

Generate histograms in Figure 3

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Load the relevant libraries

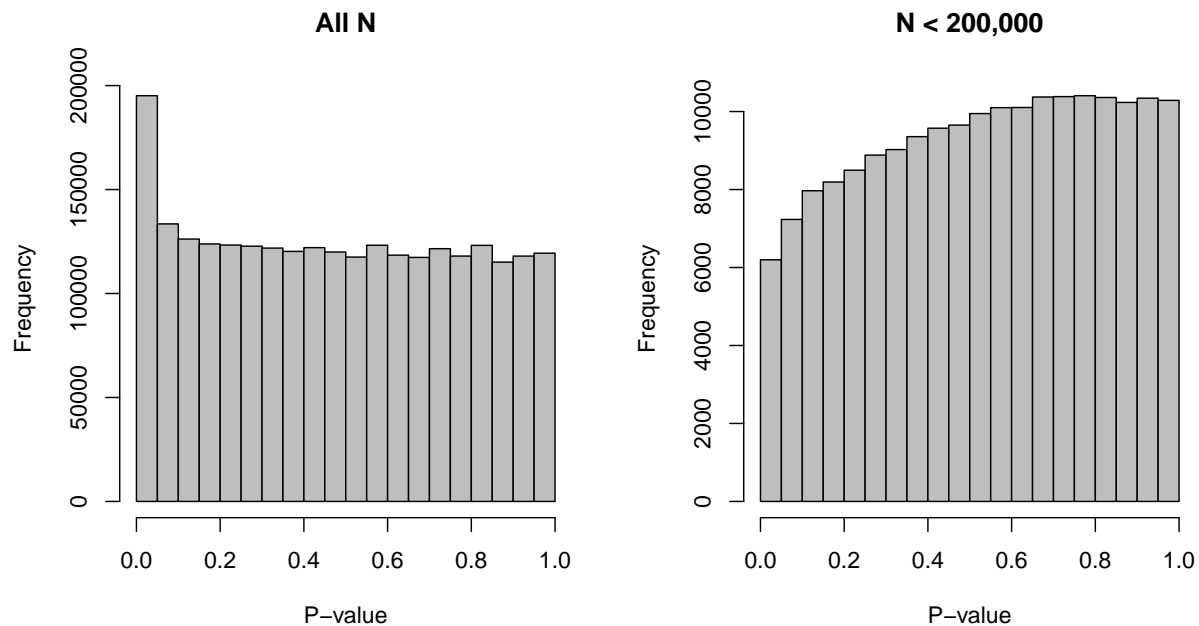
```
library(readr)
library(dplyr)
library(fdrtool)
library(betareg)
library(splines)
library(Hmisc)
library(ggplot2)
```

Load the .RData file with the BMI GIANT GWAS meta-analysis data

```
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      2016-10-26

## 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)