

Fetal hemoglobin induction in azacytidine responders enlightens methylation patterns related to blast clearance in higher-risk MDS and CMML.

Theodora Chatzilygeroudi, Vasiliki Chondrou, Ruben Boers, Stavroula Siamoglou, Katerina Athanasopoulou, Evgenia Verigou, Joost Gribnau, Spyridon Alexis, Vassiliki Labropoulou, Alexandra Kourakli, George P. Patrinos, Argyro Sgourou, Argiris Symeonidis

Additional file 2: Supplementary methodology tables

Table S1. Genes of main fetal hemoglobin expression regulators.

Gene	Genetic Region
<i>ZBTB7A</i>	chr19: 4,043,303 - 4,066,899
<i>BCL11A</i>	chr2: 60,457,679 - 60,553,658
<i>KLF1 enhancer region</i>	chr19: 12,884,422 - 12,887,201
<i>NF-E2</i>	chr12: 54,292,111 - 54,301,015
<i>GATA-1 (NF-E1, Ery-1 and GF-1)</i>	chrX: 48,786,590 - 48,794,311
<i>GATA-2</i>	chr3: 128,479,427-128,493,201
<i>ZFPM1 (FOG-1)</i>	chr16: 88,453,280 - 88,537,031
<i>SP1</i>	chr12: 53,380,176 - 53,416,446
<i>SOX6</i>	chr11: 15,966,449 - 16,476,388
<i>c-kit ligand (KL)</i>	chr13: 33,016,423 - 33,066,143
<i>Tal-1</i>	chr1: 47,216,291 - 47,232,225
<i>NF-E4 (N46W)</i>	chr7: 102,973,492 - 102,988,847
<i>MBD-2</i>	chr18: 54,151,606 - 54,224,669
<i>MBD-3</i>	chr19: 1,573,596 - 1,592,865
<i>CDH3</i>	Chr16: 68,645,310 - 68,700,292
<i>CHD4 (Mi2β)</i>	chr12: 6,570,082 - 6,607,379
<i>PRMT1</i>	chr19: 49,677,152 - 49,688,447
<i>CHTOP (friend of PRMT1)</i>	chr1: 153,634,066 - 153,646,306
<i>RCOR1</i>	chr14: 102,592,649 - 102,730,561
<i>PRMT5</i>	chr14: 22,920,529 - 22,929,376
<i>MTA1</i>	chr14: 105,419,827 - 105,470,729
<i>MTA2</i>	chr11: 62,593,214 - 62,601,865
<i>Sin3A</i>	chr15: 75,370,933 - 75,455,783
<i>HBG1</i>	chr11: 5,248,269 - 5,249,857
<i>HBG2</i>	chr11: 5,253,188 - 5,254,781
<i>HDAC1</i>	chr1: 32,292,083 - 32,333,626
<i>HDAC2</i>	chr6: 113,933,028 - 113,971,148
<i>KDM1A (LSD1)</i>	chr1: 23,019,468 - 23,083,689

LRF/ZBTB7A: Leukemia/lymphoma-related factor, *BCL11A*: B-cell lymphoma/leukemia 11A, *KLF1*: Erythroid Krüppel-Like Factor, *NF-E2*: Nuclear Factor, Erythroid 2, *GATA-1*: GATA Binding Protein 1, *GATA-2*: GATA Binding Protein 2, *ZFPM-1*: Zinc finger protein multitype 1, *FOG-1*: Friend of GATA-1 (*FOG-1*), *SP1*: Specificity protein 1, *SOX6*: SRY-box transcription factor

6, KL: c-kit ligand, TAL-1: T-cell acute leukemia 1, NF-E4: Nuclear Factor, Erythroid 4, MBD2/3: Methyl CpG Binding Domains 2 or 3, CHD3/4: Chromodomain Helicase DNA Binding Proteins 3 or 4, PRMT1: Protein Arginine Methyltransferase 1, CHTOP: chromatin target of PRMT1, RCOR-1: REST corepressor 1, PRMT5: Protein Arginine Methyltransferase 5, MTA1/2: Metastasis-Associated Proteins 1 or 2, SIN3A: SIN3 Transcription Regulator Family Member A, HBG1: Hemoglobin Subunit Gamma 1, HBG2: Hemoglobin Subunit Gamma 2, HDAC1/2: Histone Deacetylases 1 or 2, KDM1A: (K)-specific demethylase 1A, LSD1: Lysine-specific demethylase 1.

Table S2. PCR primers used for targeted pyrosequencing methodology.

Assay	Gene	Sequence	Primer
CpG assay	ZBTB7A/LRF	5' GTAGATTTTTTTGTGTTAAGGA 3'	Forward
		5' AACAAACCCCCAACCTCTAC 3'	5'biotinylated reverse
		5' GGGATTTTTATAGTTTTATTTTAA 3'	Forward/Pyrosequencing
	HBG2	5' ATGGTGGGAGAAGAAAATTAGTT 3'	Forward
		5' TCTCCTCCAACATCTCCACATTCA 3'	5'biotinylated reverse
		5' ATAGTTTTAGAGTATTTAGTGA 3'	Forward/Pyrosequencing
	LINE1	5' AAGTAAGTTTGGGTAATGG 3'	Forward
		5' AACAACTCCCATCTACAACTCCC 3'	5'biotinylated reverse
		5' GGGTGGGAGTGAT 3'	Forward/Pyrosequencing