Supplement Methods

Animals

All animal handling was performed complying with national and international directives as well as approved by the local authority Regierungspraesidium, Giessen, Germany (GI20/10 Nr. G82/2018). Adult male C57Bl6 mice (21–24 g body weight) and adult male Kyoto Wistar rats (200-250g), aged between 10-12 weeks, were obtained from Charles River Laboratories. All the animals were housed under controlled temperature (21–23°C), humidity (70%) and lighting (7AM-7PM light, 7PM-7AM dark) conditions and were fed a standard diet.

Human Pulmonary Arterial Smooth Muscle Cell (PASMC)

Human PASMCs from donor controls (n = 5) and patients with IPAH (n = 9) were obtained from Lonza (CC-2581, Basel, Switzerland) and UGLMC Giessen Biobank of the Justus-Liebig University Giessen (Giessen, Germany). The Ethics Committee of the Justus Liebig University has approved the biospecimen collection and isolation of primary cells of the UGMLC/DZL biobank according to the European IPS Registry (AZ 111/08) and the DZL Biobank (58/15). The patients have been informed and given their written consent for the use of biospecimen for research purposes. All studies and procedures to obtain human specimen were conducted according to the Declaration of Helsinki.

Primary hPASMCs were used between passages 5-8. Cells were cultured in Smooth Muscle Cell Growth Medium-2 (SmGM-2) with the supplement mix containing 5% fetal bovine serum, human fibroblast growth factor (2 ng/ml), human epidermal growth factor (0.5 ng/ml), and insulin (5 µg/ml) (PromoCell, Heidelberg, Germany). For proliferation analysis hPASMCs were starved in serum-free SMC Basal Medium (SmBM) without addition of supplements for 24 hours, followed by the treatment with varying concentrations of Juglone (1, 5, 10 µM) and stimulations with recombinant PDGF-BB (30 ng/ml; R&D Systems, Minneapolis, MN).

A table with a list of PH patients and control has been given below:

Table S1

IPAH

Nr.:	Age/Gender	Clinical Diagnosis	Final Diagnosis	Smoker	mPAP (mmHg)	PCWP (mmHg)	CI (l/min/m^2)	sPAP (mmHg)
221	39/F	PH	IPAH: severe PH. Ductus arteriosus		89	7	1.81	134
250	35/M	PPH / IPAH	IPAH		62	-	-	15
401	39/F	PAH / IPH	IPAH, pulmonary emphysema of medium size		-	-	-	-
449	34/F	PPH	IPAH		101	-	-	158
453	41/M	IPH	IPAH, mild chronic bronchitis, moderate pulmonary emphysema (Grade 4-5, according to Thurlbeck)		101	-	-	140
488	34/F	IPAH	IPAH, medium-sized blistered emphysema (Grade 4-5, according to Thurlbeck)		43	4	1.9	101
515	41/M	PPH	IPAH; Lung emphysema (Grade 4-5, according to Thurlbeck), plexiform lesions		48	15	3.1	130
GI-9	28/F	IPAH	IPAH		-	-	-	-
428	35/M	IPH	IPAH, lung emphysema (Grade 4-5)		62	10	2.2	80

Control (Biobank)

Nr.:	Age/Gender	Clinical Diagnosis	Final Diagnosis	Smoker
200	42/?	Donor	mild bronchitis, emphysema 3-4, moderate anthracosis, hypertensive vasculopathy 1-2	
553	30/M	Donor	Pulmonary emphysema grade 5-6 n.T., moderate chronic and active bronchitis, numerous condensate-containing alveolar macrophages, nicotine abuse?	
566		Donor	fibrosis	

Control (Lonza)

Nr.:	Age/Gender	Clinical Diagnosis	Final Diagnosis	Smoker
370750	51/M			No

Human Pulmonary Arterial Endothelial Cell (PAEC)

Control hPAECs were purchased from Lonza (Basel, Switzerland). IPAH-PAECs were obtained from Université Paris–Saclay, France. The human lungs used for IPAH-hPAEC cultures were obtained from patients with PAH during lung transplantation. Study patients were part of the French Network on Pulmonary Hypertension, a program approved by the institutional Ethics Committee, and had given written informed consent (Protocol N8CO–08–003, ID RCB: 2008-A00485-50, approved on June 18, 2008). PH was defined as resting mean pulmonary arterial pressure $\geqslant$25 mmHg. HPAECs were used between 3-5 passages. HPAECs were cultured in Endothelial Cell Growth Medium MV2 (Promocell, Germany). The supplement for growth medium includes fetal calf serum (0.05 ml/ml), recombinant human epidermal growth factor (5 ng/ml), recombinant human basic fibroblast growth factor (10 ng/ml), insulin-like growth factor (Long R3 IGF) (20 ng/ml), recombinant human vascular endothelial growth factor 165 (0.5 ng/ml), ascorbic acid (1µg/ml), hydrocortisone (0.2 µg/ml) as final concentrations.

Experimental PH model and treatments

Adult rats (control n=5, both placebo and Juglone treated n=10) were selected in a randomized manner and subcutaneously injected with the Sugen5416 (20 mg/kg body weight) solution in the neck. Immediately after the injection, animals were exposed to hypoxia (10% O_2) in the ventilated hypoxia chamber for three weeks, followed by re-exposure to normoxia for another two weeks. Control animals, injected with the same volume of saline, were kept in normoxic conditions for the same duration. Adult mice

(n=5 for control and placebo; n=10 for Juglone treated) were exposed to hypoxia (10% O_2) for three weeks, followed by two weeks of normoxia. Hemodynamic studies and tissue harvesting occurred at the end of the treatment. Mice and rats were subjected to intraperitoneal injection of Juglone with 3 mg/kg and 1.5 mg/kg per body weight every alternative day, respectively. Control mice and rats were injected with ethanol.

Echocardiography

Echocardiography was performed to measure several functional and morphometric measurements noninvasively, as described previously [1, 2]. The rats were anesthetized with isoflurane gas (3%) and the chest was shaved. Rats were kept in a supine position on a heating platform with limbs taped to ECG electrodes. Right ventricle internal diameter (RVID) was measured as the distance between the inner linings of the right ventricle free wall to the inner lining of the interventricular septum towards the right ventricle; it is measured in millimeters and serves as a parameter of right ventricle hypertrophy and dilatation. Stroke volume (SV) was measured as the volume of blood ejected by the ventricle during each contraction. Cardiac output (CO) was measured as the volume of blood ejected from the ventricle into the circulation per minute. Cardiac output equals SV multiplied by heart rate. Cardiac index (CI) was measured as the ratio of cardiac output per 100 grams of body mass; it estimates the performance of cardiac output according to the size of the body. Echocardiographic images were acquired with a VEVO 1100 (Visualsonics, Toronto, Canada) high-resolution imaging system equipped with MicroScan linear array transducers.

