

Porichis F, Hart MG, Massa A, Everett HL, Morou A, Richard J, et al. Immune Checkpoint Blockade Restores HIV-Specific CD4 T Cell Help for NK Cells. *J Immunol*. 2018;201(3):971-981.

Yang L, Sharma SK, Cottrell C, Guenaga J, Tran K, Wilson R, et al. Structure-Guided Redesign Improves NFL HIV Env Trimer Integrity and Identifies an Inter-Protomer Disulfide Permitting Post-Expression Cleavage. *Front Immunol*. 2018;9:1631.

Watanabe Y, Raghwani J, Allen JD, Seabright GE, Li S, Moser F, et al. Structure of the Lassa virus glycan shield provides a model for immunological resistance. *Proc Natl Acad Sci U S A*. 2018;115(28):7320-7325.

Tsui C, Martinez-Martin N, Gaya M, Maldonado P, Llorian M, Legrave NM, et al. Protein Kinase C- β Dictates B Cell Fate by Regulating Mitochondrial Remodeling, Metabolic Reprogramming, and Heme Biosynthesis. *Immunity*. 2018;48(6):1144-1159.e5.

Allen JD, Sanders RW, Doores KJ, Crispin M. Harnessing post-translational modifications for next-generation HIV immunogens. *Biochem Soc Trans*. 2018;46(3):691-698.

Watanabe Y, Vasiljevic S, Allen JD, Seabright GE, Duyvesteyn HM, Doores KJ, et al. Signature of Antibody Domain Exchange by Native Mass Spectrometry and Collision-Induced Unfolding. *Anal Chem*. 2018;90(12):7325-7331.

Rantalainen K, Berndsen ZT, Murrell S, Cao L, Omorodion O, Torres JL, et al. Co-evolution of HIV Envelope and Apex-Targeting Neutralizing Antibody Lineage Provides Benchmarks for Vaccine Design. *Cell Rep*. 2018;23(11):3249-3261.

Cao L, Diedrich JK, Ma Y, Wang N, Pauthner M, Park S-, et al. Global site-specific analysis of glycoprotein N-glycan processing. *Nat Protoc*. 2018;13(6):1196-1212.

Martinot AJ, Abbink P, Afacan O, Prohl AK, Bronson R, Hecht JL, et al. Fetal Neuropathology in Zika Virus-Infected Pregnant Female Rhesus Monkeys. *Cell*. 2018;173(5):1111-1122.e10.

Sarkar A, Bale S, Behrens A-, Kumar S, Sharma SK, de Val N, et al. Structure of a cleavage-independent HIV Env recapitulates the glycoprotein architecture of the native cleaved trimer. *Nat Commun*. 2018;9(1):1956.

Cohn LB, da Silva IT, Valieris R, Huang AS, Lorenzi JC, Cohen YZ, et al. Clonal CD4 T cells in the HIV-1 latent reservoir display a distinct gene profile upon reactivation. *Nat Med*. 2018;24(5):604-609.

Walker LM, Burton DR. Passive immunotherapy of viral infections: 'super-antibodies' enter the fray. *Nat Rev Immunol*. 2018;18(5):297-308.

Gautam R, Nishimura Y, Gaughan N, Gazumyan A, Schoofs T, Buckler-White A, et al. A single injection of crystallizable fragment domain-modified antibodies elicits durable protection from SHIV infection. *Nat Med*. 2018;24(5):610-616.

Dosenovic P, Kara EE, Pettersson A-, McGuire AT, Gray M, Hartweger H, et al. Anti-HIV-1 B cell responses are dependent on B cell precursor frequency and antigen-binding affinity. *Proc Natl Acad Sci USA*. 2018;115(18):4743-4748.

Harvey DJ, Seabright GE, Vasiljevic S, Crispin M, Struwe WB. Isomer Information from Ion Mobility Separation of High-Mannose Glycan Fragments. *J Am Soc Mass Spectrom*. 2018;29(5):972-988.

Emsley P, Crispin M. Structural analysis of glycoproteins: building N-linked glycans with Coot. *Acta Crystallogr D Struct Biol*. 2018;74(Pt 4):256-263.

Richard J, Prévost J, Baxter AE, von Bredow B, Ding S, Medjahed H, et al. Uninfected Bystander Cells Impact the Measurement of HIV-Specific Antibody-Dependent Cellular Cytotoxicity Responses. *MBio*. 2018;9(2).

Cheng HD, Grimm SK, Gilman MS, Gwom LC, Sok D, Sundling C, et al. Fine epitope signature of antibody neutralization breadth at the HIV-1 envelope CD4-binding site. *JCI Insight*. 2018;3(5).

Behrens A-, Kumar A, Medina-Ramírez M, Cupo A, Marshall K, Portillo VM, et al. Integrity of Glycosylation Processing of a Glycan-Depleted Trimeric HIV-1 Immunogen Targeting Key B-Cell Lineages. *J Proteome Res*. 2018;17(3):987-999.

Cohen YZ, Lorenzi JC, Seaman MS, Nogueira L, Schoofs T, Krassnig L, et al. Neutralizing Activity of Broadly Neutralizing Anti-HIV-1 Antibodies against Clade B Clinical Isolates Produced in Peripheral Blood Mononuclear Cells. *J Virol*. 2018;92(5).

Klasse PJ, Ketas TJ, Cottrell CA, Ozorowski G, Debnath G, Camara D, et al. Epitopes for neutralizing antibodies induced by HIV-1 envelope glycoprotein BG505 SOSIP trimers in rabbits and macaques. *PLoS Pathog*. 2018;14(2):e1006913.

Prévost J, Richard J, Ding S, Pacheco B, Charlebois R, Hahn BH, et al. Envelope glycoproteins sampling states 2/3 are susceptible to ADCC by sera from HIV-1-infected individuals. *Virology*. 2018;515:38-45.

Niessl J, Baxter AE, Kaufmann DE. Tools for Visualizing HIV in Cure Research. *Curr HIV/AIDS Rep*. 2018.

Gaya M, Barral P, Burbage M, Aggarwal S, Montaner B, Navia AW, et al. Initiation of Antiviral B Cell Immunity Relies on Innate Signals from Spatially Positioned NKT Cells. *Cell*. 2018;172(3):517-533.e20.

Abbott RK, Lee J, Menis S, Skog P, Rossi M, Ota T, et al. Precursor Frequency and Affinity Determine B Cell Competitive Fitness in Germinal Centers, Tested with Germline-Targeting HIV Vaccine Immunogens. *Immunity*. 2018;48(1):133-146.e6.

Burbage M, Gasparrini F, Aggarwal S, Gaya M, Arnold J, Nair U, et al. Tuning of in vivo cognate B-T cell interactions by Intersectin 2 is required for effective anti-viral B cell immunity. *Elife*. 2018;7.

Leipold MD, Obermoser G, Fenwick C, Kleinstuber K, Rashidi N, McNevin JP, et al. Comparison of CyTOF assays across sites: Results of a six-center pilot study. *J Immunol Methods*. 2017;pii: S0022-1759(17)30490-8.

Landais E, Murrell B, Briney B, Murrell S, Rantalainen K, Berndsen ZT, et al. HIV Envelope Glycoform Heterogeneity and Localized Diversity Govern the Initiation and Maturation of a V2 Apex Broadly Neutralizing Antibody Lineage. *Immunity*. 2017;47(5):990-1003.e9.

Kulp DW, Steichen JM, Pauthner M, Hu X, Schiffner T, Liguori A, et al. Structure-based design of native-like HIV-1 envelope trimers to silence non-neutralizing epitopes and eliminate CD4 binding. *Nat Commun*. 2017;8(1):1655.

Dey AK, Cupo A, Ozorowski G, Sharma VK, Behrens A, Go EP, et al. cGMP production and analysis of BG505 SOSIP.664, an extensively glycosylated, trimeric HIV-1 envelope glycoprotein vaccine candidate. *Biotechnol Bioeng*. 2017.

Pantophlet R, Trattinig N, Murrell S, Lu N, Chau D, Rempel C, et al. Bacterially derived synthetic mimetics of mammalian oligomannose prime antibody responses that neutralize HIV infectivity. *Nat Commun*. 2017;8(1):1601.

Wang Y, O'Dell S, Turner HL, Chiang C-, Lei L, Guenaga J, et al. HIV-1 Cross-Reactive Primary Virus Neutralizing Antibody Response Elicited by Immunization in Nonhuman Primates. *J Virol*. 2017;91(21).

Reiss S, Baxter AE, Cirelli KM, Dan JM, Morou A, Daigneault A, et al. Comparative analysis of activation induced marker (AIM) assays for sensitive identification of antigen-specific CD4 T cells. *PLoS ONE*. 2017;12(10):e0186998.

Baxter AE, Niessl J, Fromentin R, Richard J, Porichis F, Massanella M, et al. Multiparametric characterization of rare HIV-infected cells using an RNA-flow FISH technique. *Nat Protoc*. 2017;12(10):2029-2049.

Julg B, Sok D, Schmidt SD, Abbink P, Newman RM, Broge T, et al. Protective Efficacy of Broadly Neutralizing Antibodies with Incomplete Neutralization Activity against Simian-Human Immunodeficiency Virus in Rhesus Monkeys. *J Virol*. 2017;91(20).

Mayer CT, Gazumyan A, Kara EE, Gitlin AD, Golijanin J, Viant C, et al. The microanatomic segregation of selection by apoptosis in the germinal center. *Science*. 2017;358(6360).

Xu L, Pegu A, Rao E, Doria-Rose N, Beninga J, McKee K, et al. Trispecific broadly neutralizing HIV antibodies mediate potent SHIV protection in macaques. *Science*. 2017;358(6359):85-90.

Voss JE, Andrabi R, McCoy LE, de Val N, Fuller RP, Messmer T, et al. Elicitation of Neutralizing Antibodies Targeting the V2 Apex of the HIV Envelope Trimer in a Wild-Type Animal Model. *Cell Rep*. 2017;21(1):222-235.

Julg B, Liu P-, Wagh K, Fischer WM, Abbink P, Mercado NB, et al. Protection against a mixed SHIV challenge by a broadly neutralizing antibody cocktail. *Sci Transl Med.* 2017;9(408).

