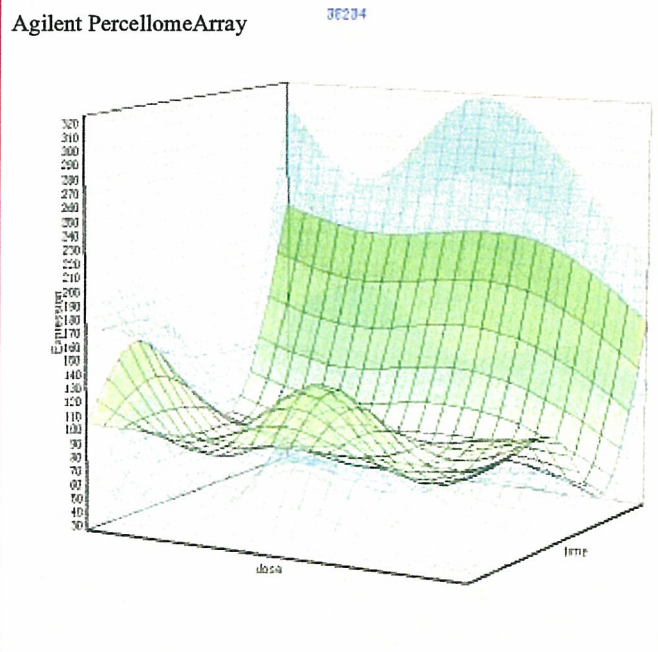
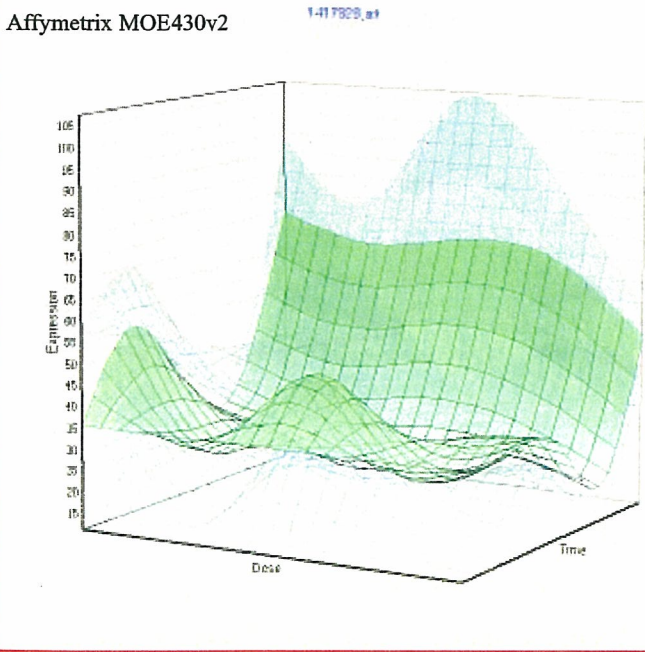


- [-] A2A\_ByUnigene@
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    - [+] 1427347\_s\_at
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    - [+] A\_52\_P621603
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Tubb2 /// 2410129E14Rik /// LOC544939

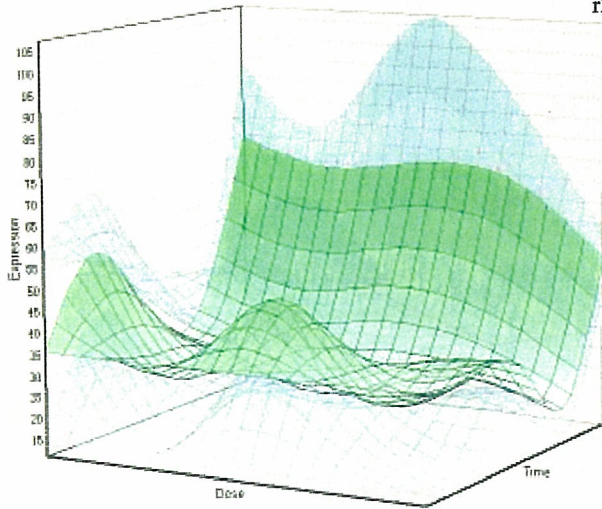


- [-] A2A\_ByUnigene@
  - [+] MOE430v2
    - [+] 1417828\_at
  - [+] AgilentID
    - [+] A\_51\_P183261
  - [+] AgilentNIHS44K
    - [+] 38234

Affymetrix MOE430v2

1417828\_at

p=1  
q=0  
r2=0

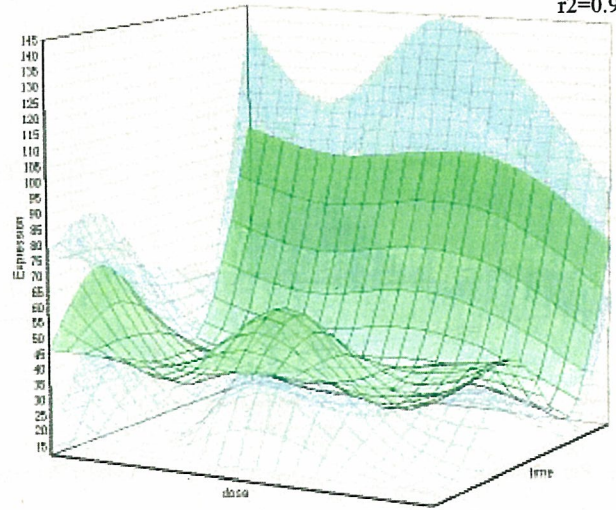


Agilent PercellomeArray

38234

補正後

r2=0.993

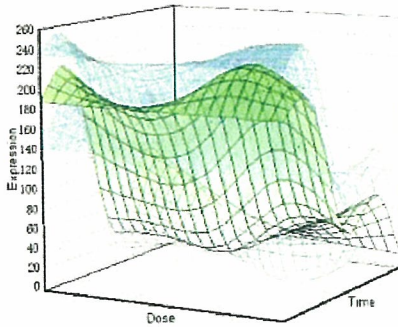


Aqp8

- [-] A2A\_ByUnigene@
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    - [+] A\_51\_P183261
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    - [+] 38234

