Chromatin immunoprecipitation (ChIP)

BIOL 426/626
Approaches to Molecular Biology

Please sit in your groups!

In class writing

- The paper by Blount et al. discusses an area of biology called "synthetic biology". From what you have read in this paper, what would you describe as the goal of synthetic biology? What specific synthetic biology goals did the authors of this paper have and what general results were they able to achieve? (No specific experimental details required!)

Groups

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Group 1
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- Doffermyre, James

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- Puglisi, Kayla Marie
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- Chan, Pooja R

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- Goralski, Stephen M
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- Muntaka, Fahrina
- Ospina Cardona, Daniela
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Group 7
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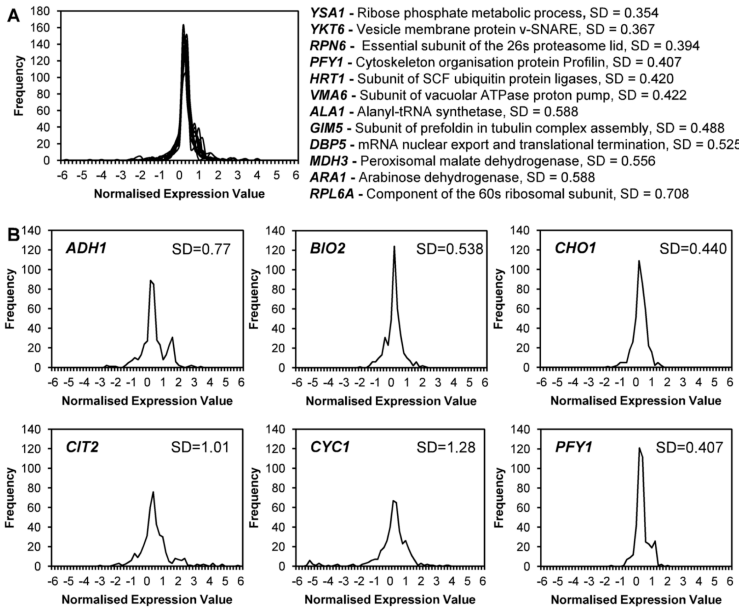
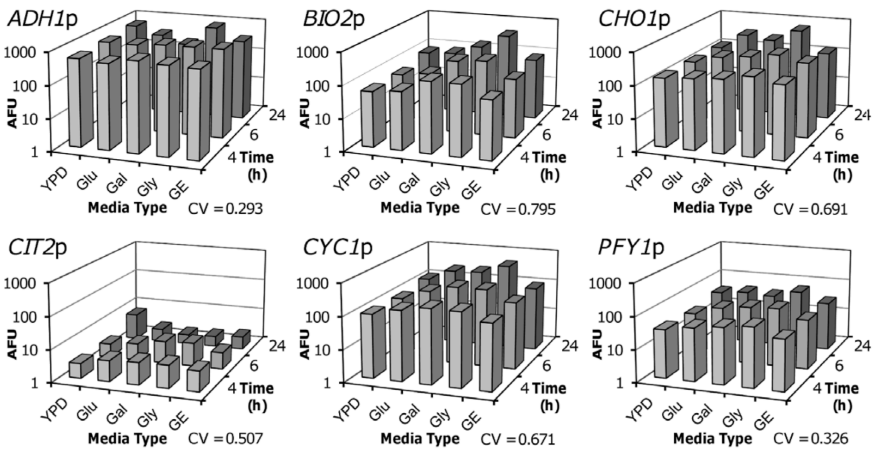
- Tajap, Basmark
- Xie, Claudia L
- Zaelke, Cody De Perrot
- Zimmer, Melody