Assessment of pulmonary arterial hypertension

Mice were anesthetized with a subcutaneous injection of heparin (50 IU/kg body mass) to measure the hemodynamic parameters. A pressure catheter (SPR-671 Mikro-Tip®, Millar Instruments, Houston, Texas, USA) was inserted through the right jugular vein to measure right ventricular systolic pressure (RVSP), and into the left carotid artery to measure arterial pressure. The heart was dissected and weighed for calculation of the RV hypertrophy index (ratio of RV free wall weight over the sum of the septum plus LV free wall weight [RV/LV+S]).

Lung tissue harvest and preparation

Whole lungs were flushed through the pulmonary artery with saline. The right lobe was snap-frozen in liquid nitrogen and stored at -80ºC for molecular biology assessment,

while the left lobe was perfused under 22 cm H_2O of pressure with 3.5 to 3.7% formalin, and immersed in formalin for 24 hours. Formalin-fixed lung tissue samples were stored in phosphate-buffered saline for 48 hours (changed after 24 hours) and dehydrated overnight. The lung tissues were then embedded and sectioned to 2μm thick sections on the fully automated rotation microtome (Leica, Wetzlar, Germany), and mounted on positively charged glass slides.

Assessment of medial wall thickness and occlusion of vessels

The assessment of medial wall thickness (MWT) and the occlusion score was performed with Elastica-van Gieson (EVG) staining. The percent medial thickness of muscular arteries (20-50μm) was calculated with the formula [(external diameter − internal diameter/external diameter) × 100] in EVG-stained slides. Next, the pulmonary vessels were categorized into open (≥75%), partially closed (75%-25%), and closed (<25%) in respect to the free area within the lamina elastic interna. Around 100 pulmonary vessels were analyzed at 630-fold magnification per lung section from each rat.

Laser-assisted micro-dissection of pulmonary vessels

Laser-assisted micro-dissection and pressure-catapulting technology (PALM Microlaser Technologies, Bernried/Germany) was performed at around 150 arteries (n = 6 for non-PAH control, n = 8 for IPAH) from each individual human. Each piece of micro-dissected tissue contained several cells. Each specimen was picked and processed for RT-PCR analysis. Methods of preparation, artery collection, total RNA extraction, and cDNA synthesis followed by quantitative real-time PCR analyses were as described in [3]. Before artery collection, cryosections from the lung, collected on glass slides were stained with Cresyl Violet for 4 min and Eosin Y for 20 s. Excessive dye was removed through rinsing slides with slow-running tap water for 1–2 min. RNeasy Mini kit (74106, Qiagen, Venlo, Netherlands) was used to isolate total RNA. In PCR experiments, the absence of any contaminating genomic DNA was validated by including reactions without RT during the first round of cDNA synthesis. Samples were also processed with no template controls (H_2O).

Western blot

Total protein extracts from cultured hPASMCs and hPAECs were isolated using cell lysis buffer (Thermo Fischer, Massachusetts, USA), and protein from lungs was

isolated using the Cell Lysis Buffer (Cell Signaling Technology, Massachusetts, USA). Western blot analyses were performed with NuPAGE (NuPAGE™, Thermo Fisher Scientific, Massachusetts, USA) setup. Cell lysates were separated on a 4-12% SDS polyacrylamide gel (NP0336, NuPAGE™, Thermo Scientific, Massachusetts, USA) followed by transfer to a nitrocellulose membrane (#1620094, Bio-Rad, California, USA) of 0.45 µm thickness for 1 hour. The membrane was then blocked with 5% non-fat dry milk in Tris-Buffer Saline + 0.1% Tween 20 (TBS/T) for 45 minutes followed by overnight incubation with one of the following antibodies: Pin1 (sc-46660, Santa Cruz, Texas, USA), PCNA (sc-7907,Santa Cruz, Texas, USA), Cyclin D1 (sc-8396, Santa Cruz, Texas, USA), Cleaved-PARP (#9541, CST, Massachusetts, USA), PARP (#9532, CST, Massachusetts, USA), Caspase-3 (#9662, CST, Massachusetts, USA), HIF-1α (ab2185, Abcam, Cambridge, UK), C/EBP-α (sc-365318, Santa Cruz, Texas, USA), p-STAT3 (#9145, CST, Massachusetts, USA), STAT3 (#4904, CST, Massachusetts, USA) and Pan-actin (#4968, CST, Massachusetts, USA). Membranes were washed in TBS/T buffer, followed by incubation in secondary antibody coupled to horseradish-peroxidase and immunoreactive signals were detected by chemiluminescence reagent (RPN2232, ECL™ Prime, GE Healthcare, Buckinghamshire, UK). All the images were developed and analyzed on Amersham™ Imager 600 (GE Healthcare, Buckinghamshire, UK).

Reverse transcription-quantitative polymerase chain reaction (RT-qPCR)

The total RNA from the hPASMCs was isolated using the RNeasy Mini kit (74106, Qiagen, Venlo, Netherlands). The procedures were followed according to the manufacturer's instructions. The quality and concentration of total RNA were measured with a NanoDrop spectrophotometer (ND-1000, Peqlab, Erlangen, Germany). cDNA was generated by reverse transcription using M-MLV reverse transcriptase (M1302, Sigma, Munich, Germany) and oligo (dT) primer. The exon-spanning primer pairs for human, mouse, and rat genes were designed using the NCBI/ Primer-BLAST and are shown in Table S2. *HPRT* was used as the reference gene. Furthermore, qPCR was performed on a qPCR system machine (Mx3000P®, Stratagene, California, USA) using an iTaq™ SYBR® Green Supermix kit (#172-5124, Bio-Rad, California, USA), and procedures were followed according to manufacturer's instructions.