Andrabi R, Su C-, Liang C-, Shivatare SS, Briney B, Voss JE, et al. Glycans Function as Anchors for Antibodies and Help Drive HIV Broadly Neutralizing Antibody Development. *Immunity.* 2017;47(3):524-537.

Baxter AE, Niessl J, Morou A, Kaufmann DE. RNA flow cytometric FISH for investigations into HIV immunology, vaccination and cure strategies. *AIDS Res Ther.* 2017;14(1):40.

Julg B, Tartaglia LJ, Keele BF, Wagh K, Pegu A, Sok D, et al. Broadly neutralizing antibodies targeting the HIV-1 envelope V2 apex confer protection against a clade C SHIV challenge. *Sci Transl Med.* 2017;9(406).

Medina-Ramírez M, Garces F, Escolano A, Skog P, de Taeye SW, Del Moral-Sanchez I, et al. Design and crystal structure of a native-like HIV-1 envelope trimer that engages multiple broadly neutralizing antibody precursors in vivo. *J Exp Med.* 2017;214(9):2573-2590.

He L, Lin X, de Val N, Saye-Francisco KL, Mann CJ, Augst R, et al. Hidden Lineage Complexity of Glycan-Dependent HIV-1 Broadly Neutralizing Antibodies Uncovered by Digital Panning and Native-Like gp140 Trimer. *Front Immunol.* 2017;8:1025.

A de la Peña T, Julien J-, de Taeye SW, Garces F, Guttman M, Ozorowski G, et al. Improving the Immunogenicity of Native-like HIV-1 Envelope Trimers by Hyperstabilization. *Cell Rep.* 2017;20(8):1805-1817.

Koch K, Kalusche S, Torres JL, Stanfield RL, Danquah W, Khazanehdari K, et al. Selection of nanobodies with broad neutralizing potential against primary HIV-1 strains using soluble subtype C gp140 envelope trimers. *Sci Rep.* 2017;7:8390.

Bale S, Goebrecht G, Stano A, Wilson R, Ota T, Tran K, et al. Covalent Linkage of HIV-1 Trimers to Synthetic Liposomes Elicits Improved B Cell and Antibody Responses. *J Virol.* 2017;91(16):pii: e00443-17.

Alsahafi N, Richard J, Prévost J, Coutu M, Brassard N, Parsons MS, et al. Impaired Downregulation of NKG2D Ligands by Nef Proteins from Elite Controllers Sensitizes HIV-1-Infected Cells to Antibody-Dependent Cellular Cytotoxicity. *J Virol.* 2017;91(16):pii: e00109-17.

Julg B, Pegu A, Abbink P, Liu J, Brinkman A, Molloy K, et al. Virological Control by the CD4-Binding Site Antibody N6 in Simian-Human Immunodeficiency Virus-Infected Rhesus Monkeys. *J Virol.* 2017;91(16):pii: e00498-17.

Horwitz JA, Bar-On Y, Lu C-, Fera D, Lockhart AA, Lorenzi JC, et al. Non-neutralizing Antibodies Alter the Course of HIV-1 Infection In Vivo. *Cell.* 2017;170(4):637-648.

Nandin IS, Fong C, Deantonio C, Torreno-Pina JA, Pecetta S, Maldonado P, et al. Novel in vitro booster vaccination to rapidly generate antigen-specific human monoclonal antibodies. *J Exp Med.* 2017;214(8):2471-2490.

Cirelli KM, Crotty S. Germinal center enhancement by extended antigen availability. *Curr Opin Immunol.* 2017;47:64-69.

Martins MA, Shin YC, Gonzalez-Nieto L, Domingues A, Gutman MJ, Maxwell HS, et al. Vaccine-induced immune responses against both Gag and Env improve control of simian immunodeficiency virus replication in rectally challenged rhesus macaques. *PLoS Pathog.* 2017;13(7):e1006529.

Sok D, Le KM, Vadnais M, Saye-Francisco K, Jardine JG, Torres J, et al. Rapid elicitation of broadly neutralizing antibodies to HIV by immunization in cows. *Nature.* 2017;548(7665):108-111.

Ozorowski G, Pallesen J, de Val N, Lyumkis D, Cottrell CA, Torres JL, et al. Open and closed structures reveal allostery and pliability in the HIV-1 envelope spike. *Nature.* 2017;547(7663):360-363.

Pauthner M, Havenar-Daughton C, Sok D, Nkolola JP, Bastidas R, Boopathy AV, et al. Elicitation of Robust Tier 2 Neutralizing Antibody Responses in Nonhuman Primates by HIV Envelope Trimer Immunization Using Optimized Approaches. *Immunity.* 2017;46(6):1073-1088.e6.

Behrens A-, Crispin M. Structural principles controlling HIV envelope glycosylation. *Curr Opin Struct Biol.* 2017;44:125-133.

Guenaga J, Garces F, de Val N, Stanfield RL, Dubrovskaya V, Higgins B, et al. Glycine Substitution at Helix-to-Coil Transitions Facilitates the Structural Determination of a Stabilized Subtype C HIV Envelope Glycoprotein. *Immunity.* 2017;46(5):792-803.e3.

Martinez-Murillo P, Tran K, Guenaga J, Lindgren G, dori MÀ, Feng Y, et al. Particulate Array of Well-Ordered HIV Clade C Env Trimers Elicits Neutralizing Antibodies that Display a Unique V2 Cap Approach. *Immunity.* 2017;46(5):804-817.e7.

Aid M, Abbink P, Larocca RA, Boyd M, Nityanandam R, Nanayakkara O, et al. Zika Virus Persistence in the Central Nervous System and Lymph Nodes of Rhesus Monkeys. *Cell.* 2017;169(4):610-620.e14.

Robbiani DF, Bozzacco L, Keeffe JR, Khouri R, Olsen PC, Gazumyan A, et al. Recurrent Potent Human Neutralizing Antibodies to Zika Virus in Brazil and Mexico. *Cell.* 2017;169(4):597-609.e11.

Hopper JT, Ambrose S, Grant OC, Krumm SA, Allison TM, Degiacomi MT, et al. The Tetrameric Plant Lectin BanLec Neutralizes HIV through Bidentate Binding to Specific Viral Glycans. *Structure.* 2017;25(5):773-782.e5.

Lee J, Andrabi R, Su C-, Yasmeen A, Julien J-, Kong L, et al. A Broadly Neutralizing Antibody Targets the Dynamic HIV Envelope Trimer Apex via a Long, Rigidified, and Anionic β -Hairpin Structure. *Immunity.* 2017;46(4):690-702.

Polonskaya Z, Deng S, Sarkar A, Kain L, Comellas-Aragones M, McKay CS, et al. T cells control the generation of nanomolar-affinity anti-glycan antibodies. *J Clin Invest.* 2017;127(4):1491-1504.

Laher F, Ranasinghe S, Porichis F, Mewalal N, Pretorius K, Ismail N, et al. HIV Controllers Exhibit Enhanced Frequencies of Major Histocompatibility Complex Class II Tetramer(+) Gag-Specific CD4(+) T Cells in Chronic Clade C HIV-1 Infection. *J Virol.* 2017;91(7):e02477-16.

Prévost J, Zoubchenok D, Richard J, Veillette M, Pacheco B, Coutu M, et al. Influence of the Envelope gp120 Phe 43 Cavity on HIV-1 Sensitivity to Antibody-Dependent Cell-Mediated Cytotoxicity Responses. *J Virol*. 2017;91(7).

Cao L, Diedrich JK, Kulp DW, Pauthner M, He L, Park S-, et al. Global site-specific N-glycosylation analysis of HIV envelope glycoprotein. *Nat Commun*. 2017;8:14954.

Nishimura Y, Gautam R, Chun T-, Sadjadpour R, Foulds KE, Shingai M, et al. Early antibody therapy can induce long-lasting immunity to SHIV. *Nature*. 2017;543(7646):559-563.

Richard J, Prévost J, von Bredow B, Ding S, Brassard N, Medjahed H, et al. BST-2 Expression Modulates Small CD4 Mimetic Sensitization of HIV-1-infected cells to ADCC. *J Virol*. 2017;91(11):pii:e00219-17.

Haynes BF, Burton DR. Developing an HIV vaccine. *Science*. 2017;355(6330):1129-1130.

Morris CD, Azadnia P, de Val N, Vora N, Honda A, Giang E, et al. Differential Antibody Responses to Conserved HIV-1 Neutralizing Epitopes in the Context of Multivalent Scaffolds and Native-Like gp140 Trimers. *MBio*. 2017;8(1):pii:e00036-17.

Irimia A, Serra AM, Sarkar A, Jacak R, Kalyuzhnyi O, Sok D, et al. Lipid interactions and angle of approach to the HIV-1 viral membrane of broadly neutralizing antibody 10E8: Insights for vaccine and therapeutic design. *PLoS Pathog*. 2017;13(2):e1006212.

Barouch DH, Thomas SJ, Michael NL. Prospects for a Zika Virus Vaccine. *Immunity*. 2017;46(2):176-182.

Struwe WB, Stuckmann A, Behrens A-, Pagel K, Crispin M. Global N-Glycan Site Occupancy of HIV-1 gp120 by Metabolic Engineering and High-Resolution Intact Mass Spectrometry. *ACS Chem Biol*. 2017;12(2):357-361.

Martinez-Martin N, Maldonado P, Gasparrini F, Frederico B, Aggarwal S, Gaya M, et al. A switch from canonical to noncanonical autophagy shapes B cell responses. *Science*. 2017;355(6325):641-647.

Burton DR. What Are the Most Powerful Immunogen Design Vaccine Strategies? Reverse Vaccinology 2.0 Shows Great Promise. *Cold Spring Harb Perspect Biol*. 2017:pii:a030262.

Caskey M, Schoofs T, Gruell H, Settler A, Karagounis T, Kreider EF, et al. Antibody 10-1074 suppresses viremia in HIV-1-infected individuals. *Nat Med*. 2017;23(2):185-191.

Martin-Gayo E, Cronin J, Hickman T, Ouyang Z, Lindqvist M, Kolb KE, et al. Circulating CXCR5(+)CXCR3(+)PD-1(lo) Tfh-like cells in HIV-1 controllers with neutralizing antibody breadth. *JCI Insight*. 2017;2(2):e89574.

