
service-ars documentation

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Getting started

1.1 Overview

1.1.1 Antigen Recognition Site

1.1.2 ARS Groups

1.1.3 ARS Reduction

1.2 Service UI

1.2.1 Options

--hml	• HML file • Required parameter
--output	• Output directory • Required parameter
--imgtdir	• Location of where the BLAST IMGT database is located • Default location is /opt/html on the docker container
--imgt	• IMGT database version • Default is 3200
--report	• Binary flag for generating HTML validation report • default is 1

1.2.2 Advanced options

--hml	• HML file • Required parameter
--output	• Output directory • Required parameter

- | | |
|------------------|--|
| --imgtdir | <ul style="list-style-type: none">• Location of where the BLAST IMGT database is located• Default location is /opt/html on the docker container |
| --imgt | <ul style="list-style-type: none">• IMGT database version• Default is 3200 |
| --report | <ul style="list-style-type: none">• Binary flag for generating HTML validation report• default is 1 |

1.2.3 Submit HML File

Service API

2.1 RESTful Interface

2.1.1 Parameters

- IMGT/DB
- Glstring
- ARS Type
- MAC Url
- Expand Genotypes
- Expand Genomic Typing

2.1.2 Convert HLA Typing

```
curl --header "Content-type: application/json" --request POST
  --data '{"arsFile":"hla_nom_g.txt","dbversion":"3.20.0","arsType":"G",
  "Subjects":[{"SubjectID":1,"typing":["A*01:01+A*01:02","B*08:01+B*07:02","C*07:01+C*07:01"]},
  {"SubjectID":1,"typing":["A*01:01+A*01:02","B*08:01+B*07:02","C*07:01+C*07:01"]}]]}'
  http://localhost:3000/api/v1/reduxSubjects
```

2.1.3 Convert Subject Typing

```
curl --header "Content-type: application/json" --request POST
  --data '{"arsFile":"hla_nom_g.txt","dbversion":"3.20.0","arsType":"G",
  "Subjects":[{"SubjectID":1,"typing":["A*01:01+A*01:02","B*08:01+B*07:02","C*07:01+C*07:01"]},
  {"SubjectID":1,"typing":["A*01:01+A*01:02","B*08:01+B*07:02","C*07:01+C*07:01"]}]]}'
  http://localhost:3000/api/v1/reduxSubjects
```

2.1.4 Get ARS Data

```
./nextflow run nmdp-bioinformatics/flow-blast-hml -with-docker \
  nmdp-bioinformatics/docker-blast-hml \
  --hml test_file.html --outdir /path/to/output/dir
```

2.2 Clients & Tools

2.2.1 Java

- hml-typing-resolution *
 - hml**
 - HML file
 - Required parameter
 - output**
 - Output directory
 - Required parameter
 - imgtdir**
 - Location of where the BLAST IMGT database is located
 - Default location is /opt/html on the docker container
 - imgt**
 - IMGT database version
 - Default is 3200
 - report**
 - Binary flag for generating HTML validation report
 - default is 1

2.2.2 Perl

- hml**
 - HML file
 - Required parameter
- output**
 - Output directory
 - Required parameter
- imgtdir**
 - Location of where the BLAST IMGT database is located
 - Default location is /opt/html on the docker container
- imgt**
 - IMGT database version
 - Default is 3200
- report**
 - Binary flag for generating HTML validation report
 - default is 1

3.1 Contributing

1. Log into Github web interface with your username-nmdp account
2. Browse to the repo at <https://github.com/nmdp-bioinformatics/flow-blast-hml>, hit the Fork button.
3. Copy the clone URL from the Github web page for the fork (something like <https://github.com/username-nmdp/pipeline.git>)
4. Clone the fork

```
git clone https://github.com/username-nmdp/flow-blast-hml.git  
cd flow-blast-hml
```

5. Add upstream as remote

```
git remote add upstream https://github.com/nmdp-bioinformatics/flow-blast-hml
```

6. Pull and merge latest changes from upstream master to your local master branch

```
git checkout master  
git pull upstream master  
git push
```

7. Create a new local feature branch

```
git checkout -b new-feature-branch
```

8. Edit files locally
9. Commit changes to local feature branch

```
git commit -m "made changes"
```

10. Push changes from local feature branch to remote feature branch on your fork

```
git push origin new-feature-branch
```

11. Browse to the Github web page for your fork repo (something like <https://github.com/username-nmdp/flow-blast-hml>) and hit the new pull request button.
12. Edit the pull request description and hit create new pull request button.
13. Other contributors will review the changes in the pull request.
14. When the pull request looks good, it will be merged into the master branch.

15. Hit the delete branch button to delete your remote feature branch (the commits have been merge upstream, so it is no longer necessary).
16. Delete your local feature branch

```
git branch -d new-feature-branch
```

3.2 Installation

3.3 Docker