

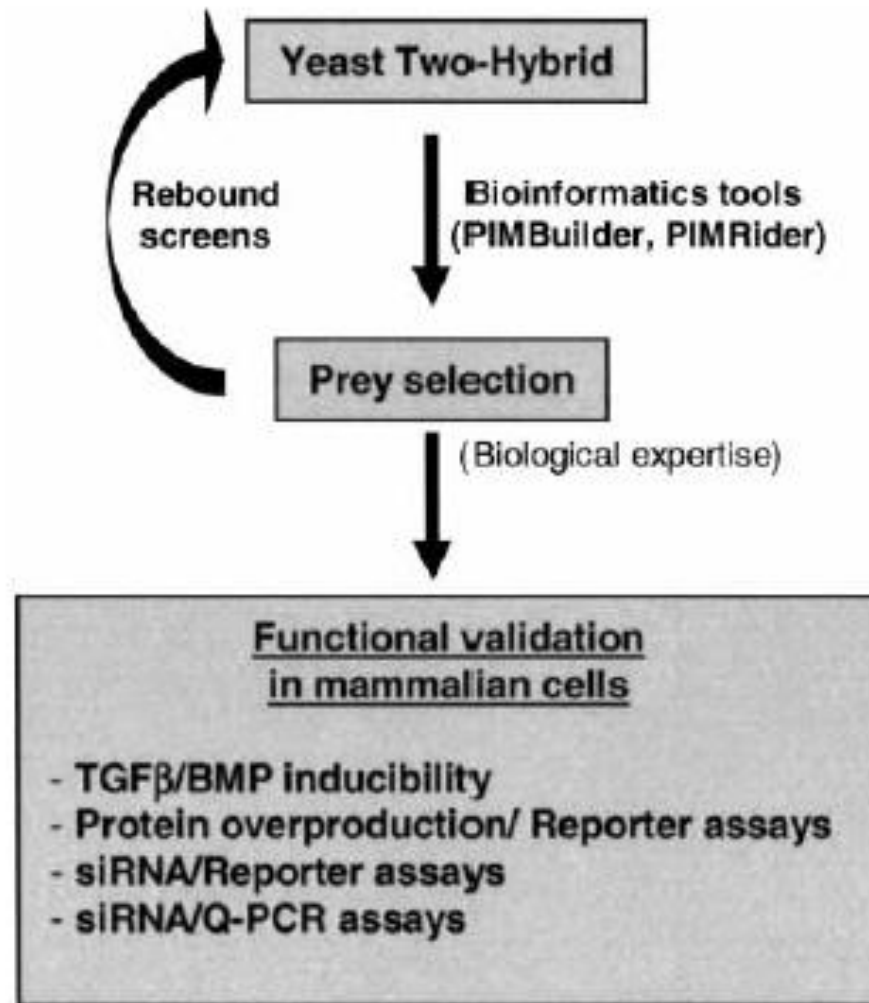
Functional Proteomics Mapping of a Human Signaling Pathway

