



H3Africa Data & Biospecimen Catalogue

User's Guide

Contents

Background	1
How the catalogue functions	1
A guide to the home page	2
Using the basic search tool (Login not required)	4
Creating an account	4
Doing an advanced search (Login required)	5
Requesting biospecimens or data (Login required)	6
Accessing additional information or assistance	8

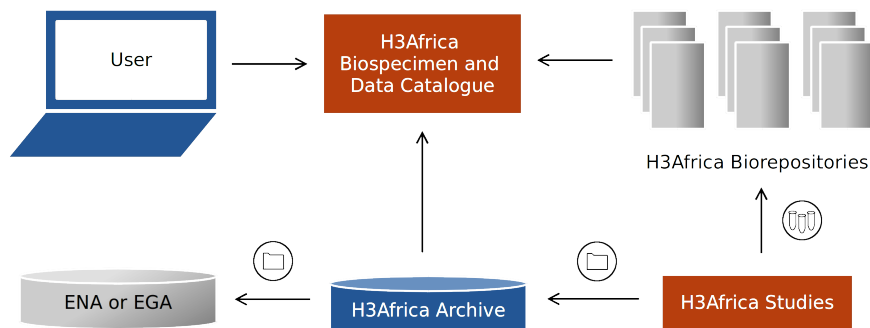
Background

The Human Heredity and Health in Africa (H3Africa) consortium has generated biospecimens and data for a variety of diseases. Access to these is controlled via a Data and Biospecimen Access Committee (DBAC). For more information on H3Africa and the research projects involved see: <http://h3africa.org>.

How the catalogue functions

The **H3Africa Catalogue** gives researchers the ability to browse the available biospecimens and data from H3Africa studies, along with their descriptions, and allows one to request access to these items. The information contained in the H3Africa catalogue is derived from the H3Africa archive, which is hosted by **H3ABioNet**, and three H3Africa biorepositories (figure 1).

Figure 1: Sources of catalogue content



H3Africa archive

The H3Africa archive acts as custodian of H3Africa genomic and phenotype data, and prepares the data for submission to public repositories such as the European Genome-phenome Archive (EGA) or the European Nucleotide Archive (ENA). This is a funder requirement, and an important step in facilitating further research that could benefit study participants.

H3Africa biorepositories

Biospecimens from H3Africa studies are deposited into three H3Africa biorepositories, which are based in Nigeria, Uganda and South Africa:

- [IHVN](#)
- [IBRH3AU](#)
- [CLS](#)

Metadata from the archive and biorepositories are submitted to the catalogue on a monthly basis. The archive data contains more metadata than the data derived from the biorepositories. As a result, biospecimens contained in one of the biorepositories that are not represented by corresponding data in the EGA will not have all the metadata fields available for searching. The H3Africa policies for data and biospecimen access and release are described in the [H3Africa policy documents](#).

A guide to the home page

[back to contents](#)

Figure 2: A guide to the home page

The screenshot shows the H3Africa Data & Biospecimen Catalogue home page. The page is titled "H3Africa Data & Biospecimen Catalogue" and includes a navigation bar with "Home", "Docs", "Contact", and "Login". The main content area is divided into several sections:

- Catalogue stats** (Callout 2): Shows "Last update: 2020-09-15", "Studies: 7", "Datasets: 12", and "Biospecimens: 23421".
- H3Africa** (Callout 1): Describes the Human Heredity and Health in Africa (H3Africa) Initiative, its goals, and the data sources (EGA and biorepositories).
- Biorepositories** (Callout 1): Lists the three biorepositories: IBRH3AU (Makerere University, Uganda), IHVN (Institute of Human Virology, Nigeria), and CLS (University of the Witwatersrand School of Pathology, South Africa).
- Search** (Callout 3): A search bar with a magnifying glass icon and a "Search" button.
- Policy documents** (Callout 4): A link to "Policy documents".
- Available Studies** (Callout 5): A table listing studies with columns for Title, Acronym, Design, EGA Accession, Data use codes, Participants, Biospecimens, and Paired.
- Advanced Search** (Callout 6): A section for advanced search and access requests, including a "Request Access" button.

