

# modERN Call

White Lab

20170209

# modERN fly ChIP-seq datasets

## 268 lines complete data sets

- ab, **Abd-B**, ac, achi, acj6<sup>!</sup>, ADD1-mimic, Antp-mimic, Atf-2, Atf3, az2, Bab2, bcd, br, brk, bsh, BtbVII, Bteb2, btn, **cad**, Camta-mimic, cato, CG10274, CG10462, CG10565, CG10631, CG10654, CG11398, CG11723, CG11762, CG11902, CG12104, CG12155, CG12236, CG12744, CG12942, CG13123, CG13624, CG13775, CG14965, CG15073, CG1602, CG1620, CG1647, CG16779-MiMIC, CG16815, CG16863, CG1792, CG18011, CG1832, CG18476, CG18764, CG2116, CG2120, CG30403, CG30431, CG3065, CG31388, CG31627, CG3163, CG3281, CG32006, CG32264, CG33213, CG3838, CG3919, CG3995, CG4282, CG4318, CG4402(aka CG34406), CG4424, CG4617, CG4820, CG4854, CG5204, CG5245, CG6276, CG6654, CG6765, CG6792(aka Plzf), CG6854, CG7045, CG7368, CG7556, CG7786, CG7928, CG8089, CG8319, CG8359, CG8944, CG9305, CG9609, CG9727, CG9876, CHES-1-like, chif\*, chn, Chrac-16, **cic**, Clk, cnc, corto, crc-mimic, crebA-mimic, crg-1, **crp**<sup>!</sup>, CTCF, cyc, D19B, da, **dac**\*, Dad, **Dfd**, **Dif**, Dip3, disco, **dl**\*, dm, dpn(mimic), dsf, dsx, E(bx), **EcR**, Eip75B-MiMIC, Eip78C, Eip93F, Elba2, emc, ems, en, ERR, esn, E(spl)m3, E(spl)my-HLH, Ets21C, Ets65A(ets3), Ets97D, E(var)3-9, **eve**, **exd**, ey, eyg, E(z), Fer1, fkh, FoxP, foxo(MiMIC), fru-mimic, ftz-f1, fu2, GATAd, gcm2, gfzf, **grh**, **grn**, gro, **h**, Hand, her, HLH54F, HLHm7, HmgD, Hmx-MiMIC, Hnf4, Hr38, Hr39, **Hr4**<sup>!</sup>, Hr46, Hr51, **Hr78**, Hr83, Hr96, hsf, ind, insv, jim, **jing**, Jra\*, jumu-mimic, kay, kn, Kr, lbe, lilli, **lola**\*, Lpt, luna-mimic, lz, Mad, maf-s, mam-mimic, Max, med, meics, Mes4, Met, Mio, Mnt, mod(mdg4), myb, **N**, NC2alpha, NC2beta, net Neu2, NK7.1, **nmo**, odd, OdsH<sup>!</sup>, org-1, ovo, p53-mimic, pb, pdm3, **pdp1**(mimic), pho, Pif1A, Pif1B, pita, pnt-MiMIC, psq<sup>!</sup>, pum-mimic, Rel, repo, REPTOR, rgr, sage, salr, sens, shn, side-mimic, sima, six4, slou, slp2, Smox, Snoo-MiMIC, Sox102F, Sox14, Sox15, Sry-delta, **Stat92E**, Su(H), su(Hw), su(var)2-10-RH, Su(var)3-7, sv, svp, tai, TFAM, tin, **tio**, tj, **tll**, toe, topi, trh, trl-mimic, tup, tx, Usf, **usp**, vfl, vri, **Vsx2**, woc, Xbp1, YL-1, Zfh2, ZnT49B.