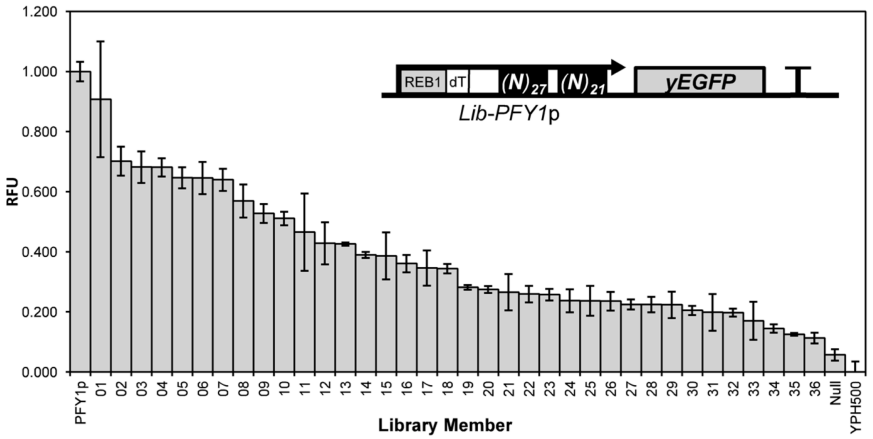
Blount et al. Fig 1



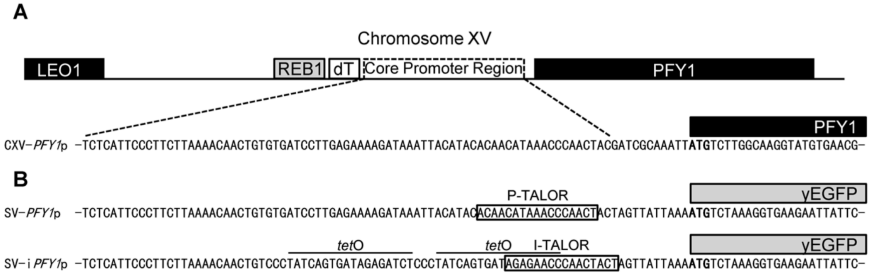
Blount et al. Fig 2



Blount et al. Fig 3



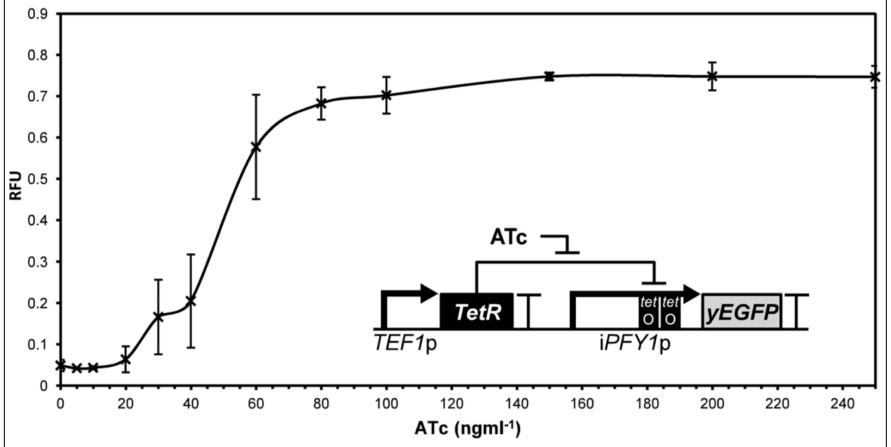
Blount et al. Fig 4A,B



B C

Lib-*PFY1*p		Output (RFU)	SD
*PFY1*p. 01	------TGTTAATAAGACTATTAAACACACAGT----------AGCCCCCCTATAAACAACCCG----------	0. 908	0. 193
*PFY1*p. 02	------ATGAAGTATGTGTTATTTATATGAAAG----------ACTTAGTCCCGAACACGACAC----------	0. 702	0. 048
*PFY1*p. 03	------CTACATGTGTTGCGTTGTCCTGGGATT----------ATCCACTGCCCCTCTTCCAAT----------	0. 682	0. 053
*PFY1*p. 04	------TCCTTCTCGTCGGTTATAACGGGAGGA----------CTACCCCAAAGCACGCACTAC----------	0. 681	0. 030
*PFY1*p. 05	------CGTACTTGAAACCTGATAGGACCTTCG----------CCCCGACCCACCTCTCCAACG----------	0. 646	0. 035
*PFY1*p. 06	------TGGTTTATTTTCCCATTAGTATGTACT----------CGCAATCTTTGCATGCCGTCA----------	0. 646	0. 053
*PFY1*p. 07	------GTTAAAGGCTGTTACAGTTATCTCGAG----------TATTCAAAGGCCAACCGGCGC----------	0. 640	0. 037
*PFY1*p. 08	------AGATTACTGCATTCCGAGTATGATTCT----------AATGTCTCCTAATAAACTGCA----------	0. 569	0. 055
*PFY1*p. 09	------CGTAGATTCCCTTTCGAAGTGGTTGGC----------TCACAAACCCACCAGTAGACT----------	0. 528	0. 031
*PFY1*p. 10	------ACTTCCTTGTAACCATTCGCCGTGGGT----------GCCCCCTACAGATTCTCCTTC----------	0. 511	0. 022
*PFY1*p. 11	------CATATACTAACAGAGCGATCTACAGAT----------TGACCTGCCTGGATTGCTTGC----------	0. 466	0. 129
*PFY1*p. 12	------TGTTGATTGGGTACGCATTGAGTTGGG----------ATACAGAGACTCGATTCACCC----------	0. 428	0. 070
*PFY1*p. 13	------CCGTATCGTTGATATTGAATTGGTGTT----------ACGCTTAGTGCTTCGCACCTG----------	0. 426	0. 005
*PFY1*p. 14	------ACGAATAGTGTTCGTGATTTTGTTGGC----------TCAGACTCACTGGTCGTCTCG----------	0. 389	0. 010
*PFY1*p. 15	------GGGGGATTGTTTTCTGAGATATCGGGT----------TTACTCCAACGAACTTTGAGC----------	0. 386	0. 078
*PFY1*p. 16	------GTAGTTGTGTTTCGATGGGGACGGTGC----------CCTGCCAGACCGCGTAACTCC----------	0. 361	0. 029
*PFY1*p. 17	------GACGAACAAATGAGCATAAATAAAAAG----------CCGCGCCTACCCTCGTTAGTA----------	0. 346	0. 059
