# Example of Microarray Data Analysis

## Locate the data to analyze

#### GENE EXPRESSION ONMIBUS DATABASE



- Public functional genomic repository from NCBI
- Array and sequence-based data are accepted
- It is mandatory to upload your microarrays CEL files before publishing any article about them

http://www.ncbi.nlm.nih.gov/geo/

## Identify a dataset

#### GENE EXPRESSION ONMIBUS DATABASE

Search for GDS4155[ACCN]

The data for the example: GDS4155

Keyword or GEO Accession	Search
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	DataSet Record GDS4155: Expr	ession Profiles Data	Analysis Tools Sample Subsets
Title:	Dopaminergic transcription factors Ascl1, Lmx1a, Nurr1 combined effect on embryonic fibroblasts		
Summary:	Analysis of induced dopaminergic (iDA) neurons generated from E14.5 mouse embryonic fibroblasts (MEFs) reprogrammed by infection with lentiviruses expressing dopaminergic transcription factors Ascl1, Lmx1a and Nurr1. Results provide insight into the molecular basis of MEF to iDA reprogramming.		
Organism:	Mus musculus		
Platform:	GPL6246: MoGene-1_0-st] Affymetrix Mouse Gene 1.0 ST Array [transcript (gene) version]		
Citation:	Caiazzo M, Dell'Anno MT, Dvoretskova E, Lazarevic D et al. Direct generation of functional dopaminergic neurons from mouse and human fibroblasts. <i>Nature</i> 2011 Jul 3;476(7359):224-7. PMID: 21725324		
Reference Series:	GSE27174	Sample count:	8
Value type:	transformed count	Series published:	2011/07/04

Search Clear Show All (Advanced Search)

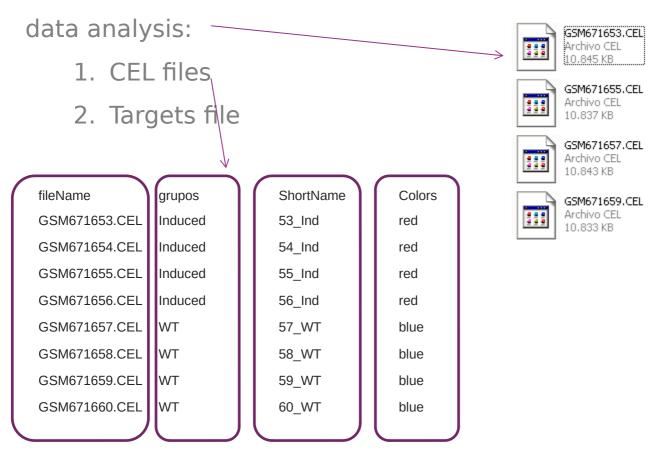
# Identify groups in data

Sample	Title	
<u>GSM671653</u>	Fibroblasts dopaminergic induced rep1	
GSM671654	Fibroblasts dopaminergic induced rep2	
GSM671655	Fibroblasts dopaminergic induced rep3	
<u>GSM671656</u>	Fibroblasts dopaminergic induced rep4	
<u>GSM671657</u>	Fibroblasts not induced rep1	
GSM671658	Fibroblasts not induced rep2	
GSM671659	Fibroblasts not induced rep3	
GSM671660	Fibroblasts not induced rep4	



### Download celfiles & Prepare targets

Two types of files are necessary to begin the





GSM671654.CEL Archivo CEL 10.840 KB



GSM671656.CEL Archivo CEL 10.840 KB



GSM671658.CEL Archivo CEL 10.842 KB



GSM671660.CEL Archivo CEL 10.842 KB