Table S2

Pin1	Homo sapiens	Fw 5'-GCAGCTCAGGCCGAGTGTA-3'

Pin1	Homo sapiens	Rev 3'-TGCGGAGGATGATGTGGATG-5'
Pin1	Mus musculus	Fw 5'-CACCCTACGCACCTTCCATT-3'
Pin1	Mus musculus	Rev 3'-GTTGAGGGGGCCTCTGTTAC-5'
Pin1	Rattus norwegicus	Fw 5'-AGCTCAGGCCGTGTCTACTA-3'
Pin1	Rattus norwegicus	Rev 3'-TGCTTTTCGCAACGGAACAG-5'
HPRT	Homo sapiens	Fw 5'-TGACACTGGCAAAACAATGCA-3'
HPRT	Homo sapiens	Rev 5'-GGTCCTTTTCACCAGCAAGCT-3'
HPRT	Mus musculus	Fw 5´-CAGTCCCAGCGTCGTGATTA-3´
HPRT	Mus musculus	Rev 5´-TGGCCTCCCATCTCCTTCAT-3´
HPRT	Rattus norwegicus	Fw 5'-ACAGGCCAGACTTTGTTGGAT-3'
HPRT	Rattus norwegicus	Rev 5'-GGCCACAGGACTAGAACGT-3'

si RNA transfections

PASMCs were serum-starved with Opti-MEM I medium (Fa. Gibco by Life Technologies, Carlsbad, California, USA) and then transfected with 30 nM of Pin1 (or control siRNA) lipoplexed with DharmaFECT1 (GE Dharmacon, Lafayette, Colorado, USA).

Transcription Factor Array

siRNA transfections with Pin1 siRNA or scrambled siRNA in hPASMCs were performed as described above. siRNA tranfections with Pin1 siRNA using Dharmacon ON-TARGETplusTM SMARTpool siRNA with 5'-CCACAUAACGCCAGC-3' sequence or scrambled-siRNA in hPAMSCs were performed. Similarly, hPASMCs were treated with either DMSO or Juglone (5 µM) and nuclear proteins were extracted with the nuclear extraction kit (#78833, NE-PER^{TM}, Thermo-Scientific, Massachusetts, USA). The nuclear extracts were incubated with biotin-labeled probe mix and TF-probe complexes were separated from free probes through a spin-column purification. The bound probes were detached from the complex and analyzed through hybridization with the 96-Well Plate. Complementary sequences of the probes are pre-coated in each well and the captured probe was further detected with Streptavidin-HRP Conjugate. A microplate luminometer (Infinite M200, TECAN, Männedorf, Switzerland) was used to detect luminescence (RLU).

Immunofluorescence staining

hPASMCs were cultured in a 24-well plate on a glass cover-slip. Serum starved cells were either treated with Pin1 siRNA or Juglone. The cells were then fixed with 3.7% paraformaldehyde (252549, Sigma-Aldrich, St. Louis, USA) and permeabilized with

0.5% Triton-X100 (T8787, Sigma-Aldrich, St. Louis, USA) . After incubating the cells in blocking buffer, mouse anti-Ki-67 (ACK-02, Leica Biosystems, Wetzlar Germany) was added and incubated overnight. The next day, cells were washed with 0.1% Nonidet P40 (74385, Fluka Biochemika, Buchs, Switzerland), and Alexa-flour goat anti-mouse (A11005, Life Technologies, California, USA) secondary antibody was added. After washing, the cells were stained with DAPI and visualized under fluorescence microscope BZ-9000 (Keyence, Japan).

Luciferase assay

hPASMCs were cultured in a 6-well plate. After serum starvation, siRNA transfections were performed using Pin1 siRNA, and cells were incubated for 24 hours. The next day, 9*HRE-luc reporter plasmid was overexpressed using Viromer® Yellow (lipocalyx GmbH, Halle, Germany) plasmid transfection reagent. A transfection complex with HRE reporter plasmid and Viromer® Yellow was prepared in supplemented buffer and given to the cells with fresh SmGM-2 medium. After 6 hours, the medium was replaced and the cells were kept in a hypoxia incubator (1% O_2) for 24 hours. Dual-Luciferase® Reporter Assay (E1960, Promega, Wisconsin, USA) was employed and manufacturer's instructions were followed to detect the HRE luciferase activity.

Mouse ventricular fibroblasts

Adult murine cardiac fibroblasts (CFs) were isolated from the right ventricle of mice. The tissue was washed with PBS and digested with the enzyme Liberase DH (cat. No. 05401089001, Roche, Mannheim). With various centrifugation steps, other cell types were separated and RVCFs were cultivated in DMEM medium (cat.no. E15-806, PAA, Cambridge, UK) with 10% FCS, 100 U/ml penicillin, and 10 µg/ml streptomycin. Early passage (1 or 2) CFs were used for all the experiments.

Collagen synthesis in cardiac fibroblasts

Serum starved CFs were treated with 5 µM Juglone and further stimulated with TGF-β1 (10 ng/ml) for 3 days. L-Ascorbic acid with an end concentration of 0.25 mM was added every day to the medium to stimulate collagen synthesis. Sircol Soluble Collagen Assay (Biocolor Ltd, Carrickfergus, UK) was employed to detect the secreted collagen in the cell culture medium. Cold isolation & concentration reagent was added to each tube containing cell culture medium and incubated overnight at 0-4°C. The following day, the tube was centrifuged and the supernatant was removed carefully

using cotton buds leaving a transparent pellet at the bottom. Sircol dye reagent was added and the concentration was determined using a spectrophotometer.

Assessment of right ventricular fibrosis

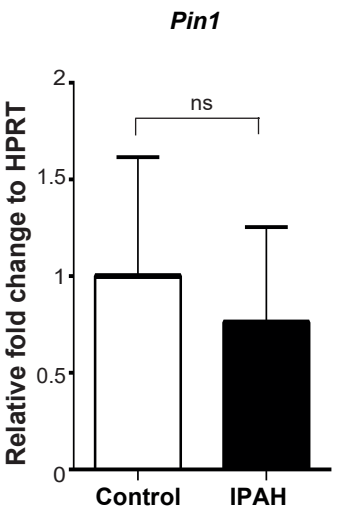
The RV tissue was freshly dissected and fixed overnight in 4% paraformaldehyde. After embedding in paraffin, the RV tissues were cut into 3 µm thin sections. To detect collagen fiber deposition in RV tissues, the Sirius Red assay (Sirius Red F3B, Bürstadt, Germany) with 0.1% Sirius Red in picric acid was applied. Leica Qwin V3 image analysis software (Leica Microsystem, Wetzlar, Germany) was used to analyze and quantify the amount of RV fibrosis.