*PFY1*p. 18	------ATCTTTGGCTGGTAGTTAGGTGTTTGC----------CTCGGTTGCTGCCGTACTGAC----------	0. 344	0. 016
*PFY1*p. 19	------CGCTAGTTAGTGGAGTAGTCTTACGGA----------CCTCCACTCTAGCCCACCACA----------	0. 282	0. 008
*PFY1*p. 20	------GGACATTGTTTTTACTCCGTATTTGTA----------TAGGCTCCACAGACTGAGGCG----------	0. 275	0. 012
*PFY1*p. 21	------TAAAGTCATTAGCAGGGATAAGCGGCC----------TTGAGAAAAGATACATCTAAG----------	0. 265	0. 060
*PFY1*p. 22	------GTTTATAATCGTTCGGTACCGTGTGCA----------CCGCCACCGCCCCCTGCTGAG----------	0. 259	0. 028
*PFY1*p. 23	------CATTATAGATTCCGATTAACGTGAGCG----------AACCCCGTCAGCACGATTCCC----------	0. 257	0. 019
*PFY1*p. 24	------ACAATAGACATTACCTGCAAAGGTCTT----------CGAGGACCTCCACACGTTTCC----------	0. 237	0. 038
*PFY1*p. 25	------ATTATTACATGACGTCTTGGCAGATGA----------CCAGCCTATTAGGATACGCAT----------	0. 237	0. 050
*PFY1*p. 26	------AAGCACTTGTAGGTTGCCATTTAGGGT----------AATACATTCGGAAGCTTGCAC----------	0. 236	0. 031
*PFY1*p. 27	------CAAAGTCTCTGCTGCGTTGTTAGTAGA----------CCCGCTCGCCCTCTAGCCAAG----------	0. 225	0. 017
*PFY1*p. 28	------CTATGGTCTAGACGCTTAAGAACCCGA----------ACGATTGCAGGGCCGGCGCCA----------	0. 224	0. 026
*PFY1*p. 29	------TGAGTTAGCGCTCAGTTGTGTGTGTGT----------TCACGGGTAAGCTGCTCTAAG----------	0. 224	0. 044
*PFY1*p. 30	------TGTATGGGCTACTATTCGGCCAATTTA----------GCAAACGAACTACCCCCATGA----------	0. 205	0. 015
*PFY1*p. 31	------ATTTTCGCACCACTTTAATGTGCAATT----------GACGCTCCGGCCCACCAGGTT----------	0. 199	0. 061
*PFY1*p. 32	------TGCTAGGTCATCAATTGTGCTGCCCAC----------ACAGAACGCGTACCGATAACG----------	0. 198	0. 013
*PFY1*p. 33	------GCTGGTGCGTTTTACGGTTTTTGCGTA----------AATGTGTGTTAATTTCCTTCC----------	0. 171	0. 064
*PFY1*p. 34	------TGACTTGGGGGTGCGGATGGGGGGCGC----------AATACATTCGGAAGCTTGCCC----------	0. 145	0. 014
*PFY1*p. 35	------TCGGCCGAGGGTTTTCATGGGTGTCAT----------AAAATAAAAGCATAGTCCTAT----------	0. 125	0. 004
*PFY1*p. 36	------TGGTCATCTAGTGTGGCAGGGCTGCTG----------TTGAGCATCAAATGGCGGGCA----------	0. 113	0. 018
*PFY1*p. null	------TGACTTGAGGGTGCGGATGCGTGGCGC----------AATACATTCGGAAGCTTGCAC----------	0. 057	0. 019

