



Bioen Workshop on Metabolomics of Sugarcane
07 December 2009



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 **FAPESP**

SECRETARIA DE
ENSINO SUPERIOR

 **GOVERNO DE
SÃO PAULO**

Metabolomics of sucrose accumulation in sugarcane

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USP

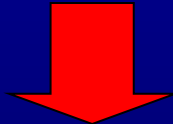
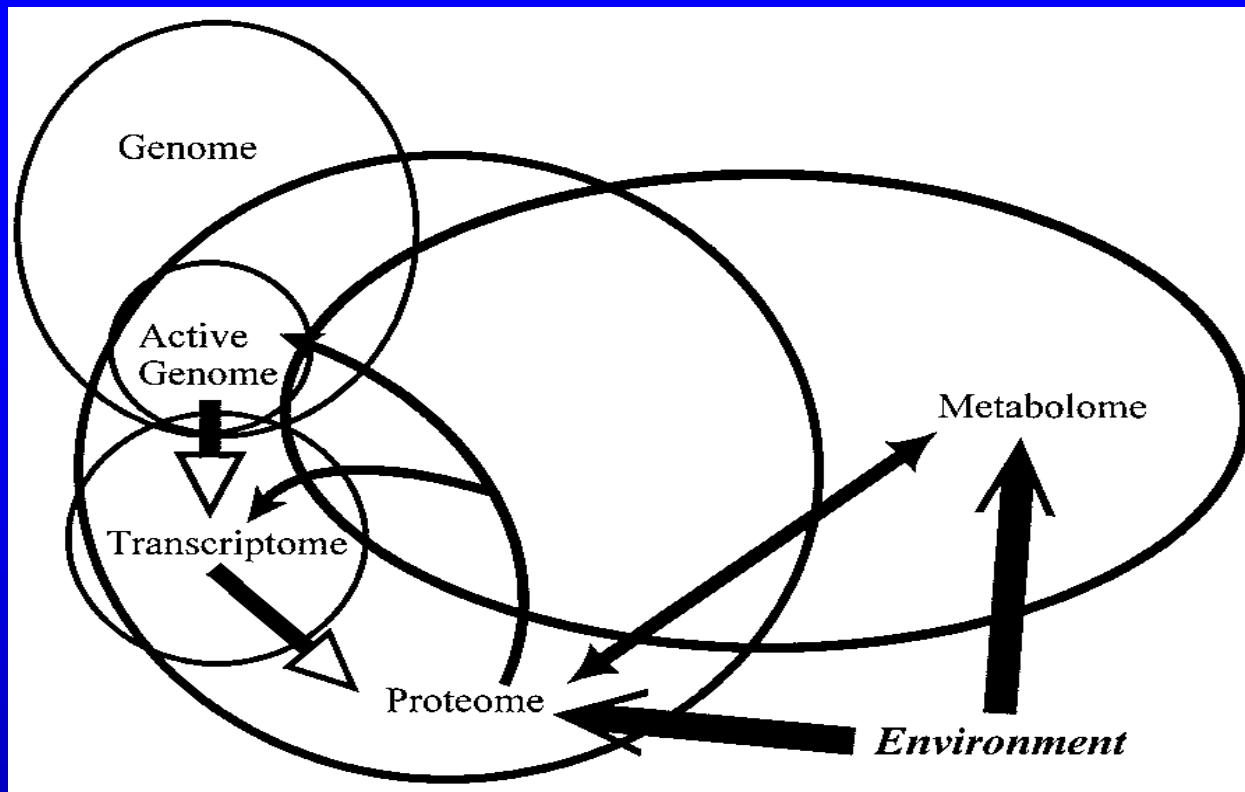
Escola Superior de Agricultura
"Luiz de Queiroz"

Fundada em 1901



HOW TO IMPROVE SUGARCANE PRODUCTIVITY ?





