API description: computation and database

General

Endpoints

/

GET: get the general api info
Response: home scheme

/similar-patients-computation-methods/

GET: get the methods for computing similar patients
Response: similar patients computation methods scheme

Schemes

Home scheme

```
{
        patients: {
                first_page: {href: <url>},
                all_patients: {href: <url>},
                query_url_parameter: “query”
        },
        similar_patients_computation_methods: {href: <url>}
}
```

Similar patients computation methods scheme

```
{
        self: {href: <url>},
        methods: [ {
                self: {href: <url>}
```

```
                name: <name>
        }, … ]
}
```

Patient data

Endpoints

/patients/

GET: get the list of patients
Parameters: query (a query to filter patients), start (the first patient to be shown, starts at 0), end (the first patient to no longer be shown)
Response: patient list scheme

POST: make a new patient
Input: patient input scheme
Response: patient output scheme

/patients/{p atientID}

GET: get a patient
Response: patient output scheme

PUT: update a patient
Input: patient input scheme
Response: patient output scheme

/patients/{patientID}/mutations

POST: enter a new mutations file for the patient
Input: a new mutations file using a multipart http request. The filename chosen by the user will be used on the server. The extension should reflect the filetype. allowed formats: .maf
Response: Mutation data file link scheme

/patients/{patientID}/mutations/{filename}

GET: download a mutations file

/patients/{patientID}/similar-patients/{resultID}

GET: get the most similar patients for a certain method that was executed using certain data
Response: similar patients list scheme

/patients/{patientID}/similar-patients/requests/

POST: request to compute the most similar patients.
Input: similar patients computation request scheme
Response: similar patients computation request scheme

/patients/{patientID}/similar-patients/requests/{requestID}

GET: get info on the status of the request
Response: similar patients computation request scheme

Schemes

Patient list scheme

```
{
        self: { href: <url to this resource> },
        patients: [ {
                href: <url to the patient resource>,
                id: <id>
                name: <name>,
                birthdate: <birthdate>,
                cancer_type: <type>,
                cancer_subtype: <subtype>
                }, … ],
        next_page: { href: <link to next set of patients when representing the same
                amount of patients>}
}
```

Patient input scheme

```
{
        id: <id>,
        name: <name>,
        birthdate: <birthdate>,
```

```
        cancer_type: <type>,
        cancer_subtype: <subtype>
}
```

Patient output scheme

```
{
        self: {href: <url to this resource>},
        first_page_patient_list: {href: <url to list of first 20 patients>},
        id: <id>,
        name: <name>,
        birthdate: <birthdate>,
        cancer_type: <type>,
        cancer_subtype: <subtype>,
        mutation_data_files: [ <mutation data file link scheme>, ... ],
        default_similar_patients_list: <similar patients list link scheme>,
        similar_patients_lists: [
                <similar patients list link scheme>, …
        ]
}
```

Mutation data file link scheme

```
{
        href: <url>
}
```

Similar patients list link scheme

```
{
        href: <url>,
        method: <method used to compute list>,
        date: <date>,
        input_files: [
                {href: <url>}, …
        ]
}
```

Similar patients list scheme

```
{
        self: {href: <url>},
```

```
        patient: {href: <link to patient> },
        method: <method>,
        date: <date>,
        input_files: [ <mutation data file link scheme>, ... ],
        patients: [ {
                self: {href: <url to this resource>},
                id: <id>,
                name: <name>,
                birthdate: <birthdate>,
                cancer_type: <type>,
                cancer_subtype: <subtype>,
                mutation_data_files: [ <mutation data file link scheme>, ... ],
                similarity_explanation: <explanation>
        }, … ]
}
```

Similar patients computation request scheme

```
{
        method: <method>,
        input_files: [
                {href: <url>}, …
        ]
}
```

Similar patients computation request scheme

```
{
        self: {href: <url>},
        method: <method>,
        input_files: [
                {href: <url>}, …
        ],
        status: <status>,
        eta: <ETA>
}
```