- **14 already submitted by modENCODE**

- 254 / 300 for modERN

\* multiple isoforms run

! Multiple time-points collected

**XX**: verifying data with rerun.

**246**: Released by DCC

**04**: needs to be submitted

**00**: Ready for release by DCC

**04**: Ab validation required for release

# *C. elegans* ChIP-seq

- ~163 datasets

AHR-1, ALY-1, B0035.1, B0261.1, B0310.2, BLMP-1, C04F5.9, C06A8.2, C08G9.2, CEH-14, CEH-18, CEH-2, CEH-24, CEH-31, CEH-32, CEH-34, CEH-36, CEH-48, CEH-9, CEH-90, CEY-2, CHD-7, CHE-1, COG-1, DAF-16\*, DAO-5, DIE-1, DMD-4, DPFF-1, DPL-1, DSC-1, DUXL-1, DVE-1!, EFL-1\*, EGL-13, ELT-1, ELT-2!, ELT-4, ETS-4, ETS-7, F08F3.9, F10B5.3, F13C5.2, F13H6.1!, F22D6.2, F23B12.7, F37D6.2, F49E8.2!, F52B5.7, F55B11.4, FAX-1, FKH-3, FKH-4, FKH-6, FKH-8, GMEB-2, HIF-1, HIM-1\*, HLH-12, HLH-15, HLH-30!, HLH-4, HLH-6-R, HLH-8, HMBX-1, HMG-11, HND-1, IRX-1, K09A11.1, LET-607, LIM-6, LIN-40, LIR-3!, LSY-12, LSY-27, MADF-10, MEC-3, MED-1, MEL-28, MES-2, MES-4, MLS-2, MXL-1, NFYA-1!, NHR-102, NHR-179, NHR-20, NHR-232, NHR-25, NHR-43, NHR-47, NHR-48, NHR-71, NHR-80, NHR-85, NHR-90\*!, NPAX-4, ODD-2, PAG-3!, POP-1, PQM-1, RBR-2, REC-8\*, REF-2, RNT-1!, RPC-1!, SDC-2, SDZ-38, SMA-3, SMA-9, SNPC-4\*, SNU-23, SOX-4, SPR-1, ~~SPR-4~~, SWSN-7, SYD-9, T02C12.2, T07F8.4, T26A5.8, TBX-2!, TBX-7, TBX-9, TTX-3, UNC-120, UNC-130!, UNC-3, UNC-42, UNC-86!, WAGO-9, XBP-1, XND-1, Y116A8C.19, Y22D7AL.16, Y53C12C.1, ZFP-2, ZIP-5, ZK185.1, ZTF-11, ~~ZTF-16~~, ZTF-18, ZTF-26

\* Multiple lines

01: Ready for release

! Multiple time-points collected

20: need Ab characterization

130: Released by DCC

# New lines from Berkeley

- **05** need to be reinjected  
Bap170, C15, CG7691, D, ems
- **18** Lines being validated @ UofC  
stwl, CG17912, CG1663, B-H2, salm, CG12071, Dref,  
CG7056, CG6791, E(spl)m8-HLH, E(spl)mdelta, oli, mirr,  
wek, AbdA-RB, dmRT99B, CG1603, G12219
- All but these and 6 others haven't been sent to BDSC

# Current ChIP-seq

MiMIC being expanded for ChIP-seq (CG9727, dsx<sup>†</sup>)

Tagged lines:

Embryo: ash1<sup>!!</sup>, ATbp, Beaf-32, bigmax, caup, Cdc5, CG10209, CG10431, CG10543<sup>!!</sup>, CG12299, CG1233, CG12659, CG13296, CG13894, CG14962, CG15011, CG1529, CG15514, CG15601<sup>!!</sup>, CG15812, CG17181, CG17186, CG17385, CG17568<sup>!!</sup>, CG18599, CG2199, CG2875, CG3407, CG34376, CG4328, CG45071, CG4936, CG5180, CG6254, CG6683<sup>!!</sup>, CG6813, CG7056, CG7271<sup>^</sup>, CG7987, CG8281, CG8290, CG9437, CG9797, CG9817<sup>!!</sup>, CrebB<sup>!!</sup>, cwo, D, dalao, dmRT11E<sup>^</sup>, Dp, E(spl)m5<sup>^</sup>, E(spl)m-beta, ewg, exex, fd96Cb<sup>!!</sup>, Fer2, Fer3, Hey, HmgZ<sup>!!</sup>, Hmr, Jarid2, kni, lab, Lhr, I(3)neo38, mor, MTF-1<sup>!!</sup>, nau, Nfl<sup>!!</sup>, oc, PHDP, run, sc, schlank, Sox100B<sup>^</sup>, Sqz, sry-Beta<sup>^</sup>, Ssrp, trem, unpg, Vsx1, Z, zen<sup>^</sup>, zf30C, Zif,.

W3L: CG9705, dmrt93B, HLH106<sup>§</sup>.

