

2. Define variables of interest

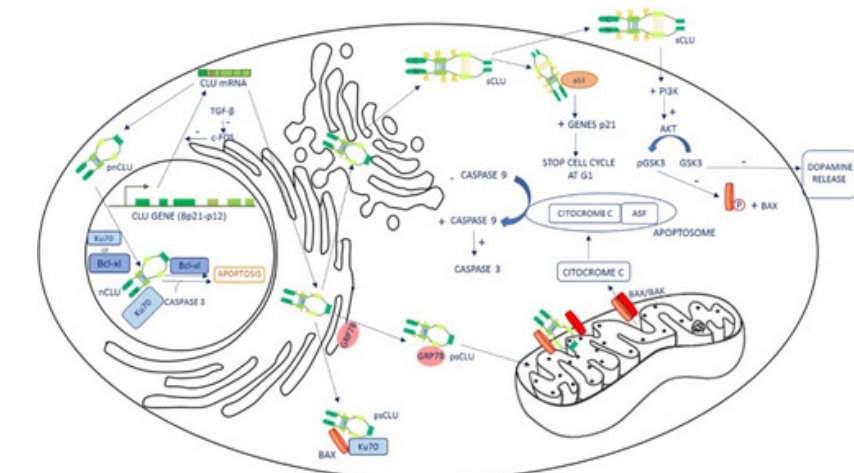
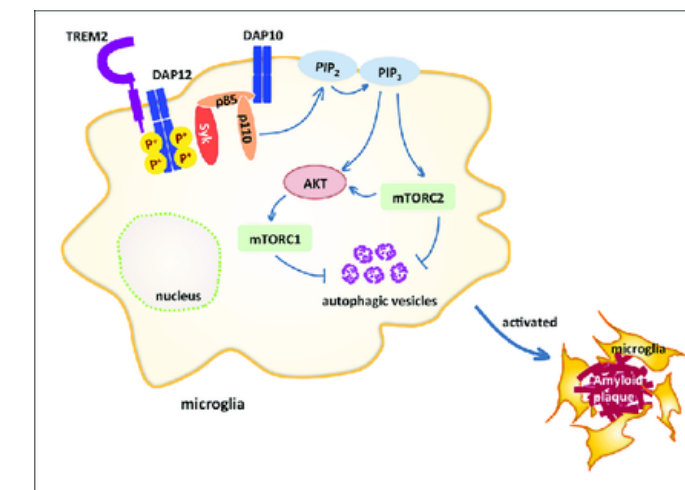
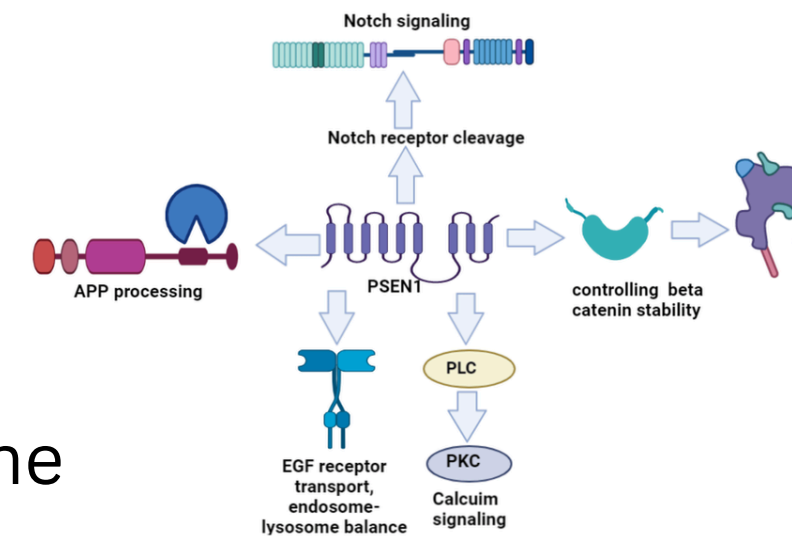
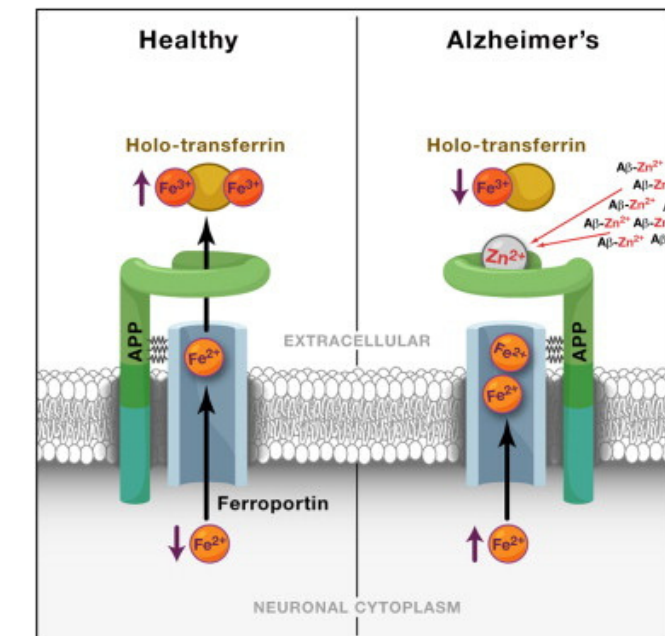
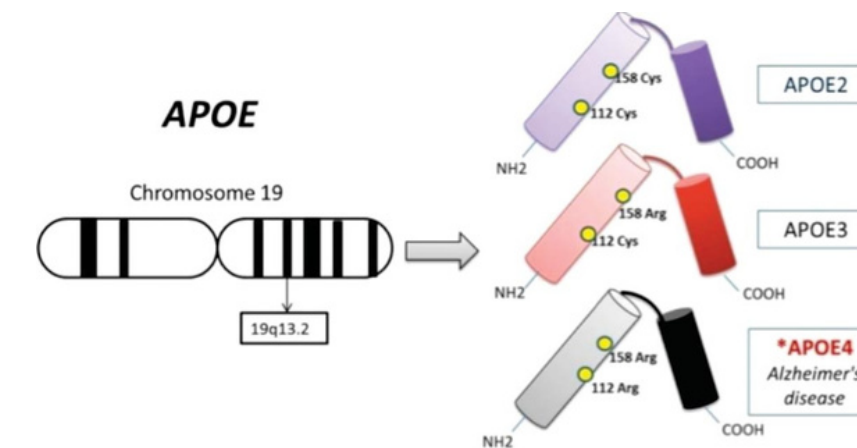
- Clustering Alzheimer Disease by using gene expression