Title	Acronym	Design	EGA Accession	Data use codes 🔗	Participants	Biospecimens	Paired
H3Africa Chip Design Study	H3AChip	Control	EGAS00001002976	DUO:0000006 DUO:0000027 DUO:0000024 DUO:0000019 DUO:0000021	348	66	151
Stroke Investigative Research & Educational Network	SIREN		Unavailable	Unavailable	0	5986	0

The home page consists of five main sections (anti-clockwise from centre), as depicted in figure 2:

1. **Introduction:** background to the catalogue and links to relevant sites
2. **Content overview:** a summary of the studies, datasets and biospecimens in the catalogue
3. **Basic search menu:** a tool to search the catalogue using key words
4. **Policy documents:** links to important documents for requesting data or biospecimens
5. **Available studiesⁱ:** a list of studies along with their key characteristics, such as their EGA study accession, the Data Use Ontology (DUO) codes linked to their associated datasets and the number of biospecimens available

6. **Response items:** links to a range of functions:

- **Docs:** access the users' guide
- **Contact:** access additional information or assistance
- **Login:** login or create an account
- **Search catalogue:** do an advanced search (login required)
- **Request Access:** initiate the process of requesting data and/or biospecimens (login required)

ⁱ **NOTE:**

- clicking on the the EGA accession (figure 3) links to the entry for the relevant study on the EGA website
- clicking on the title or acronym of the study (figure 3) provides a more detailed description of the study as well as its associated datasets and biospecimens
- the table lists the number of participants for whom data is available in the EGA (not the total number of participants involved in the study)

Figure 3: *Accessing information about available studies*

Available Studies								
Title	Acronym	Design	EGA Accession	Data use codes ↗	Participants	Biospecimens	Paired	
H3Africa Chip Design Study	H3AChip	Control	EGAS00001002976	DUO:0000006 DUO:0000027 DUO:0000024 DUO:0000019 DUO:0000021	348	66	151	
Stroke Investigative Research & Educational Network	SIREN		Unavailable	Unavailable	0	5986	0	
Genetic determinants of susceptibility to trypanosomiasis	TrypanoGEN	Case	EGAS00001002602	DUO:0000006 DUO:0000027 DUO:0000024 DUO:0000019 DUO:0000021	233	0	0	
Collaborative African Genomics Network	CARGEN	Case- Control	EGAS00001002656	DUO:0000006 DUO:0000027 DUO:0000024 DUO:0000019 DUO:0000021	314	1113	306	
Clinical and genetic studies of hereditary neurological disorders in Mali, West Africa	NEEDI	Cohort	EGAS00001003016	DUO:0000006 DUO:0000027 DUO:0000024 DUO:0000019 DUO:0000021	10	627	10	
The Genomics of Schizophrenia in the South African Xhosa People	SAX		Unavailable	Unavailable	0	2238	0	
Genomic and Environmental Risk Factors for Cardiometabolic Disease in Africans	AWI-Gen	Case- Control	EGAS00001002482	DUO:0000006 DUO:0000027 DUO:0000024 DUO:0000019 DUO:0000014 DUO:0000015 DUO:0000011	971	13391	0	

Using the basic search tool (login not required)

[back to contents](#)

In order to identify relevant studies and review the associated datasets or biospecimens, researchers can use the basic search tool. Alternatively, in order to access the advanced search tool, researchers should [create an account](#) and login.

Figure 4: *Doing a basic search*

Catalogue stats	
Last update:	2020-09-15
Studies	7
Datasets	12
Biospecimens	23421
Search	
<input type="text"/>	
<input type="submit" value="Q"/>	
Policy documents ▼	

Creating an account

[back to contents](#)

The registration form for creating an account can be accessed from the login screen:

- Click on the “Login” tab on the home page
- Click “sign up” in the sentence below the page heading
- Complete all fields and click “Sign Up”

The new account will then be verified and a confirmation email will be sent to the email account specified.