Blount et al. Fig 5



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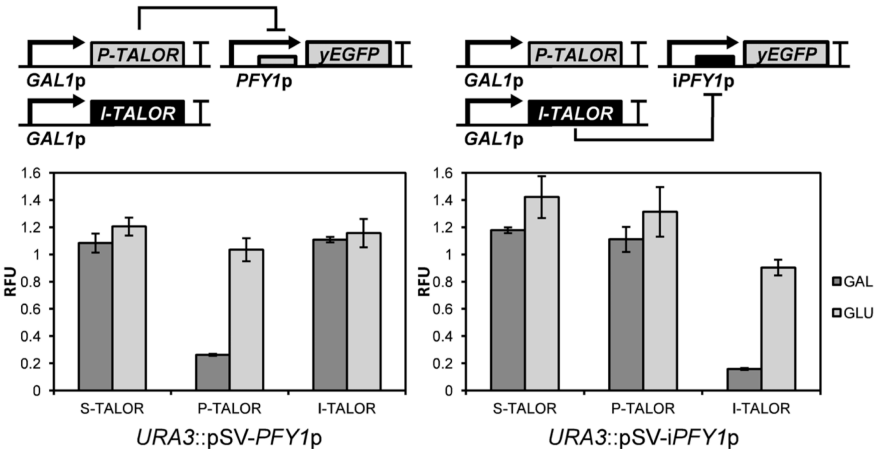
Blount et al. Fig 6



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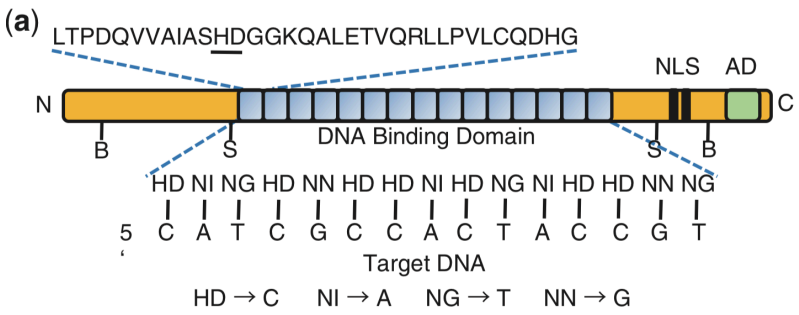
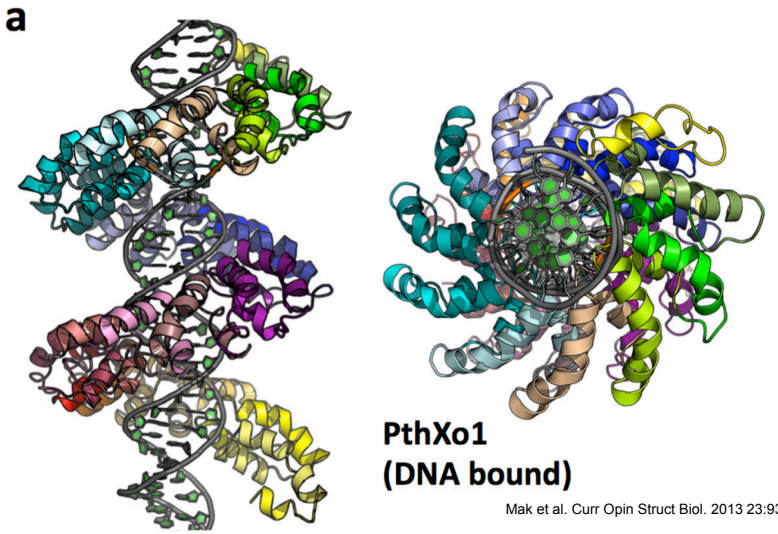
Organization of TAL Proteins



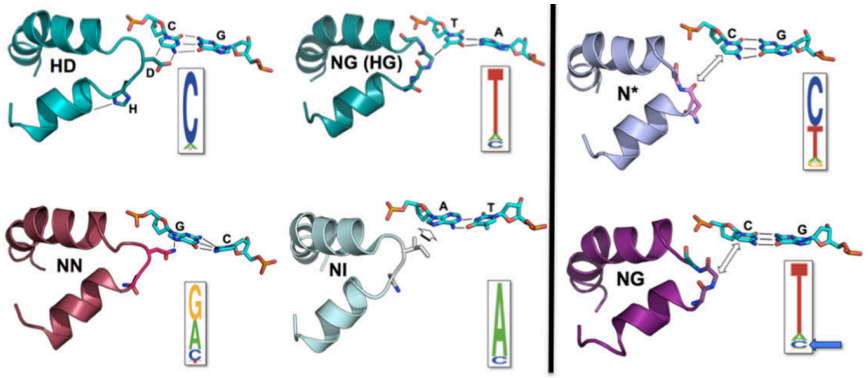
Cermak et al. Nucleic Acids Res. 2011 39:e82

Structure of TAL Proteins



Mak et al. Curr Opin Struct Biol. 2013 23:93

DNA recognition by TAL Proteins



Mak et al. Curr Opin Struct Biol. 2013 23:93