Generate histograms in Figure 3

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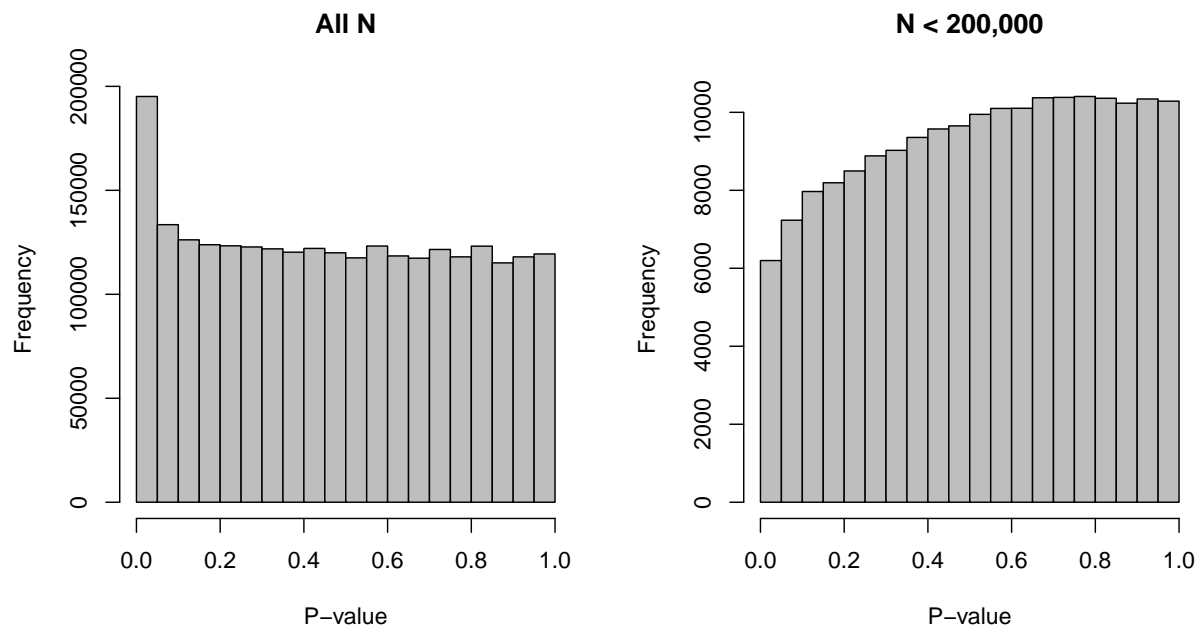*2016-10-27*

Load the relevant libraries:

```
library(readr)
library(dplyr)
library(fdrtool)
library(betareg)
library(splines)
library(Hmisc)
library(ggplot2)
```

<<<<<<< HEAD Load the .RData file with the BMI GIANT GWAS meta-analysis data: =======
Load the .RData file with the BMI GIANT GWAS meta-analysis data >>>>>>> origin/master

```
load("BMI_GIANT_GWAS.RData")
```

Generate histogram of p-values for all sample sizes and histogram of p-values for sample sizes < 200,000:

```
par(mfrow=c(1,2))
hist(BMI_GIANT_GWAS$p, col="grey", main="All N", xlab="P-value")
hist(BMI_GIANT_GWAS$p[BMI_GIANT_GWAS$N < 200000],
     col="grey", main="N < 200,000", xlab="P-value")
```