Assignment in Biotechnology, ITMB
Begetis Nikolaos

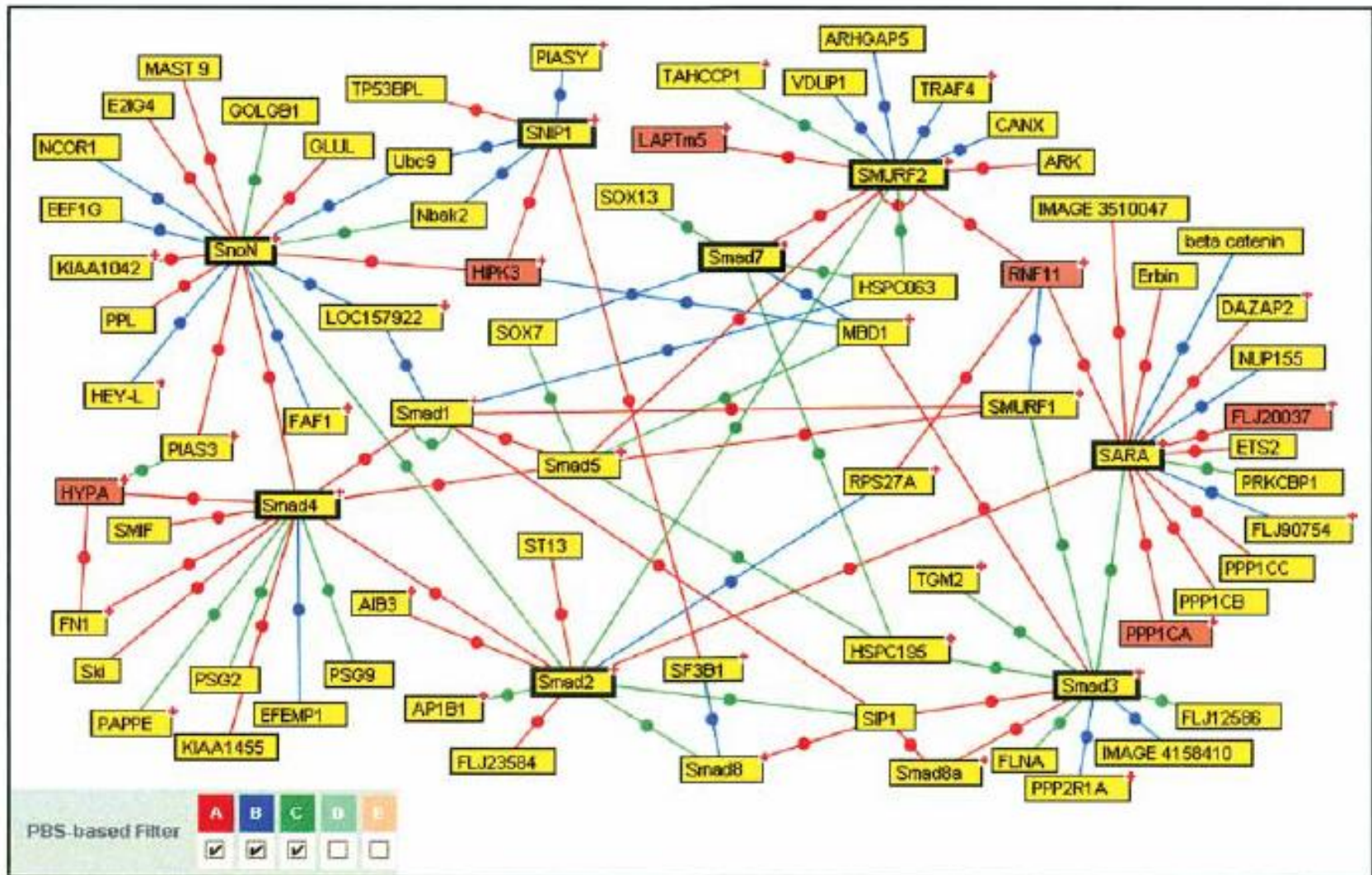
Supervisors:

Zoidakis Ieronymos, Investigator,
BRFAA

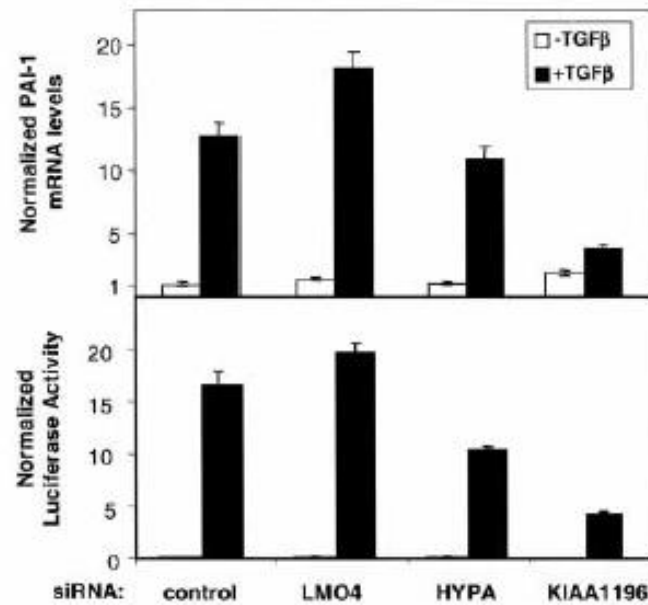
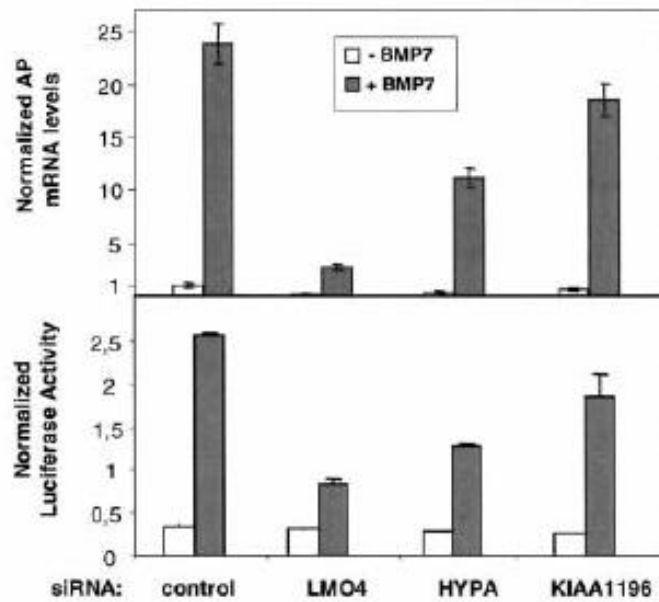
Vlachou Antonia, Investigator
(Professor Level), BRFAA