Freund NT, Wang H, Scharf L, Nogueira L, Horwitz JA, Bar-On Y, et al. Coexistence of potent HIV-1 broadly neutralizing antibodies and antibody-sensitive viruses in a viremic controller. *Sci Transl Med*. 2017;9(373):pii:eaa12144.

Behrens A-, Harvey DJ, Milne E, Cupo A, Kumar A, Zitzmann N, et al. Molecular Architecture of the Cleavage-Dependent Mannose Patch on a Soluble HIV-1 Envelope Glycoprotein Trimer. *J Virol*. 2017;91(2):pii:e01894-16.

Antunes Rd, Paul S, Sidney J, Weiskopf D, Dan JM, Phillips E, et al. Definition of Human Epitopes Recognized in Tetanus Toxoid and Development of an Assay Strategy to Detect Ex Vivo Tetanus CD4+ T Cell Responses. *PLoS ONE*. 2017;12(1):e0169086.

Wibmer CK, Gorman J, Ozorowski G, Bhiman JN, Sheward DJ, Elliott DH, et al. Structure and Recognition of a Novel HIV-1 gp120-gp41 Interface Antibody that Caused MPER Exposure through Viral Escape. *PLoS Pathog*. 2017;13(1):e1006074.

Ward AB, Wilson IA. The HIV-1 envelope glycoprotein structure: nailing down a moving target. *Immunol Rev*. 2017;275(1):21-32.

McCoy LE, Burton DR. Identification and specificity of broadly neutralizing antibodies against HIV. *Immunol Rev*. 2017;275(1):11-20.

Escolano A, Dosenovic P, Nussenzweig MC. Progress toward active or passive HIV-1 vaccination. *J Exp Med*. 2017;214(1):3-16.

Havenar-Daughton C, Lee J, Crotty S. Tfh cells and HIV bnAbs, an immunodominance model of the HIV neutralizing antibody generation problem. *Immunol Rev*. 2017;275(1):49-61.

CHAVI-ID

2016

Coss KP, Vasiljevic S, Pritchard LK, Krumm SA, Glaze M, Madzorera S, et al. HIV-1 Glycan Density Drives the Persistence of the Mannose Patch within an Infected Individual. *J Virol*. 2016;90(24):11132-11144.

Havenar-Daughton C, Carnathan DG, de la Peña AT, Pauthner M, Briney B, Reiss SM, et al. Direct Probing of Germinal Center Responses Reveals Immunological Features and Bottlenecks for Neutralizing Antibody Responses to HIV Env Trimer. *Cell Rep*. 2016;17(9):2195-2209.

Sok D, Burton DR. HIV Broadly Neutralizing Antibodies: Taking Good Care Of The 98. *Immunity*. 2016;45(5):958-960.

Chen Y, Wilson R, O'Dell S, Guenaga J, Feng Y, Tran K, et al. An HIV-1 Env-Antibody Complex Focuses Antibody Responses to Conserved Neutralizing Epitopes. *J Immunol*. 2016;197(10):3982-3998.

van Gils MJ, van den Kerkhof TL, Ozorowski G, Cottrell CA, Sok D, Pauthner M, et al. An HIV-1 antibody from an elite neutralizer implicates the fusion peptide as a site of vulnerability. *Nat Microbiol*. 2016;2:16199.

Harvey DJ, Scarff CA, Edgeworth M, Pagel K, Thalassinou K, Struwe WB, et al. Travelling-wave ion mobility mass spectrometry and negative ion fragmentation of hybrid and complex N-glycans. *J Mass Spectrom*. 2016.

Tam HH, Melo MB, Kang M, Pelet JM, Ruda VM, Foley MH, et al. Sustained antigen availability during germinal center initiation enhances antibody responses to vaccination. *Proc Natl Acad Sci USA*. 2016;113(43):E6639-E6648.

Voss JE, Macauley MS, Rogers KA, Villinger F, Duan L, Shang L, et al. Reproducing SIV Δ nef vaccine correlates of protection: trimeric gp41 antibody concentrated at mucosal front lines. *AIDS*. 2016;30(16):2427-2438.

Ellebedy AH, Jackson KJ, Kissick HT, Nakaya HI, Davis CW, Roskin KM, et al. Defining antigen-specific plasmablast and memory B cell subsets in human blood after viral infection or vaccination. *Nat Immunol*. 2016;17(10):1226-34.

Kleinsteuber K, Corleis B, Rashidi N, Nchinda N, Lisanti A, Cho JL, et al. Standardization and quality control for high-dimensional mass cytometry studies of human samples. *Cytometry A*. 2016;89(10):903-913.

Sok D, Briney B, Jardine JG, Kulp DW, Menis S, Pauthner M, et al. Priming HIV-1 broadly neutralizing antibody precursors in human Ig loci transgenic mice. *Science*. 2016;353(6307):1557-1560.

Steichen JM, Kulp DW, Tokatlian T, Escolano A, Dosenovic P, Stanfield RL, et al. HIV Vaccine Design to Target Germline Precursors of Glycan-Dependent Broadly Neutralizing Antibodies. *Immunity*. 2016.

Klasse PJ, Labranche CC, Ketas TJ, Ozorowski G, Cupo A, Pugach P, et al. Sequential and Simultaneous Immunization of Rabbits with HIV-1 Envelope Glycoprotein SOSIP.664 Trimers from Clades A, B and C. *PLoS Pathog*. 2016;12(9):e1005864.

Baxter AE, Niessl J, Fromentin R, Richard J, Porichis F, Charlebois R, et al. Single-Cell Characterization of Viral Translation-Competent Reservoirs in HIV-Infected Individuals. *Cell Host Microbe*. 2016;20(3):368-80.

Abbink P, Larocca RA, De La Barrera RA, Bricault CA, Moseley ET, Boyd M, et al. Protective efficacy of multiple vaccine platforms against Zika virus challenge in rhesus monkeys. *Science*. 2016;353(6304):1129-32.

Escolano A, Steichen JM, Dosenovic P, Kulp DW, Golijanin J, Sok D, et al. Sequential Immunization Elicits Broadly Neutralizing Anti-HIV-1 Antibodies in Ig Knockin Mice. *Cell*. 2016;166(6):1445-1458.e12.

Tian M, Cheng C, Chen X, Duan H, Cheng H-, Dao M, et al. Induction of HIV Neutralizing Antibody Lineages in Mice with Diverse Precursor Repertoires. *Cell*. 2016;166(6):1471-1484.e18.

Briney B, Sok D, Jardine JG, Kulp DW, Skog P, Menis S, et al. Tailored Immunogens Direct Affinity Maturation toward HIV Neutralizing Antibodies. *Cell*. 2016;166(6):1459-1470.e11.

Liu J, Ghneim K, Sok D, Bosche WJ, Li Y, Chipriano E, et al. Antibody-mediated protection against SHIV challenge includes systemic clearance of distal virus. *Science*. 2016;353(6303):1045-1049.

McCoy LE, van Gils MJ, Ozorowski G, Messmer T, Briney B, Voss JE, et al. Holes in the Glycan Shield of the Native HIV Envelope Are a Target of Trimer-Elicited Neutralizing Antibodies. *Cell Rep*.

2016;16(9):2327-38.

Larocca RA, Abbink P, Peron JP, Zanotto PM, Iampietro JM, Badamchi-Zadeh A, et al. Vaccine protection against Zika virus from Brazil. *Nature*. 2016.

Jardine JG, Sok D, Julien J-, Briney B, Sarkar A, Liang C-, et al. Minimally Mutated HIV-1 Broadly Neutralizing Antibodies to Guide Reductionist Vaccine Design. *PLoS Pathog*. 2016;12(8):e1005815.

Deruaz M, Moldt B, Le KM, Power KA, Vrbanac VD, Tanno S, et al. Protection of Humanized Mice From Repeated Intravaginal HIV Challenge by Passive Immunization: A Model for Studying the Efficacy of Neutralizing Antibodies In Vivo. *J Infect Dis*. 2016;214(4):612-6.

Feng Y, Tran K, Bale S, Kumar S, Guenaga J, Wilson R, et al. Thermostability of Well-Ordered HIV Spikes Correlates with the Elicitation of Autologous Tier 2 Neutralizing Antibodies. *PLoS Pathog*. 2016;12(8):e1005767.

Stephenson KE, D'Couto HT, Barouch DH. New concepts in HIV-1 vaccine development. *Curr Opin Immunol*. 2016;41:39-46.

Locci M, Wu JE, Arumemi F, Mikulski Z, Dahlberg C, Miller AT, et al. Activin A programs the differentiation of human TFH cells. *Nat Immunol*. 2016.

Dan JM, Arlehamn CS, Weiskopf D, Antunes Rd, Havenar-Daughton C, Reiss SM, et al. A Cytokine-Independent Approach To Identify Antigen-Specific Human Germinal Center T Follicular Helper Cells and Rare Antigen-Specific CD4+ T Cells in Blood. *J Immunol*. 2016.

Havenar-Daughton C, Reiss SM, Carnathan DG, Wu JE, Kendric K, de la Peña AT, et al. Cytokine-Independent Detection of Antigen-Specific Germinal Center T Follicular Helper Cells in Immunized Nonhuman Primates Using a Live Cell Activation-Induced Marker Technique. *J Immunol*. 2016.

Scheid JF, Horwitz JA, Bar-On Y, Kreider EF, Lu C-, Lorenzi JC, et al. HIV-1 antibody 3BNC117 suppresses viral rebound in humans during treatment interruption. *Nature*. 2016.

Sok D, Pauthner M, Briney B, Lee J, Saye-Francisco KL, Hsueh J, et al. A Prominent Site of Antibody Vulnerability on HIV Envelope Incorporates a Motif Associated with CCR5 Binding and Its Camouflaging Glycans. *Immunity*. 2016;45(1):31-45.

van den Kerkhof TL, de Taeye SW, Boeser-Nunnink BD, Burton DR, Kootstra NA, Schuitemaker H, et al. HIV-1 escapes from N332-directed antibody neutralization in an elite neutralizer by envelope glycoprotein elongation and introduction of unusual disulfide bonds. *Retrovirology*. 2016;13(1):48.

von Bredow B, Arias JF, Heyer LN, Moldt B, Le K, Robinson JE, et al. Comparison of Antibody-Dependent Cell-Mediated Cytotoxicity and Virus Neutralization by HIV-1 Env-Specific Monoclonal Antibodies. *J Virol*. 2016;90(13):6127-39.

