

## REFERENCES

- Abbas AK, Lichtman AH, Pober JS. Cellular and molecular immunology. 4<sup>th</sup> ed. Philadelphia; London: W.B. Saunders, 2000.
- Abraham SN and Arock M. Mast cells and basophils in innate immunity. *Semin. Immunol.* 1998; 10: 373-81.
- Aderem A and Underhill DM. Mechanisms of phagocytosis in macrophages. *Annu. Rev. Immunol.* 1999; 17: 593-623.
- Altruda F, Cervella P, Gaeta ML, Daniele A, Giancotti F, Tarrone G, *et al.* Cloning of cDNA for a novel mouse membrane glycoprotein (gp42): shared identity to histocompatibility antigens, immunoglobulins and neural-cell adhesion molecules. *Gene.* 1989; 85(2): 445-51.
- An G, Dong N, Shao B, Zhu M and Ruan C. Expression and characterization of the ScFv fragment of antiplatelet GPIIIa monoclonal antibody SZ-21. *Throm. Res.* 2002; 105: 331-7.
- Ballas ZK, Rasmussen WL and Krieg AM. Induction of NK activity in murine and human cells by CpG motifs in oligodeoxynucleotides and bacterial DNA. *J. Immunol.* 1996; 157: 1840-5.
- Barbas CR. Recent advances in phage display. *Curr. Opin. Biotechnol.* 1993; 4: 526-30.

- Barclay AN, Brown MH, Alex Law SK, McKnight AJ, Tomlinson MG and Merwe PA. The leukocyte Antigen Facts Book. 2<sup>nd</sup> ed. Academic Press, Toronto; 1997.
- Barry MA, Barry ME and Johnston SA. Production of monoclonal antibodies by genetic immunization. *Biotechniques* 1994; 16: 616-20.
- Better M, Chang CP, Robinson RR and Horwitz AH. *Escherichia coli* secretion of an active chimeric antibody fragment. *Science*. 1998; 240: 1041-3.
- Biswas C, Zhang Y, DeCastro R, Guo H, Nakamura T, Kataoka H, *et al.* The human tumor cell derived collagenase stimulatory factor (renamed EMMPRIN) is a member of the immunoglobulin superfamily. *Cancer Res*. 1995; 55(2): 434-9.
- Boise LH, Minn AJ, June CH, Lindsten T and Thompson CB. . Growth Factors can Enhance Lymphocyte Survival without Committing the Cell to Undergo Cell Division. *National Academy of Sciences* 1995; 92: 5491-5.
- