Install R package ctrdata

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Install package `ctrdata` on an R system

The R Project website (https://www.r-project.org/) provides installers for the R system. It can be used with software products and graphical user interfaces such as R Studio, or Microsoft R Open, or from Visual Studio Code.

General information on the `ctrdata` package is available here: https://rfhb.github.io/ctrdata/.

In R, execute:

```r
install.packages("ctrdata")
```

For using the development version of package `ctrdata`, install from GitHub:

```r
# install package under development
install.packages(c("remotes"))
remotes::install_github("rfhb/ctrdata", dependencies = TRUE, build_vignettes = TRUE)
```

Either of the above should install package `ctrdata` into the user's library.

Internet access via proxy

Functions in package `ctrdata` that start with `ctr...` require access to trial registers over the internet via the `https` protocol. Many organisations use transparent proxies that may *not* require users to do any configurations. However, if necessary, package `ctrdata` can use proxy settings set by users in their R session such as follows:

```r
Sys.setenv(https_proxy = "your_proxy.server.domain:8080") # if needed
Sys.setenv(https_proxy_user = "your_userid:your_password") # if needed
```

Databases to use

At this time, a PostgreSQL, DuckDB, an SQLite or a MongoDB (local or remote) database can be used with the package `ctrdata`. A full SQLite database is provided in the R package `RSQLite`. Suggested installation instructions for PostgreSQL are here and for a local MongoDB server are here; a remote MongoDB database server is accessible here. See here for a speed comparison of the databases; recommended: DuckDB, PostgreSQL or MongoDB local server.

Purpose	Function call
Create **SQLite** database connection	`dbc <- nodbi::src_sqlite(dbname = "name_of_my_database", collection = "name_of_my_collection")`
Create **MongoDB** database connection	`dbc <- nodbi::src_mongo(db = "name_of_my_database", collection = "name_of_my_collection")`
Create **PostgreSQL** database connection	`dbc <- nodbi::src_postgres(dbname = "name_of_my_database"); dbc[["collection"]] <- "name_of_my_collection"`
Create **DuckDB** database connection	`dbc <- nodbi::src_duckdb(dbname = "name_of_my_database", collection = "name_of_my_collection")`
Use connection with `ctrdata` functions	`ctrdata::{ctrLoadQueryIntoDb, dbQueryHistory, dbFindIdsUniqueTrials, dbFindFields, dbGetFieldsIntoDf}(con = dbc, ...)`

Attach package `ctrdata`

After completing the installation, attach the package from the user's library. This will also check the availability of the additional installation requirements as mentioned above:

```
library(ctrdata)
```

Remember to respect the registers' terms and conditions (see `ctrOpenSearchPagesInBrowser(copyright = TRUE)`). Please cite this package in any publication as follows: Ralf Herold (2024). ctrdata: Retrieve and Analyze Clinical Trials in Public Registers. R package version 1.16.0. https://cran.r-project.org/package=ctrdata