PHENOTYPE

**WHAT
ARE THE
TOOLS?**



Transcriptome

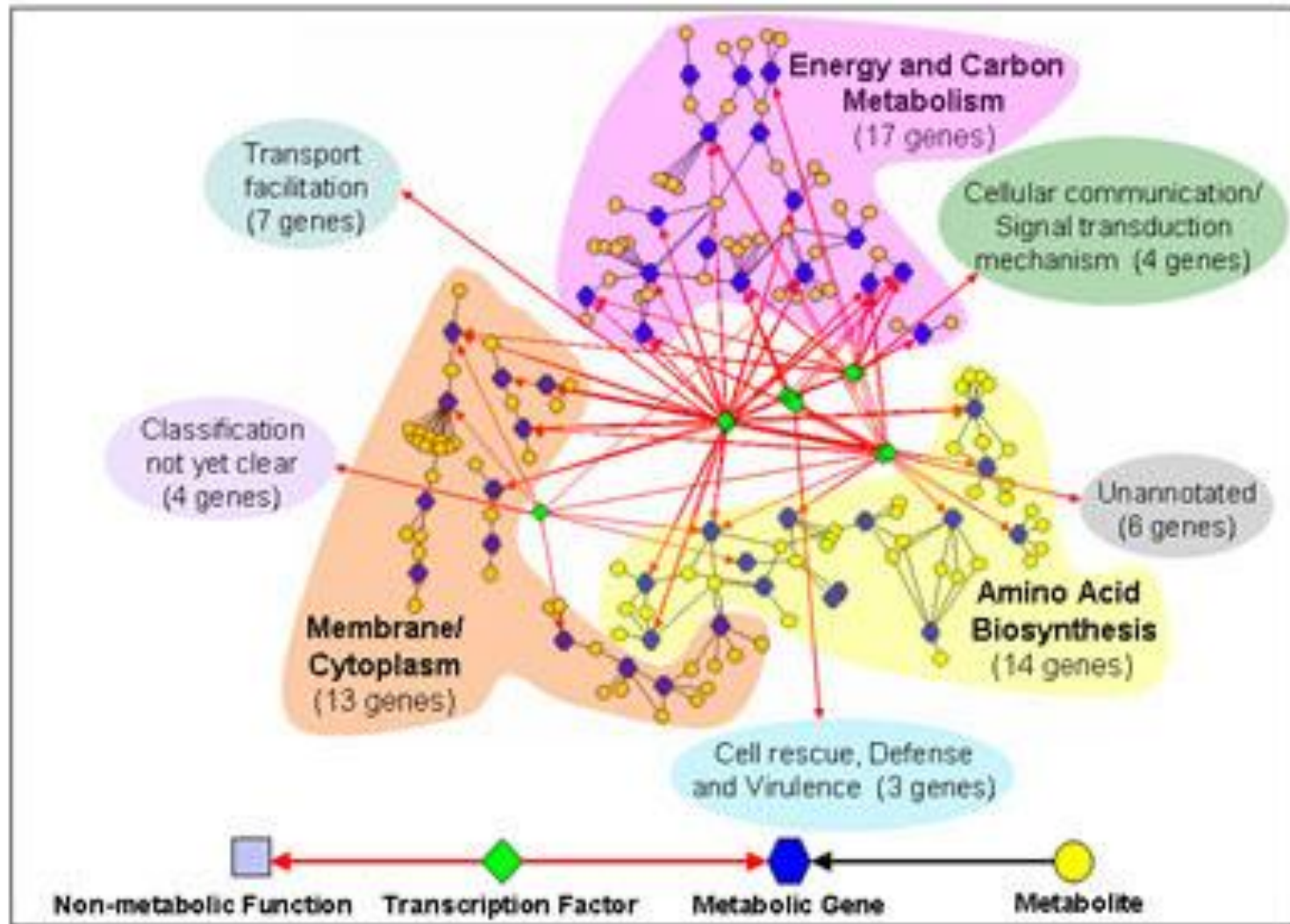
Metabolome

Proteome



Systems Biology

NETWORK REGULATION OF GENES, PROTEINS AND METABOLITES



Metabolite and Protein Extraction



Leaves

Immature Internodes (1 and 2)
and mature Internodes (5 and 9)