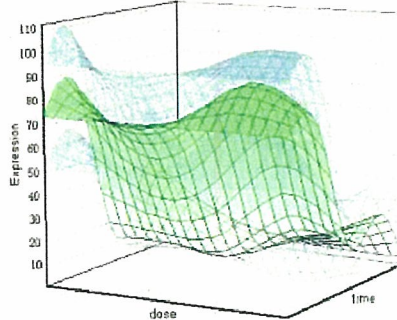
Affymetrix MOE430v2

1426516\_a\_at



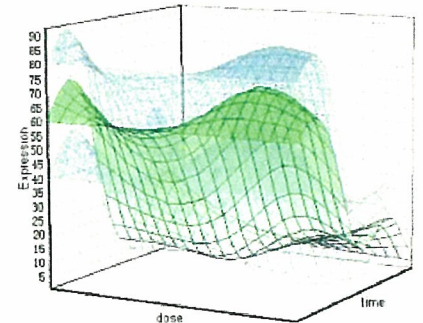
Agilent PercellomeArray

18916



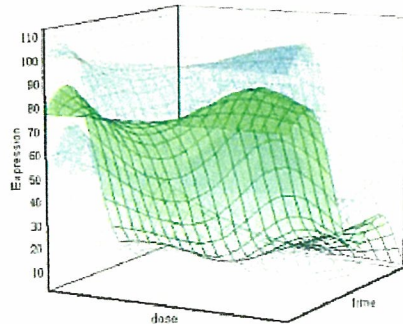
Agilent PercellomeArray

28341



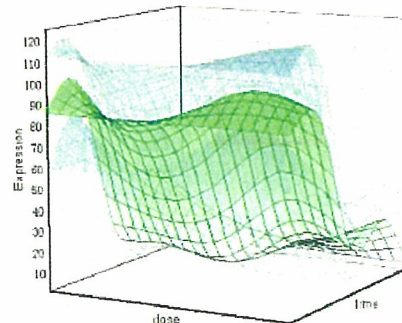
Agilent PercellomeArray

6632



Agilent PercellomeArray

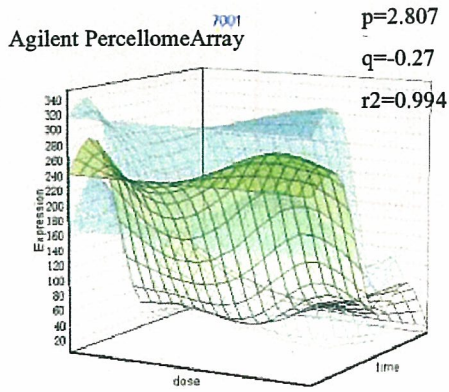
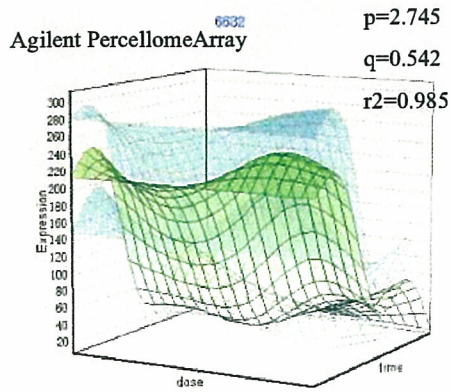
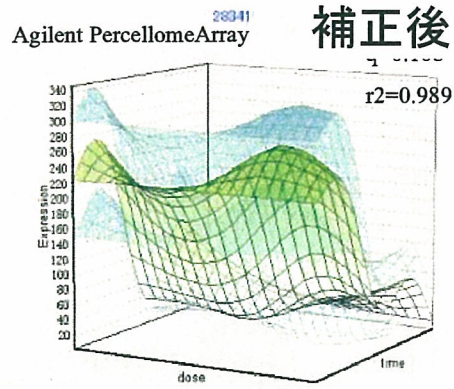
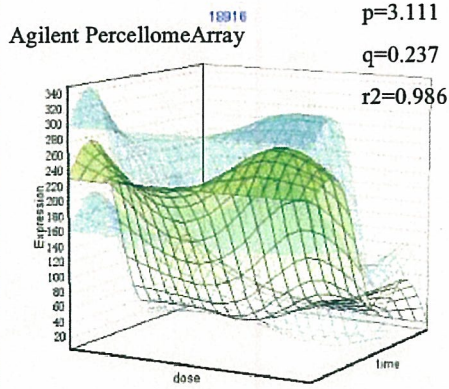
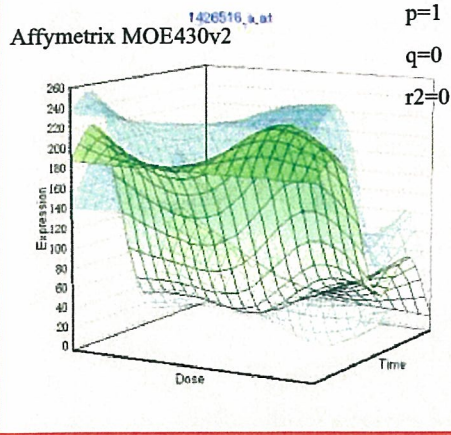
7001



- [-] A2A\_ByUnigene@
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  - [+] AgilentID
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    - [+] A\_52\_P483101
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    - [+] 18916
    - [+] 28341
    - [+] 6632
    - [+] 7001

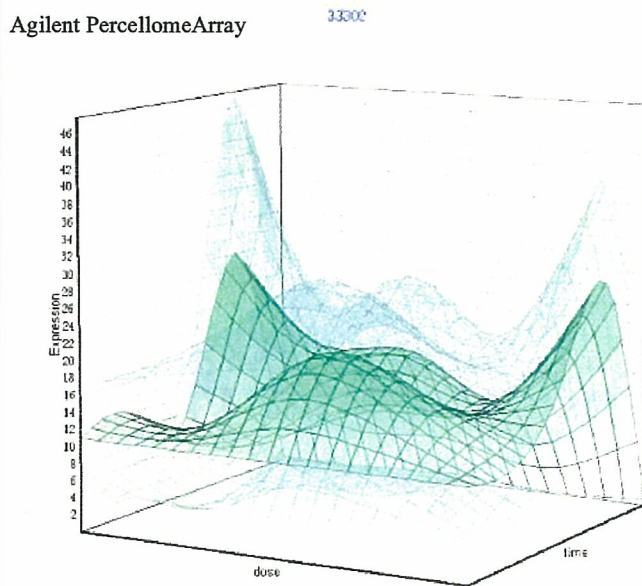
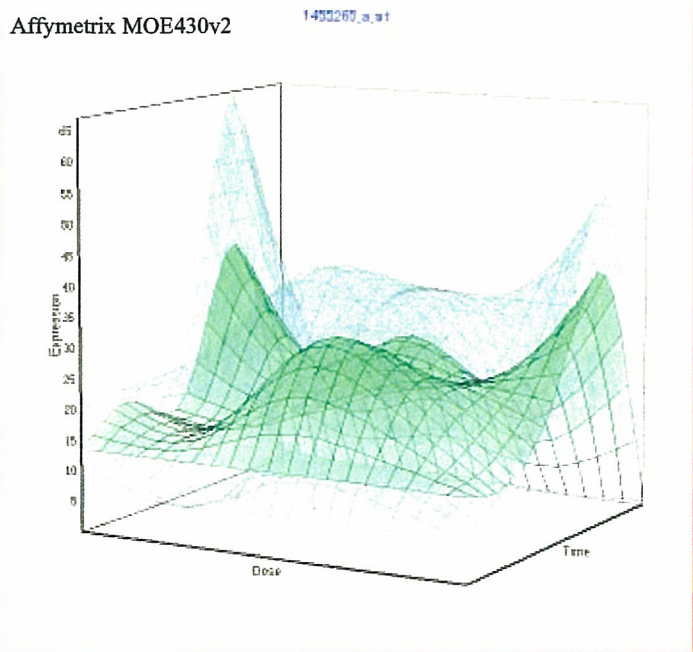
Lpin1





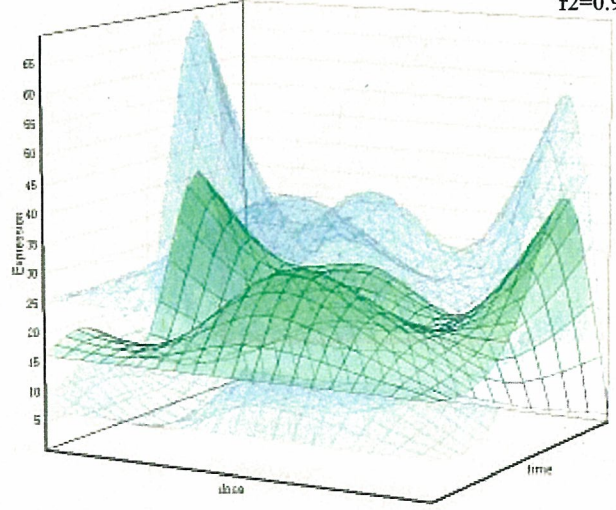
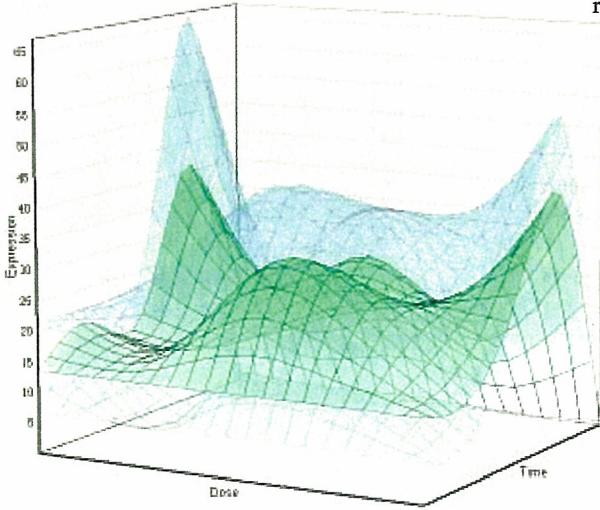
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  - [+] MOE430v2
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    - ▷ A\_52\_P483105
  - [+] AgilentNIHS44K
    - ▷ 18916
    - ▷ 28341
    - ▷ 6632
    - ▷ 7001

Lpin1



- [-] A2A\_ByUnigene@
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    - ▷ 1455265\_a.at
  - [+] AgilentID
    - ▷ A\_51\_P249286
  - [+] AgilentNIHS44K
    - ▷ 33302

Rgs16



Rgs16

- [-] A2A\_ByUnigene@
  - [+] MOE430v2
    - ▷ 1455265\_a\_at
  - [+] AgilentID
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  - [+] AgilentNIHS44K
    - ▷ 33302

# Data-bridging among Affy, Agilent and Q-PCR

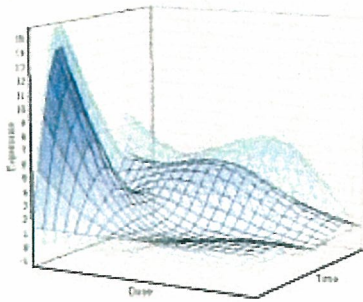


Affy

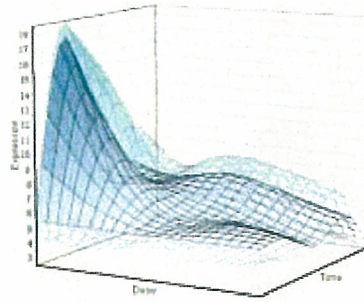
Q-PCR

Agilent

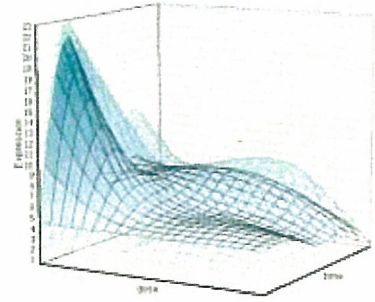
Affymetrix MOE430v2



Q-PCR



Agilent PercellomeArray



- [-] A2A\_ByUnigene@
  - [-] ▶ MOE430v2
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  - [-] ▶ AgilentID
    - ▶ A\_52\_P608322
  - [-] ▶ AgilentNIHS44K
    - ▶ 19049