WPP: Blimp-1, CG10669, CG13204, CG14655, CG17803, CG17806, CG6808, CG8145, CG8301, CG9139(Rabex-5), CG9948\*, D1, fd59A, gl, salr<sup>!!</sup>, Sp1<sup>!!</sup>.

Ad: CG7839<sup>!!</sup>

AM: CG11617, CG12768, CG15710, CG33017, CG8216.

AF: CG14711, CG17802, CG2678, CG30403<sup>!!</sup>, CG7101, CG8159, CoRest, pad, phol.

Repeat: Abd-B(for sue), insv, jing, nmo-small.

Worrisome: CG33557, ss-RA, ss-RB

\*: Probably need to recollect at better time point

†: Collect at different time-point if fail

!!: failed once, check for good old IPs

^: tight expression

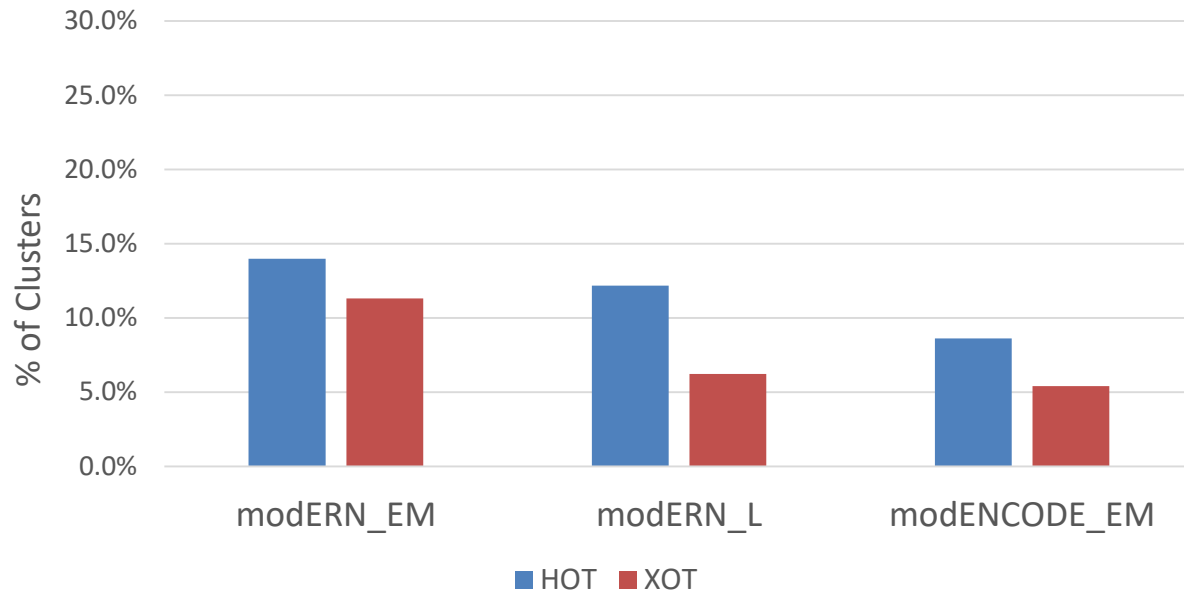
28: Queued Lines
46: Expanding
17: Chromatin extracted
08: IPed
16: Librariied
02: Awaiting inputs
07: recollecting