TRANSCRIPTOMICS

METABOLOMICS

PROTEOMICS

GC-TOF-MS

LC/MS-MS

2-DE gels

MudPit

Metabolite Data Bank

Bioinformatics

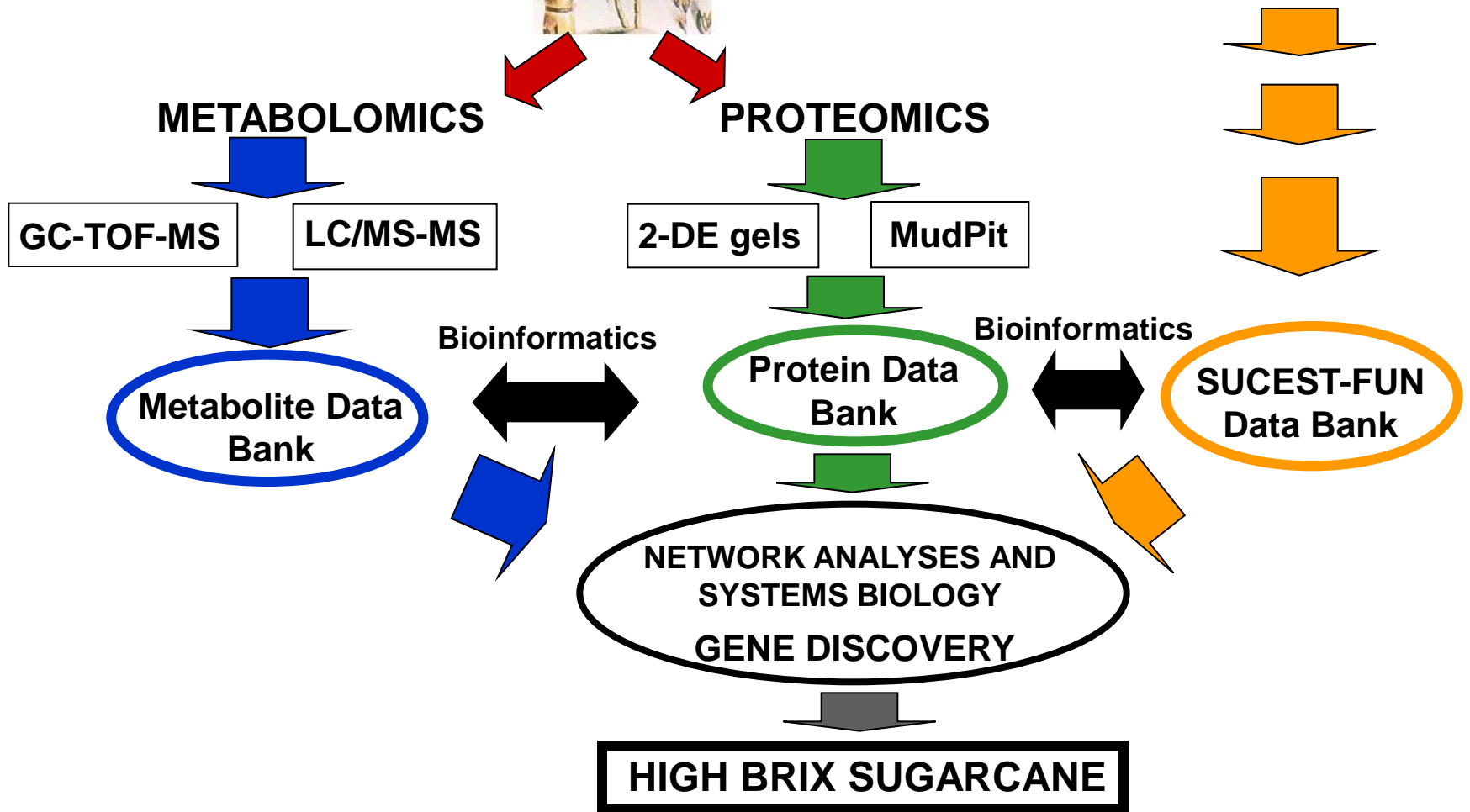
Protein Data Bank

Bioinformatics

SUCEST-FUN Data Bank

NETWORK ANALYSES AND
SYSTEMS BIOLOGY
GENE DISCOVERY

HIGH BRIX SUGARCANE

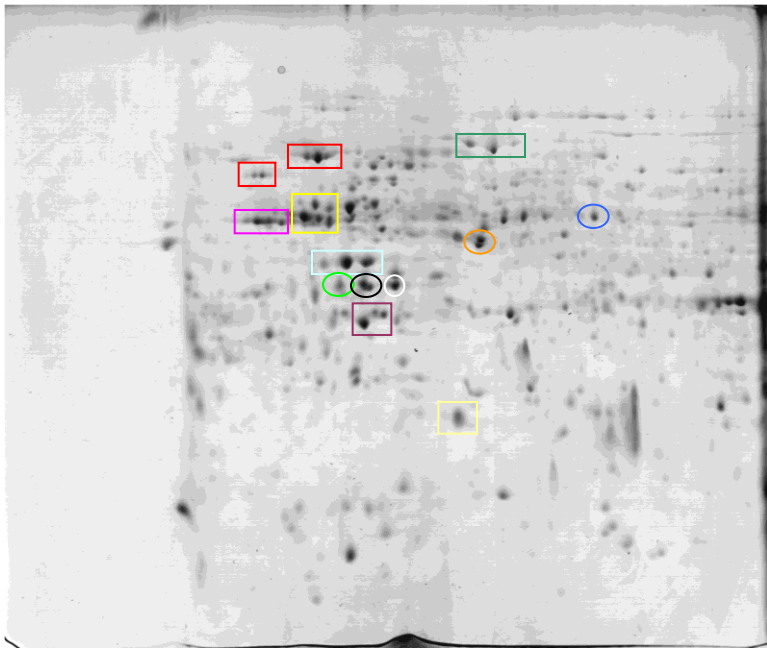


Protein profile

IMMATURE

pI 4

7

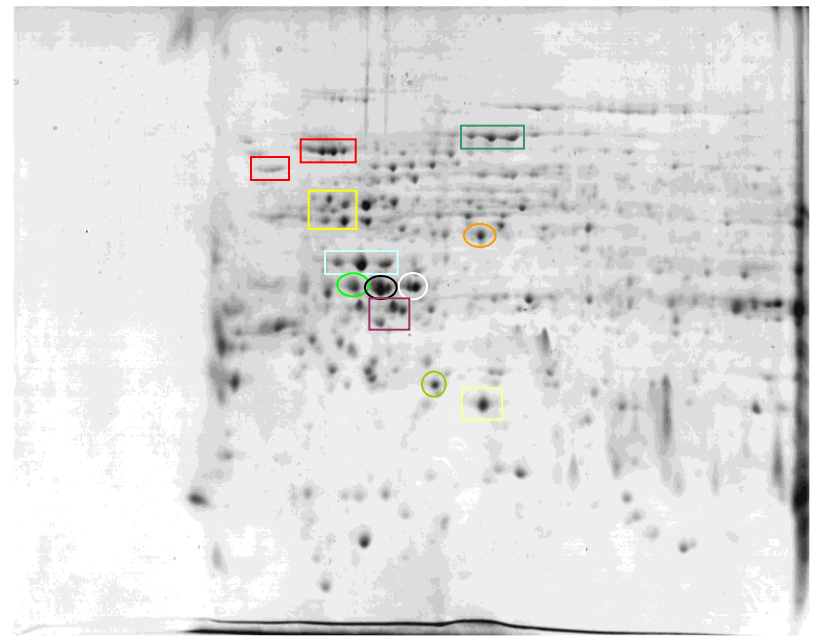


Internode 2

MATURE

pI 4

7



Internode 6

Team

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