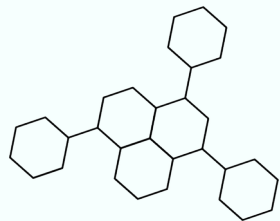# Drug Search

Databases and Web Development

MSc in Bioinformatics for Health Sciences

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The Problem

Navigating Drug Information Can Be Overwhelming for Patients

- Patients often struggle to find comprehensive and clear drug information.

- Many platforms, like DrugBank, are designed for researchers or healthcare professionals, making them too complex for general users.

- Patients lack an easy way to search for drugs, avoid specific side effects or ingredients, and check for drug interactions in a user-friendly format.
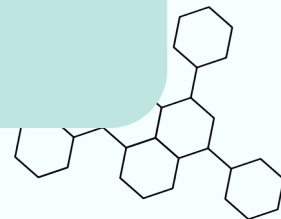
OBJECTIVES

Develop a free and easy-to-use web application aimed at patients.

Provide functionality for:

1. Searching for drugs and viewing their detailed side effects.
2. Filtering out drugs with unwanted side effects.
3. Excluding drugs containing specific ingredients, like caffeine or alcohol.
4. Utilizing DrugBank's interaction checker to identify drug interactions.

DATABASES

Drug_Info_Browser data will be retrieved from multiple external databases

 DRUGBANK

Drug mechanism of action, structure, brand names, interactions…

 KEGG
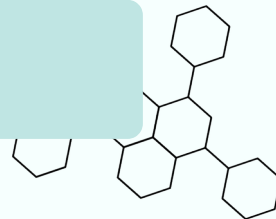
Drugs classification, structure, disease association, interactions…

 SIDER 4.1

Drugs adverse side effects and their frequency

The user will be able to search for specific drugs using :

- Drug name — Search for a drug by its name (e.g., Insulin).

- ID from our database — Use a unique ID to find a specific drug.

- Advanced search options — Search by side effects or drug type.

OUTPUT

Basic Drug Information

01
- Name, molecular formula, molecular weight
- General specifications (e.g., type of drug)

Detailed Information

02
- Drug function description
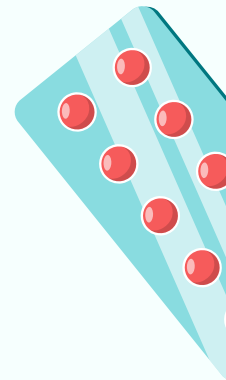- Image of the molecular structure
- Sales brands

Side Effects

03
- Comprehensive list of potential side effects
- Option to create a table comparing side effects of multiple drugs

Search by Side Effect

04
- Display all drugs associated with a specific side effect

Thank you