a user clicks on learn more in certain sections, then they are taken to the corresponding database.
When a user clicks advance search, they are presented with a modal window where they can choose to omit certain results or include certain advanced results in their search.

API used:
UniProt API + GenBank API

Task breakdown:
Leo → styling, js logic, api manipulation
Riley → api manipulation, js logic, styling

🧬 Gene Search (by Leo and Riley)

Search for a gene:

`gene CFTR or ID`

Species

`Homo sapiens (humans)` ▽

[Search] Advance search

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Gene Name

Phenotype associated

Gene structure

Recent Publications

Gene Name: CFTR

Protein: Cystic fibrosis transmembrane conductance (CFTR)

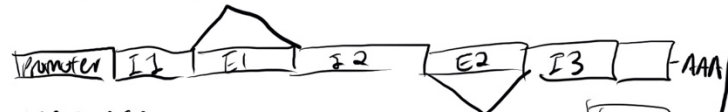Organism: Homo sapiens

Amino Acid length: 1480

Basic summary: . . . .

Protein Picture

Phenotype, disease & traits associated:

1. Cystic fibrosis
2. Infertility
3. . . . . .
4. . . . .

[learn more]

Gene structure/sequence

| Promoter | I1 | E1 | I2 | E2 | I3 | AAA |

AAAACTAGT . . . .

[learn more]

Recent Research Publications:

1. Pubmed article1
2. Pubmed article 2
3. Pubmed article 3

[see more]