Supplementary Data

Table S1: Cell line background information

Cells	Patient	Age	Sex	Primary Tumor Site and Histology	Metastasis
Hacats				Immortalized human keratinocyte	N/A
A431		85	F	Epidermoid carcinoma	No
SCCT1	Immunosuppressed renal transplant.	61	M	Forearm. Well differentiated.	No
SCCT8	Immunosuppressed renal transplant.	67	M	Ear. Poorly differentiated.	Yes
MET1	Immunosuppressed renal transplant	45	M	Back of hand, invasive SCC. Acantholytic SCC. Subsequent local recurrences (x2)	Yes
MET4	Same patient as MET1 (isogenic cell lines).	45	M	Axillary LN metastasis of MET1 recurrence – also metastasized to cervical LNs, bones and lung despite cessation of immunosuppression. Histology – poorly differentiated SCC	Yes

# Table S2: Patient cohort demographics and tumor features

Pt No	Dx	Demographic	Tumor site	Outcome	Differentiation	BWH Stage
1	S	83M	Hand		Well	1
2	I	76M	Scalp		Well	1
3	S	76M	Ear		Well	1
	S	76M	Hand		Mod	1
4	I	87F	Hand		Mod	1
	I	87F	Neck		Mod	1
	I	87F	Leg		Mod	1
	I	87F	Hand		Mod	1
5	S	77M	Hand		Mod	1
6	S	82M	Arm		Mod	1
	I	81M	Hand		Mod	1
7	T	72M	Arm		Mod	1
	T	73M	Neck		Mod	1
9	I	84M	Scalp		Well	2A
	S	83M	Scalp		Mod	2A
10	I	81M	Leg		Mod	2A
11	PNI	96F	Forehead		Mod	2A
12	PNI	86M	Scalp		Mod	2A
13	T	78M	Chest		Mod	1
	T	77M	Leg		Mod	1
	T	77M	Temple		Poor	2A
8	T	74F	Leg		Mod	1
	T	74F	Arm		Mod	2A
	T	74F	Back		Poor	2A
14	PNI	64M	Temple		Mod	2B
15	PNI	81M	Temple		Mod	2B
16	PNI	45F	Forehead		Mod	2B
	PNI	81M	Face		Mod	2B
18	I	63M	Chest	Mets	Mod	2B
17	PNI	78M	Scalp		Poor	2B
19	I	88M	Ear		Poor	2B
20	T	50F	Chest		Poor	2B
	T	50F	Leg		Poor	2B
21	PNI	65M	Ear		Poor	3
22	PNI	90M	Arm		Poor	3
23	I	70M	Temple	Mets, Death related to SCC	Poor	3
	I	71M	Chest	Mets, Death related to SCC	Poor	3
24	PNI	88M	Scalp	Mets, Death related to SCC	Poor	3

