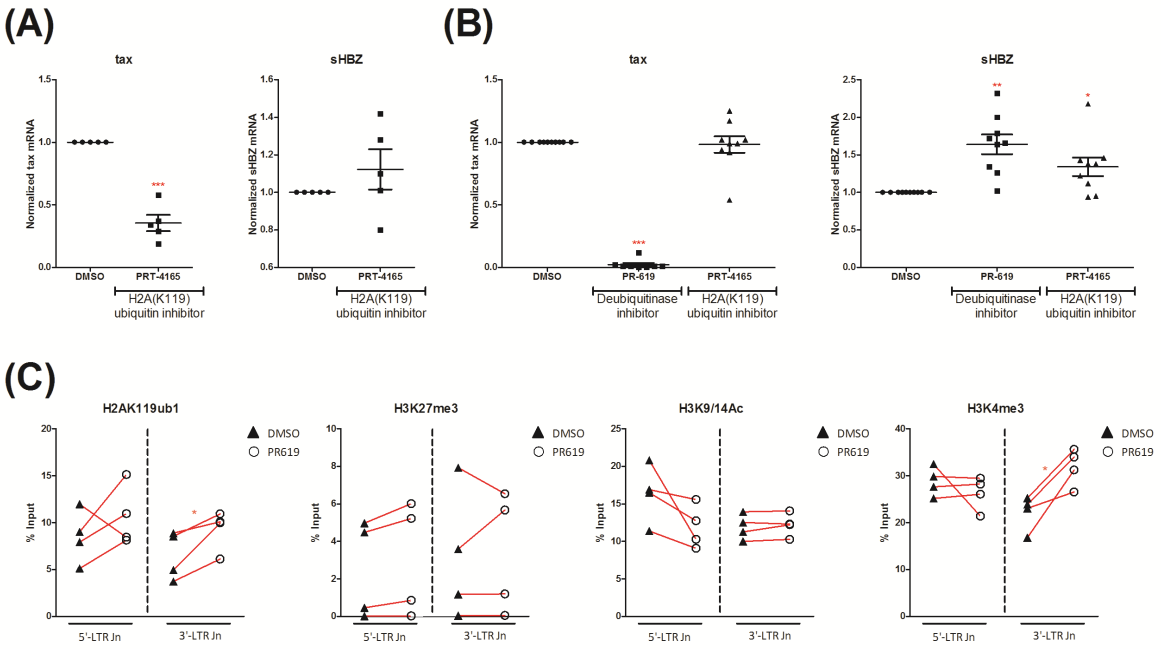
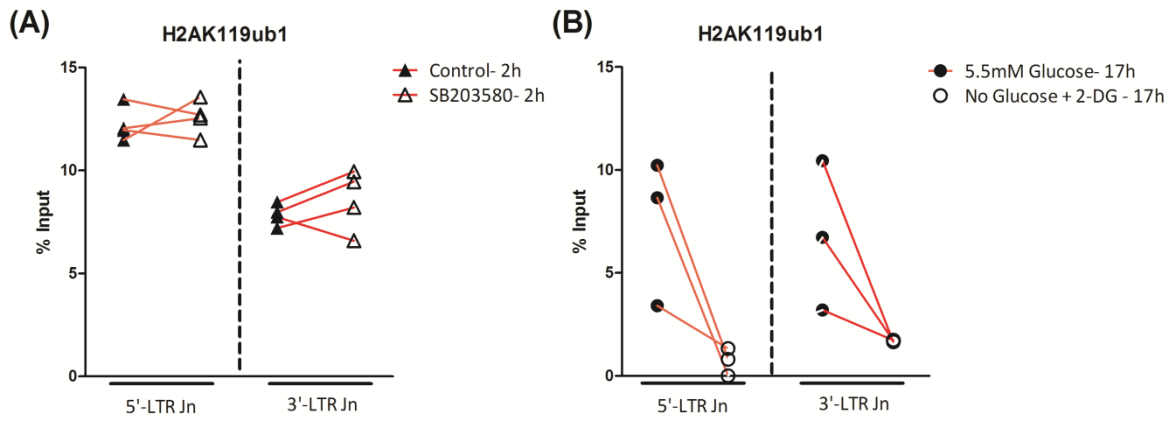