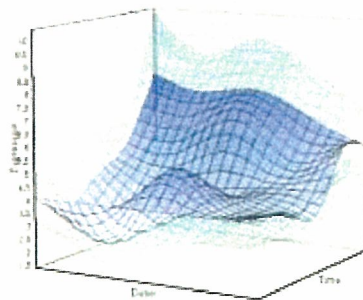
Maff

Affy

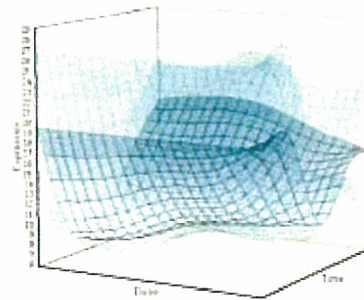
Q-PCR

Agilent

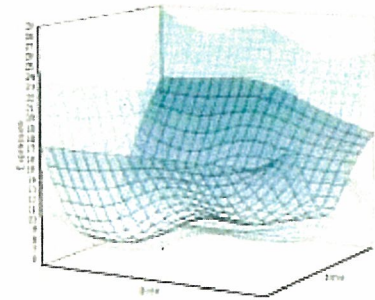
Affymetrix MOE430v2



Q-PCR



Agilent PercellomeArray



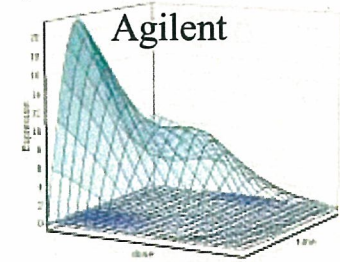
- [-] A2A\_ByUnigene@
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    - ▶ 1450695\_at
  - [-] ▶ AgilentID
    - ▶ A\_51\_P449133
  - [-] ▶ AgilentNIHS44K
    - ▶ 4153

Ahr

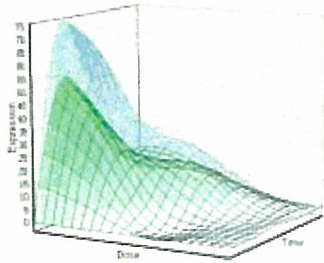
Affy

Q-PCR

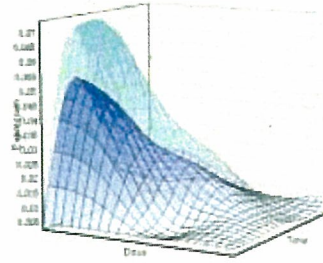
Agilent PercellomeArray



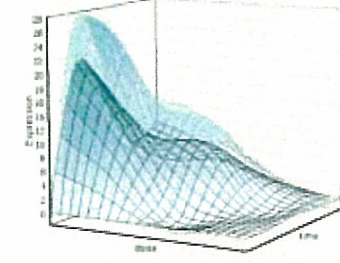
Affymetrix MOE430v2



Q-PCR

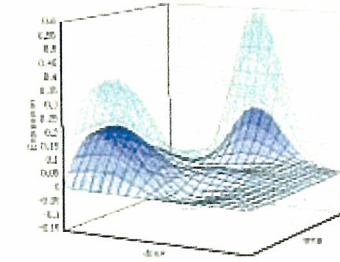


Agilent PercellomeArray



- [-] A2A\_ByUnigene@
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    - ▷ A\_51\_P183571
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  - [-] AgilentNIHS44K
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    - ▷ 42778

Agilent PercellomeArray



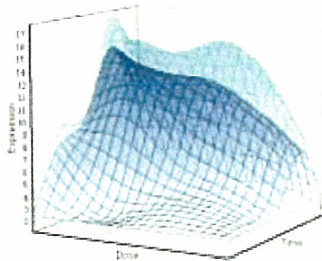
Serpine1

Affy

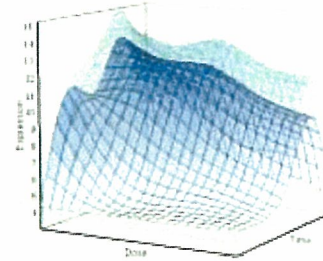
Q-PCR

Agilent

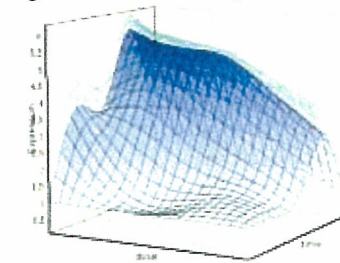
Affymetrix MOE430v2



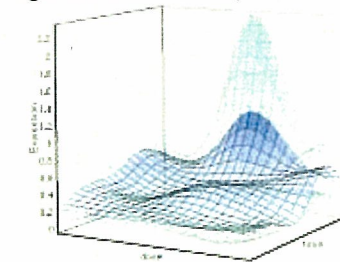
Q-PCR



Agilent PercellomeArray



Agilent PercellomeArray



- [-] A2A\_ByUnigene@
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    - ▷ 8614

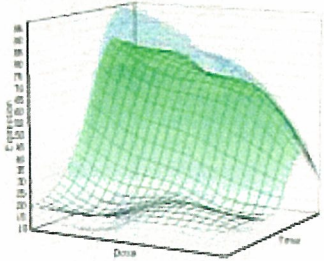


# Affy

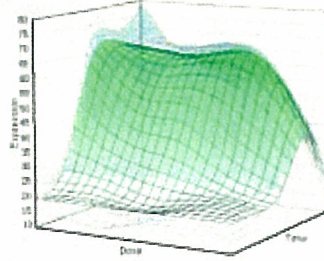
# Q-PCR

# Agilent

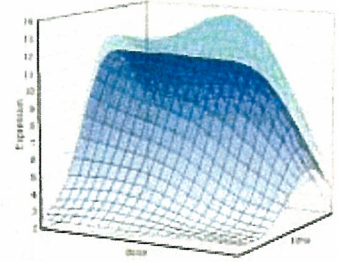
Affy  
Affymetrix MOE430v2



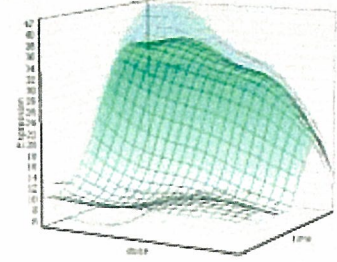
Q-PCR



Agilent  
Agilent PercellomeArray



Agilent  
Agilent PercellomeArray



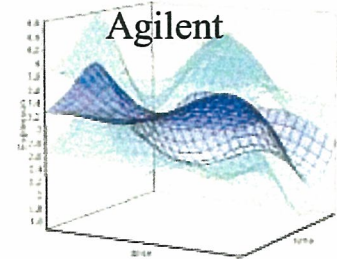
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  - [-] ▸ AgilentID
    - A\_51\_P358256
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    - 33154

Nr1i3

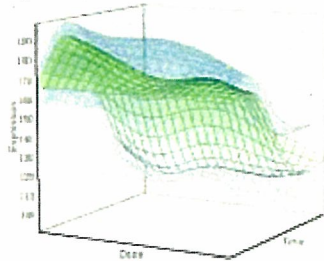
# Affy

# Q-PCR

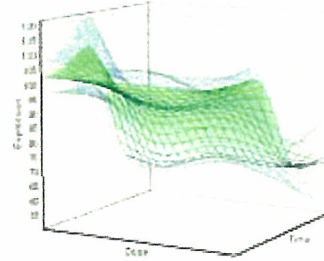
Agilent  
Agilent PercellomeArray



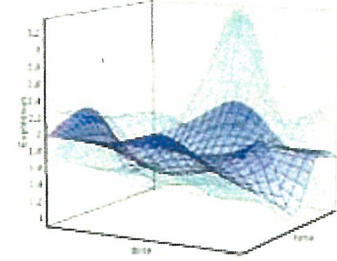
Affy  
Affymetrix MOE430v2



Q-PCR



Agilent  
Agilent PercellomeArray



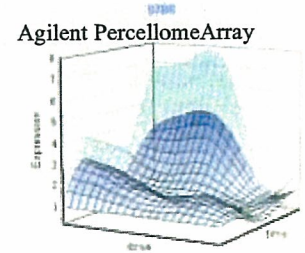
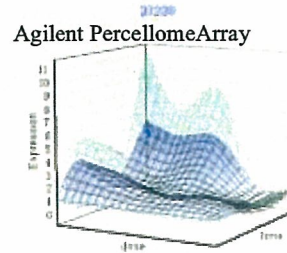
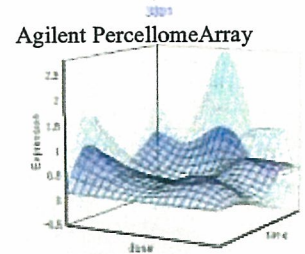
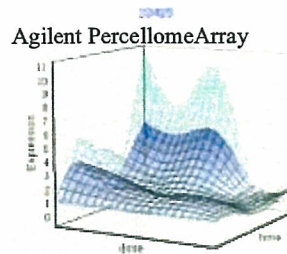
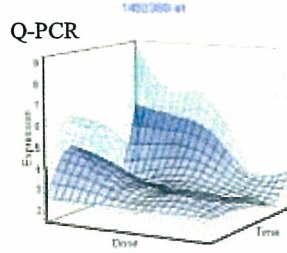
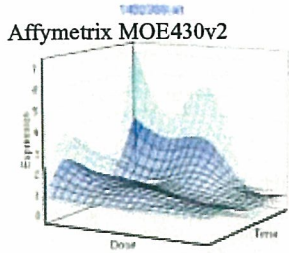
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  - [-] ▸ AgilentID
    - A\_51\_P198473
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    - A\_52\_P69656
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    - 14232
    - 2416
    - 43878

Hnf4a

# Affy

# Q-PCR

# Agilent



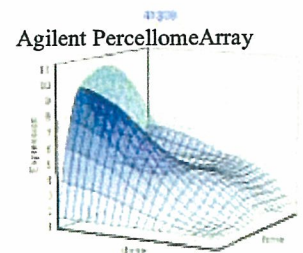
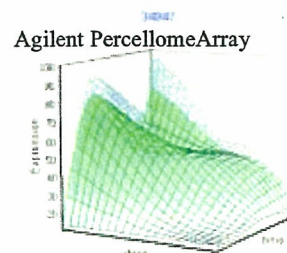
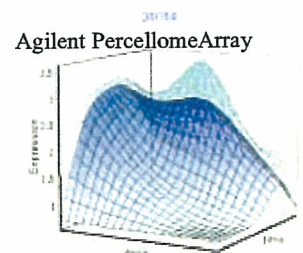
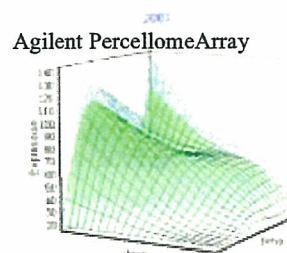
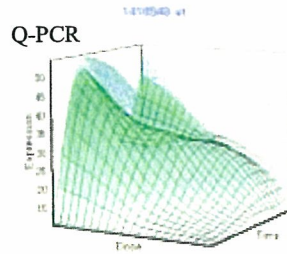
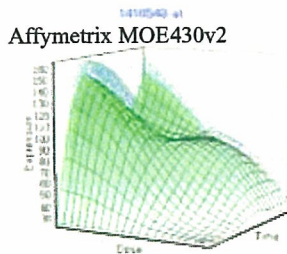
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  - [-] > AgilentID
    - > A\_51\_P117952
    - > A\_52\_P304902
    - > A\_52\_P52803
    - > A\_52\_P82741
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    - > 3321
    - > 37238
    - > 8798

Hspala

# Affy

# Q-PCR

# Agilent



- [-] A2A\_ByUnigene@
  - [-] > MOE430v2
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  - [-] > AgilentID
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    - > 34947
    - > 41339

Nfe212

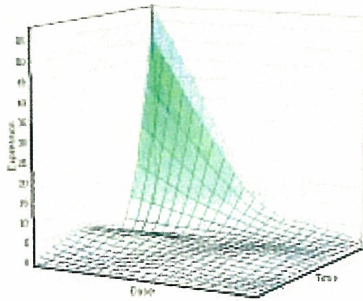


Affy

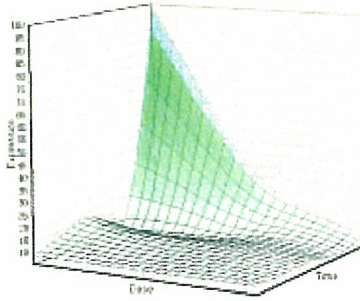
Q-PCR

Agilent

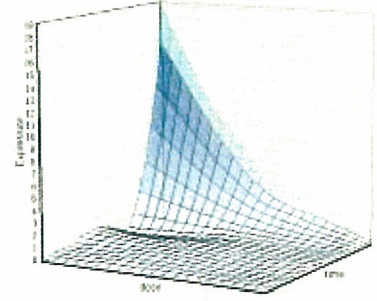
Affymetrix MOE430v2



Q-PCR



Agilent PercellomeArray



- ☐ A2A\_ByUnigene@
  - ☐ ▶ MOE430v2
    - ▶ 1416612\_at
  - ☐ ▶ AgilentID
    - ▶ A\_51\_P255456
  - ☐ ▶ AgilentNIHS44K
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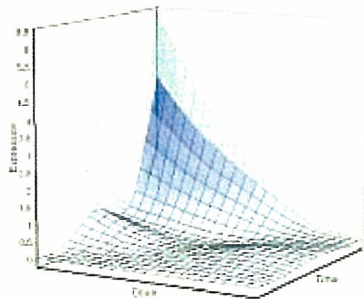
Cyp1b1

Affy

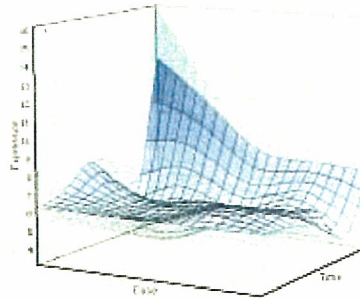
Q-PCR

Agilent

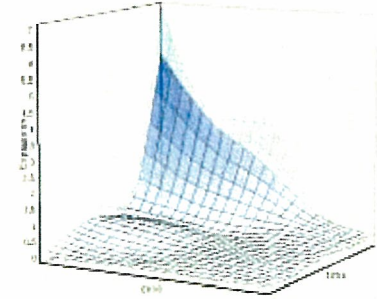
Affymetrix MOE430v2



Q-PCR



Agilent PercellomeArray



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  - ☐ ▶ MOE430v2
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  - ☐ ▶ AgilentID
    - ▶ A\_51\_P254425
  - ☐ ▶ AgilentNIHS44K
    - ▶ 7248

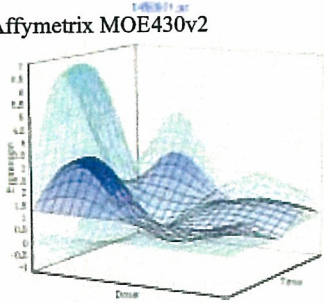
Ahrr

Affy

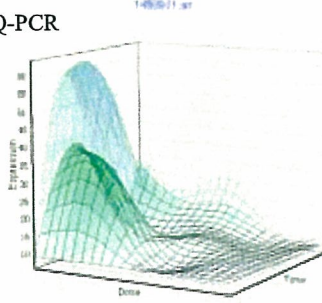
Q-PCR

Agilent

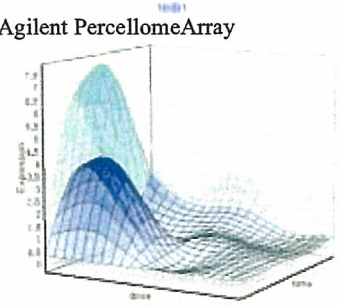
Affy  
Affymetrix MOE430v2



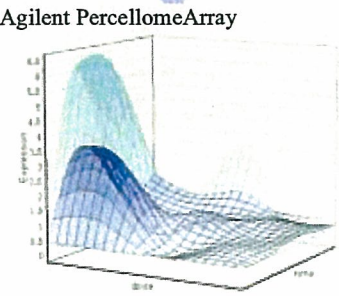
Q-PCR



Agilent  
Agilent PercellomeArray



Agilent PercellomeArray



- [-] A2A\_ByUnigene@
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    - ▶ 6262

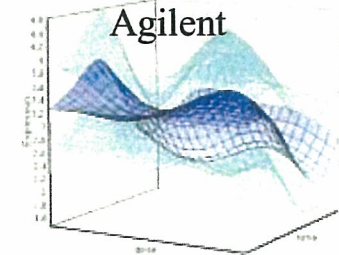
Gadd45b

Affy

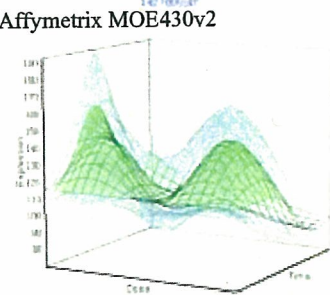
Q-PCR

Agilent PercellomeArray

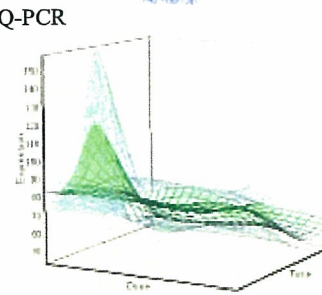
Agilent



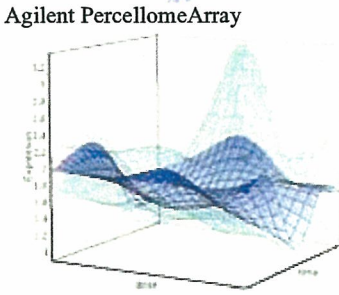
Affy  
Affymetrix MOE430v2



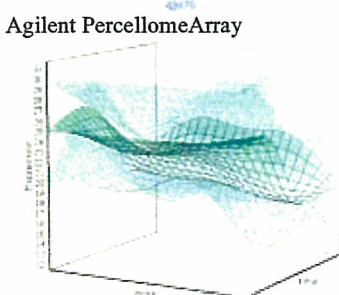
Q-PCR



Agilent PercellomeArray



Agilent PercellomeArray



- [-] A2A\_ByUnigene@
  - [-] ▶ MOE430v2
    - ▶ 1427000\_at
  - [-] ▶ AgilentID
    - ▶ A\_51\_P198473
    - ▶ A\_52\_P683991
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  - [-] ▶ AgilentNIHS44K
    - ▶ 14232
    - ▶ 2416
    - ▶ 43878

Hnf4a

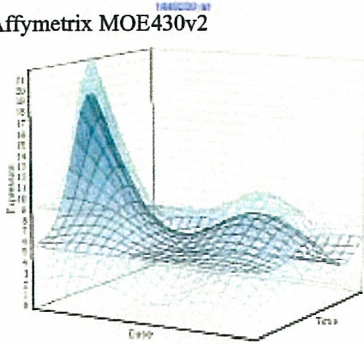


Affy

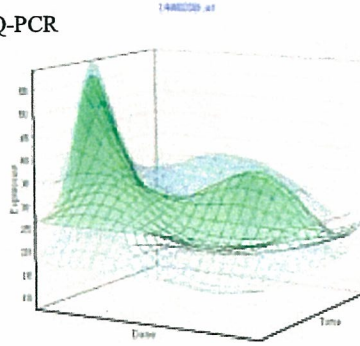
Q-PCR

Agilent

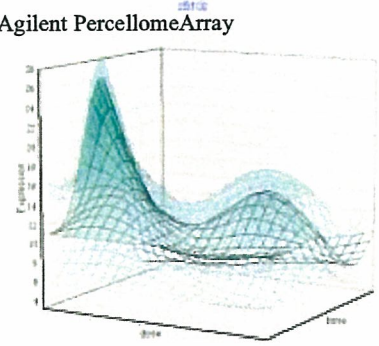
Affymetrix MOE430v2



Q-PCR



Agilent PercellomeArray



- [-] A2A\_ByUnigene@
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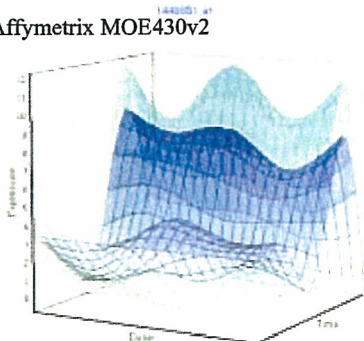
Hmox1

Affy

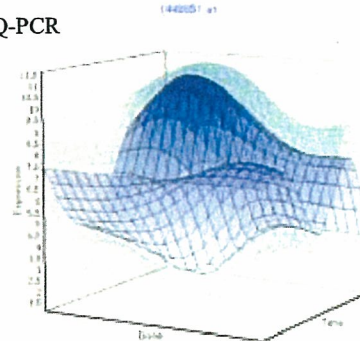
Q-PCR

Agilent

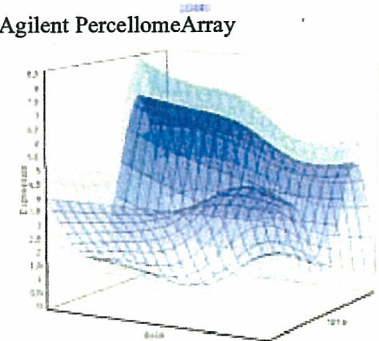
Affymetrix MOE430v2



Q-PCR



Agilent PercellomeArray



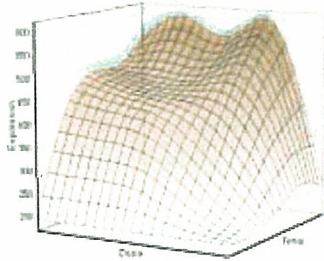
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  - [-] ▶ AgilentNIHS44K
    - ▶ 20448

Affy

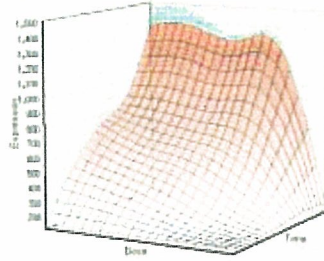
Q-PCR

Agilent

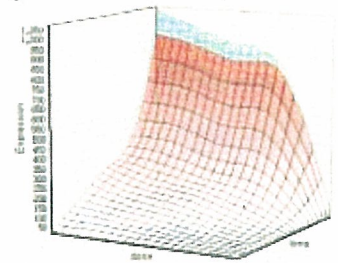
Affymetrix MOE430v2



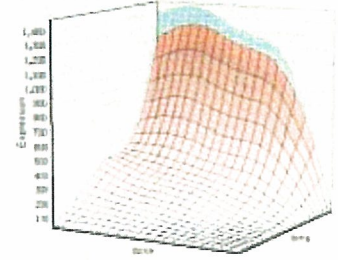
Q-PCR



Agilent PercellomeArray



Agilent PercellomeArray



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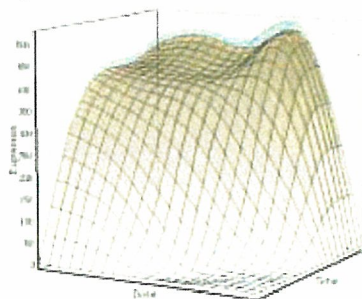
Cyp1a2

Affy

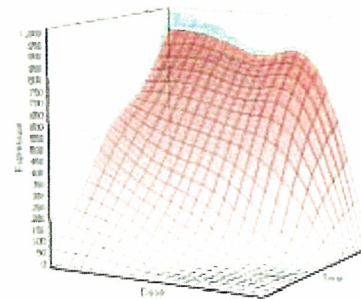
Q-PCR

Agilent

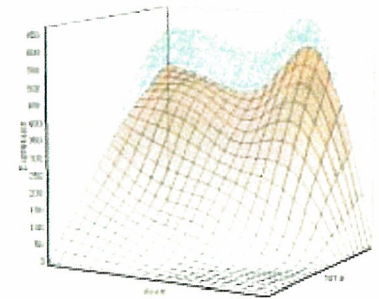
Affymetrix MOE430v2



Q-PCR



Agilent PercellomeArray



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  - [-] > AgilentNIHS44K
    - > 43187

Cyp1a1



# 進捗

	H18				H19				H20			
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv
<b>データ(ベース)の量的・質的な拡張に関わる技術</b>												
プラットフォーム間データ変換技術		100%										
Exonアレイデータによる遺伝子発現の詳細解析技術		25%										
<b>データ解析に関わる技術</b>												
発現同期遺伝子の抽出・解析技術		80%										
時系列ソーティング技術			25%									
化合物反応(毒性反応)の類似性評価技術			25%									
<b>データそのものの取り扱い技術</b>												
遺伝子リストの大量・高速ハンドリング方法				10%								

計画

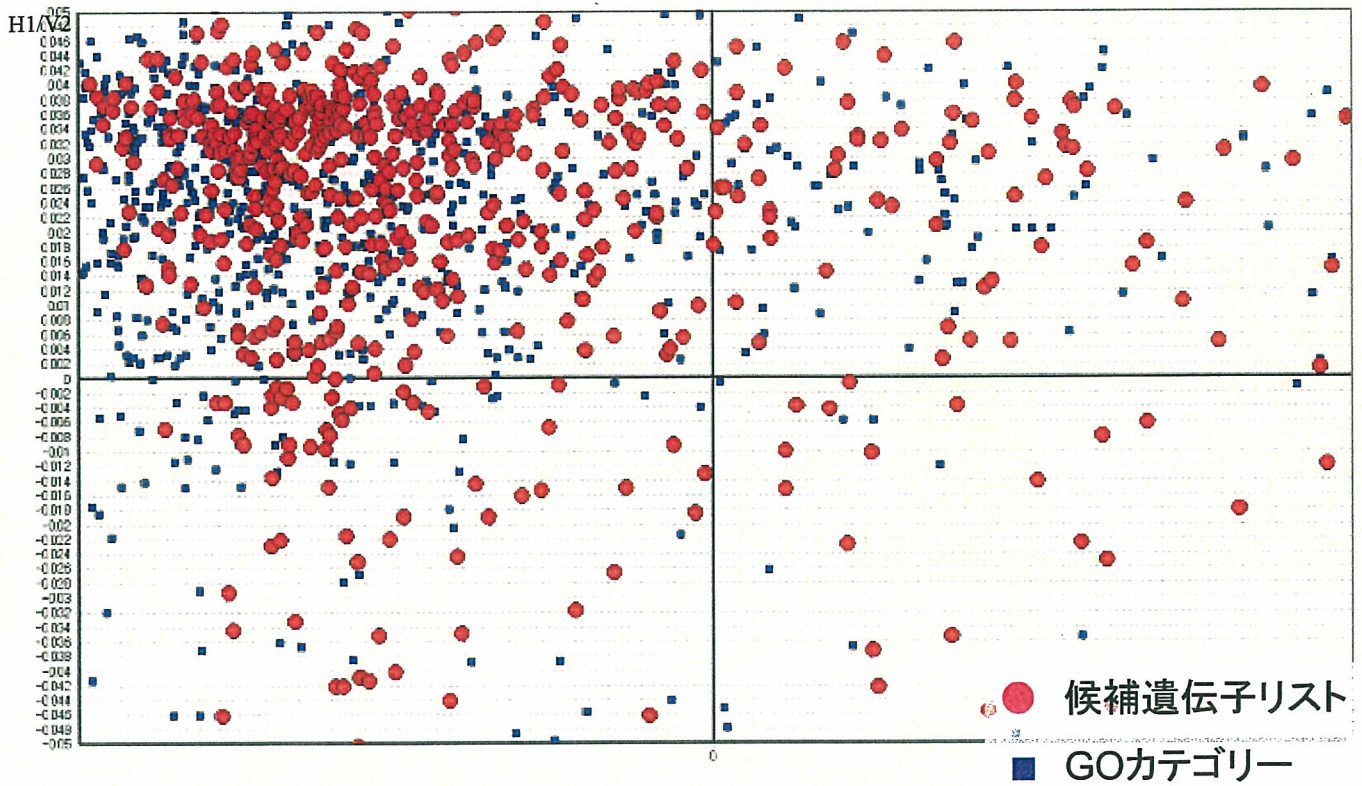
継続計画

実施

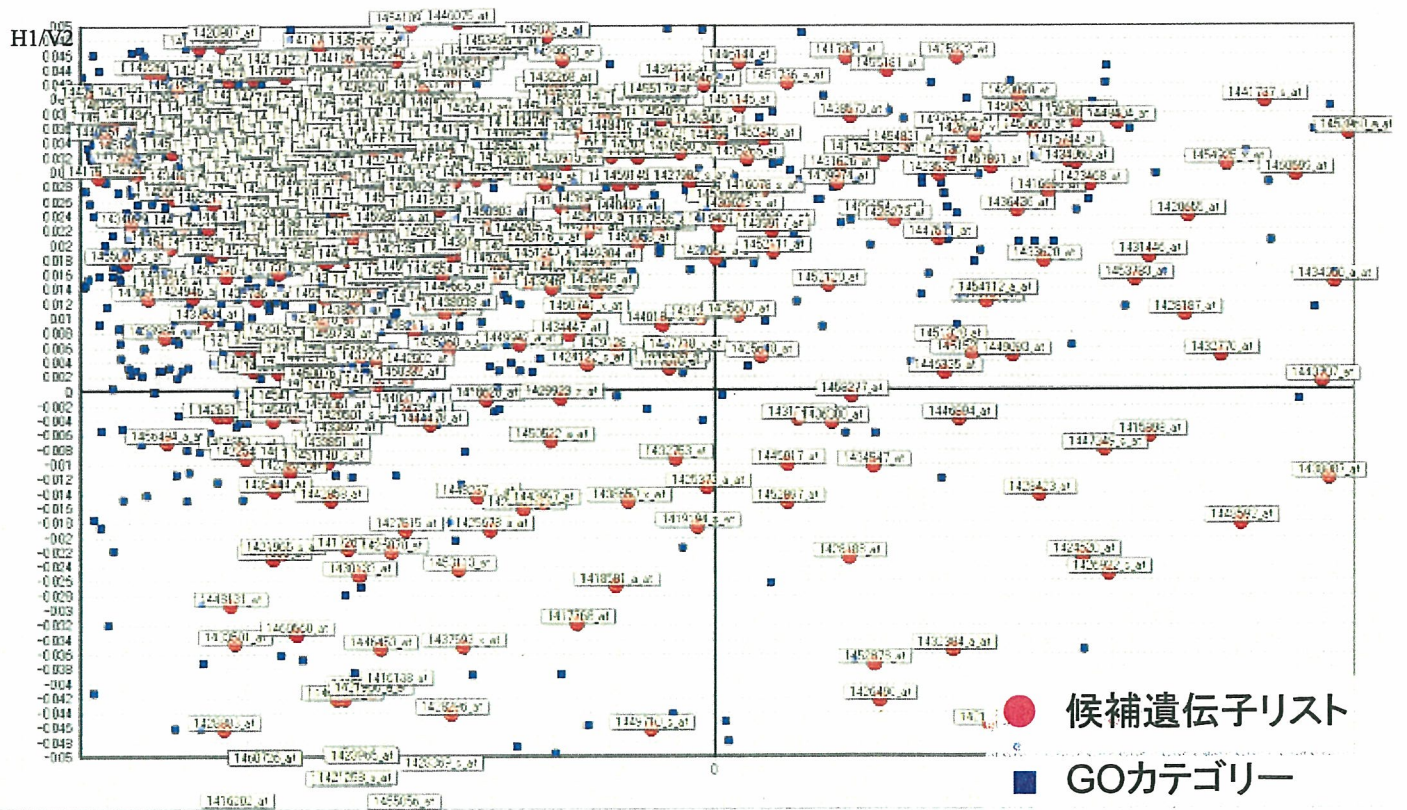
継続実施

化合物反応(毒性反応)の類似性評価技術の基礎となる  
候補遺伝子リストの意味解析技術

# 意味空間への候補遺伝子リストの展開 ~ MF GoPlot

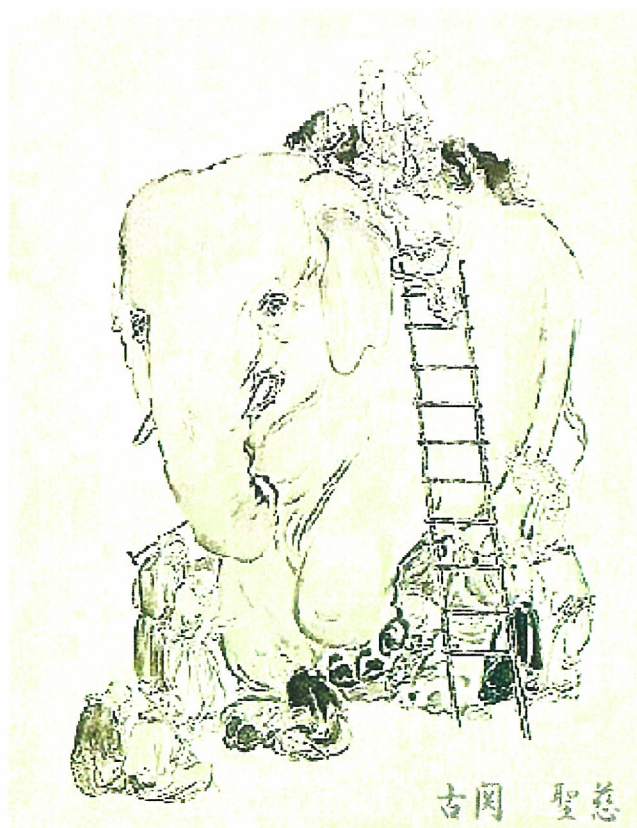
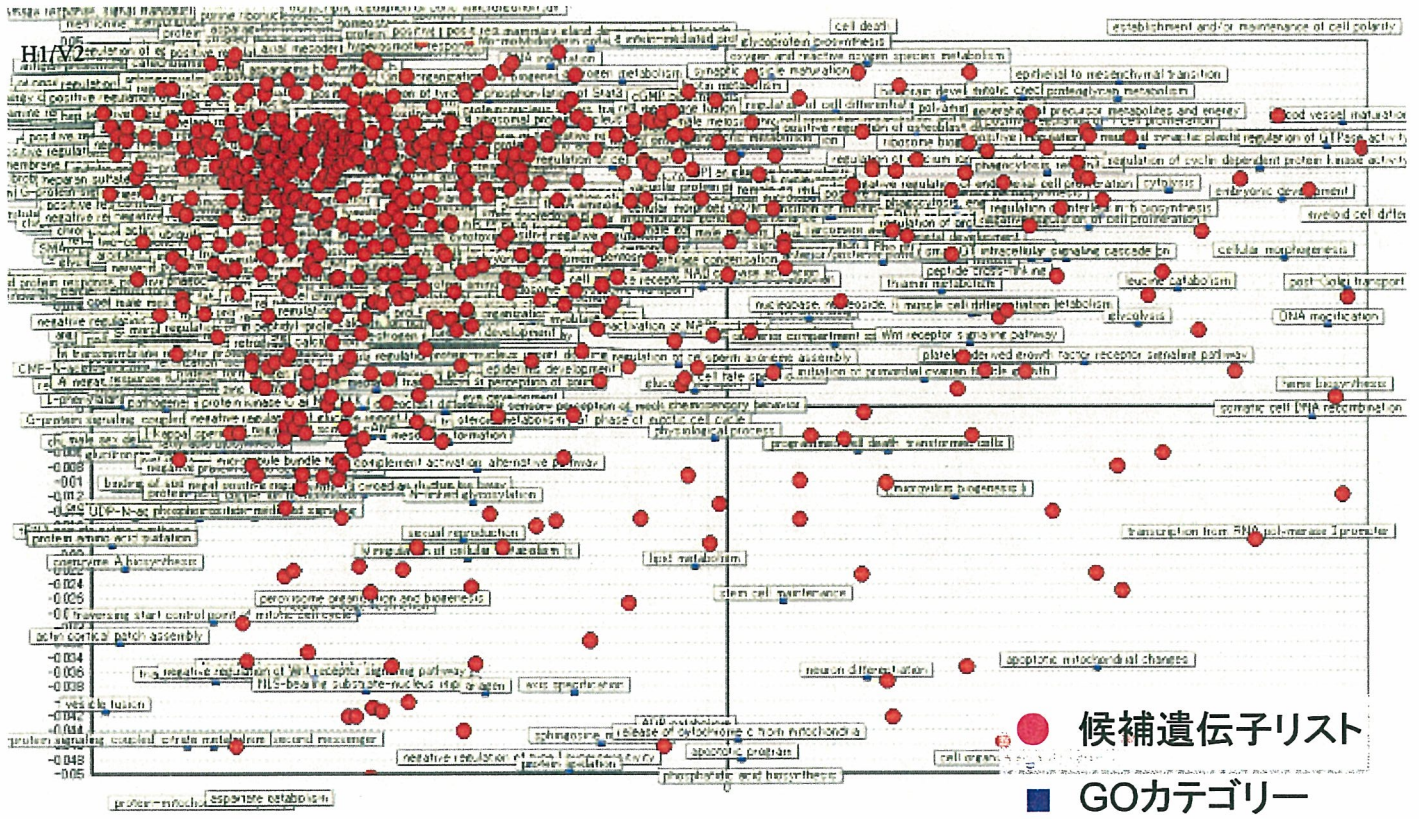


# 意味空間への候補遺伝子リストの展開 ~ MF GoPlot



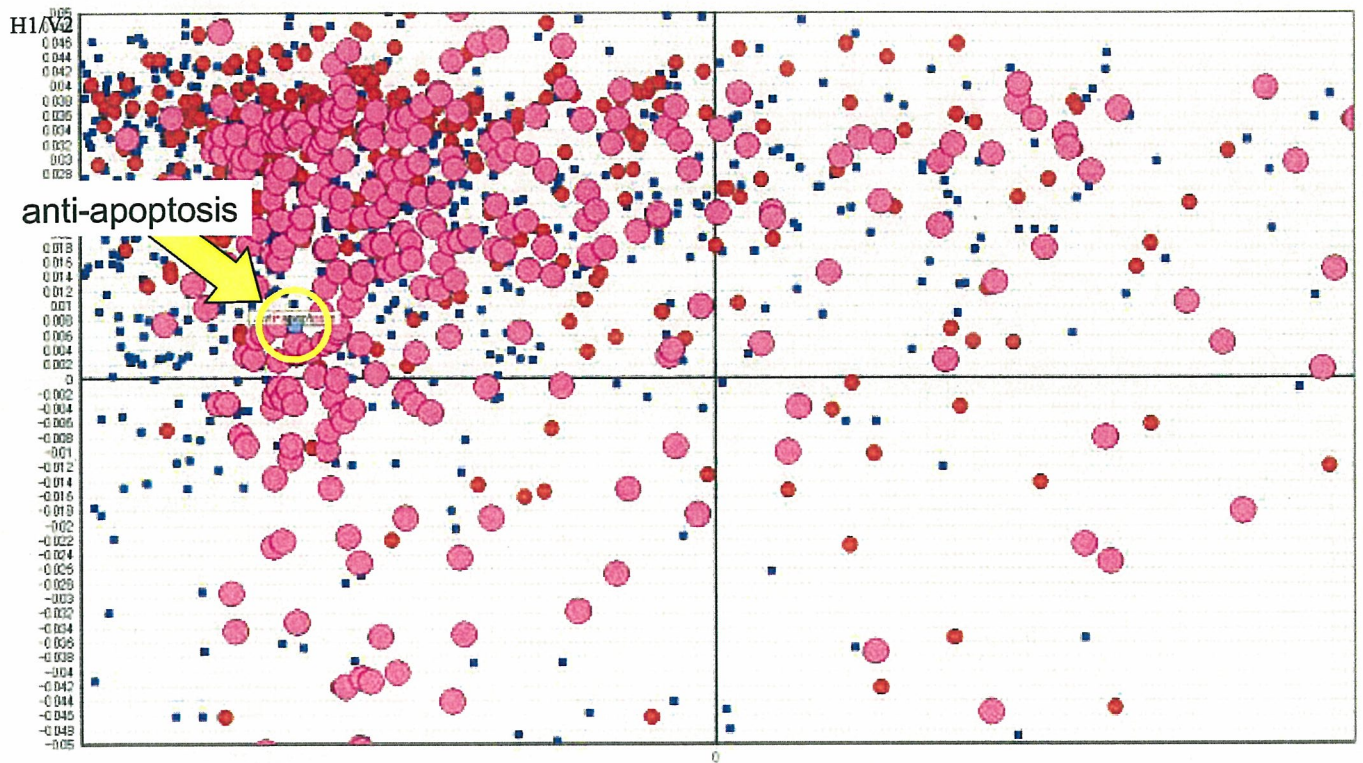


# 意味空間への候補遺伝子リストの展開 ~ MF GoPlot

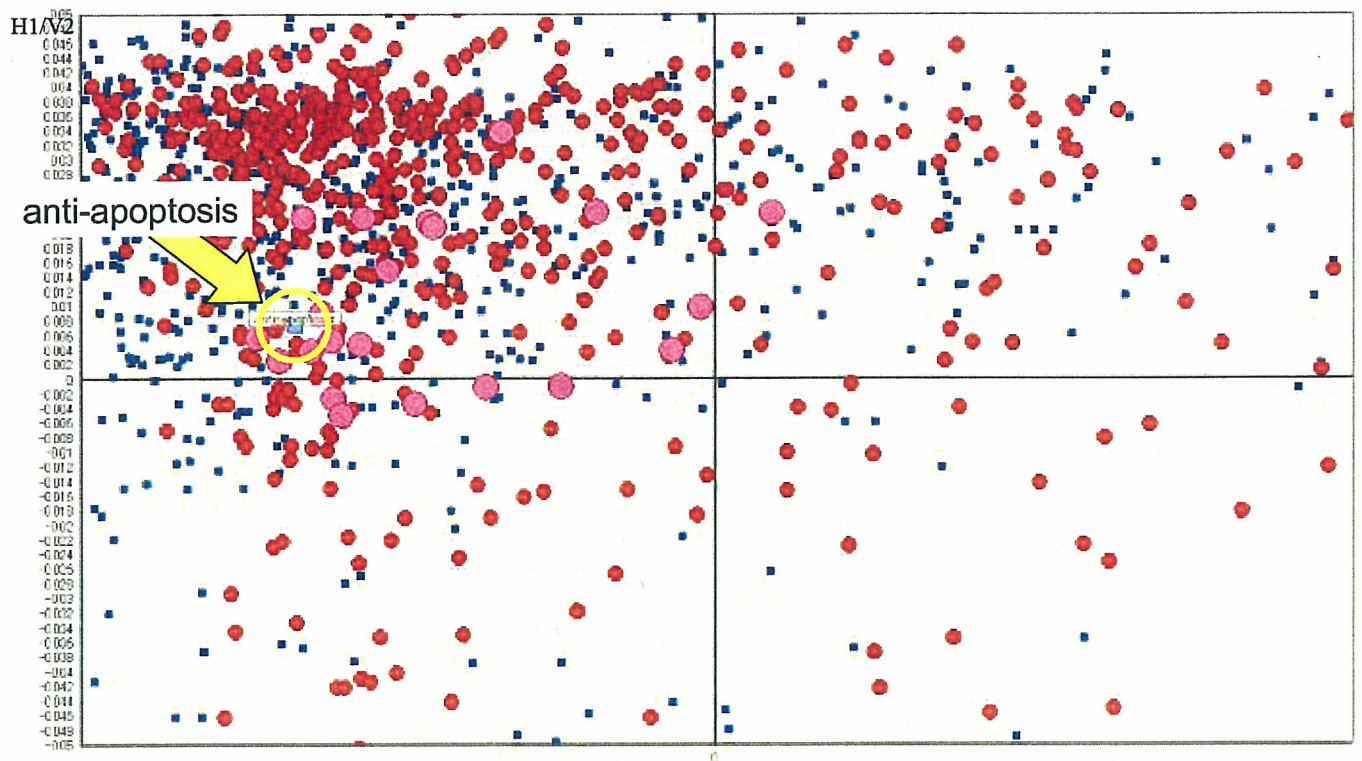




# 意味空間への候補遺伝子リストの展開 ~ MF GoPlot

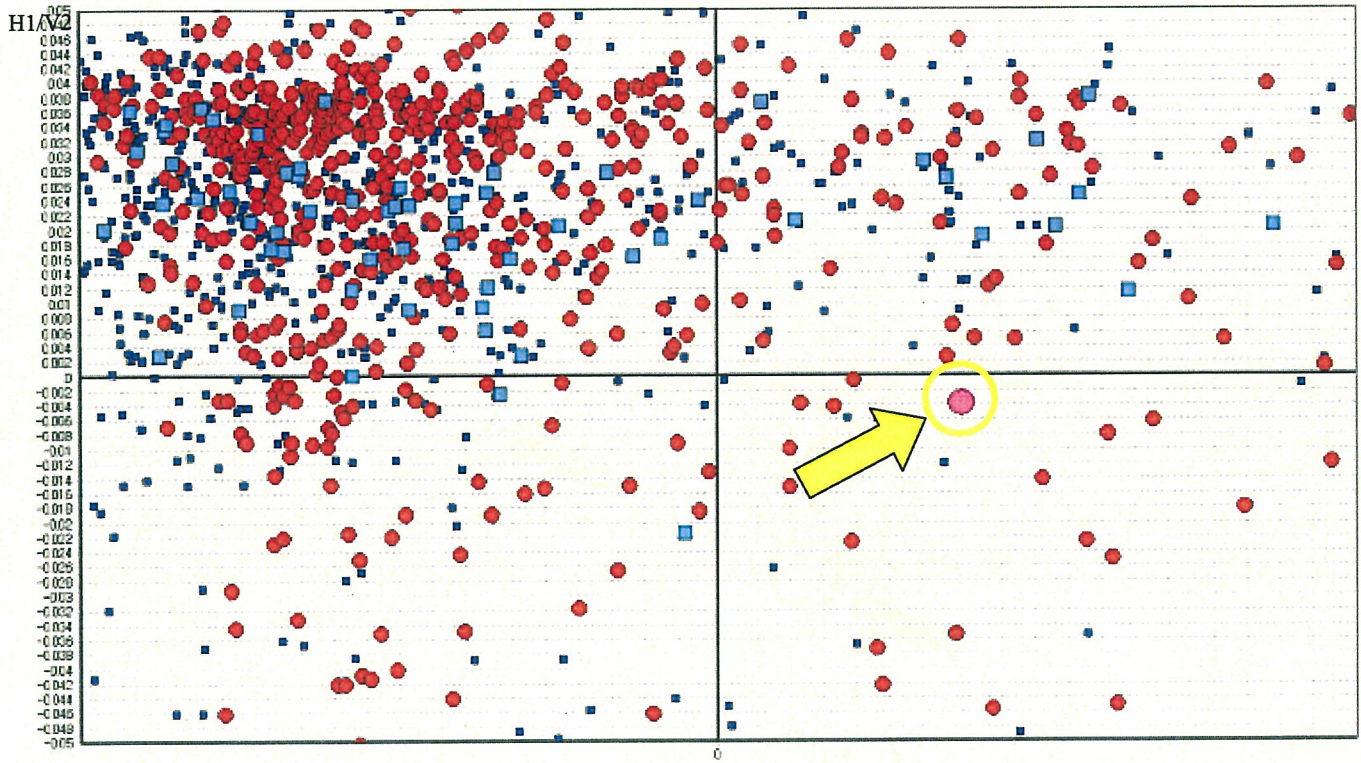


# 意味空間への候補遺伝子リストの展開 ~ MF GoPlot

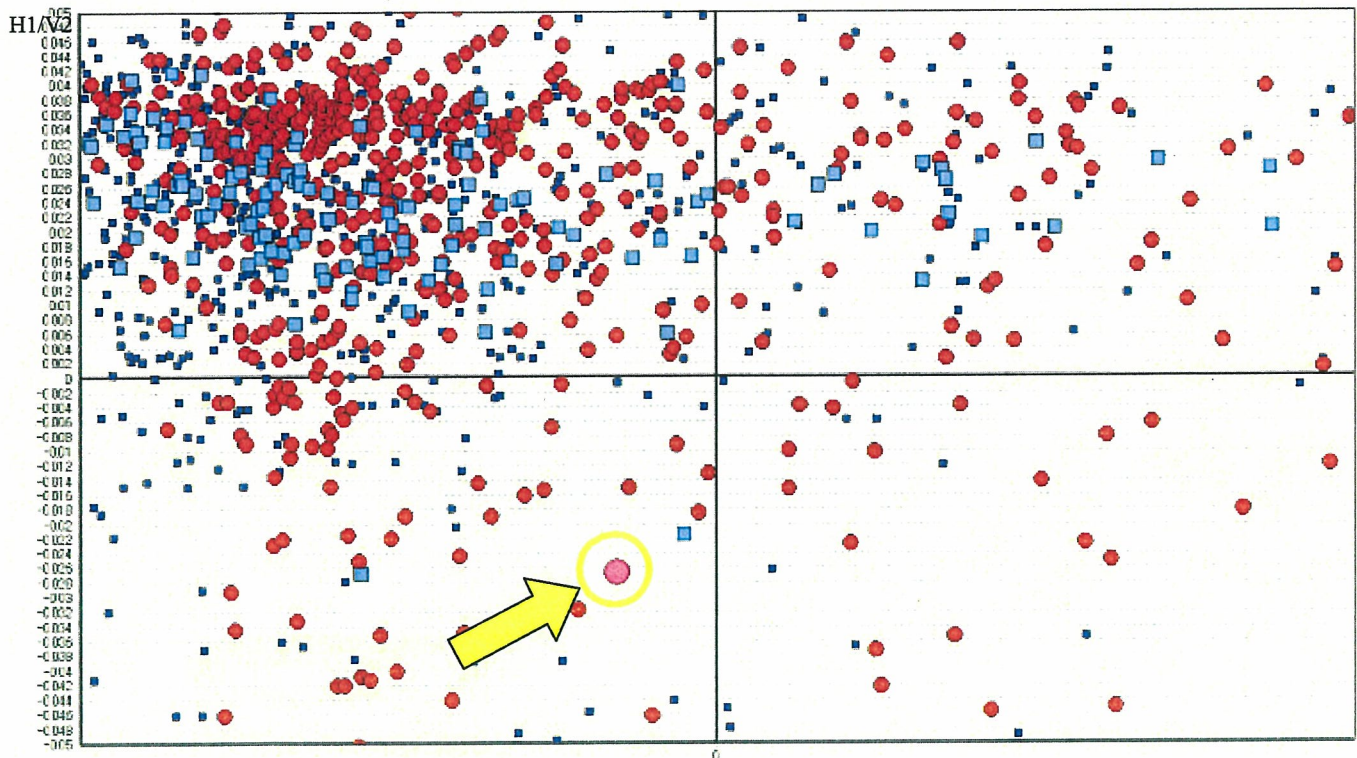




# 意味空間への候補遺伝子リストの展開 ~ MF GoPlot



# 意味空間への候補遺伝子リストの展開 ~ MF GoPlot





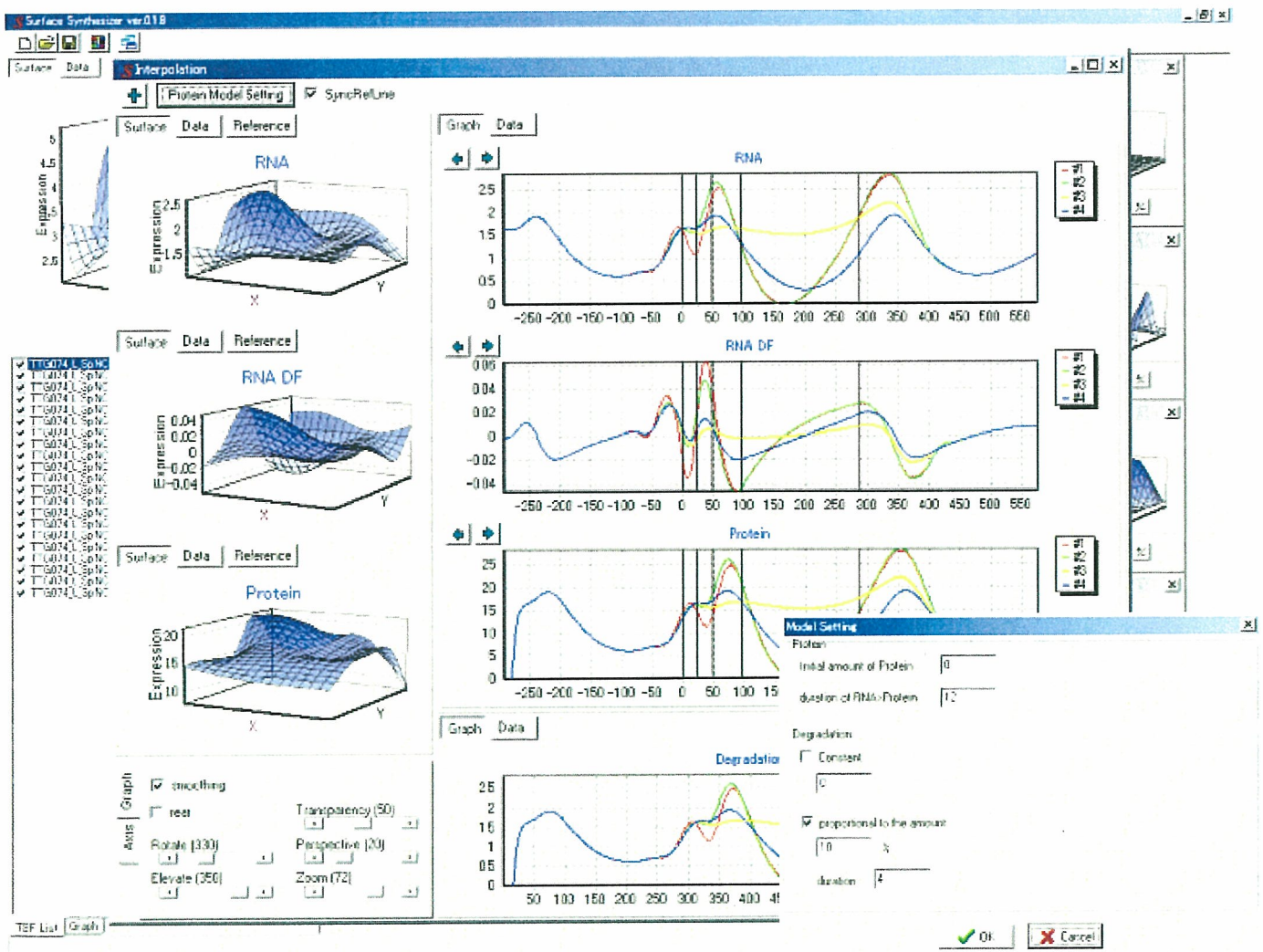




# 時系列ソーティングに向けた基本技術の開発

- 発現パターンから誘導された順序(時系列)に沿って遺伝子を並べるためには、測定点間(内挿)または測定範囲前後(外挿)のデータ補間技術が必要。

→ 3次スプラインを応用した補間・推定技術を開発した。



## 研究成果の刊行に関する一覧表

## 書籍

著者氏名	論文タイトル名	書籍全体の 編集者名	書籍名	出版社名	出版地	出版年	ページ
菅野 純、北嶋 聡、 相崎健一、五十嵐勝 秀、中津則之、高木 篤也、小川幸男、児 玉幸夫	Percellome Project による毒性トランス クリプトミクスの新し い試み		細胞工学	株式会社 秀潤社	東京	2007	71-77
菅野 純	毒性の高精細解 析に向けてのトキ シコゲノミクス、		医学のあゆ み	医歯薬出版 株式会社	東京	2006	No.12 2006.9.16 1035-6

## 雑誌

発表者氏名	論文タイトル名	発表誌名	巻名	ページ	出版年
Shiina H, Matsumoto T, Sato T, Igarashi K, Miyamoto J, Takemasa S, Sakari M, Takada I, Nakamura T, Metzger D, Chambon P, Kanno J, Yoshikawa H, Kato S.	Premature ovarian failure in androgen receptor-deficient mice.	Proc Natl Acad Sci U S A.	103(1)	224- 9	2006
Kanno J, Aisaki K, Igarashi K, Nakatsu N, Ono A, Kodama Y, Nagao T.	"Per cell" normalization method for mRNA measurement by quantitative PCR and microarrays.	BMC Genomics	7	64	2006
Grun F, Watanabe H, Zamanian Z, Maeda L, Arima K, Chubacha R, Gardiner DM, Kanno J, Iguchi T, Blumberg B.	Endocrine disrupting organotin compounds are potent inducers of adipogenesis in vertebrates.	Mol Endocrinol.	20(9)	2141 -55	
Yasuhiko Y, Haraguchi S, Kitajima S, Takahashi Y, Kanno J, Saga Y.	Tbx6-mediated Notch signaling controls somite-specific Mesp2 expression.	Proc Natl Acad Sci U S A.	103	3651 - 3656	2006
Kitajima S, Miyagawa-Tomita S, Inoue T, Kanno J, Saga Y.	Mesp1-nonexpressing cells contribute to the ventricular cardiac conduction system.	Dev Dyn.	235	395- 402	2006