Halldorsson S, Behrens A-, Harlos K, Huiskonen JT, Elliott RM, Crispin M, et al. Structure of a phleboviral envelope glycoprotein reveals a consolidated model of membrane fusion. *Proc Natl Acad Sci USA*. 2016;113(26):7154-9.

Kong L, He L, de Val N, Vora N, Morris CD, Azadnia P, et al. Uncleaved prefusion-optimized gp140 trimers derived from analysis of HIV-1 envelope metastability. *Nat Commun.* 2016;7:12040.

He L, de Val N, Morris CD, Vora N, Thinnes TC, Kong L, et al. Presenting native-like trimeric HIV-1 antigens with self-assembling nanoparticles. *Nat Commun.* 2016;7:12041.

Moldt B, Le KM, Carnathan DG, Whitney JB, Schultz N, Lewis MG, et al. Neutralizing antibody affords comparable protection against vaginal and rectal simian/human immunodeficiency virus challenge in macaques. *AIDS.* 2016;30(10):1543-51.

Crispin M, Zeltina A, Zitzmann N, Bowden TA. Native functionality and therapeutic targeting of arenaviral glycoproteins. *Curr Opin Virol.* 2016;18:70-75.

Ingale J, Stano A, Guenaga J, Sharma SK, Nemazee D, Zwick MB, et al. High-Density Array of Well-Ordered HIV-1 Spikes on Synthetic Liposomal Nanoparticles Efficiently Activate B Cells. *Cell Rep.* 2016;15(9):1986-99.

Barton JP, Goonetilleke N, Butler TC, Walker BD, McMichael AJ, Chakraborty AK. Relative rate and location of intra-host HIV evolution to evade cellular immunity are predictable. *Nat Commun.* 2016;7:11660.

Schoofs T, Klein F, Braunschweig M, Kreider EF, Feldmann A, Nogueira L, et al. HIV-1 therapy with monoclonal antibody 3BNC117 elicits host immune responses against HIV-1. *Science.* 2016;352(6288):997-1001.

Lu C-, Murakowski DK, Bournazos S, Schoofs T, Sarkar D, Halper-Stromberg A, et al. Enhanced clearance of HIV-1-infected cells by broadly neutralizing antibodies against HIV-1 in vivo. *Science.* 2016;352(6288):1001-4.

MacLeod DT, Choi NM, Briney B, Garces F, Ver LS, Landais E, et al. Early Antibody Lineage Diversification and Independent Limb Maturation Lead to Broad HIV-1 Neutralization Targeting the Env High-Mannose Patch. *Immunity.* 2016;44(5):1215-26.

Kong R, Xu K, Zhou T, Acharya P, Lemmin T, Liu K, et al. Fusion peptide of HIV-1 as a site of vulnerability to neutralizing antibody. *Science.* 2016;352(6287):828-33.

Gautam R, Nishimura Y, Pegu A, Nason MC, Klein F, Gazumyan A, et al. A single injection of anti-HIV-1 antibodies protects against repeated SHIV challenges. *Nature.* 2016;533(7601):105-9.

Stewart-Jones GB, Soto C, Lemmin T, Chuang G-, Druz A, Kong R, et al. Trimeric HIV-1-Env Structures Define Glycan Shields from Clades A, B, and G. *Cell.* 2016;165(4):813-26.

Wang Y, Sundling C, Wilson R, O'Dell S, Chen Y, Dai K, et al. High-Resolution Longitudinal Study of HIV-1 Env Vaccine-Elicited B Cell Responses to the Virus Primary Receptor Binding Site Reveals Affinity Maturation and Clonal Persistence. *J Immunol.* 2016.

Briney B, Le K, Zhu J, Burton DR. Clonify: unseeded antibody lineage assignment from next-generation sequencing data. *Sci Rep.* 2016;6:23901.

Gitlin AD, von Boehmer L, Gazumyan A, Shulman, iv Z, Oliveira TY, Nussenzweig MC. Independent Roles of Switching and Hypermutation in the Development and Persistence of B Lymphocyte Memory. *Immunity*. 2016.

Kong L, Ju B, Chen Y, He L, Ren L, Liu J, et al. Key gp120 Glycans Pose Roadblocks to the Rapid Development of VRC01-Class Antibodies in an HIV-1-Infected Chinese Donor. *Immunity*. 2016;44(4):939-50.

Bonsignori M, Zhou T, Sheng Z, Chen L, Gao F, M Joyce G, et al. Maturation Pathway from Germline to Broad HIV-1 Neutralizer of a CD4-Mimic Antibody. *Cell*. 2016.

Jardine JG, Kulp DW, Havenar-Daughton C, Sarkar A, Briney B, Sok D, et al. HIV-1 broadly neutralizing antibody precursor B cells revealed by germline-targeting immunogen. *Science*. 2016;351(6280):1458-63.

Behrens A-, Vasiljevic S, Pritchard LK, Harvey DJ, Andev RS, Krumm SA, et al. Composition and Antigenic Effects of Individual Glycan Sites of a Trimeric HIV-1 Envelope Glycoprotein. *Cell Rep*. 2016.

Havenar-Daughton C, Lindqvist M, Heit A, Wu JE, Reiss SM, Kendric K, et al. CXCL13 is a plasma biomarker of germinal center activity. *Proc Natl Acad Sci USA*. 2016.

Bornholdt ZA, Turner HL, Murin CD, Li W, Sok D, Souders CA, et al. Isolation of potent neutralizing antibodies from a survivor of the 2014 Ebola virus outbreak. *Science*. 2016;351(6277):1078-83.

Lee J, Ozorowski G, Ward AB. Cryo-EM structure of a native, fully glycosylated, cleaved HIV-1 envelope trimer. *Science*. 2016;351(6277):1043-8.

Moyer TJ, Zmolek AC, Irvine DJ. Beyond antigens and adjuvants: formulating future vaccines. *J Clin Invest*. 2016;126(3):799-808.

Harvey DJ, Scarff CA, Edgeworth M, Struwe WB, Pagel K, Thalassinou K, et al. Travelling-wave ion mobility and negative ion fragmentation of high-mannose N-glycans. *J Mass Spectrom*. 2016;51(3):219-35.

McGuire AT, Gray MD, Dosenovic P, Gitlin AD, Freund NT, Petersen J, et al. Specifically modified Env immunogens activate B-cell precursors of broadly neutralizing HIV-1 antibodies in transgenic mice. *Nat Commun*. 2016;7:10618.

Dai K, Khan SN, Wang Y, He L, Guenaga J, Ingale J, et al. HIV-1 Vaccine-elicited Antibodies Reverted to Their Inferred Naive Germline Reveal Associations between Binding Affinity and in vivo Activation. *Sci Rep*. 2016;6:20987.

Nakaya HI, Clutterbuck E, Kazmin D, Wang L, Cortese M, Bosinger SE, et al. Systems biology of immunity to MF59-adjuvanted versus nonadjuvanted trivalent seasonal influenza vaccines in early childhood. *Proc Natl Acad Sci USA*. 2016;113(7):1853-8.

Krumm SA, Mohammed H, Le KM, Crispin M, Wrin T, Poignard P, et al. Mechanisms of escape from the PGT128 family of anti-HIV broadly neutralizing antibodies. *Retrovirology*. 2016;13(1):8.

Halper-Stromberg A, Nussenzweig MC. Towards HIV-1 remission: potential roles for broadly neutralizing antibodies. *J Clin Invest.* 2016;126(2):415-23.

Irimia A, Sarkar A, Stanfield RL, Wilson IA. Crystallographic Identification of Lipid as an Integral Component of the Epitope of HIV Broadly Neutralizing Antibody 4E10. *Immunity.* 2016;44(1):21-31.

Landais E, Huang X, Havenar-Daughton C, Murrell B, Price MA, Wickramasinghe L, et al. Broadly Neutralizing Antibody Responses in a Large Longitudinal Sub-Saharan HIV Primary Infection Cohort. *PLoS Pathog.* 2016;12(1):e1005369.

Ackerman ME, Mikhailova A, Brown EP, Dowell KG, Walker BD, Bailey-Kellogg C, et al. Polyfunctional HIV-Specific Antibody Responses Are Associated with Spontaneous HIV Control. *PLoS Pathog.* 2016;12(1):e1005315.

CHAVI-ID

2015

Bitto D, Harvey DJ, Halldorsson S, Doores KJ, Pritchard LK, Huiskonen JT, et al. Determination of N-linked Glycosylation in Viral Glycoproteins by Negative Ion Mass Spectrometry and Ion Mobility. *Methods Mol Biol.* 2015;1331:93-121.

Guenaga J, Dubrovskaya V, de Val N, Sharma SK, Carrette B, Ward AB, et al. Structure-guided redesign increases the propensity of HIV Env to generate highly stable soluble trimers. *J Virol.* 2015.

Alsahafi N, Ding S, Richard J, Markle T, Brassard N, Walker B, et al. Nef Proteins from HIV-1 Elite Controllers Are Inefficient at Preventing Antibody-Dependent Cellular Cytotoxicity. *J Virol.* 2015;90(6):2993-3002.

de Taeye SW, Ozorowski G, de la Peña AT, Guttman M, Julien J-, van den Kerkhof TL, et al. Immunogenicity of Stabilized HIV-1 Envelope Trimers with Reduced Exposure of Non-neutralizing Epitopes. *Cell.* 2015;163(7):1702-15.

Garces F, Lee J, de Val N, de la Peña AT, Kong L, Puchades C, et al. Affinity Maturation of a Potent Family of HIV Antibodies Is Primarily Focused on Accommodating or Avoiding Glycans. *Immunity.* 2015;43(6):1053-63.

