main_py

August 26, 2022

1 Pie chart of samples

[1]:
```
import pandas as pd
import matplotlib.pyplot as plt
```

[2]:
```
%matplotlib inline
```

[3]:
```
df = pd.read_csv("../../input/phenotypes/merged/_m/merged_phenotypes.csv",␣
↪index_col=0)
df = df[df["Race"].isin(["AA", "CAUC"]) & (df["Dx"].isin(["Control",␣
↪"Schizo"]))].copy()
df.Race = df.Race.astype("category").cat.rename_categories({'CAUC': 'EA'})
df.head()
```

[3]:

	BrNum	RNum	Region	RIN	Age	Sex	Race	Dx	mitoRate	rRNA_rate	overallMapRate
R12864	Br1303	R12864	Caudate	9.6	42.98	F	AA	Schizo	0.032654	0.000087	0.909350
R12865	Br1320	R12865	Caudate	9.5	53.12	M	AA	Schizo	0.019787	0.000070	0.873484
R12866	Br1321	R12866	Caudate	9.1	57.13	F	AA	Schizo	0.013006	0.000040	0.905505
R12867	Br1326	R12867	Caudate	9.2	74.56	M	AA	Schizo	0.032594	0.000038	0.910551
R12868	Br1418	R12868	Caudate	9.5	43.35	M	AA	Schizo	0.052347	0.000056	0.748659

[4]:
```
df.groupby("Region").size()
```

[4]:
```
Region
Caudate          420
DLPFC            434
DentateGyrus     161
HIPPO            447
dtype: int64
```

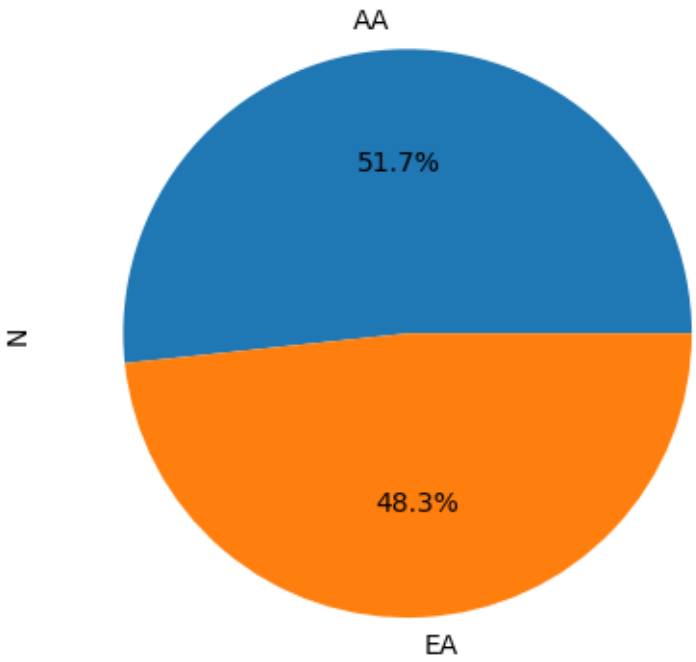
[5]:
```
data = df.groupby(["Region", "Race"]).size().reset_index().rename(columns={0:
 ↪"N"})
data
```

[5]:

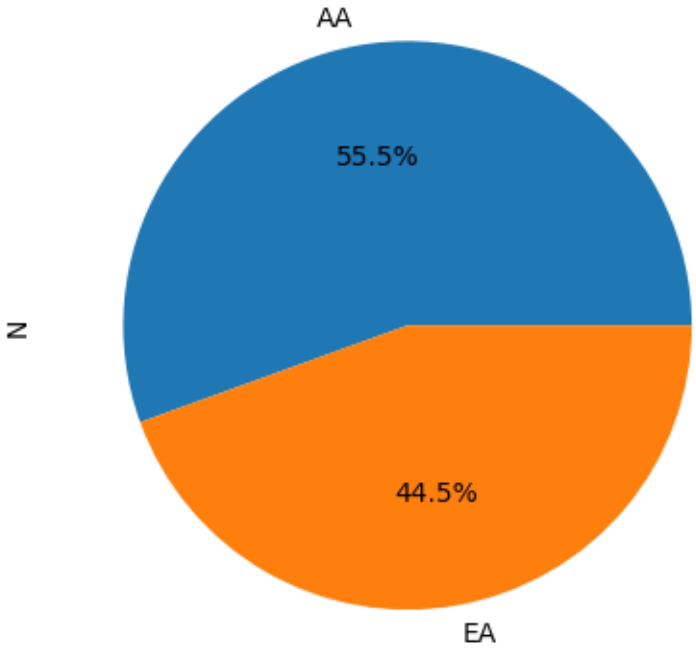
	Region	Race	N
0	Caudate	AA	217
1	Caudate	EA	203
2	DLPFC	AA	241
3	DLPFC	EA	193
4	DentateGyrus	AA	78
5	DentateGyrus	EA	83
6	HIPPO	AA	248
7	HIPPO	EA	199