Figure S1

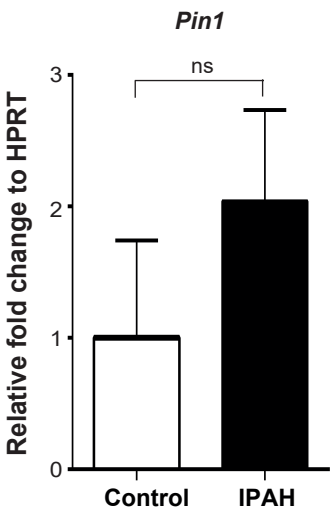
Expression of Pin1 in human and experimental PAH

a) mRNA expression of *Pin1* in laser-assisted micro-dissected vessels (LMVs) from non-PAH controls and IPAH patients (control=6, IPAH=8). **b)**, **c)** mRNA analyses and protein expression of Pin1 in lung homogenates from control individuals and IPAH patients (control=5, IPAH=5). **d)** Protein expression of Pin1 in mouse smooth muscle cells (SMCs) exposed for 24 hours to 1% O_2. Data from four independent experiments are presented as mean ± SEM**. e)** & **f)** mRNA analysis of *Pin1* in lung homogenates from rats (NOX=5, SuHx=6) and mice (NOX=3, HOX=3) respectively, exposed to 10% O_2 for 3 weeks. *p<0.05. Statistical analysis was performed using Student's t-test.

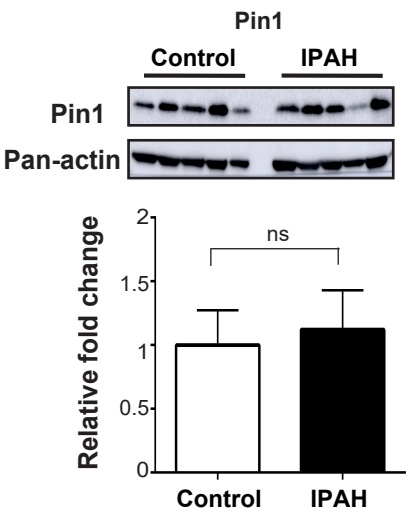
a. LMVs



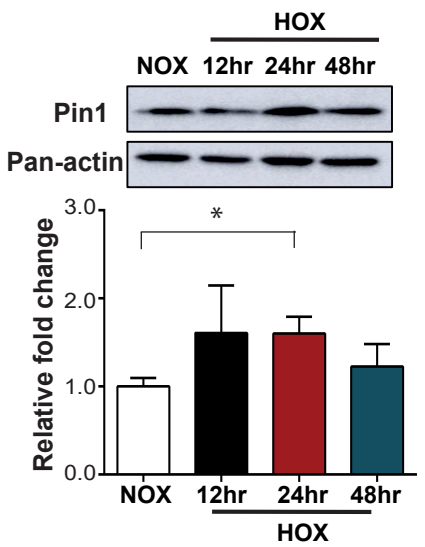
b. Human Lung



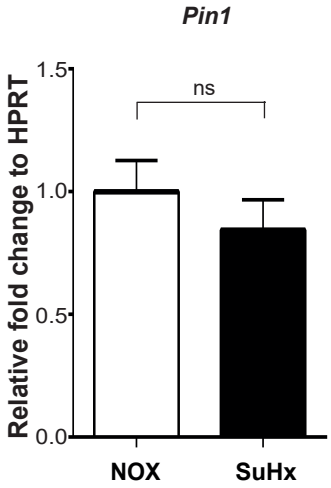
c. Human Lung



d. Mouse SMC



e. Rat Lung



f. Mouse Lung

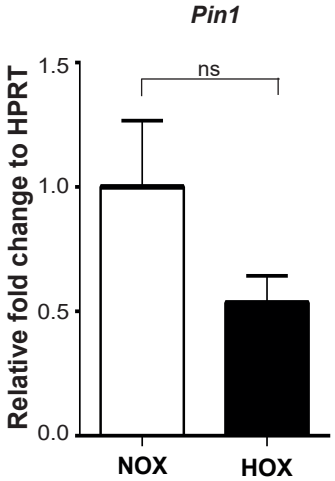


Figure S2

Pin1 expression in PAH experimental animal models

Representative immunofluorescence images of lungs sections from **a)** Normoxia (NOX) vs. Sugen/Hypoxia (SuHx) rats and from **b)** Normoxia (NOX) vs. chronic-hypoxia (HOX) mice stained with Pin1 (green) and α–smooth muscle actin (α–SMA) (red). Scale bar: 50 µm.

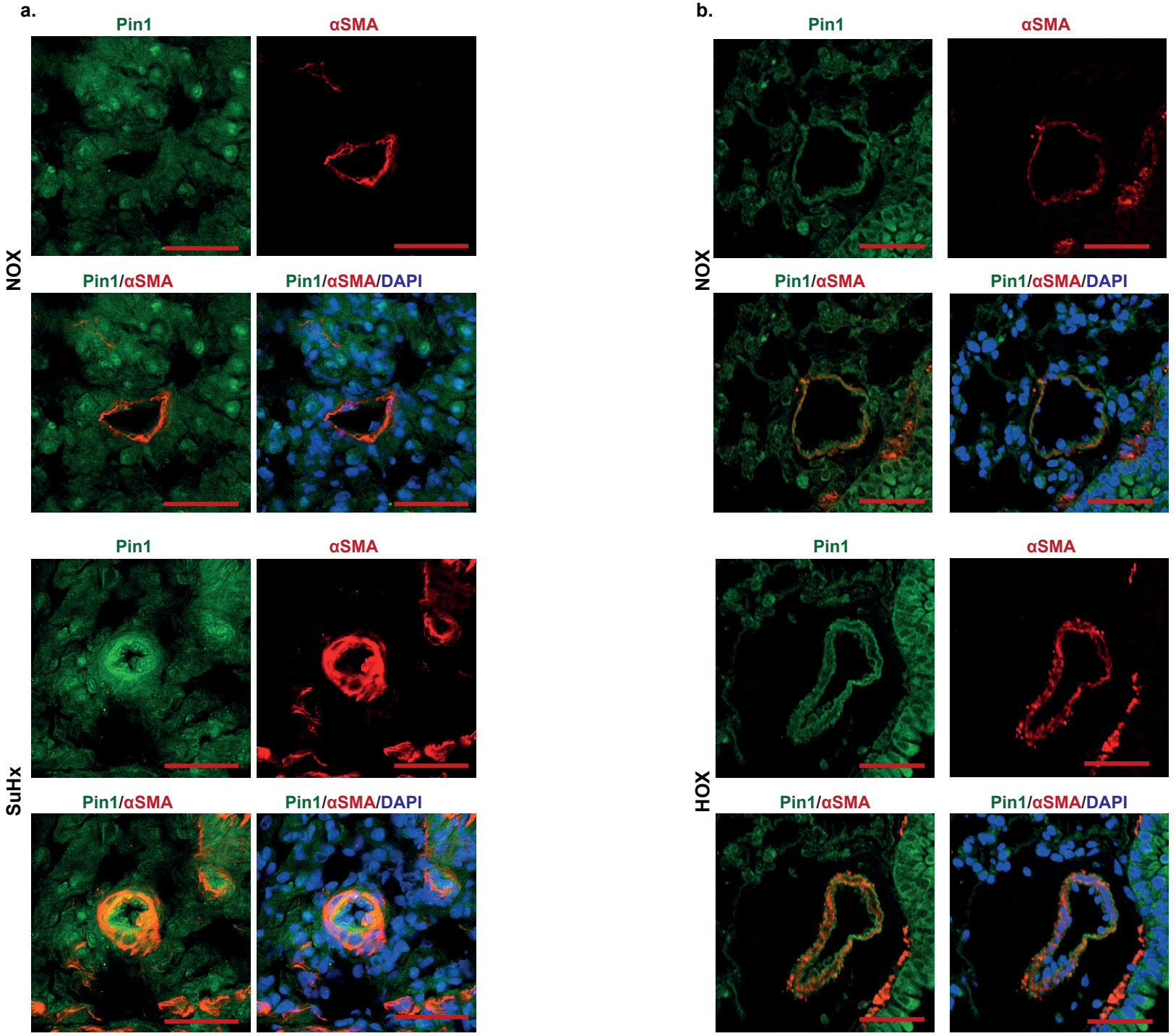

a.
Pin1
αSMA
NOX
Pin1/αSMA
Pin1/αSMA/DAPI
Pin1
αSMA
SuHx
Pin1/αSMA
Pin1/αSMA/DAPI
b.
Pin1
αSMA
NOX
Pin1/αSMA
Pin1/αSMA/DAPI
Pin1
αSMA
HOX
Pin1/αSMA
Pin1/αSMA/DAPI

Figure S3

Pin1 ablation affects the apoptotic resistance and proliferative capacity of human pulmonary vascular cells

a-c) Representative images of Ki-67 expression (red) upon Pin1 silencing or Juglone treatment in control and IPAH human pulmonary arterial smooth muscle cells (hPASMCs). **d-g)** Representative images of terminal deoxynucleotidyl transferase dUTP nick end labeling (TUNEL) of control and IPAH **d,e)** hPASMCs and **f,g)** human pulmonary arterial endothelial cells (hPAECs) upon Juglone treatment. Scale bar: 50 μm.

Supplement fig 3

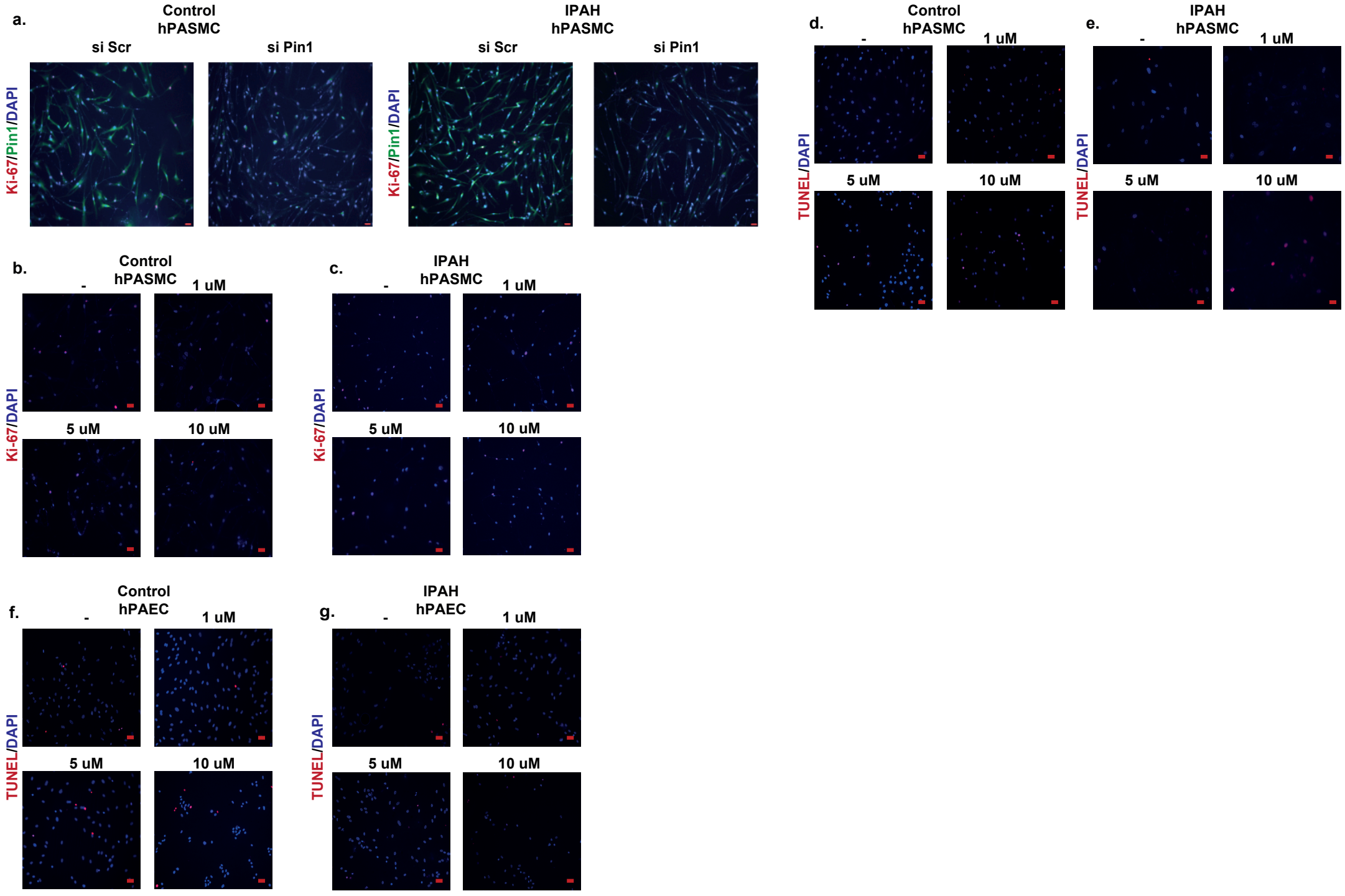
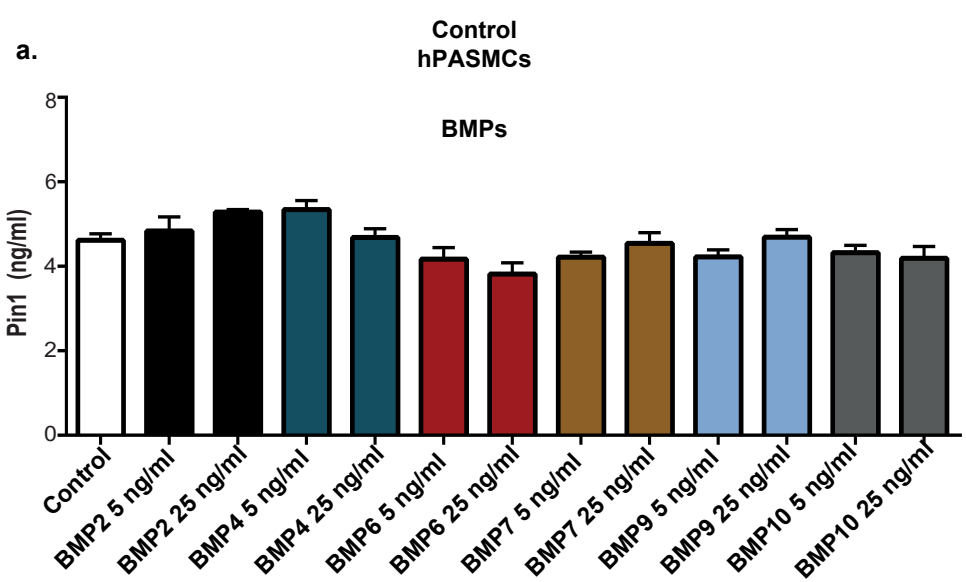