Cubas R, van Grevenynghe J, Wills S, Kardava L, Santich BH, Buckner CM, et al. Reversible Reprogramming of Circulating Memory T Follicular Helper Cell Function during Chronic HIV Infection. *J Immunol.* 2015;195(12):5625-36.

Ranasinghe S, Soghoian DZ, Lindqvist M, Ghebremichael M, Donaghey F, Carrington M, et al. HIV-1 antibody neutralization breadth is associated with enhanced HIV-specific CD4+ T cell responses. *J Virol.* 2015.

Lee WS, Richard J, Lichtfuss M, Smith AB, Park J, Courter JR, et al. Antibody-Dependent Cellular Cytotoxicity against Reactivated HIV-1-Infected Cells. *J Virol.* 2015;90(4):2021-30.

Richard J, Veillette M, Ding S, Zoubchenok D, Alsaifi N, Coutu M, et al. Small CD4 Mimetics Prevent HIV-1 Uninfected Bystander CD4 + T Cell Killing Mediated by Antibody-dependent Cell-mediated Cytotoxicity. *EBioMedicine*. 2015;3:122-34.

Heesters BA, Lindqvist M, Vagefi PA, Scully EP, Schildberg FA, Altfeld M, et al. Follicular Dendritic Cells Retain Infectious HIV in Cycling Endosomes. *PLoS Pathog*. 2015;11(12):e1005285.

Ringe RP, Yasmeeen A, Ozorowski G, Go EP, Pritchard LK, Guttman M, et al. Influences on the design and purification of soluble, recombinant native-like HIV-1 envelope glycoprotein trimers. *J Virol*. 2015.

Andrabi R, Voss JE, Liang C-, Briney B, McCoy LE, Wu C-, et al. Identification of Common Features in Prototype Broadly Neutralizing Antibodies to HIV Envelope V2 Apex to Facilitate Vaccine Design. *Immunity*. 2015;43(5):959-73.

Dai K, He L, Khan SN, O'Dell S, McKee K, Tran K, et al. Rhesus Macaque B-Cell Responses to an HIV-1 Trimer Vaccine Revealed by Unbiased Longitudinal Repertoire Analysis. *MBio*. 2015;6(6):e01375-15.

Freund NT, Horwitz JA, Nogueira L, Sievers SA, Scharf L, Scheid JF, et al. A New Glycan-Dependent CD4-Binding Site Neutralizing Antibody Exerts Pressure on HIV-1 In Vivo. *PLoS Pathog*. 2015;11(10):e1005238.

Schiffner T, de Val N, Russell RA, de Taeye SW, de la Peña AT, Ozorowski G, et al. Chemical Cross-Linking Stabilizes Native-Like HIV-1 Envelope Glycoprotein Trimer Antigens. *J Virol*. 2015;90(2):813-28.

Sliepen K, van Montfort T, Ozorowski G, Pritchard LK, Crispin M, Ward AB, et al. Engineering and Characterization of a Fluorescent Native-Like HIV-1 Envelope Glycoprotein Trimer. *Biomolecules*. 2015;5(4):2919-34.

Lee J, de Val N, Lyumkis D, Ward AB. Model Building and Refinement of a Natively Glycosylated HIV-1 Env Protein by High-Resolution Cryoelectron Microscopy. *Structure*. 2015;23(10):1943-51.

Ingale J, Wyatt RT. Coupling of HIV-1 gp120-derived Core Protein to Paramagnetic Beads and Adsorption Assays. *Bio Protoc*. 2015;5(20).

Ingale J, Wyatt RT. Kinetic Analysis of Monoclonal Antibody Binding to HIV-1 gp120-derived Hyperglycosylated Cores. *Bio Protoc*. 2015;5(20).

Kong L, de la Peña AT, Deller MC, Garces F, Sliepen K, Hua Y, et al. Complete epitopes for vaccine design derived from a crystal structure of the broadly neutralizing antibodies PGT128 and 8ANC195 in complex with an HIV-1 Env trimer. *Acta Crystallogr D Biol Crystallogr*. 2015;71(Pt 10):2099-108.

Harvey DJ, Crispin M, Bonomelli C, Scrivens JH. Ion Mobility Mass Spectrometry for Ion Recovery and Clean-Up of MS and MS/MS Spectra Obtained from Low Abundance Viral Samples. *J Am Soc Mass Spectrom*. 2015;26(10):1754-67.

Hu JK, Crampton JC, Cupo A, Ketas T, van Gils MJ, Sliepen K, et al. Murine Antibody Responses to Cleaved Soluble HIV-1 Envelope Trimers Are Highly Restricted in Specificity. *J Virol*. 2015;89(20):10383-98.

Sliepen K, Ozorowski G, Burger JA, van Montfort T, Stunnenberg M, LaBranche C, et al. Presenting native-like HIV-1 envelope trimers on ferritin nanoparticles improves their immunogenicity. *Retrovirology*. 2015;12:82.

Lee J, Leaman DP, Kim AS, de la Peña AT, Sliepen K, Yasmeeen A, et al. Antibodies to a conformational epitope on gp41 neutralize HIV-1 by destabilizing the Env spike. *Nat Commun*. 2015;6:8167.

Julien J-, Lee J, Ozorowski G, Hua Y, de la Peña AT, de Taeye SW, et al. Design and structure of two HIV-1 clade C SOSIP.664 trimers that increase the arsenal of native-like Env immunogens. *Proc Natl Acad Sci USA*. 2015.

Murugan R, Imkeller K, Busse CE, Wardemann H. Direct high-throughput amplification and sequencing of immunoglobulin genes from single human B cells. *Eur J Immunol*. 2015;45(9):2698-700.

Pritchard LK, Harvey DJ, Bonomelli C, Crispin M, Doores KJ. Cell- and Protein-Directed Glycosylation of Native Cleaved HIV-1 Envelope. *J Virol*. 2015;89(17):8932-44.

McCoy LE, Falkowska E, Doores KJ, Le K, Sok D, van Gils MJ, et al. Incomplete Neutralization and Deviation from Sigmoidal Neutralization Curves for HIV Broadly Neutralizing Monoclonal Antibodies. *PLoS Pathog*. 2015;11(8):e1005110.

Gitlin AD, Mayer CT, Oliveira TY, Shulman, iv Z, Jones MJ, Koren A, et al. T cell help controls the speed of the cell cycle in germinal center B cells. *Science*. 2015.

He L, Cheng Y, Kong L, Azadnia P, Giang E, Kim J, et al. Approaching rational epitope vaccine design for hepatitis C virus with meta-server and multivalent scaffolding. *Sci Rep*. 2015;5:12501.

Jardine JG, Ota T, Sok D, Pauthner M, Kulp DW, Kalyuzhniy O, et al. HIV-1 VACCINES. Priming a broadly neutralizing antibody response to HIV-1 using a germline-targeting immunogen. *Science*. 2015;349(6244):156-61.

Sanders RW, van Gils MJ, Derking R, Sok D, Ketas TJ, Burger JA, et al. HIV-1 neutralizing antibodies induced by native-like envelope trimers. *Science*. 2015.

Pritchard LK, Spencer DI, Royle L, Vasiljevic S, Krumm SA, Doores KJ, et al. Glycan Microheterogeneity at the PGT135 Antibody Recognition Site on HIV-1 gp120 Reveals a Molecular Mechanism for Neutralization Resistance. *J Virol*. 2015;89(13):6952-9.

Leaman DP, Lee J, Ward AB, Zwick MB. Immunogenic Display of Purified Chemically Cross-Linked HIV-1 Spikes. *J Virol*. 2015;89(13):6725-45.

Pritchard LK, Spencer DI, Royle L, Bonomelli C, Seabright GE, Behrens A-, et al. Glycan clustering stabilizes the mannose patch of HIV-1 and preserves vulnerability to broadly neutralizing antibodies. *Nat Commun*. 2015;6:7479.

Dosenovic P, von Boehmer L, Escolano A, Jardine J, Freund NT, Gitlin AD, et al. Immunization for HIV-1 Broadly Neutralizing Antibodies in Human Ig Knockin Mice. *Cell*. 2015;161(7):1505-15.

Pritchard LK, Vasiljevic S, Ozorowski G, Seabright GE, Cupo A, Ringe R, et al. Structural Constraints Determine the Glycosylation of HIV-1 Envelope Trimers. *Cell Rep.* 2015.

Martin-Gayo E, Buzon MJ, Ouyang Z, Hickman T, Cronin J, Pimenova D, et al. Potent Cell-Intrinsic Immune Responses in Dendritic Cells Facilitate HIV-1-Specific T Cell Immunity in HIV-1 Elite Controllers. *PLoS Pathog.* 2015;11(6):e1004930.

Zhou T, Lynch RM, Chen L, Acharya P, Wu X, Doria-Rose NA, et al. Structural Repertoire of HIV-1-Neutralizing Antibodies Targeting the CD4 Supersite in 14 Donors. *Cell.* 2015;161(6):1280-92.

Burton DR, Mascola JR. Antibody responses to envelope glycoproteins in HIV-1 infection. *Nat Immunol.* 2015;16(6):571-6.

Willis JR, Sapparapu G, Murrell S, Julien J-, Singh V, King HG, et al. Redesigned HIV antibodies exhibit enhanced neutralizing potency and breadth. *J Clin Invest.* 2015;125(6):2523-31.

Crooks ET, Tong T, Chakrabarti B, Narayan K, Georgiev IS, Menis S, et al. Vaccine-Elicited Tier 2 HIV-1 Neutralizing Antibodies Bind to Quaternary Epitopes Involving Glycan-Deficient Patches Proximal to the CD4 Binding Site. *PLoS Pathog.* 2015;11(5):e1004932.

Richard J, Veillette M, Brassard N, Iyer SS, Roger M, Martin L, et al. CD4 mimetics sensitize HIV-1-infected cells to ADCC. *Proc Natl Acad Sci USA.* 2015;112(20):E2687-94.

Sharma SK, de Val N, Bale S, Guenaga J, Tran K, Feng Y, et al. Cleavage-Independent HIV-1 Env Trimers Engineered as Soluble Native Spike Mimetics for Vaccine Design. *Cell Rep.* 2015.