[6]:
```
caudate = data[(data["Region"] == "Caudate")].drop("Region", axis=1).
 ↪set_index("Race")
dlpfc = data[(data["Region"] == "DLPFC")].drop("Region", axis=1).
 ↪set_index("Race")
gyrus = data[(data["Region"] == "DentateGyrus")].drop("Region", axis=1).
 ↪set_index("Race")
hippocampus = data[(data["Region"] == "HIPPO")].drop("Region", axis=1).
 ↪set_index("Race")
```

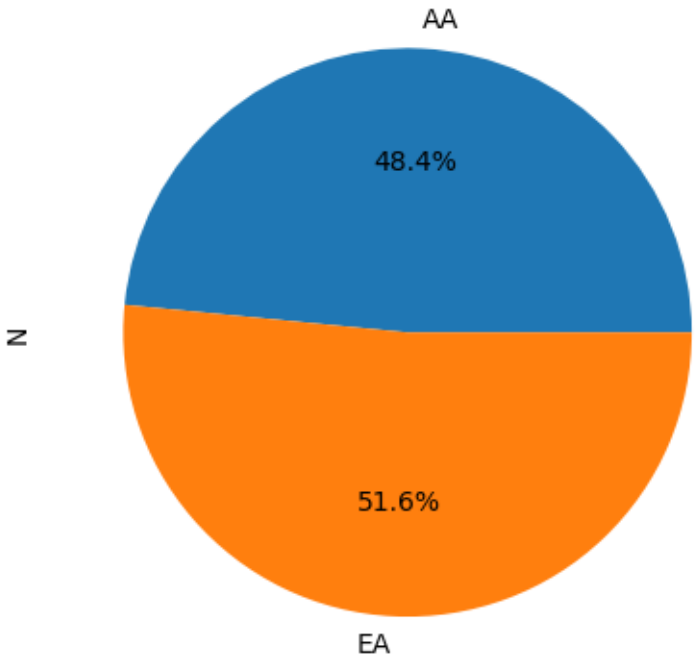
[7]:
```
caudate.N.plot.pie(autopct="%.1f%%")
plt.savefig('caudate_pie.pdf')
```



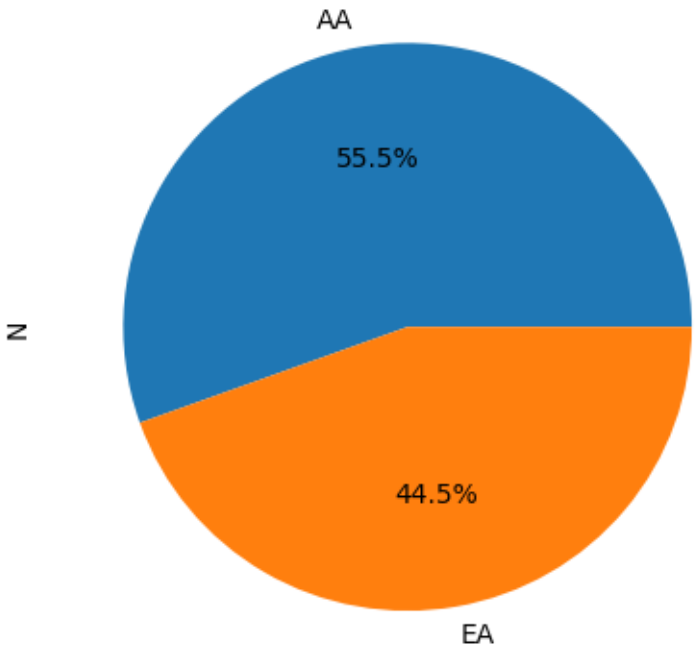
[8]:
```
dlpfc.N.plot.pie(autopct="%.1f%%");
plt.savefig('dlpfc_pie.pdf')
```



[9]:
```
gyrus.N.plot.pie(autopct="%.1f%%");
plt.savefig('dentate_gyrus_pie.pdf')
```



[10]:
```
hippocampus.N.plot.pie(autopct="%.1f%%")
plt.savefig('hippocampus_pie.pdf')
```



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