Protein name	Accession number	Bait fragments (amino acids)
Primary screens		
Smad1	NM 005900	v1 (1–465); v2 (1–268); v3 (242–465)
Smad2	NM 005901	v1 (1–467); v2 (1–271); v4 (403–467)
Smad3	NM 005902	v1 (1–425); v2 (1–145); v3 (200–425); v4 (1–229)
Smad4	NM 005359	v1 (1–552); v2 (1–318); v3 (251–552)
Smad5	U59913	v1 (1–268)
Smad7	NM 005904	v1 (251–426)
Smad8	NM 005905	v1 (1–430); v2 (1–233); v3 (209–430)
SARA	AF104304	v5 (665–1323)
Smurf2	AF301463	v1 (1–335)
SnoN	X15219	v1 (1–684); v2 (1–370); v3 (290–684)
SNIP1	AK022615	v1 (1–396); v2 (1–198)
Rebound screens		
LAPTm5	NM 006762	v1 (1–262); v2 (219–262)
PTPN12	NM 002835	v1 (69–457); v2 (100–336)
PPP1CA	NM 002708	v1 (11–330); v2 (1–324)
HIPK3	NM 005734	v1 (667–1152); v2 (643–929)
p621	NM 018179	v1 (1–709)
PKD2	XM 028271	v1 (487–643)
HYP4	AF049528	v1 (1–452)
LMO4	NM 006769	v1 (1–165)
RNF11	NM 014372	v1 (232–154); v2 (1–154)
KIAA1196	XM 028968	v1 (486–774); v2 (644–833)
FLJ20037	NM 017633	v1 (1–447); v2 (27–252)
ZNF8	XM 034263	v1 (245–436)

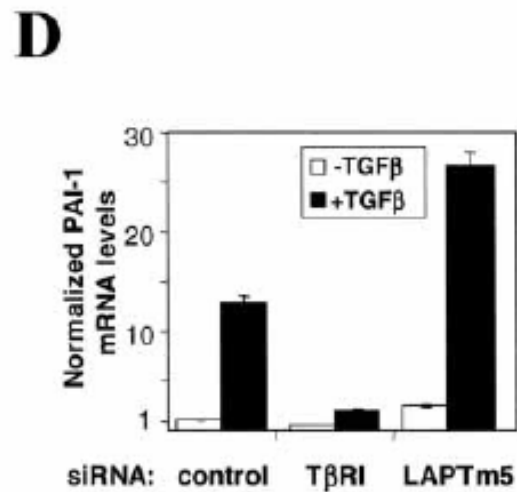
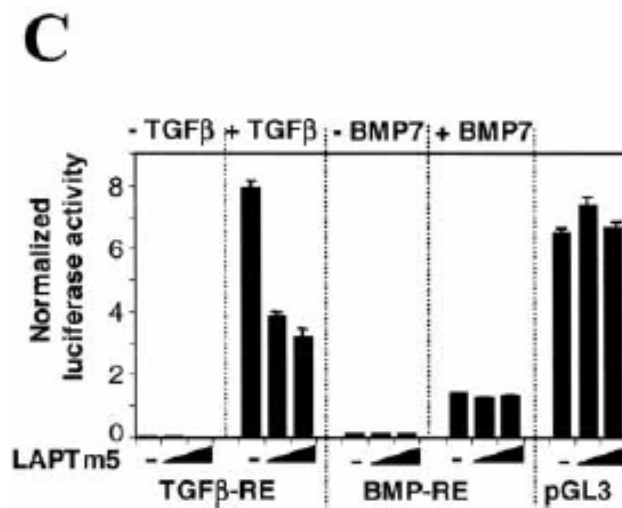
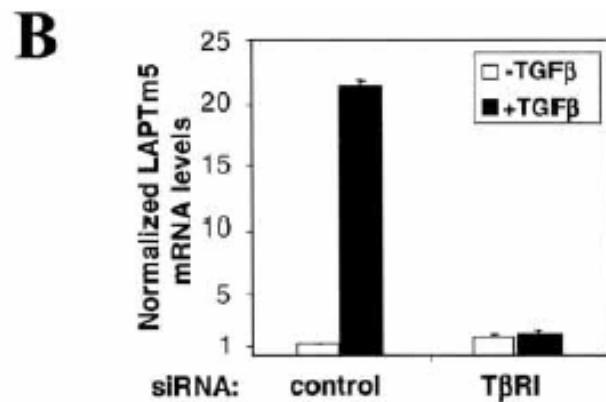
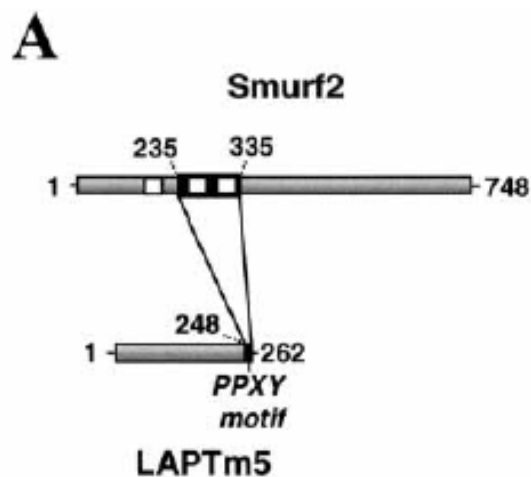



Selected proteins	Bait proteins	Rebound screens	Gene reporter activity							
			mRNA Induction assay		Protein overproduction		siRNA Interference		Endogenous gene expression	
			TGF β	BMP7	TGF β	BMP7	TGF β	BMP7	TGF β (PAI-1)	BMP7 (AP)
LAPtm5	Smurf2	+	▲+++	—	▼++	—	▲+	—	▲++	—
MAPK13	Smad4	nd	—	—	—	—	—	—	—	—
PTPN12	Smad5	—	—	—	—	—	—	—	—	—
PPP1CA	SARA	+	—	—	▲++	—	▼+	—	—	—
HIPK3	SNIP1	—	—	—	nd	nd	—	—	—	—
	SnoN	—								
p621	Smad4	—	—	—	nd	nd	—	—	—	—
PKD2	Smad1	—	—	—	—	—	—	—	—	—
	Smad8	—								
MAN1	Smad1	nd	—	—	—	—	—	▼+	—	▼++
	Smad8	nd								
HYP4	Smad4	—	—	—	—	—	▼+	▼+	—	▼+
LMO4	Smad8	—	—	—	—	—	—	▼+++	—	▼+++
RNF11	Smurf2	+	—	—	—	—	nd	nd	▼+++	—
	SARA	—								
KIAA1196	Smad1	+	—	—	nd	nd	▼+++	—	▼++	—
FLJ20037	SARA	—	—	—	—	—	—	—	—	—
ZNF8	Smad1	+	—	—	—	—	—	▼++	—	▼++
	Smad5	—								
	Smad8	—								



Q-PCR assays

Reporter assays



- 
- ❑ What Questions is the paper trying to answer?
 - ❑ Abstract
 - ❑ What kind of experiments did they do, what can it show?
 - ❑ What do they claim the figure shows?
 - ❑ What is the specific evidence for the claim?
 - ❑ What could be wrong with the claims, what controls address that?
 - ❑ What inferences do they make in the Discussion, based on these results?



Thank you!

Begetis Nikolaos
PIV0111