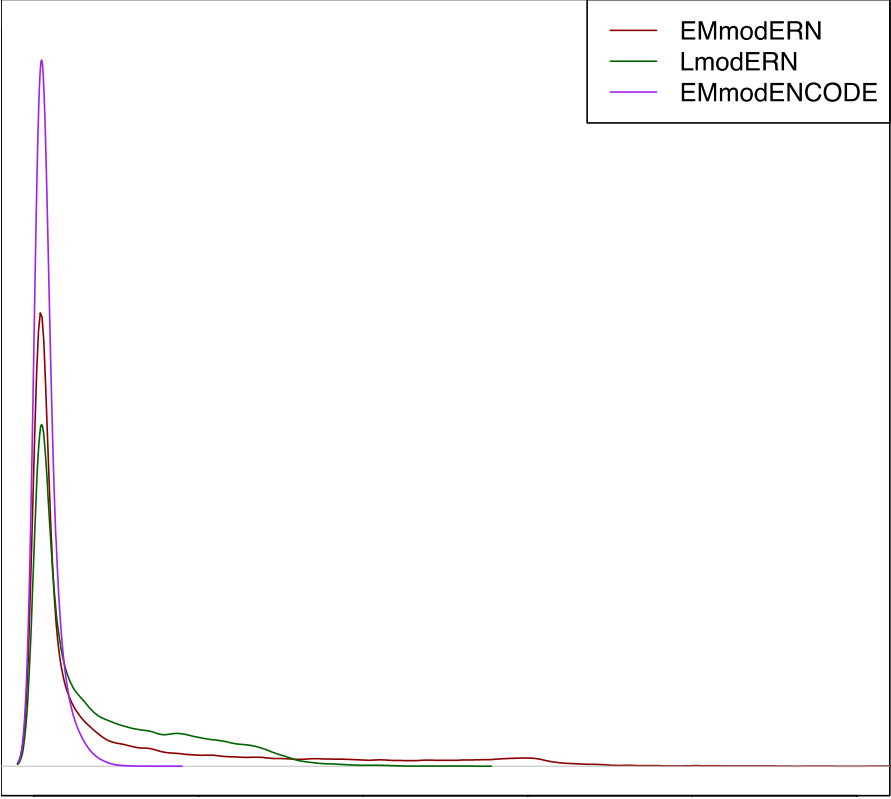
# Paper discussion (1)

## - HOT region

# Summary of Fly Binding Clusters

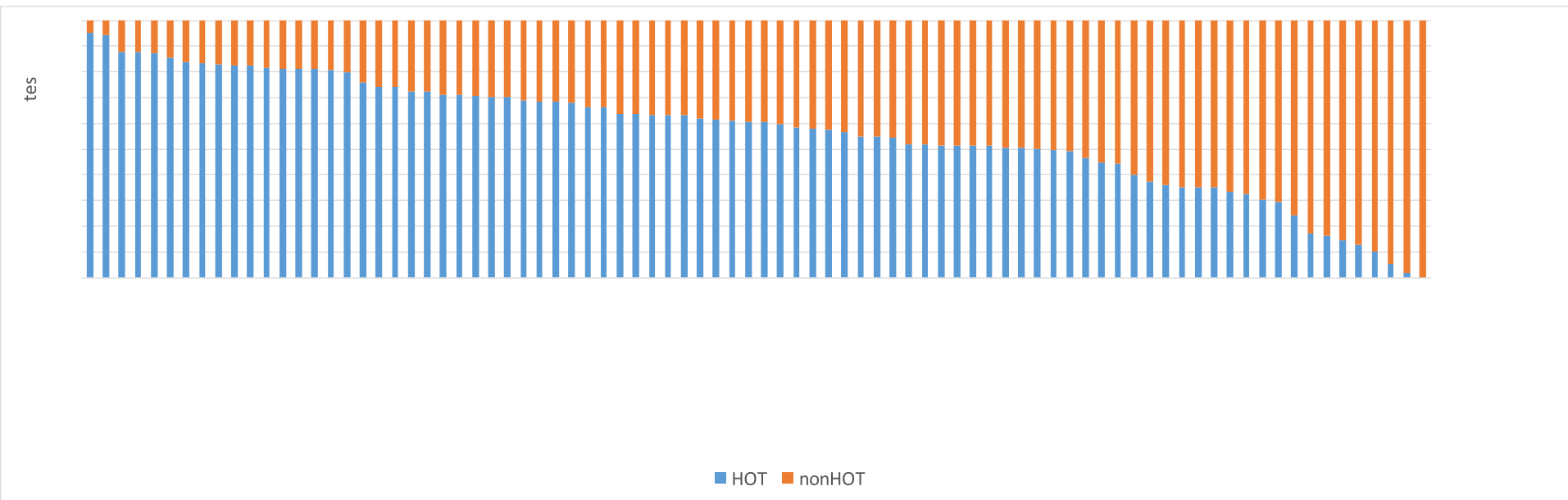
	Total Dataset	Clusters	HOT Cutoff (P<0.05)		XOT Cutoff (P<0.01)	
			# of HOT Region	# of XOT Region		
modERN_EM	155	22746	66	3180	83	2572
modERN_L	75	20469	51	2490	63	1276
modENCODE_EM	84	41959	8	3617	10	2270