Hatzi K, J Nance P, Kroenke MA, Bothwell M, Haddad EK, Melnick A, et al. BCL6 orchestrates Tfh cell differentiation via multiple distinct mechanisms. *J Exp Med.* 2015;212(4):539-53.

He L, Zhu J. Computational tools for epitope vaccine design and evaluation. *Curr Opin Virol.* 2015;11:103-112.

Stanfield RL, De Castro C, Marzaioli AM, Wilson IA, Pantophlet R. Crystal structure of the HIV neutralizing antibody 2G12 in complex with a bacterial oligosaccharide analog of mammalian oligomannose. *Glycobiology.* 2015;25(4):412-9.

Derking R, Ozorowski G, Sliепен K, Yasmeen A, Cupo A, Torres JL, et al. Comprehensive Antigenic Map of a Cleaved Soluble HIV-1 Envelope Trimer. *PLoS Pathog.* 2015;11(3):e1004767.

Gounder K, Padayachi N, Mann JK, Radebe M, Mokgoro M, van der Stok M, et al. High Frequency of Transmitted HIV-1 Gag HLA Class I-Driven Immune Escape Variants but Minimal Immune Selection over the First Year of Clade C Infection. *PLoS ONE.* 2015;10(3):e0119886.

Martinez P, Sundling C, O'Dell S, Mascola JR, Wyatt RT, Karlsson Hedestam GB. Primate immune responses to HIV-1 Env formulated in the saponin-based adjuvant AbISCO-100 in the presence or absence of TLR9 co-stimulation. *Sci Rep.* 2015;5:8925.

Gardner MR, Kattenhorn LM, Kondur HR, von Schaewen M, Dorfman T, Chiang JJ, et al. AAV-expressed eCD4-Ig provides durable protection from multiple SHIV challenges. *Nature.*

2015;519(7541):87-91.

Pugach P, Ozorowski G, Cupo A, Ringe R, Yasmeen A, de Val N, et al. A Native-Like SOSIP.664 Trimer Based on an HIV-1 Subtype B env Gene. *J Virol*. 2015;89(6):3380-95.

Crotty S. A brief history of T cell help to B cells. *Nat Rev Immunol*. 2015;15(3):185-9.

Kong L, Wilson IA, Kwong PD. Crystal structure of a fully glycosylated HIV-1 gp120 core reveals a stabilizing role for the glycan at Asn262. *Proteins*. 2015;83(3):590-6.

Wang S, Mata-Fink J, Kriegsman B, Hanson M, Irvine DJ, Eisen HN, et al. Manipulating the Selection Forces during Affinity Maturation to Generate Cross-Reactive HIV Antibodies. *Cell*. 2015;160(4):785-97.

Pulendran B. The varieties of immunological experience: of pathogens, stress, and dendritic cells. *Annu Rev Immunol*. 2015;33:563-606.

Edlefsen PT, Rolland M, Hertz T, Tovanabutra S, Gartland AJ, DeCamp AC, et al. Comprehensive sieve analysis of breakthrough HIV-1 sequences in the RV144 vaccine efficacy trial. *PLoS Comput Biol*. 2015;11(2):e1003973.

Ward AB, Wilson IA. Insights into the trimeric HIV-1 envelope glycoprotein structure. *Trends Biochem Sci*. 2015.

Cohn LB, Silva IT, Oliveira TY, Rosales RA, Parrish EH, Learn GH, et al. HIV-1 Integration Landscape during Latent and Active Infection. *Cell*. 2015;160(3):420-32.

Doores KJ, Kong L, Krumm SA, Le KM, Sok D, Laserson U, et al. Two classes of broadly neutralizing antibodies within a single lineage directed to the high-mannose patch of HIV envelope. *J Virol*. 2015;89(2):1105-18.

Guenaga J, de Val N, Tran K, Feng Y, Satchwell K, Ward AB, et al. Well-ordered trimeric HIV-1 subtype B and C soluble spike mimetics generated by negative selection display native-like properties. *PLoS Pathog*. 2015;11(1):e1004570.

CHAVI-ID

2014

Eroshkin AM, Leblanc A, Weekes D, Post K, Li Z, Rajput A, et al. bNAber: database of broadly neutralizing HIV antibodies. *Nucleic Acids Res*. 2014;42(Database issue):D1133-9.

Sok D, van Gils MJ, Pauthner M, Julien J-, Saye-Francisco KL, Hsueh J, et al. Recombinant HIV envelope trimer selects for quaternary-dependent antibodies targeting the trimer apex. *Proc Natl Acad Sci USA*. 2014;111(49):17624-9.

Porichis F, Hart MG, Griesbeck M, Everett HL, Hassan M, Baxter AE, et al. High-throughput detection of miRNAs and gene-specific mRNA at the single-cell level by flow cytometry. *Nat Commun*. 2014;5:5641.

Bird GH, Irimia A, Ofek G, Kwong PD, Wilson IA, Walensky LD. Stapled HIV-1 peptides recapitulate antigenic structures and engage broadly neutralizing antibodies. *Nat Struct Mol Biol.* 2014;21(12):1058-67.

Ingale J, Tran K, Kong L, Dey B, McKee K, Schief W, et al. Hyperglycosylated stable core immunogens designed to present the CD4 binding site are preferentially recognized by broadly neutralizing antibodies. *J Virol.* 2014;88(24):14002-16.

Klein F, Nogueira L, Nishimura Y, Phad G, West AP, Halper-Stromberg A, et al. Enhanced HIV-1 immunotherapy by commonly arising antibodies that target virus escape variants. *J Exp Med.* 2014;211(12):2361-72.

Huang J, Kang BH, Pancera M, Lee J, Tong T, Feng Y, et al. Broad and potent HIV-1 neutralization by a human antibody that binds the gp41-gp120 interface. *Nature.* 2014;515(7525):138-42.

Forsell MN, McKee K, Feng Y, Mascola JR, Wyatt RT. HIV-1 envelope glycoprotein trimer immunogenicity elicited in the presence of human CD4 alters the neutralization profile. *AIDS Res Hum Retroviruses.* 2014;30(11):1089-98.

He L, Sok D, Azadnia P, Hsueh J, Landais E, Simek M, et al. Toward a more accurate view of human B-cell repertoire by next-generation sequencing, unbiased repertoire capture and single-molecule barcoding. *Sci Rep.* 2014;4:6778.

Crotty S. T follicular helper cell differentiation, function, and roles in disease. *Immunity.* 2014;41(4):529-42.

Azoitei ML, Ban YA, Kalyuzhny O, Guenaga J, Schroeter A, Porter J, et al. Computational design of protein antigens that interact with the CDR H3 loop of HIV broadly neutralizing antibody 2F5. *Proteins.* 2014;82(10):2770-82.

Garces F, Sok D, Kong L, McBride R, Kim HJ, Saye-Francisco KF, et al. Structural evolution of glycan recognition by a family of potent HIV antibodies. *Cell.* 2014;159(1):69-79.

Shingai M, Donau OK, Plishka RJ, Buckler-White A, Mascola JR, Nabel GJ, et al. Passive transfer of modest titers of potent and broadly neutralizing anti-HIV monoclonal antibodies block SHIV infection in macaques. *J Exp Med.* 2014;211(10):2061-74.

Oh JZ, Ravindran R, Chassaing B, Carvalho FA, Maddur MS, Bower M, et al. TLR5-mediated sensing of gut microbiota is necessary for antibody responses to seasonal influenza vaccination. *Immunity.* 2014;41(3):478-92.

Li Q, Zeng M, Duan L, Voss JE, Smith AJ, Pambuccian S, et al. Live simian immunodeficiency virus vaccine correlate of protection: local antibody production and concentration on the path of virus entry. *J Immunol.* 2014;193(6):3113-25.

Bournazos S, Klein F, Pietzsch J, Seaman MS, Nussenzweig MC, Ravetch JV. Broadly Neutralizing Anti-HIV-1 Antibodies Require Fc Effector Functions for In Vivo Activity. *Cell.* 2014;158(6):1243-53.

Del Prete GQ, Ailers B, Moldt B, Keele BF, Estes JD, Rodriguez A, et al. Selection of unadapted, pathogenic SHIVs encoding newly transmitted HIV-1 envelope proteins. *Cell Host Microbe*. 2014;16(3):412-8.

Seddiki N, Kaufmann DE. Editorial overview: cell dysfunction and exhaustion in HIV infection. *Curr Opin HIV AIDS*. 2014;9(5):437-8.

Murin CD, Julien J-, Sok D, Stanfield RL, Khayat R, Cupo A, et al. Structure of 2G12 Fab2 in complex with soluble and fully glycosylated HIV-1 Env by negative-stain single-particle electron microscopy. *J Virol*. 2014;88(17):10177-88.

Morou A, Palmer BE, Kaufmann DE. Distinctive features of CD4+ T cell dysfunction in chronic viral infections. *Curr Opin HIV AIDS*. 2014;9(5):446-51.

Shulman, iv Z, Gitlin AD, Weinstein JS, Lainez B, Esplugues E, Flavell RA, et al. Dynamic signaling by T follicular helper cells during germinal center B cell selection. *Science*. 2014;345(6200):1058-62.

Navis M, Tran K, Bale S, Phad GE, Guenaga J, Wilson R, et al. HIV-1 receptor binding site-directed antibodies using a VH1-2 gene segment orthologue are activated by Env trimer immunization. *PLoS Pathog*. 2014;10(8):e1004337.

Halper-Stromberg A, Lu C-, Klein F, Horwitz JA, Bournazos S, Nogueira L, et al. Broadly Neutralizing Antibodies and Viral Inducers Decrease Rebound from HIV-1 Latent Reservoirs in Humanized Mice. *Cell*. 2014.

Pulendran B. Systems vaccinology: probing humanity's diverse immune systems with vaccines. *Proc Natl Acad Sci USA*. 2014;111(34):12300-6.

Whitney JB, Hill AL, Sanisetty S, Penaloza-MacMaster P, Liu J, Shetty M, et al. Rapid seeding of the viral reservoir prior to SIV viraemia in rhesus monkeys. *Nature*. 2014;512(7512):74-7.

Barouch DH, Deeks SG. Immunologic strategies for HIV-1 remission and eradication. *Science*. 2014;345(6193):169-74.