Figure S4

Analysis of Pin1 expression in human pulmonary arterial smooth muscle cells

a), b) Control human pulmonary arterial smooth muscle cells (hPASMCs) and **c), d)** IPAH hPASMCs, stimulated with Bone Morphogenetic Proteins (BMPs) and cytokines after 24h of serum starvation, subjected to enzyme-linked immunosorbent assay (ELISA) for Pin1 protein analysis. Data from two independent experiments are presented as mean ± SEM. **e)** Effect of Juglone administration on systemic systolic blood pressure (SBP, mmHg) in SuHx rats.


a.
Control
hPASMCs
BMPs
Pin1 (ng/ml)
0
2
4
6
8
Control
BMP2 5 ng/ml
BMP2 25 ng/ml
BMP4 5 ng/ml
BMP4 25 ng/ml
BMP6 5 ng/ml
BMP6 25 ng/ml
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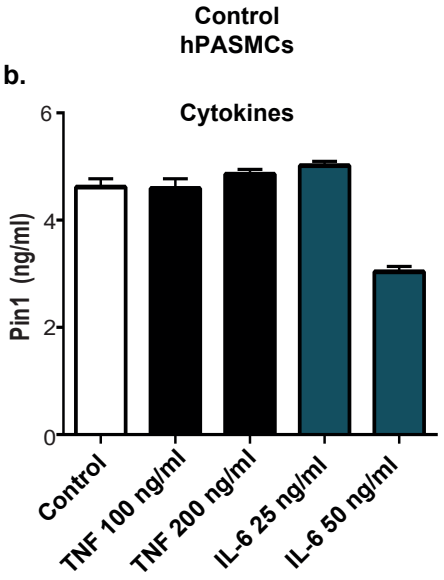
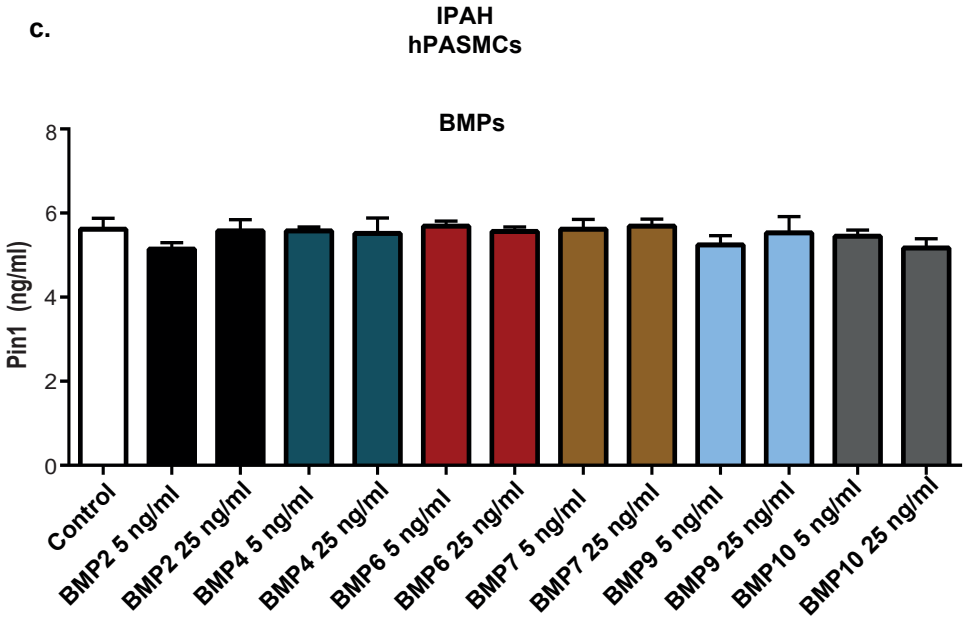
BMP10 5 ng/ml
BMP10 25 ng/ml


b.
Control
hPASMCs
Cytokines
Pin1 (ng/ml)
0
2
4
6
Control
TNF 100 ng/ml
TNF 200 ng/ml
IL-6 25 ng/ml
IL-6 50 ng/ml