Supplementary figure 1. Transcriptional and epigenetic impact of PRC1 modulators. (A) Cryopreserved PBMCs isolated from HTLV-1-infected individuals (N=5) were cultured for 2 hr in the presence of either control (DMSO) or the H2A-ubiquitylation inhibitor PRT4165 (50 µM). **(B)** Cryopreserved PBMCs isolated from HTLV-1-infected individuals (N=9) were cultured for 17 hr in the presence of either control (DMSO); the deubiquitinase (DUB) inhibitor PR619 (50 µM); or the H2A-ubiquitylation inhibitor PRT4165 (50 µM). Cells were harvested for RNA and subjected to qRT-PCR with primers specific for *tax* mRNA (plus-strand) and *sHBZ* mRNA (minus-strand). Error bars represent the SEM. **(C)** Cryopreserved HTLV-1-infected PBMCs (N=4) were fixed after 17 hr of culture in the presence of control (DMSO) or deubiquitinase inhibitor PR619 (50 µM). Fixed cells were subjected to ChIP-qPCR, using antibodies directed against H2AK119ub1, H3K27me3, H3K4me3, H3K9/14Ac and IgG, and primers specific respectively for the 5'-LTR and 3'-LTR junctions of the HTLV-1 provirus. Enrichment is expressed as percent input DNA. Statistical significance was calculated using the two-tailed Student's t test (*$p < 0.05$, **$p < 0.005$, ***$p<0.0005$). N=5 for (A); N=9 for (B) and N=4 for (C).



Supplementary figure 2. Effect of p38-MAPK inhibition and glucose levels on H2AK119ub1 at the HTLV-1 provirus. Cryopreserved HTLV-1-infected PBMCs were fixed: **(A)** after 2 hr of culture in the presence of a control (DMSO) or p38-MAPK inhibitor (SB203580), and **(B)** after 17 hr of culture in medium containing 5.5mM glucose (5.5mM glucose-17h) or in glucose-free medium containing glycolysis inhibitor 2-deoxy-D-glucose (no glucose + 2-DG-17h). Fixed cells were subjected to ChIP-qPCR, using antibodies directed against H2AK119ub1 or IgG, and primers specific respectively for the 5'-LTR and 3'-LTR junctions of the HTLV-1 provirus. Enrichment is expressed as percent input DNA. N=4 for (A); N=3 for (B).

Supplementary Table S1. Patient samples used in the study. (Table relates to Figures 1-4; Supplementary Figures 1 and 2)

	Figure 1			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TDZ	61.0	F	HAM
2	TW	52.7	F	HAM
3	TEB	61.6	M	HAM
4	HEZ	61.7	F	AC
5	HBX	64.6	F	AC
6	TCD	32.2	F	HAM
7	TED	59.0	F	HAM
8	TEF	53.3	M	HAM

	Figure 2A			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TEB	61.6	M	HAM
2	TET	54.3	F	HAM
3	TEP	50.8	F	HAM
4	TDZ	61.0	F	HAM

	Figure 2B			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TEB	61.6	M	HAM
2	TED	59.0	F	HAM
3	TBC	76.5	F	HAM
4	TCX	50.7	M	HAM

	Figure 3A			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TCK	69.6	F	HAM
2	TCJ	54.6	F	HAM
3	TEJ	52.5	F	HAM
4	TBP	79.5	M	HAM
5	TDZ	61.0	F	HAM

	Figure 3B			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TCR	59.2	M	HAM
2	TEJ	52.5	F	HAM
3	TCJ	54.6	F	HAM

	Figure 4A- H3K4me3			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TCQ	78.0	M	HAM
2	TCX	50.7	M	HAM
3	TED	59.0	F	HAM
4	TCJ	54.6	F	HAM

	Figure 4A- H3K9/14Ac			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TBC	76.5	F	HAM
2	TCX	50.7	M	HAM
3	TEB	61.6	M	HAM
4	TED	59.0	F	HAM

	Figure 4B- H3K4me3			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TEB	61.6	M	HAM
2	TED	59.0	F	HAM
3	TCX	50.7	M	HAM
4	TCJ	54.6	F	HAM

	Figure 4B- H3K9/14Ac			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TEB	61.6	M	HAM
2	TCY	60.0	F	HAM
3	TCR	59.2	M	HAM
4	TCX	50.7	F	HAM
5	TED	59.0	F	HAM
6	TCQ	78.0	M	HAM

	Figure 4C			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TCJ	54.6	F	HAM
2	TCK	69.6	F	HAM
3	TAD	57.8	F	HAM

AC : Asymptomatic carrier
HAM : HTLV-1 Associated Myelopathy

	Suppl. Fig. 1A			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TFF	55.1	F	HAM
2	TEJ	52.5	F	HAM
3	TCG	58.7	F	HAM
4	TCK	69.6	F	HAM
5	TEF	53.3	M	HAM

