

# Package ‘dbgap2x’

April 13, 2019

**Title** dbGaP to eXtract and eXplore

**Version** 1.0

**Description** This package has been created to help users exploring, and downloading phenotypic data from the database of Genotypes and Phenotypes (dbGaP)

**URL** <https://github.com/gversmee/dbgap2x>

**BugReports** <https://github.com/gversmee/dbgap2x/issues>

**Depends** R (>= 3.1.1)

**Imports** data.table, httr, parallel, RCurl, XML

**License** Apache 2

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 6.1.1

**NeedsCompilation** no

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browse.dbgap	<i>Open the dbGap webpage of your study in your browser</i>
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### Description

Open the dbGap webpage of your study in your browser

### Usage

```
browse.dbgap(phs, no.browser = FALSE)
```

### Arguments

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
no.browser	set on TRUE will just display the URL

### Value

Opens the dbGaP webpage of your study in your browser

### Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenne, Niloofar Jalali

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browse.study	<i>Opens the study webpage in a web browser</i>
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### Description

Opens the study webpage in a web browser

### Usage

```
browse.study(phs, no.browser = FALSE)
```

### Arguments

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
no.browser	set on TRUE will just display the URL

### Value

Open the study webpage in a web browser

### Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenne, Niloofar Jalali

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consent.groups	<i>Gets you the list of the consent groups of the study</i>
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**Description**

Gets you the list of the consent groups of the study

**Usage**

```
consent.groups(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
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**Value**

Returns a data frame with 3 cols : "consent group number", "cg short name" and "cg long name"

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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datatables.dict	<i>Create a tables dictionnary of your study</i>
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**Description**

This function extracts informations from data.dict.xml files from the dbgap ftp server to create a table dictionnary.

**Usage**

```
datatables.dict(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
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**Value**

a data.frame with 3 cols : XXXXX

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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dbgap.data_dict	Create a table dictionnary and a variable dictionnary
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**Description**

This function extracts informations from data.dict xml files in dbgap to create table dictionnary and a variable dictionnary.

**Usage**

```
dbgap.data_dict(xml, dest)
```

**Arguments**

xml	Folder where the xml files are located
dest	Folder where the data dictionnary and the table dictionnary will be extracted

**Value**

2 csv files "phs\_tables\_dict.csv" and "phs\_variables\_dict.csv"

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenne, Niloofar Jalali

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dbgap.decrypt	Decrypt ncbi_enc files
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**Description**

This function decrypts dbGap files (\*ncbi\_enc) using your personal key

**Usage**

```
dbgap.decrypt(files, key = FALSE)
```

**Arguments**

file	file or folder where your encrypted files are located
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**Value**

Decrypt the file(s) and replace it in the same folder

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenne, Niloofar Jalali

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dbgap.download	<i>Downloads and decrypts dbGaP files</i>
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**Description**

This function downloads and decrypts dbGaP files

**Usage**

```
dbgap.download(krt, key = FALSE)
```

**Arguments**

krt	path/to/your/cart.krt file generated from the dbGaP website
key	path/to/yourkey.ngc file

**Value**

A folder named dbGaP-\*\*\* in your working directory that contains your decrypted files

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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is.parent	<i>Is the study a parent or a child study</i>
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**Description**

Is the study a parent or a child study

**Usage**

```
is.parent(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
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**Value**

Returns a logical TRUE if the study is a parent, and false if the study is a child

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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n.pop	<i>Gets the population number of the study</i>
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### Description

This function extracts informations from data.dict.xml files from the dbgap ftp server to get the population characteristics. Works only for parents studies.

### Usage

```
n.pop(phs, consentgroups = TRUE, gender = TRUE)
```

### Arguments

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
consentgroup	if false, will return only the total number of participants

### Value

a data.frame with 2 cols : name of the consent group and n total. Possibility to add the breakdown by gender

### Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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n.tables	<i>Gets the number of phenotypic datatables in the study</i>
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### Description

This function extracts informations from data.dict.xml files from the dbgap ftp server to get the study characteristics. Works only for a parent study.

### Usage

```
n.tables(phs)
```

### Arguments

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
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### Value

Return the number of phenotypic datatables in the study

### Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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n.variables	<i>Gets the number of phenotypic variables in the study</i>
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**Description**

This function extracts informations from data.dict.xml files from the dbgap ftp server to get the study characteristics. Works only for a parent study.

**Usage**

```
n.variables(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
-----	---

**Value**

Return the number of phenotypic variables in the study

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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parent.study	<i>Gets you the parent study of the specified study</i>
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**Description**

Gets you the parent study of the specified study

**Usage**

```
parent.study(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
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**Value**

Returns the phs id of the latest version of the parent study, and its full name. If the study is it's parent itself, will return the phs id and the name of the study.

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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phs.version	<i>Gets you the full dbGap study ID of your study, with the latest version</i>
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**Description**

Gets you the full dbGap study ID of your study, with the latest version

**Usage**

```
phs.version(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
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**Value**

Returns the full ID of the latest version of your study

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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search.dbgap	<i>Opens the results of your search on dbGaP</i>
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**Description**

Opens the results of your search on dbGaP

**Usage**

```
search.dbgap(term, no.browser = FALSE)
```

**Arguments**

term	Term of your search
no.browser	set on TRUE will just display the URL

**Value**

Open the results of your search on dbGap

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali



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study.name	<i>Gets you the full name of the study on dbGap</i>
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**Description**

Gets you the full name of the study on dbGap

**Usage**

```
study.name(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
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**Value**

Returns the full name of the study

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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sub.study	<i>Gives the substudies associated with the one selected</i>
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**Description**

Gives the substudies associated with the one selected

**Usage**

```
sub.study(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
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**Value**

Returns a dataframe with 2 cols : the phs id and the name of the substudy

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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variables.dict	<i>Creates a variables dictionnary of your study</i>
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**Description**

This function extracts informations from data.dict.xml files from the dbgap ftp server to create a variable dictionnary.

**Usage**

```
variables.dict(phs)
```

**Arguments**

phs	dbGap study ID (phs00xxxx, or 00xxxx, or xxx)
-----	---

**Value**

a data.frame with 4 cols : variable identifier (dbGap), table name, variable name, variable description

**Author(s)**

Gregoire Versmee, Laura Versmee, Mikael Dusenne, Niloofar Jalali

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