Sampling unit : Alzheimer Disease

list variables of interest

- Gene = Alzheimer Gene
(categorical data)

1. APOE (Apolipoprotein E) Gene
2. APP (Amyloid Precursor Protein) Gene
3. PSEN1 (Presenilin 1) and PSEN2 (Presenilin 2) Genes
4. TREM2 (Triggering Receptor Expressed on Myeloid Cells 2) Gene
5. CLU (Clusterin) Gene



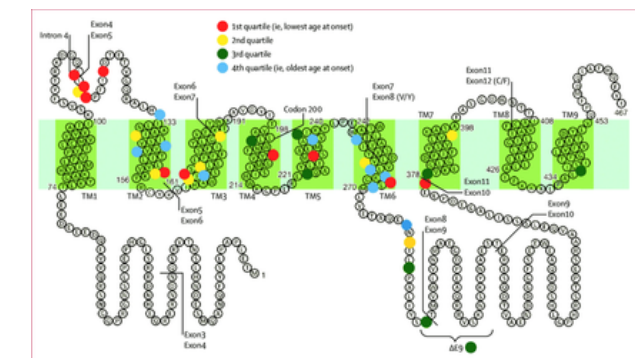
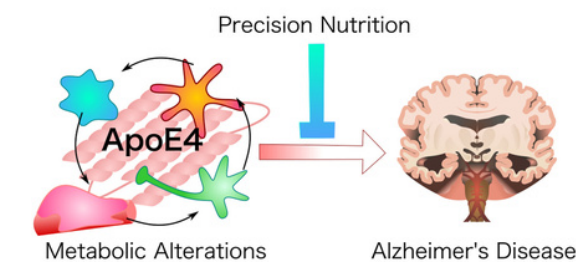
2. Define variables of interest

list variables of interest

- Exercise (**categorical data**)
0 : Lack of exercise
1 : Exercise
- Depression (**categorical data**)
0 : Not having depression
1 : Have depression
- age_at_diagnosis (**continuous data**)
Age of the patient at diagnosis time

- Smoking (**categorical data**)
0 : Non-smoker
1 : Smoker

- Genetics (**categorical data**)
1. APOE4
2. PSEN1



- Health Conditions (**categorical data**)
1. Diabetes
2. High blood pressure
3. Stroke

Group members

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2. 6609655227 ปิ่นเพชร วัฒนาเพิ่มพูล
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4. 6609655359 ศิรดา บุญหมั่น