	Suppl. Fig. 1B			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TCJ	54.6	F	HAM
2	TCK	69.6	F	HAM
3	TEF	53.3	M	HAM
4	TEK	43.5	F	HAM
5	TFF	55.1	F	HAM
6	TEJ	52.5	F	HAM
7	TCQ	78.0	M	HAM
8	TCR	59.2	M	HAM
9	TCG	58.7	F	HAM

	Suppl. Fig. 1C			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TEK	43.5	F	HAM
2	TCK	69.6	F	HAM
3	TCG	58.7	F	HAM
4	TEF	53.3	M	HAM

	Suppl. Fig. 2A			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TCX	50.7	M	HAM
2	TCR	59.2	M	HAM
3	TEB	61.6	M	HAM
4	TED	59.0	F	HAM

	Suppl. Fig. 2B			
Sr. No.	Patient Code	Age	Sex	Clinical status
1	TCJ	54.6	F	HAM
2	TCK	69.6	F	HAM
3	TAD	57.8	F	HAM

Supplementary Table S2. Chemical compounds and supplier list. (Table relates to Figures 1-4; Supplementary Figures 1 and 2)

Sr. No.	Name	Supplier	Solvent	Final conc.	Mechanism of action	Reference
1	DMOG	Cayman Chem.	DMSO	0.5mM	Broad spectrum 2-OG oxygenase inhibitor (and isocitrate dehydrogenase inhibitor)	(24)
2	SB203580	Cell Guidance Systems	DMSO	10µM	Selective p38-MAPK inhibitor	(21)
3	BIRB-796	Cell Guidance Systems	DMSO	5µM	Selective p38-MAPK inhibitor	(21)
4	PD184352	Cell Guidance Systems	DMSO	10µM	Selective ERK-MAPK inhibitor	(21)
5	2-Deoxy-D-Glucose	Sigma	Water	10mM	Glycolysis inhibitor	(30)
6	U0126	Cell Guidance Systems	DMSO	10µM	Selective ERK-MAPK inhibitor	(21)
7	Anisomycin	Cayman Chem.	DMSO	5µM	MAPK Inducer, Protein synthesis inhibitor	(26)
8	PR619	Cayman Chem.	DMSO	50µM	Broad-spectrum Deubiquitinase Inhibitor	(28)
9	PRT4165	Cayman Chem.	DMSO	50µM	H2A ubiquitiylation inhibitor	(29)

Supplementary Table S3. Primers and probes used in the study. (Table relates to Figures 1-4; Supplementary Figures 1 and 2)

qRT-PCR				
Sr. No	**Gene**		**Sequence**	**Reference**
1	Tax	F	5’-CCGGCGCTGCTCTCATCCCGGT-3’	(22)
		R	5’-GGCCGAACATAGTCCCCCAGAG-3’	
2	sHBZ	F	5’-GGACGCAGTTCAGGAGGCAC-3’	
		R	5’-CCTCCAAGGATAATAGCCCG-3’	
3	18S rRNA	F	5’-GTAACCCGTTGAACCCCATT-3’	
		R	5’-CCATCCAATCGGTAGTAGCG-3’	
4	c-fos	F	5'-CGGGCTTCAACGCAGACTA-3'	(25)
		R	5'-GGTCCGTGCAGAAGTCCTG-3'	
5	ATF3	F	5'-TGATGCAACGCTCTCCAAGC-3'	(32)
		R	5'-TTAGCTCTGCAATGTTCCTTC-3'	
6	GAPDH	F	5'-CGGAGTCAACGGATTTGGTC-3'	
		R	5'-AAGCTTCCCGTTCTCAGCC-3'	

ChIP-qPCR				
1	5'-LTR Junction	F	5’-GACAGCCCATCCTATAGCACTC-3’	(22)
		R	5’-CTAGCGCTACGGGAAAAGATT-3’	
2	3'-LTR Junction	F	5’-AATACACCAACATCCCCATTTC-3’	
		R	5’-GTTTTTCACTGGGAGGCTCTAA-3’	
3	ATF3 promoter	F	5'-CGAACTTGCATCACCAGTGC-3'	(32)
		R	5'-GGTCGTTTACTCCGTGTTGC-3'	
qPCR Probes				
1	5'-LTR Junction		FAM -TCGTCCGGGATACGAGCGCC- TAM	
2	3'-LTR Junction		FAM -AGAGGCAGATGACAATGACCATGAGCC- TAM	
3	ATF3 promoter		FAM-AGCATTACGTCAGCCTGGGACTG -TAM	
4	ATF3 mRNA		FAM-CACTGCACAGCTCTCTTCTCTCGC-TAM	
5	GAPDH mRNA		FAM-CATTGACCTCAACTACATGGTTTACATGTTCCAATATGATTC-TAM	