c.
IPAH
hPASMCs
BMPs
Pin1 (ng/ml)
0
2
4
6
8
Control
BMP2 5 ng/ml
BMP2 25 ng/ml
BMP4 5 ng/ml
BMP4 25 ng/ml
BMP6 5 ng/ml
BMP6 25 ng/ml
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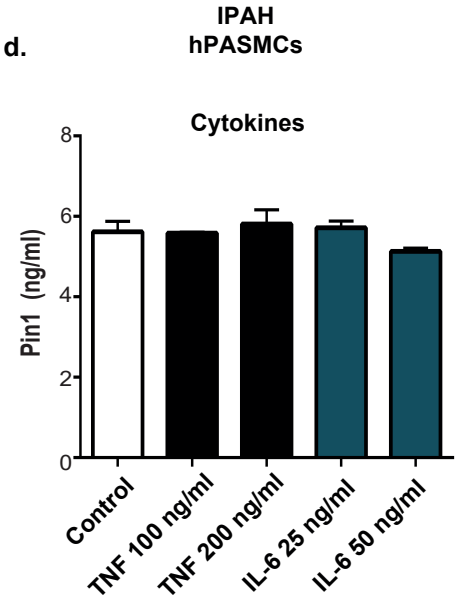
BMP10 5 ng/ml
BMP10 25 ng/ml


d.
IPAH
hPASMCs
Cytokines
Pin1 (ng/ml)
0
2
4
6
8
Control
TNF 100 ng/ml
TNF 200 ng/ml
IL-6 25 ng/ml
IL-6 50 ng/ml

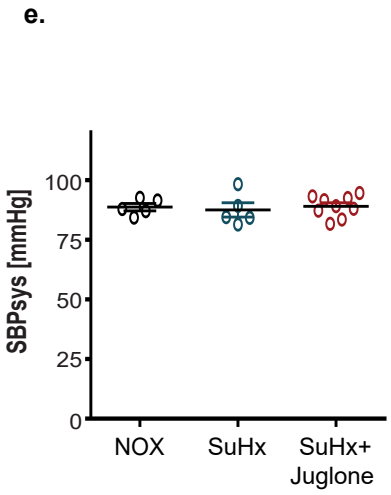

e.
SBPsys [mmHg]
0
25
50
75
100
NOX
SuHx
SuHx+
Juglone

Figure S5

Effect of Juglone on Sugen/Hypoxia (SuHx) induced PAH in rats

a) Representative images of SuHx lung sections stained with von Willebrand (brown) and α–smooth muscle actin (purple) for the degree of muscularization. **b)**, **c)** Elastica van Gieson (EVG) staining on lung sections for medial wall thickness and occlusion of vessels and their respective representative images. **d)** Representative images of PCNA+ cells in vessels in SuHx lungs with hematoxylin/eosin, as counterstain. Scale bar: 50 µm. **e**) Representative images of Picrosirius red-stained right ventricular sections from NOX, SuHOX and SuHOX+Juglone treated rats. **f)**, **g)** Western blot analysis followed by densitometry of proteins from lung homogenates of SuHx rats (NOX=4, SuHx=4, SuHx+Juglone=4).