Figure S1:
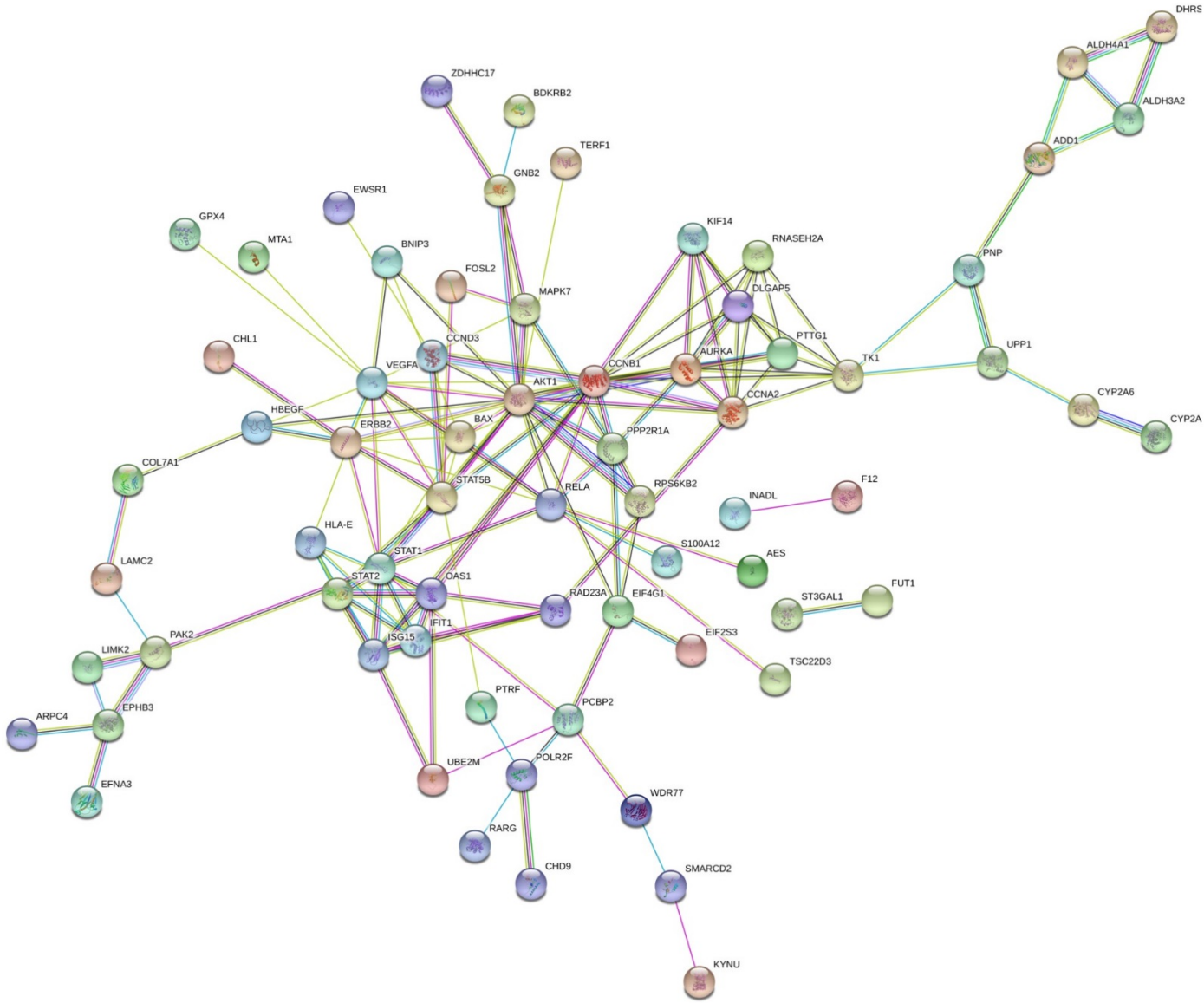
Figure S1: STRING network visualization of differentially expressed proteins between squamous cell carcinoma (SCC) and transplant-associated SCC (TSCC) from microarray data of 8 SCCs, 5 TSCCs and 10 normal skin samples.

Figure S2:
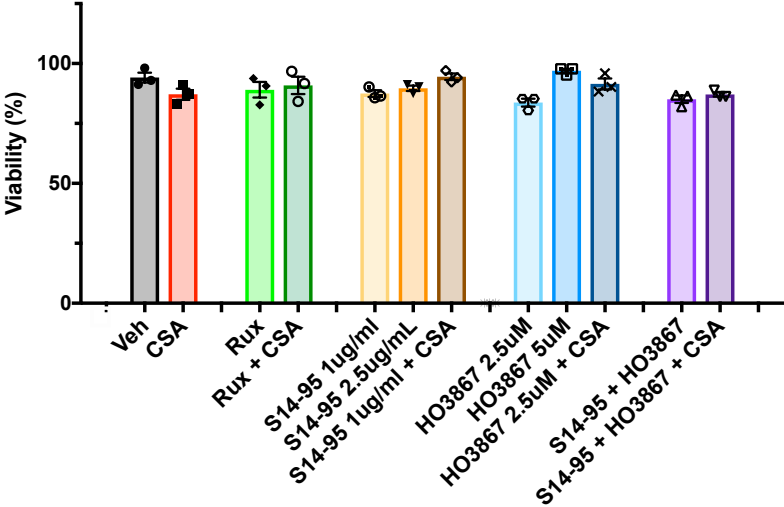
Figure S2: Cell viability determined by trypan blue staining of A431 squamous cell carcinoma (SCC) cells treated with Cyclosporine A (CSA, 25ug/mL), Ruxolitinib (10uM), STAT1α inhibitor s14-95, STAT3 inhibitor HO-3867, or combinations of the above reveals nil significant differences from vehicle alone in any treatment condition.