n 🔻 Query & Browse 🔻

Email GEO

## **Gene Expression Omnibus**



GEO is a public functional genomics data repository supporting MIAME-compliant data submissions. Array- and sequence-based data are accepted. Tools are provided to help users query and download experiments and curated gene expression profiles.

Keyword or GEO Accession Search

Getting Started	Tools	Browse Content	
Overview	Search for Studies at GEO DataSets	Repository Browser	
FAQ	Search for Gene Expression at GEO Profiles	DataSets:	4348
About GEO DataSets	Search GEO Documentation	Series: 🔽	87644
About GEO Profiles	Analyze a Study with GEO2R	Platforms:	17565
About GEO2R Analysis	GEO BLAST	Samples:	2163652
How to Construct a Query	Programmatic Access		
How to Download Data	FTP Site		
Information for Submitters			
	Submission Guidelines	MIAME Standards	
Information for Submitters Login to Submit	Submission Guidelines Update Guidelines	MIAME Standards Citing and Linking to	o GEO

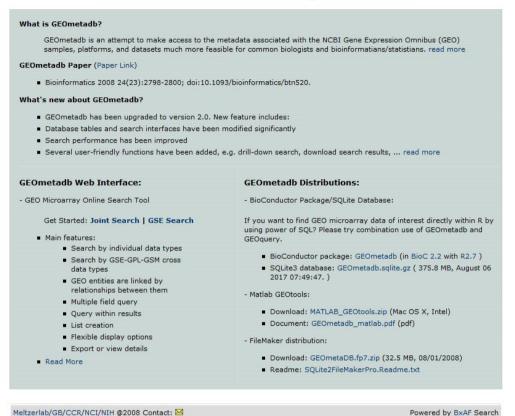
GEO data repository [ncbi.nlm.nih.gov/geo/]

Click on "Platforms", search for "humanmethylation27"

No tool to extract meta data → use GEOmetadb instead



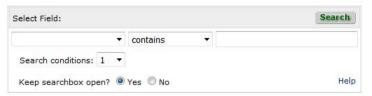
## **GEOmetadb: GEO Microarray Search Tool**



GEOmetadb [gbnci-abcc.ncifcrf.gov/geo/]

GPL accession for the 27K platform is GPL8490

## **GEO Sample (GSM) Search**





## Exercise (10min)

- What is the number of samples and datasets available on GEO using the 450K chip? (hint: official name is "Illumina HumanMethylation450 BeadChip")
- Search for datasets that are using the 450K chip, have .idat files and information on age, gender, and BMI of the sample donors (how many samples are available?)

GPL13534: 63404 samples, 931 datasets

- Look for dataset GSE72556
- Download meta data, make sure to include the columns "characteristics\_ch1"
- Download the .tar containing all .idat files from GEO