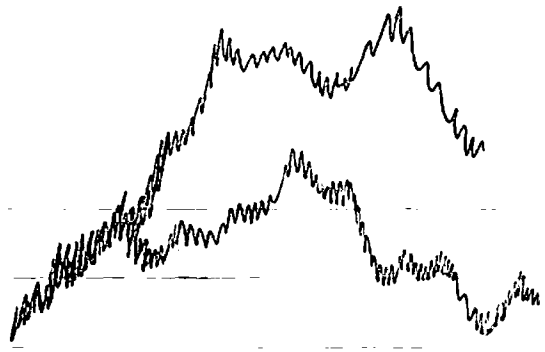


# R. Maalik - human colon cancer



## Outline

- cancer progression
  - alterations in cell-cycle progression
  - chromosomal aberrations
  - oncogene activation
  - tumor suppressor inactivation
  - induction of hypoxic response genes
  - altered growth/spatial regulation

## - colon cancer

- 1/20 people
- 60,000 annual deaths
- risk: genetic, age, family history

1:25

(2)

- ~~Flask~~

- phosphotyrosine screening
- soft agar assay - measures contact inhibition

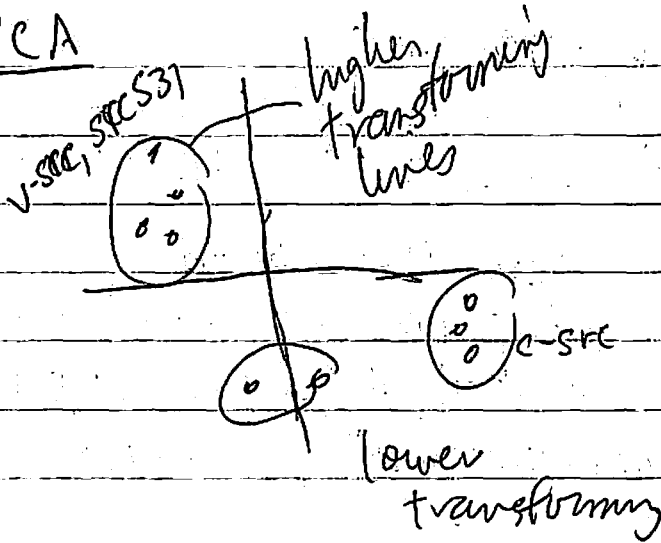
v-src transformed cells

Gene expression - compare v-src, c-src,

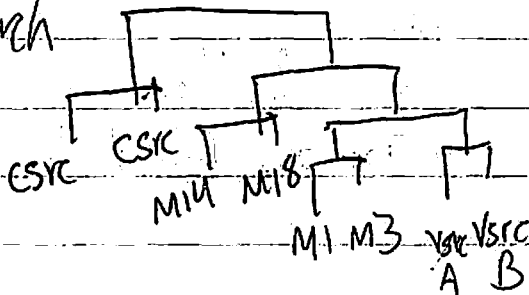
- ↓
- onto array

9 cell lines - 4400 elements - 3S reps

PCA



Hierarchy



higher transforming

# transformation fingerprints

spk up -

- is this comparable to human

- pulled out rat genes

↓  
queried toga for human ortholog

↓  
examined on human arrays

↓  
ran cross species clusters

↓  
rat transformed group w/ human  
cancer cells

↓  
rat transformed w/ src inhibitor  
groups w/ non-transformed

Rat Gene Index

Rat Gene Expression Anatomy

Ch for Env. Genomics

toxicogenomics  
response  
consortium

- Duke
- Oregon Health
- MIT
- UNC-Chapel Hill
- one other

Genetics of innate immunity  
to endotoxin (test w/ LPS challenge)  
in mice

Neural tube development in zebrafish