Guttman M, Garcia NK, Cupo A, Matsui T, Julien J-, Sanders RW, et al. CD4-induced activation in a soluble HIV-1 Env trimer. *Structure*. 2014;22(7):974-84.

Madani N, Princiotta AM, Schön A, LaLonde J, Feng Y, Freire E, et al. CD4-mimetic small molecules sensitize human immunodeficiency virus to vaccine-elicited antibodies. *J Virol*. 2014;88(12):6542-55.

Gitlin AD, Shulman, iv Z, Nussenzweig MC. Clonal selection in the germinal centre by regulated proliferation and hypermutation. *Nature*. 2014;509(7502):637-40.

Blattner C, Lee J, Slieden K, Derking R, Falkowska E, de la Peña AT, et al. Structural Delineation of a Quaternary, Cleavage-Dependent Epitope at the gp41-gp120 Interface on Intact HIV-1 Env Trimers. *Immunity*. 2014;40(5):669-80.

Falkowska E, Le KM, Ramos A, Doores KJ, Lee J, Blattner C, et al. Broadly Neutralizing HIV Antibodies Define a Glycan-Dependent Epitope on the Prefusion Conformation of gp41 on Cleaved Envelope Trimers. *Immunity*. 2014;40(5):657-68.

Sok D, Doores KJ, Briney B, Le KM, Saye-Francisco KL, Ramos A, et al. Promiscuous Glycan Site Recognition by Antibodies to the High-Mannose Patch of gp120 Broadens Neutralization of HIV. *Sci Transl Med*. 2014;6(236):236ra63.

Scharf L, Scheid JF, Lee J, West AP, Chen C, Gao H, et al. Antibody 8ANC195 reveals a site of broad vulnerability on the HIV-1 envelope spike. *Cell Rep*. 2014;7(3):785-95.

Doria-Rose NA, Schramm CA, Gorman J, Moore PL, Bhiman JN, Dekosky BJ, et al. Developmental pathway for potent V1V2-directed HIV-neutralizing antibodies. *Nature*. 2014;509(7498):55-62.

P Y Chung N, Matthews K, Kim HJ, Ketas TJ, Golabek M, Reyes Kd, et al. Stable 293 T and CHO cell lines expressing cleaved, stable HIV-1 envelope glycoprotein trimers for structural and vaccine studies. *Retrovirology*. 2014;11:33.

Sundling C, Zhang Z, Phad GE, Sheng Z, Wang Y, Mascola JR, et al. Single-Cell and Deep Sequencing of IgG-Switched Macaque B Cells Reveal a Diverse Ig Repertoire following Immunization. *J Immunol*. 2014;192(8):3637-44.

Bates JT, Keefer CJ, Slaughter JC, Kulp DW, Schief WR, Crowe JE. Escape from neutralization by the respiratory syncytial virus-specific neutralizing monoclonal antibody palivizumab is driven by changes in on-rate of binding to the fusion protein. *Virology*. 2014;454-455:139-44.

Correia BE, Bates JT, Loomis RJ, Baneyx G, Carrico C, Jardine JG, et al. Proof of principle for epitope-focused vaccine design. *Nature*. 2014;507(7491):201-6.

Porichis F, Hart MG, Zupkosky J, Barblu L, Kwon DS, McMullen A, et al. Differential impact of PD-1 and/or IL-10 blockade on HIV-1-specific CD4 T cell and antigen-presenting cell functions. *J Virol*. 2014.

Xie J, Yea K, Zhang H, Moldt B, He L, Zhu J, et al. Prevention of cell death by antibodies selected from intracellular combinatorial libraries. *Chem Biol*. 2014;21(2):274-83.

Tran K, Poulsen C, Guenaga J, de Val N, Alda Nd, Wilson R, et al. Vaccine-elicited primate antibodies use a distinct approach to the HIV-1 primary receptor binding site informing vaccine redesign. *Proc Natl Acad Sci USA*. 2014;111(7):E738-47.

West AP, Scharf L, Scheid JF, Klein F, Bjorkman PJ, Nussenzweig MC. Structural Insights on the Role of Antibodies in HIV-1 Vaccine and Therapy. *Cell*. 2014;156(4):633-648.

Li S, Roupael N, Duraisingham S, Romero-Steiner S, Presnell S, Davis C, et al. Molecular signatures of antibody responses derived from a systems biology study of five human vaccines. *Nat Immunol*. 2014;15(2):195-204.

Trist HM, Tan PS, Wines BD, Ramsland PA, Orłowski E, Stubbs J, et al. Polymorphisms and interspecies differences of the activating and inhibitory FcγRII of *Macaca nemestrina* influence the binding of human IgG subclasses. *J Immunol*. 2014;192(2):792-803.

Lyumkis D, Julien J-, de Val N, Cupo A, Potter CS, Klasse P-, et al. Cryo-EM structure of a fully glycosylated soluble cleaved HIV-1 envelope trimer. *Science*. 2013;342(6165):1484-90.

Julien J-, Cupo A, Sok D, Stanfield RL, Lyumkis D, Deller MC, et al. Crystal Structure of a Soluble Cleaved HIV-1 Envelope Trimer. *Science*. 2013.

Malbec M, Porrot F, Rua R, Horwitz J, Klein F, Halper-Stromberg A, et al. Broadly neutralizing antibodies that inhibit HIV-1 cell to cell transmission. *J Exp Med*. 2013;210(13):2813-21.

Ferguson AL, Falkowska E, Walker LM, Seaman MS, Burton DR, Chakraborty AK. Computational prediction of broadly neutralizing HIV-1 antibody epitopes from neutralization activity data. *PLoS ONE*. 2013;8(12):e80562.

Iyer SS, Latner DR, Zilliox MJ, McCausland M, Akondy RS, Penaloza-MacMaster P, et al. Identification of novel markers for mouse CD4(+) T follicular helper cells. *Eur J Immunol*. 2013;43(12):3219-32.

Chakrabarti BK, Feng Y, Sharma SK, McKee K, Karlsson Hedestam GB, Labranche CC, et al. Robust Neutralizing Antibodies Elicited by HIV-1 JRFL Envelope Glycoprotein Trimers in Non-human Primates. *J Virol*. 2013.

Gaebler C, Gruell H, Velinzon K, Scheid JF, Nussenzweig MC, Klein F. Isolation of HIV-1-reactive antibodies using cell surface-expressed gp160 Δ c(BaL.). *J Immunol Methods*. 2013;397(1-2):47-54.

Sok D, Laserson U, Laserson J, Liu Y, Vigneault F, Julien J-, et al. The effects of somatic hypermutation on neutralization and binding in the PGT121 family of broadly neutralizing HIV antibodies. *PLoS Pathog*. 2013;9(11):e1003754.

Gupta S, Gach JS, Becerra JC, Phan TB, Pudney J, Moldoveanu Z, et al. The Neonatal Fc receptor (FcRn) enhances human immunodeficiency virus type 1 (HIV-1) transcytosis across epithelial cells. *PLoS Pathog*. 2013;9(11):e1003776.

Barouch DH, Whitney JB, Moldt B, Klein F, Oliveira TY, Liu J, et al. Therapeutic efficacy of potent neutralizing HIV-1-specific monoclonal antibodies in SHIV-infected rhesus monkeys. *Nature*. 2013.

Shingai M, Nishimura Y, Klein F, Mouquet H, Donau OK, Plishka R, et al. Antibody-mediated immunotherapy of macaques chronically infected with SHIV suppresses viraemia. *Nature*. 2013;503(7475):277-80.

Ringe RP, Sanders RW, Yasmeen A, Kim HJ, Lee J, Cupo A, et al. Cleavage strongly influences whether soluble HIV-1 envelope glycoprotein trimers adopt a native-like conformation. *Proc Natl Acad Sci USA*. 2013;110(45):18256-61.

Feng Y, Forsell MN, Flynn B, Adams W, Loré K, Seder R, et al. Chemical cross-linking of HIV-1 Env for direct TLR7/8 ligand conjugation compromises recognition of conserved antigenic determinants. *Virology*. 2013;446(1-2):56-65.

Sok D, Moldt B, Burton DR. SnapShot: broadly neutralizing antibodies. *Cell*. 2013;155(3):728.e1.

Barouch DH, Stephenson KE, Borducchi EN, Smith K, Stanley K, McNally AG, et al. Protective Efficacy of a Global HIV-1 Mosaic Vaccine against Heterologous SHIV Challenges in Rhesus Monkeys. *Cell*. 2013;155(3):531-9.

Locci M, Havenar-Daughton C, Landais E, Wu J, Kroenke MA, Arlehamn CL, et al. Human Circulating PD-1(+) CXCR3(-) CXCR5(+) Memory Tfh Cells Are Highly Functional and Correlate with Broadly Neutralizing HIV Antibody Responses. *Immunity*. 2013.

Porichis F, Hart MG, Zupkosky J, Barblu L, Kaufmann DE. In vitro assay to evaluate the impact of immunoregulatory pathways on HIV-specific CD4 T cell effector function. *J Vis Exp*. 2013;(80):e50821.

Horwitz JA, Halper-Stromberg A, Mouquet H, Gitlin AD, Tretiakova A, Eisenreich TR, et al. HIV-1 suppression and durable control by combining single broadly neutralizing antibodies and antiretroviral drugs in humanized mice. *Proc Natl Acad Sci USA*. 2013.

Ota T, Doyle-Cooper C, Cooper AB, Doores KJ, Aoki-Ota M, Le K, et al. B cells from knock-in mice expressing broadly neutralizing HIV antibody b12 carry an innocuous B cell receptor responsive to HIV vaccine candidates. *J Immunol*. 2013;191(6):3179-85.

Doyle-Cooper C, Hudson KE, Cooper AB, Ota T, Skog P, Dawson PE, et al. Immune tolerance negatively regulates B cells in knock-in mice expressing broadly neutralizing HIV antibody 4E10. *J Immunol*. 2013;191(6):3186-91.

Klein F, Mouquet H, Dosenovic P, Scheid JF, Scharf L, Nussenzweig MC. Antibodies in HIV-1 vaccine development and therapy. *Science*. 2013;341(6151):1199-204.