NOTE:

An institutional email address should be used for registration.

Doing an advanced search (login required)

[back to contents](#)

After login, users are able to access the advanced search tool by clicking on 'Filter' in the lefthand side menu or clicking on the 'Filter' tab at the top righthand corner of the screen.

In order to identify relevant datasets or biospecimens, researchers can filterⁱⁱ catalogue content by:

- **Study characteristics:** study acronym, study design (eg. case-control), primary disease
- **Participant characteristicsⁱⁱⁱ:** disease status, ethnicity, gender, country^{iv}
- **Dataset characteristics:** EGA/ENA accession, data type
- **Biospecimen characteristics:** specimen type

NOTE:

- ⁱⁱ Filters which apply exclusively to datasets or biospecimens are indicated by yellow or green icons, respectively.
- ⁱⁱⁱ If the data for a biospecimen is not yet in the EGA, no metadata will be available for the related participant.
- ^{iv} "Country" refers to the origin of the biospecimen, i.e. the participant's country of residence, which may not coincide with the participant's nationality.

Figure 5: *Doing an advanced search*

Advanced search

Study acronym Primary disease Disease status

Ethnicity Gender

Datasets

EGA/ENA accession **D** Study design **D** Data type **D**

Biospecimens

Country **B** Specimen type **B**

B or **D** these filters and results are only applied to either biospecimens or datasets respectively.

Apply filter

Use the filter options above to search for datasets and biospecimens

Once the filtering criteria have been set, the user can click on the blue ‘Apply Filter’ button (figure 5) to produce a table of results.

The table of results (see figure 6) includes links to:

- a more detailed description of the study as well as its associated datasets and biospecimens (click on the study acronym)
- (for datasets only) the corresponding entry on the European Genome-phenome Archive (EGA) website (click on the EGA accession)
- (for datasets only) information regarding the Data Use Ontology (DUO) codes associated with a particular dataset (click on "details", in the DUO codes column)

NOTE:

- If a participant included in the search output is linked to multiple studies, all of these studies will appear in the search output.

Requesting biospecimens or data (login required)

[back to contents](#)

In order to submit a request, the user needs to:

- create an account (as described in the [previous section](#))
- (*for biospecimen requests*) agree to abide by the terms and conditions outlined in the [H3Africa Biospecimen Sharing Policy](#)
- (*for data requests*) agree to abide by the terms and conditions outlined in the [H3Africa Data Sharing Access and Release Policy](#)

NOTE:

Links to policy documents can be found in the menu at the lefthand side of the screen.