Session Information

```
devtools::session_info()
```

```
## Session info -----------------------------------------------------------------

##   setting  value
##   version  R version 3.3.1 (2016-06-21)
##   system   x86_64, mingw32
##   ui       RTerm
##   language (EN)
##   collate  English_United States.1252
##   tz       America/New_York
##   date     2016-10-27

## Packages ---------------------------------------------------------------------

##   package      * version date       source
##   acepack        1.3-3.3 2014-11-24 CRAN (R 3.3.0)
##   assertthat     0.1     2013-12-06 CRAN (R 3.3.1)
##   betareg      * 3.0-5   2014-09-25 CRAN (R 3.3.1)
##   BiocStyle    * 2.0.2   2016-05-16 Bioconductor
##   chron          2.3-47  2015-06-24 CRAN (R 3.3.1)
##   cluster        2.0.4   2016-04-18 CRAN (R 3.3.1)
##   codetools      0.2-14  2015-07-15 CRAN (R 3.3.1)
##   colorspace     1.2-6   2015-03-11 CRAN (R 3.3.1)
##   data.table     1.9.6   2015-09-19 CRAN (R 3.3.1)
##   DBI            0.4-1   2016-05-08 CRAN (R 3.3.1)
##   devtools       1.12.0  2016-06-24 CRAN (R 3.3.1)
##   digest         0.6.9   2016-01-08 CRAN (R 3.3.1)
##   dplyr        * 0.5.0   2016-06-24 CRAN (R 3.3.1)
##   evaluate       0.9     2016-04-29 CRAN (R 3.3.1)
##   fdrtool      * 1.2.15  2015-07-08 CRAN (R 3.3.0)
##   flexmix        2.3-13  2015-01-17 CRAN (R 3.3.1)
##   foreign        0.8-66  2015-08-19 CRAN (R 3.3.1)
##   formatR        1.4     2016-05-09 CRAN (R 3.3.1)
##   Formula      * 1.2-1   2015-04-07 CRAN (R 3.3.0)
##   ggplot2      * 2.1.0   2016-03-01 CRAN (R 3.3.1)
##   gridExtra      2.2.1   2016-02-29 CRAN (R 3.3.1)
##   gtable         0.2.0   2016-02-26 CRAN (R 3.3.1)
##   Hmisc        * 3.17-4  2016-05-02 CRAN (R 3.3.1)
##   htmltools      0.3.5   2016-03-21 CRAN (R 3.3.1)
##   knitr          1.13    2016-05-09 CRAN (R 3.3.1)
##   lattice      * 0.20-33 2015-07-14 CRAN (R 3.3.1)
##   latticeExtra   0.6-28  2016-02-09 CRAN (R 3.3.1)
##   lmtest         0.9-34  2015-06-06 CRAN (R 3.3.1)
##   magrittr       1.5     2014-11-22 CRAN (R 3.3.1)
##   Matrix         1.2-6   2016-05-02 CRAN (R 3.3.1)
##   memoise        1.0.0   2016-01-29 CRAN (R 3.3.1)
##   modeltools     0.2-21  2013-09-02 CRAN (R 3.3.0)
##   munsell        0.4.3   2016-02-13 CRAN (R 3.3.1)
##   nnet           7.3-12  2016-02-02 CRAN (R 3.3.1)
```

```
## plyr          1.8.4  2016-06-08 CRAN (R 3.3.1)
## R6            2.1.2  2016-01-26 CRAN (R 3.3.1)
## RColorBrewer  1.1-2  2014-12-07 CRAN (R 3.3.0)
## Rcpp          0.12.6 2016-07-19 CRAN (R 3.3.1)
## readr       * 0.2.2  2015-10-22 CRAN (R 3.3.1)
## rmarkdown     1.0    2016-07-08 CRAN (R 3.3.1)
## rpart         4.1-10 2015-06-29 CRAN (R 3.3.1)
## sandwich      2.3-4  2015-09-24 CRAN (R 3.3.1)
## scales        0.4.0  2016-02-26 CRAN (R 3.3.1)
## stringi       1.1.1  2016-05-27 CRAN (R 3.3.0)
## stringr       1.0.0  2015-04-30 CRAN (R 3.3.1)
## survival    * 2.39-4 2016-05-11 CRAN (R 3.3.1)
## tibble        1.1    2016-07-04 CRAN (R 3.3.1)
## withr         1.0.2  2016-06-20 CRAN (R 3.3.1)
## yaml          2.1.13 2014-06-12 CRAN (R 3.3.1)
## zoo           1.7-13 2016-05-03 CRAN (R 3.3.1)
```