

## *Agilent eArray 4.0*

***Print what you want, when you want it.  
Any genome, any application, any  
probe – any time.***



# *Agilent eArray 4.0*

- eArray is the industry's only web-based microarray design application
- provides access to the annotation and probe sequences of Agilent's gene expression (GE), comparative genomics hybridization (CGH), and chromatin immunoprecipitation (ChIP) catalog microarray content
- create customized microarrays from Agilent's microarray probe databases, your own uploaded probes, or a combination of both



# How to gain access to eArray?

[www.chem.agilent.com](http://www.chem.agilent.com)

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**eArray**

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**Any genome, any application, any probe, any time**

Uncover the biological data hidden in your samples with eArray and Agilent's custom printing. Agilent's flexible manufacturing allows you to create your own microarray designs that meet your specific biological needs. Design at your own pace and receive delivery of your arrays in weeks, anywhere in the world. eArray is a secure, online array creation application tool that enables you to design and print what you want, when you want it. more ...

**Features**

- Easily design your microarray by either choosing from optimized probes for given genes, uploading your own sequences, or having Agilent design probes
- Search and download any Agilent Catalog Microarray content with free access and use in your designs
- Upload your own probes -and content
- Search and download all content in Agilent's High-Density CGH and ChIP-on-chip probe databases - Millions of optimized tiling probes at your fingertips
- Collaborate with other colleagues using secure online capabilities for building and sharing design information
- Print microarrays when you want using Agilent's SurePrint technology for the finest quality *in situ* products available

**Login to eArray 4.0**

Now with new, enhanced features

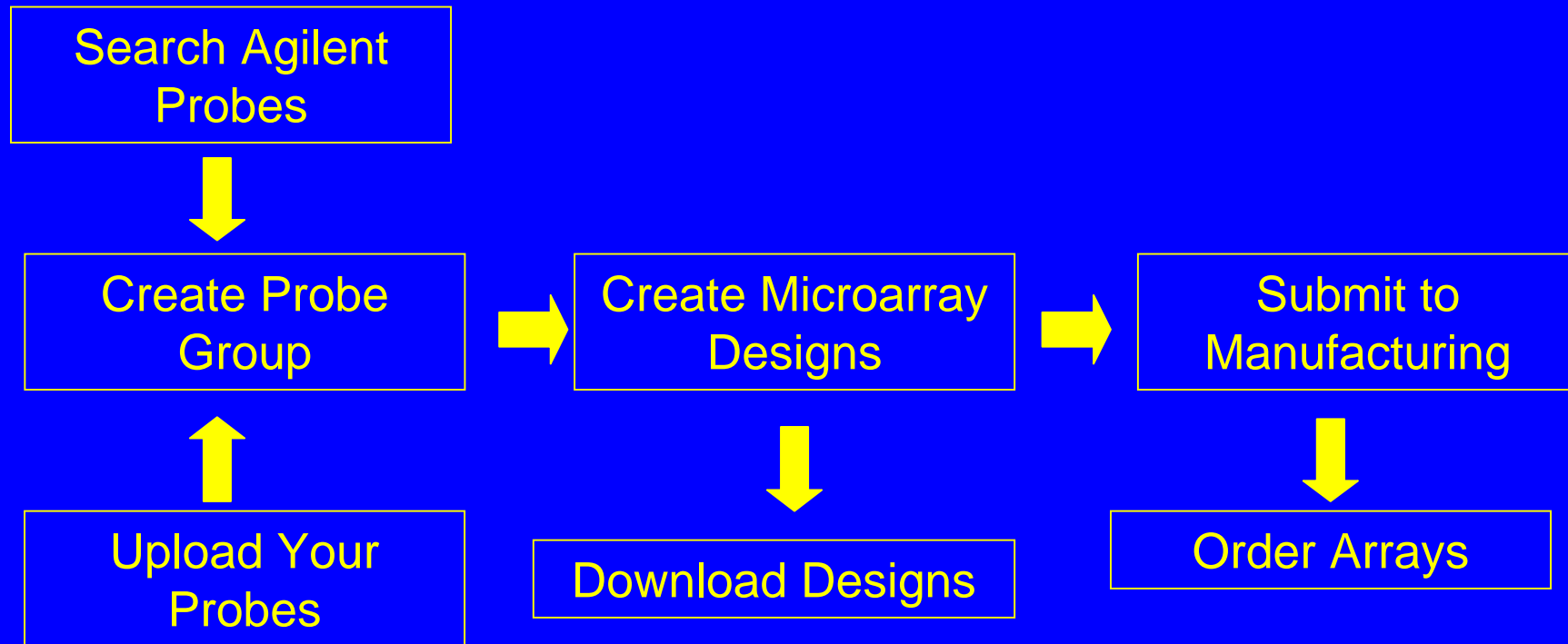
Printer friendly version | Email this page

**Dr. Wiener Zoltan**

2006.09. SE GSI Microarray továbbképzés



# Process overview



# How to search for probes?

## Step 1: Select search Method

The screenshot shows the eArray - Semmelweis university web interface. The top navigation bar includes links for Home, Collaborations, Microarray Design, Probe Group, Probes, Tools, Administration, and Help. Below this is a secondary navigation bar with icons for Create, Search, Browse, Transfer, and Order. The user is logged in as Zoltan Wiener. The main content area is titled "Search Probe Group" and contains several search criteria: Name, Keywords, Status, Type, Folder, Include SubFolders (checked), Created By, Creation Date (with a "Select" link), and Is High Density. A "Display" section shows "Results per page" and "Search" and "Reset" buttons. A dropdown menu is open over the "Search" icon, listing search methods: Simple, GO (circled in red), Advanced, Chromosomal Location, HD-CGH, and HD-ChIP. A blue box on the right contains the text: "Searching probes with the help of the Gene Ontology Database".

Searching probes with the help of the Gene Ontology Database



# Gene Ontology Database

<http://www.geneontology.org/>

AmiGO! Your friend in the Gene Ontology. - Microsoft Internet Explorer

Address: [http://www.geneontology.org/cgi-bin/amiigo/go.cgi?action=plus\\_node&depth=1&search\\_constraint=terms&query=GO:0009987&session\\_id=4767b1158063473](http://www.geneontology.org/cgi-bin/amiigo/go.cgi?action=plus_node&depth=1&search_constraint=terms&query=GO:0009987&session_id=4767b1158063473)

## AmiGO

Search GO

Exact Match  
 Terms  
 Gene Symbol/Name

Submit Query

Advanced Query  
Query By Sequence

Gene Product Filters

Species

All  
A. thaliana  
B. anthracis str. Am

DataSource ?

All  
CGD  
dictyBase

Evidence Code ?

All Curator Approved  
IGI  
IEP

Ontology Filter

All  
Biological Process  
Cellular Component  
Molecular Function

Set Filters

XML  
Flat File  
Permalink

all : all ( 184870 )

- GO:0008150 : biological\_process ( 145029 )
  - GO:0000004 : biological process unknown ( 32522 )
  - GO:0009987 : cellular process ( 77121 )
    - GO:0007155 : cell adhesion ( 1466 )
    - GO:0007154 : cell communication ( 12499 )
    - GO:0030154 : cell differentiation ( 3690 )
    - GO:0008037 : cell recognition ( 71 )
    - GO:0050875 : cellular physiological process ( 70331 )
    - GO:0050794 : regulation of cellular process ( 13190 )
  - GO:0007275 : development ( 30697 )
  - GO:0040007 : growth ( 17609 )
  - GO:0051704 : interaction between organisms ( 1476 )
  - GO:0021700 : maturation ( 0 )
  - GO:0007582 : physiological process ( 93922 )
  - GO:0043473 : pigmentation ( 103 )
  - GO:0050789 : regulation of biological process ( 30799 )
  - GO:0000003 : reproduction ( 22250 )
  - GO:0050896 : response to stimulus ( 16239 )
  - GO:0016032 : viral life cycle ( 307 )
- GO:0005575 : cellular\_component ( 106518 )
- GO:0003674 : molecular\_function ( 127482 )
- obsolete\_biological\_process : obsolete\_biological\_process ( 0 )
- obsolete\_cellular\_component : obsolete\_cellular\_component ( 0 )
- obsolete\_molecular\_function : obsolete\_molecular\_function ( 0 )

[Help](#) [GOst](#) [The Gene Ontology](#) [GO Request](#) [AmiGO Request](#)

Last updated: 2006-09-10

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# Step 2: Enter search Criteria

**GO Search**

Folder: ALL

Include SubFolders:

Type: Expression

Species: M. musculus

Exact Search:

GO Term: immune response

Contained in Probe Groups:

Display: 100 Results per page

Search Reset



Searching takes time, be patient



# Probes are returned

Agilent Technologies - Microsoft Internet Explorer

Fájl Szerkesztés Nézet Kedvencek Eszközök Súgó

Vissza Keresés Kedvencek Multimédia

Cím <https://earray.chem.agilent.com/earray/probeGOSearch.do?action=results&result=current&allProbes=true&pager.offset=0#page> Ugrás

### Search Results

Number of Results: 552

Result Pages: 1 2 3 4 5 [Next >>]

Go to Page

Download Create Probe Group Show Statistics and Sequence Annotations Not Found

Select All  Show All

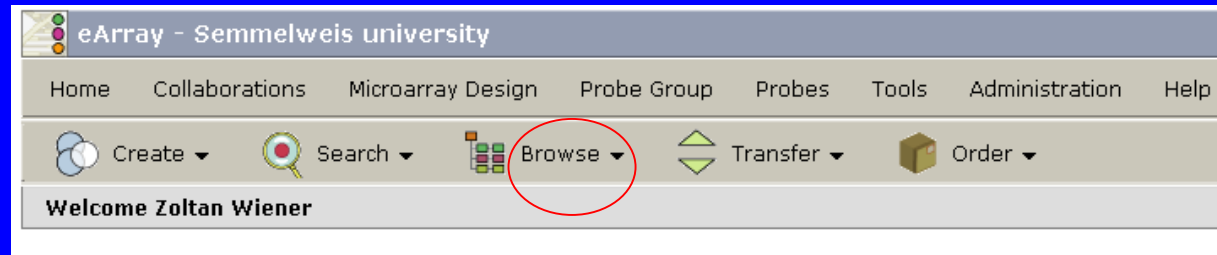
Select	Probe ID	Validated	Probe Type	Species	GeneName	GeneSymbol	Accessions
<input checked="" type="checkbox"/>	↕	↕		↕	↕	↕	
<input checked="" type="checkbox"/>	A_66_P102527	true	Expression	M. musculus	I IC8a		<a href="#">ucluster4 U025316</a> <a href="#">ref NM_146148</a> <a href="#">gb AB077295</a> <a href="#">gb AB077296</a> <a href="#">gb AB077297</a> <a href="#">gb AB077298</a>
ucluster4 complement component 8, alpha polypeptide							
<input checked="" type="checkbox"/>	A_66_P121008	true	Expression	M. musculus	I IBmi1		<a href="#">ucluster4 U064606</a> <a href="#">ref NM_007552</a> <a href="#">ref NM_147778</a> <a href="#">gb AK007318</a> <a href="#">gb AK041634</a>
ucluster4 B lymphoma Mo-MLV insertion region 1							
<input checked="" type="checkbox"/>	A_66_P108087	true	Expression	M. musculus	I IDock2		<a href="#">ucluster4 U032647</a> <a href="#">ref NM_033374</a> <a href="#">gb AK037611</a> <a href="#">gb AK085708</a> <a href="#">gb AK172915</a> <a href="#">gb AK172916</a>
ucluster4 dedicator of cyto-kinesis 2							
<input checked="" type="checkbox"/>	A_66_P117919	true	Expression	M. musculus	I ICc14		<a href="#">ucluster4 U013092</a> <a href="#">ref NM_013652</a> <a href="#">gb AF128218</a> <a href="#">gb AF128219</a> <a href="#">gb M23503</a> <a href="#">gb M23504</a>

Kész

Start Total Commander 6.0... Microsoft PowerPoint... 2 Microsoft Internet... névtelen - Paint 10:28



# Create Probe Group



Creation Method >> Define Probe group >> Select probes >>

**Probe Group created successfully!!**

### Edit Probe Group

Name: immune response

Type: Expression

Description: musmusculus immune response genes

Status: Incomplete

Folder: Tolger

Keywords: immune system

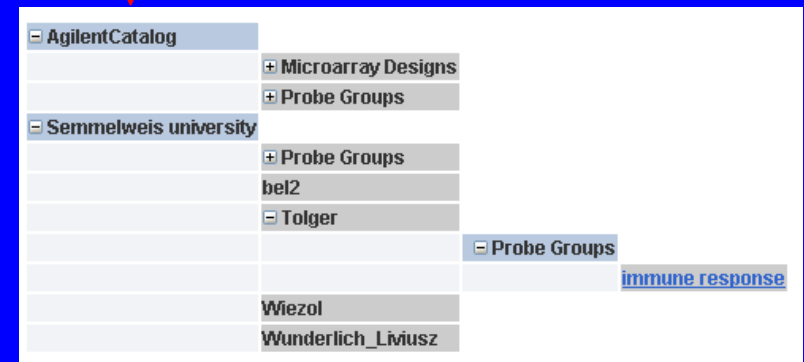
Created By: Zoltan Wiener

Creation Date: 09/14/2006

High Density ProbeGroup:

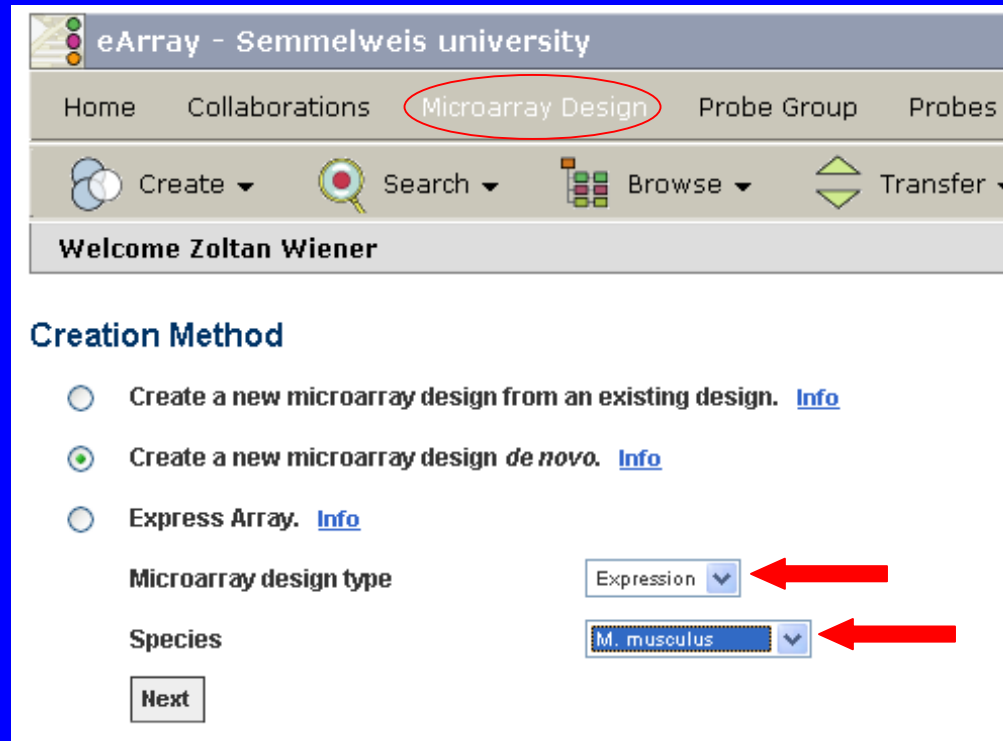
Number of Probes: 552

Search Criteria: [Click Here](#)



# Create a Microarray Design


## -Select creation methodology-




The screenshot shows the 'eArray - Semmelweis university' web interface. The navigation menu includes 'Home', 'Collaborations', 'Microarray Design' (circled in red), 'Probe Group', and 'Probes'. Below the menu are icons for 'Create', 'Search', 'Browse', and 'Transfer'. A welcome message reads 'Welcome Zoltan Wiener'.

### Creation Method

- Create a new microarray design from an existing design. [Info](#)
- Create a new microarray design *de novo*. [Info](#)
- Express Array. [Info](#)

Microarray design type: Expression 

Species: M. musculus 



# Create a Microarray Design

## -Define Microarray Design-

eArray - Semmelweis university

Home Collaborations Microarray Design Probe Group Probes Tools Administration

Create Search Browse Transfer Order

Welcome Zoltan Wiener

Creation Method >> Define Design >> Select Probe Groups >> Layout Probes >> Finish

### Step 2 of 5: Define Design

**Name**

**Description**


**Design Format**  [Show Details](#)

**Control Grid**   
4 X 44K  
2 X 11K  
2 X 105K  
8 X 1.9K  
1 X 44K  
1 X 22K  
1 X 244K

**Total Number of Features**

**Number of Available Features**

**Keywords**



# Add Probe Groups 1

**Step 3 of 5: Select Probe Groups**

Probe Groups

Select Name	Control Type	Replicate	Evenly Distribute
<input type="button" value="Remove"/> <input type="button" value="Add"/>			


Enable MicroArray set

Fill Microarrays

Probe Group To Fill Microarray

Attachment

Number of Microarrays 8

Number of Available Features 1577 

Number of Agilent Controls 323

Number of User Controls 0

**Search**

Name

Keywords

Status

Type **Expression**

Folder

Include SubFolders

Created By

Creation Date  [Select](#)

Is High Density

Display  Results per page



# Add Probe Groups 2

**Search Results**

Number of Results: 1

Select	Name	Type	Status	Creation Date	Created By	Folder	No. of Probes	Is High Density
<input type="radio"/>	<a href="#">immune response</a>	Expression	Incomplete	09/14/2006	Zoltan Wiener	Tolger	552	False

musmusculus immune response genes



# Add Probe Groups 3

Creation Method >> Define Design >> **Select Probe Groups** >> Layout Probes >>

### Step 3 of 5: Select Probe Groups

Probe Groups

Select Name	Control Type	Replicate	Evenly Distribute
<input type="checkbox"/> <a href="#">immune response</a>	biological	1	<input type="checkbox"/>

Enable MicroArray set

Fill Microarrays

Probe Group To Fill Microarray  [immune response](#)

Attachment

Number of Microarrays 8

Number of Available Features 1025

Number of Agilent Controls 323

Number of User Controls 0

Percentage Filled 46,05%



# Layout Probes

Creation Method >> Define Design >> Select Probe Groups >> **Layout Probes** >>

## Step 4 of 5: Layout Probes

[Feature Layout](#)

Randomized

Ordered for Agilent Scanner

**Linker**

Append linker to 3' end [More info on Linkers](#)

**Linker length**

Make probes of length

Add linker of length

**Linker sequence**

Use Agilent linker sequence



# Finish or Edit the Design

- If the design is to be reviewed by others within your organization (with versions created), the design should be saved in the 'Review' status.

[- AgilentCatalog		
	+ Microarray Designs	
	+ Probe Groups	
[- Semmelweis university		
	+ Probe Groups	
	bel2	
	[- Tolger	
		[- Microarray Designs
		Immune response array
		+ Probe Groups
	Wiezol	
	Wunderlich_Liviusz	