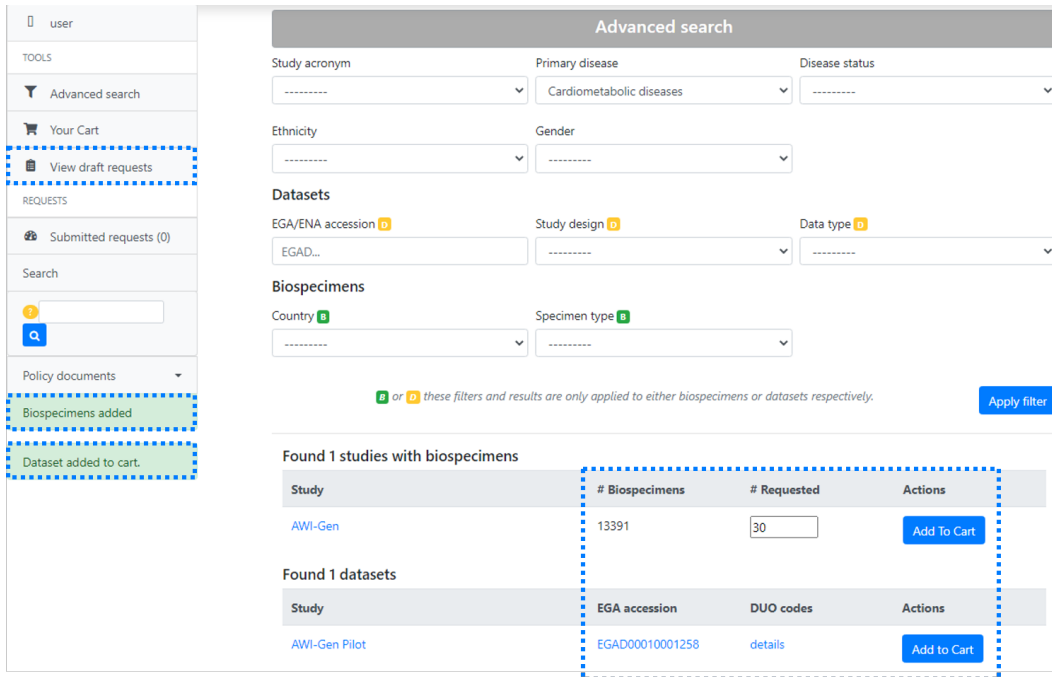
1. Adding content to the cart

Once relevant datasets or biospecimens have been identified (as described in the [previous section](#)), they can be added to the cart using the blue “Add to Cart” button (figure 6).

The number of biospecimens which match the query are displayed in the column labelled “# Biospecimens”. The number of biospecimens required can be specified using the box in the column labelled “# Requested” (figure 6).

Once data or biospecimens have been added to the cart, a message appears at the lefthand side of the screen (figure 6) to confirm that the relevant items have been added.

Figure 6: Adding biospecimens or datasets to the cart



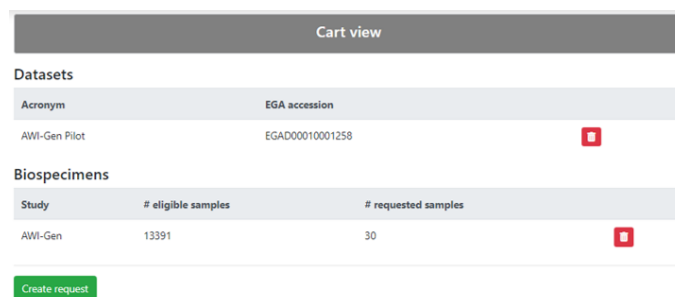
2. Reviewing the cart and creating a request

The contents of the cart can be reviewed at any point, by clicking on “Your Cart” in the menu at the left of the screen (figure 6). The items added during the most recent search are displayed.

Once all of the required items have been added to the cart, the user can create a request by clicking the green “Create request” button (figure 7). This will open a request form, which can be edited and saved using the blue “Save draft” button at the bottom of the form. The draft must be given a title before it can be saved.

When the request form is created, all items which had previously been added to the cart (i.e. not only items added during the most recent search) are automatically added to the request form, and the cart is cleared. Items that are no longer required can be removed by clicking on the red delete icon (see figure 7).

Figure 7: Reviewing cart contents and creating a request



NOTE:

A number of considerations are relevant when creating a request. The factors listed below are documented in the request form, which is submitted to the DBAC along with any request for data/biospecimens:

- research question being addressed and intended research methods
- research ethics, consent and study approval
- benefit to Africa and African collaborators

In addition, submitting the form requires uploading a number of documents, including:

- evidence of peer review for the proposed research
- evidence, in the form of publications, to show that the applicant has experience in the area of research
- a signed [data access agreement](#)

3. Submitting a request

The user can submit a request to the DBAC by clicking the green “Submit” button at the bottom of the request form. Once a request has been submitted, it will be reviewed by the DBAC. A response can be expected within about 4 weeks of submission.

Accessing additional information or assistance

[back to contents](#)

For requests for bioinformatics or technical assistance:

<https://helpdesk.h3abionet.org/>

For queries related to data or biospecimen access, contact the DBAC:

dbac@h3africa.org

For queries about H3Africa studies, datasets or biospecimens:

<https://h3africa.org/index.php/contacts/>