Khayat R, Lee J, Julien J-, Cupo A, Klasse P, Sanders RW, et al. Structural characterization of cleaved, soluble HIV-1 envelope glycoprotein trimers. *J Virol*. 2013;87(17):9865-72.

Chuang G-, Acharya P, Schmidt SD, Yang Y, Louder MK, Zhou T, et al. Residue-level prediction of HIV-1 antibody epitopes based on neutralization of diverse viral strains. *J Virol*. 2013;87(18):10047-58.

Klasse P, Depetris RS, Pejchal R, Julien J-, Khayat R, Lee J, et al. Influences on trimerization and aggregation of soluble, cleaved HIV-1 SOSIP envelope glycoprotein. *J Virol*. 2013;87(17):9873-85.

Pulendran B, Oh JZ, Nakaya HI, Ravindran R, Kazmin DA. Immunity to viruses: learning from successful human vaccines. *Immunol Rev*. 2013;255(1):243-55.

Sanders RW, Derking R, Cupo A, Julien J-, Yasmeen A, de Val N, et al. A next-generation cleaved, soluble HIV-1 Env Trimer, BG505 SOSIP.664 gp140, expresses multiple epitopes for broadly neutralizing but not non-neutralizing antibodies. *PLoS Pathog*. 2013;9(9):e1003618.

Zhou T, Zhu J, Wu X, Moquin S, Zhang B, Acharya P, et al. Multidonor analysis reveals structural elements, genetic determinants, and maturation pathway for HIV-1 neutralization by VRC01-class antibodies. *Immunity*. 2013;39(2):245-58.

Shulman, iv Z, Gitlin AD, Targ S, Jankovic M, Pasqual G, Nussenzweig MC, et al. T follicular helper cell dynamics in germinal centers. *Science*. 2013;341(6146):673-7.

Gruell H, Bournazos S, Ravetch JV, Ploss A, Nussenzweig MC, Pietzsch J. Antibody and antiretroviral preexposure prophylaxis prevent cervicovaginal HIV-1 infection in a transgenic mouse model. *J Virol*. 2013;87(15):8535-44.

Pancera M, Shahzad-ul-Hussan S, Doria-Rose NA, McLellan JS, Bailer RT, Dai K, et al. Structural basis for diverse N-glycan recognition by HIV-1-neutralizing V1-V2-directed antibody PG16. *Nat Struct Mol Biol*. 2013;20(7):804-13.

Stephenson KE, Barouch DH. A global approach to HIV-1 vaccine development. *Immunol Rev*. 2013;254(1):295-304.

Ranasinghe S, Cutler S, Davis I, Lu R, Soghoian DZ, Qi Y, et al. Association of HLA-DRB1-restricted CD4(+) T cell responses with HIV immune control. *Nat Med*. 2013.

Rasheed MA, Latner DR, Aubert RD, Gourley T, Spolski R, Davis CW, et al. IL-21 is a critical cytokine for the generation of virus-specific long-lived plasma cells. *J Virol*. 2013.

Kong L, Lee J, Doores KJ, Murin CD, Julien J-, McBride R, et al. Supersite of immune vulnerability on the glycosylated face of HIV-1 envelope glycoprotein gp120. *Nat Struct Mol Biol*. 2013.

Crispin M, Bowden TA. Antibodies expose multiple weaknesses in the glycan shield of HIV. *Nat Struct Mol Biol*. 2013;20(7):771-2.

West AP, Scharf L, Horwitz J, Klein F, Nussenzweig MC, Bjorkman PJ. Computational analysis of anti-HIV-1 antibody neutralization panel data to identify potential functional epitope residues. *Proc Natl Acad Sci USA*. 2013;110(26):10598-603.

Isik G, P Y Chung N, van Montfort T, Menis S, Matthews K, Schief WR, et al. An HIV-1 envelope glycoprotein trimer with an embedded IL-21 domain activates human B cells. *PLoS ONE*. 2013;8(6):e67309.

Diskin R, Klein F, Horwitz JA, Halper-Stromberg A, Sather ND, Marcovecchio PM, et al. Restricting HIV-1 pathways for escape using rationally designed anti-HIV-1 antibodies. *J Exp Med*. 2013;210(6):1235-49.

Youngblood B, J Hale S, Akondy R. Using epigenetics to define vaccine-induced memory T cells. *Curr Opin Virol*. 2013.

Ahmed R, Burton DR. Viral vaccines: past successes and future challenges. *Curr Opin Virol*. 2013;3(3):307-8.

Hu J, Havenar-Daughton C, Crotty S. Modulation of SAP dependent T:B cell interactions as a strategy to improve vaccination. *Curr Opin Virol*. 2013.

Kulp DW, Schief WR. Advances in structure-based vaccine design. *Curr Opin Virol*. 2013;3(3):322-31.

Koff WC, Burton DR, Johnson PR, Walker BD, King CR, Nabel GJ, et al. Accelerating next-generation vaccine development for global disease prevention. *Science*. 2013;340(6136):1232910.

Jardine J, Julien J-, Menis S, Ota T, Kalyuzhniy O, McGuire A, et al. Rational HIV Immunogen Design to Target Specific Germline B Cell Receptors. *Science*. 2013.

Julien J-, Sok D, Khayat R, Lee J, Doores KJ, Walker LM, et al. Broadly Neutralizing Antibody PGT121 Allosterically Modulates CD4 Binding via Recognition of the HIV-1 gp120 V3 Base and Multiple Surrounding Glycans. *PLoS Pathog*. 2013;9(5):e1003342.

Gavrilyuk J, Ban H, Uehara H, Sirk SJ, Saye-Francisco K, Cuevas A, et al. Antibody conjugation approach enhances breadth and potency of neutralization of anti-HIV-1 antibodies and CD4-IgG. *J Virol*. 2013;87(9):4985-93.

J Hale S, Youngblood B, Latner DR, Mohammed AU, Ye L, Akondy RS, et al. Distinct Memory CD4(+) T Cells with Commitment to T Follicular Helper- and T Helper 1-Cell Lineages Are Generated after Acute Viral Infection. *Immunity*. 2013;38(4):805-17.

Zhu J, Ofek G, Yang Y, Zhang B, Louder MK, Lu G, et al. Mining the antibodyome for HIV-1-neutralizing antibodies with next-generation sequencing and phylogenetic pairing of heavy/light chains. *Proc Natl Acad Sci USA*. 2013;110(16):6470-5.

Choi YS, Yang JA, Yusuf I, Johnston RJ, Greenbaum J, Peters B, et al. Bcl6 expressing follicular helper CD4 T cells are fate committed early and have the capacity to form memory. *J Immunol*. 2013;190(8):4014-26.

Choi YS, Eto D, Yang JA, Lao C, Crotty S. Cutting edge: STAT1 is required for IL-6-mediated Bcl6 induction for early follicular helper cell differentiation. *J Immunol*. 2013;190(7):3049-53.

Cubas RA, Mudd JC, Savoye A-, Perreau M, van Grevenynghe J, Metcalf T, et al. Inadequate T follicular cell help impairs B cell immunity during HIV infection. *Nat Med*. 2013;19(4):494-9.

Klein F, Diskin R, Scheid JF, Gaebler C, Mouquet H, Georgiev IS, et al. Somatic mutations of the immunoglobulin framework are generally required for broad and potent HIV-1 neutralization. *Cell*. 2013;153(1):126-38.

Ferguson AL, Mann JK, Omarjee S, Ndung'u T, Walker BD, Chakraborty AK. Translating HIV sequences into quantitative fitness landscapes predicts viral vulnerabilities for rational immunogen design. *Immunity*. 2013;38(3):606-17.

Julien J-, Lee J, Cupo A, Murin CD, Derking R, Hoffenberg S, et al. Asymmetric recognition of the HIV-1 trimer by broadly neutralizing antibody PG9. *Proc Natl Acad Sci USA*. 2013;110(11):4351-6.

Ward AB, Sali A, Wilson IA. Biochemistry. Integrative structural biology. *Science*. 2013;339(6122):913-5.

Streeck H, D'Souza PM, Littman DR, Crotty S. Harnessing CD4(+) T cell responses in HIV vaccine development. *Nat Med*. 2013;19(2):143-9.

Doores KJ, Huber M, Le KM, Wang S-, Doyle-Cooper C, Cooper A, et al. 2G12-expressing B cell lines may aid in HIV carbohydrate vaccine design strategies. *J Virol*. 2013;87(4):2234-41.

Tan WG, Jin H-, West EE, Penaloza-MacMaster P, Wieland A, Zilliox MJ, et al. Comparative analysis of simian immunodeficiency virus gag-specific effector and memory CD8+ T cells induced by different adenovirus vectors. *J Virol*. 2013;87(3):1359-72.

Hoot S, McGuire AT, Cohen KW, Strong RK, Hangartner L, Klein F, et al. Recombinant HIV envelope proteins fail to engage germline versions of anti-CD4bs bNAbs. *PLoS Pathog*. 2013;9(1):e1003106.

CHAVI-ID

2012

Klein F, Halper-Stromberg A, Horwitz JA, Gruell H, Scheid JF, Bournazos S, et al. HIV therapy by a combination of broadly neutralizing antibodies in humanized mice. *Nature*. 2012.

Mouquet H, Scharf L, Euler Z, Liu Y, Eden C, Scheid JF, et al. Complex-type N-glycan recognition by potent broadly neutralizing HIV antibodies. *Proc Natl Acad Sci USA*. 2012;109(47):E3268-77.

Ota T, Doyle-Cooper C, Cooper AB, Huber M, Falkowska E, Doores KJ, et al. Anti-HIV B Cell lines as candidate vaccine biosensors. *J Immunol*. 2012;189(10):4816-24.

Moldt B, Rakasz EG, Schultz N, Chan-Hui P-, Swiderek K, Weisgrau KL, et al. Highly potent HIV-specific antibody neutralization in vitro translates into effective protection against mucosal SHIV challenge in vivo. *Proc Natl Acad Sci USA*. 2012;109(46):18921-5.

Burton DR, Ahmed R, Barouch DH, Butera ST, Crotty S, Godzik A, et al. A Blueprint for HIV Vaccine Discovery. *Cell Host Microbe*. 2012;12(4):396-407.