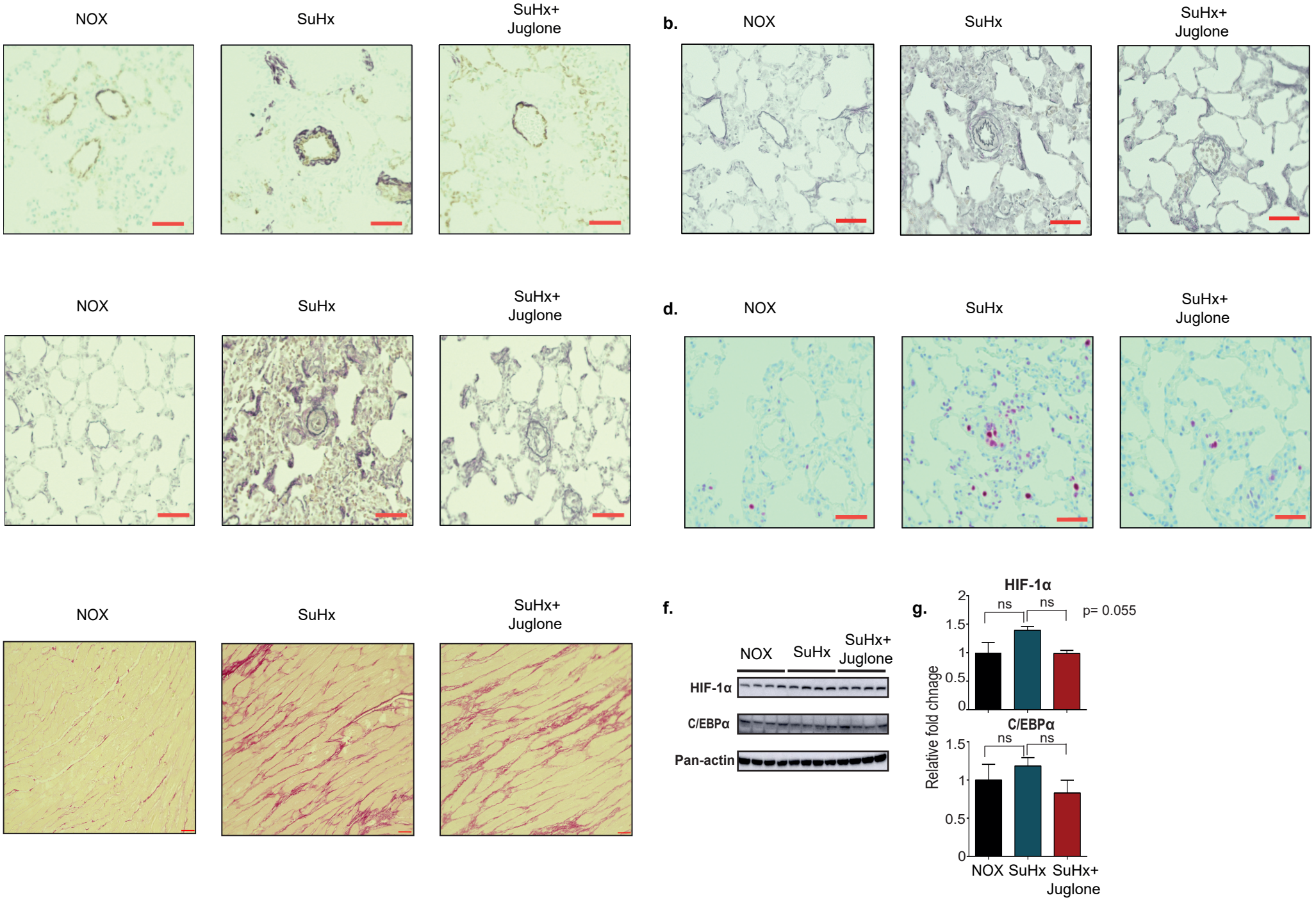
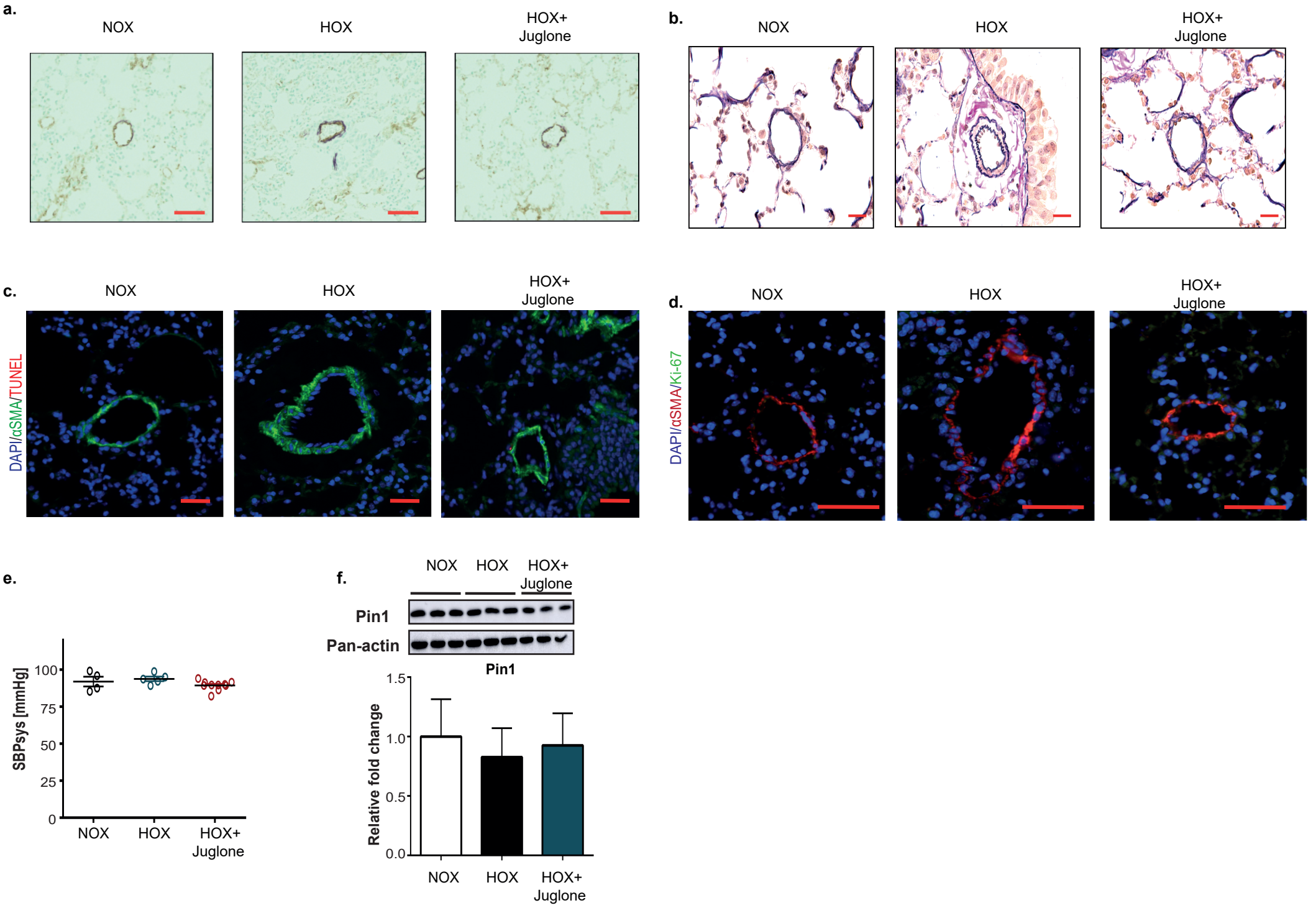

a.
NOX
SuHx
SuHx+ Juglone
b.
NOX
SuHx
SuHx+ Juglone
c.
NOX
SuHx
SuHx+ Juglone
d.
NOX
SuHx
SuHx+ Juglone
e.
NOX
SuHx
SuHx+ Juglone
f.
NOX
SuHx
SuHx+ Juglone
HIF-1α
C/EBPα
Pan-actin
g.
HIF-1α
ns
ns
p= 0.055
C/EBPα
ns
ns
Relative fold chnage
2
1.5
1
0.5
0
NOX
SuHx
SuHx+ Juglone

Figure S6

Effect of Juglone on chronic hypoxia-induced PH in mice

a) Representative images of immunohistological stainings of chronic hypoxia lung sections with von Willebrand Factor [vWF] (brown) and α–smooth muscle actin (purple) for the degree of muscularization. Scale bar: 50 µm. **b)** Representative images of Elastica van Gieson (EVG) staining of lung sections for medial wall thickness. Scale bar: 20 µm. **c)** Immunofluorescence images of TUNEL+ cells (red), and **d)** Ki-67+ cells (green) in vessels of chronic hypoxia mouse lung sections. Scale bar: 50 µm. **e)** Effect of Juglone administration on systemic systolic blood pressure (SBP, mmHg) in chronic hypoxia mice. **f**) Western Blot analysis followed by densitometry of lung protein homogenates from chronic hypoxia mice (NOX=5, HOX=5, HOX+Juglone=5).


a.
NOX
HOX
HOX+
Juglone
b.
NOX
HOX
HOX+
Juglone
c.
NOX
HOX
HOX+
Juglone
DAPI/αSMA/TUNEL
d.
NOX
HOX
HOX+
Juglone
DAPI/αSMA/Ki-67
e.
SBPsys [mmHg]
100
75
50
25
0
NOX
HOX
HOX+
Juglone
f.
NOX
HOX
HOX+
Juglone
Pin1
Pan-actin
Pin1
Relative fold change
1.5
1.0
0.5
0.0
NOX
HOX
HOX+
Juglone

References

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