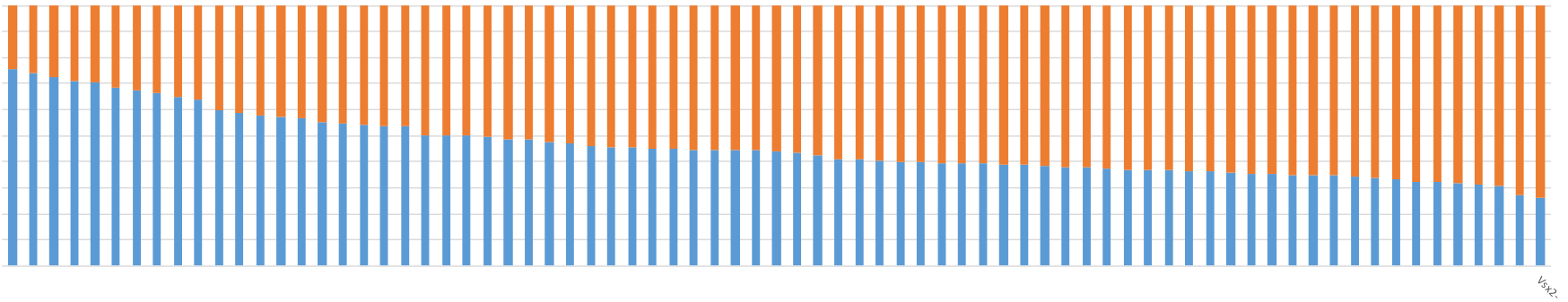




# HOT and non-HOT Binding Sites modERN\_EM

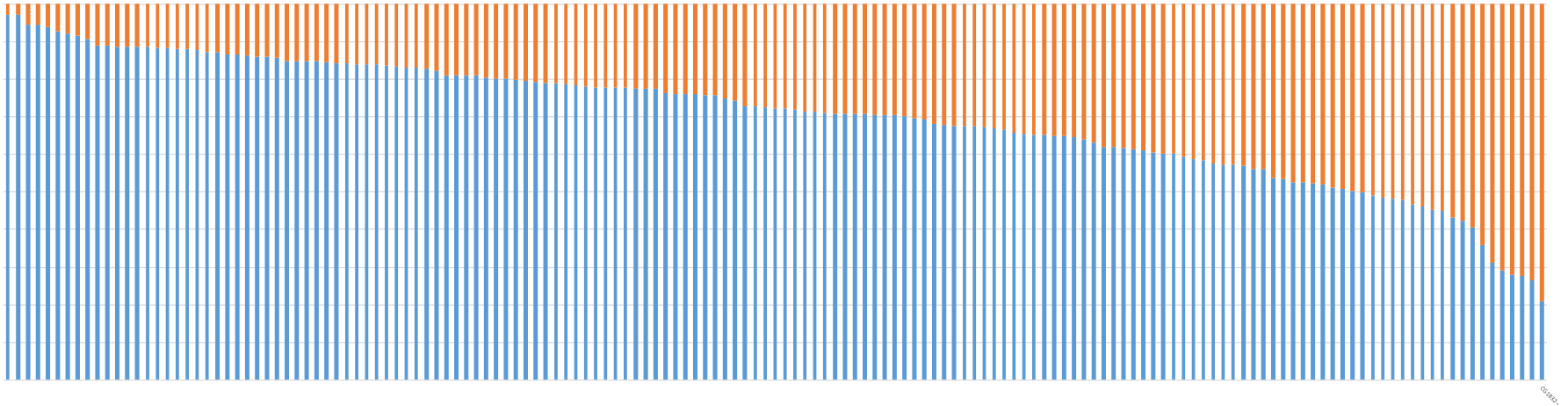


# HOT and non-HOT Binding Sites modERN\_L

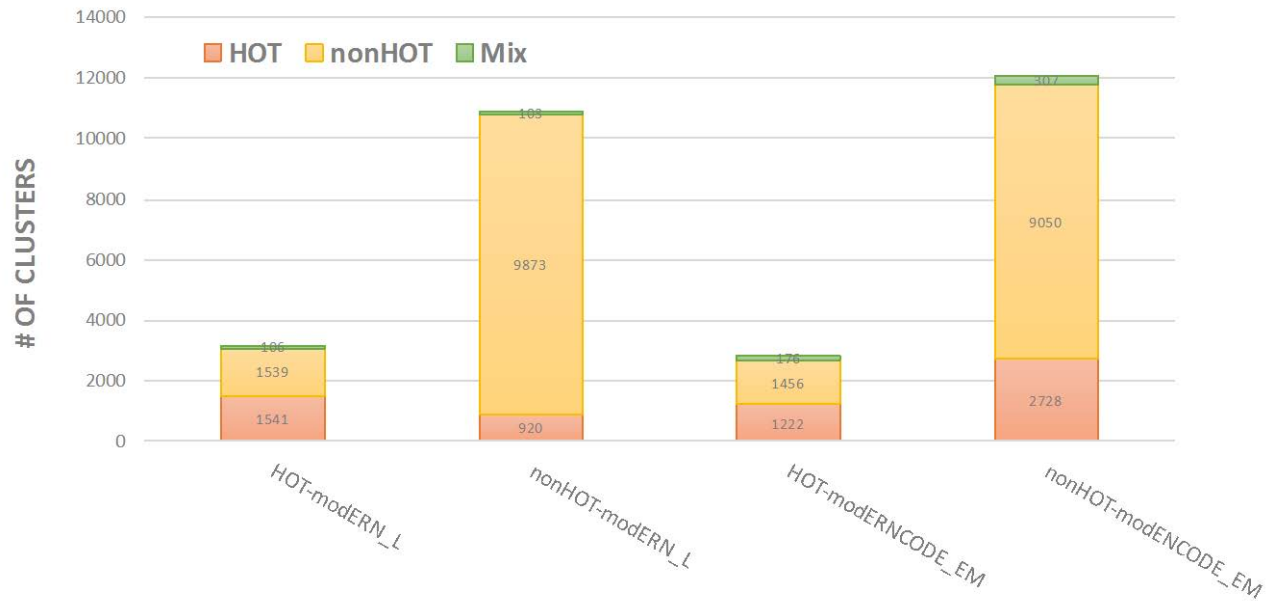


