

Package ‘dbgap2x’

July 2, 2019

Title dbGaP to eXtract and eXplore

Version 1.0

Description This package has been created to help users exploring, downloading and decrypting phenotypic and genomic 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

R topics documented:

browse.dbgap	2
browse.study	2
consent.groups	3
datatables.dict	3
dbgap.decrypt	4
dbgap.download	4
is.parent	5
list.tables	5
list.variables	6
n.pop	6
n.tables	7
n.variables	7
parent.study	8
phs.version	8
search.dbgap	9
study.name	9
sub.study	10
variables.dict	10

Index**11**

browse.dbgap	<i>Opens the dbGaP webpage of your study in your browser</i>
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Description

Opens 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 Dusenno, Niloofar Jalali

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

Opens the study webpage in a web browser

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

consent.groups	<i>Gets the list of the study's consent groups</i>
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Description

Gets the list of the study's consent groups

Usage

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

Arguments

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

Value

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

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

datatables.dict	<i>Creates study's tables dictionary</i>
-----------------	--

Description

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

Usage

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

Arguments

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

Value

a data.frame with 3 columns : table id (pht), table name (dt_study_name) and description (dt_label)

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

dbgap.decrypt	<i>Decrypts ncbi_enc files</i>
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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

Decrypts the file(s) and replaces it in the same folder

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenne, Niloofar Jalali

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 Dusenne, Niloofar Jalali

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)
-----	---

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

list.tables	<i>Lists the phenotypic datatables in the study</i>
-------------	---

Description

Lists the phenotypic datatables in the study

Usage

```
list.tables(filelist)
```

Value

Return the phenotypic datatables in the study

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

list.variables	<i>Gets the phenotypic variables in the study</i>
----------------	---

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

```
list.variables(phs, useftp = F)
```

Arguments

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

Value

Return the phenotypic variables in the study

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

n.pop	<i>Gets the study participants' number</i>
-------	--

Description

This function extracts information 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 columns : 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

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

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)
-----	---

Value

Return the number of phenotypic datatables in the study

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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

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(...)
```

Arguments

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

Value

Returns the number of phenotypic variables in the study

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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

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)
-----	---

Value

Returns the full ID of the latest version of your study

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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

Gets 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

A data frame of the results of your search on dbGaP

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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)
-----	---

Value

Returns the full name of the study

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenno, Niloofar Jalali

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)
-----	---

Value

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

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenne, Niloofar Jalali

variables.dict	<i>Creates a variables dictionary of your study</i>
----------------	---

Description

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

Usage

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

Arguments

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

Value

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

Author(s)

Gregoire Versmee, Laura Versmee, Mikael Dusenne, Niloofar Jalali

Index

`browse.dbgap`, [2](#)
`browse.study`, [2](#)

`consent.groups`, [3](#)

`datatables.dict`, [3](#)
`dbgap.decrypt`, [4](#)
`dbgap.download`, [4](#)

`is.parent`, [5](#)

`list.tables`, [5](#)
`list.variables`, [6](#)

`n.pop`, [6](#)
`n.tables`, [7](#)
`n.variables`, [7](#)

`parent.study`, [8](#)
`phs.version`, [8](#)

`search.dbgap`, [9](#)
`study.name`, [9](#)
`sub.study`, [10](#)

`variables.dict`, [10](#)