# HOT and non-HOT Binding Sites

## modENCODE\_EM



# Overlap of modERN\_EM Binding Clusters with other stages

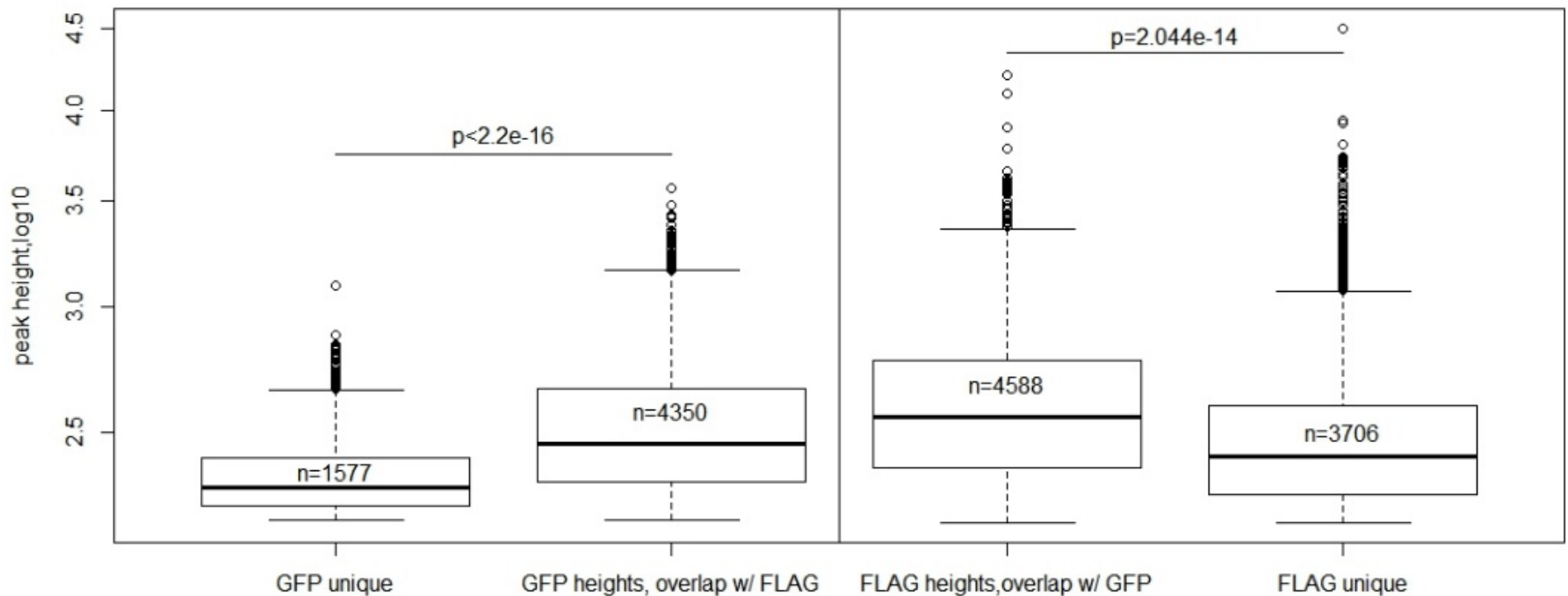


# Paper discussion (2)

## HOT region and mock IP

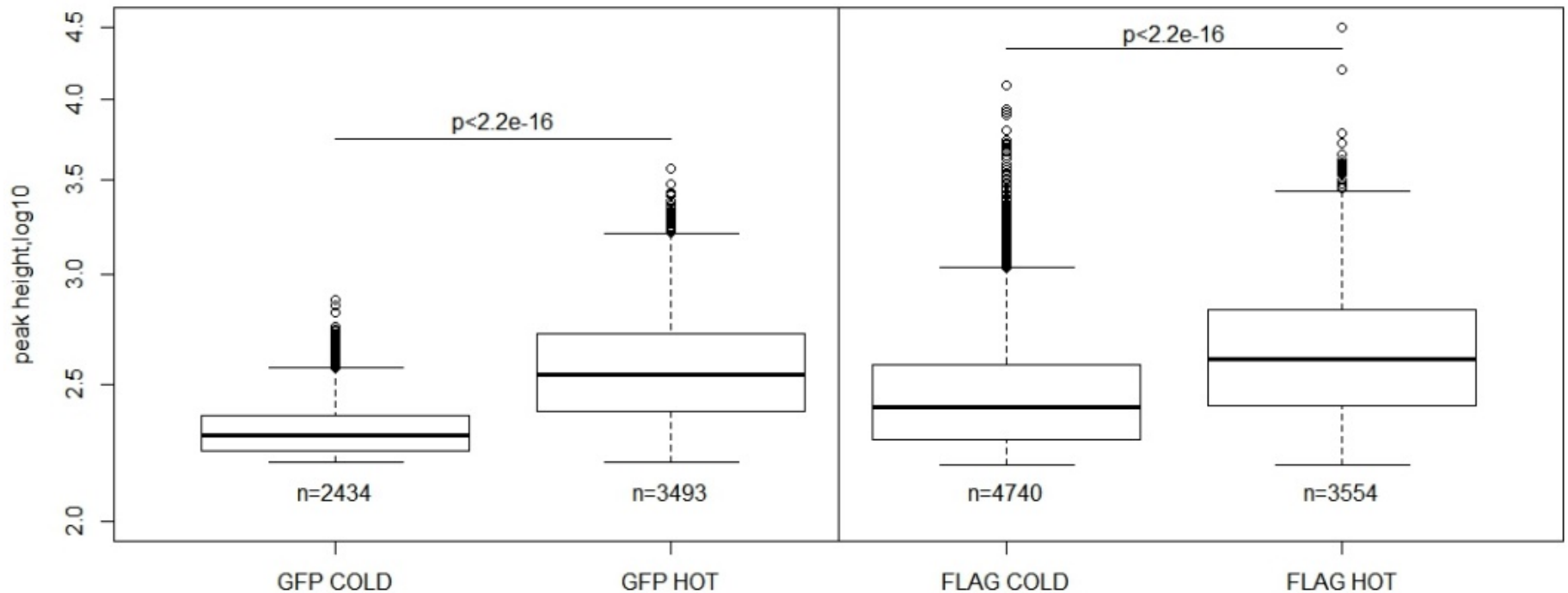
# HOT peaks common to mock-IPs have higher intensities

Embryonic peaks in W1118, IPed with GoatV or FLAG antibodies



# HOT peaks in mock-IP are larger than not-HOT peaks

HOT(66) and COLD Embryonic peaks in W1118, IPed with GoatV or FLAG antibodies



# Majority of Em mock-IP peaks aren't hot

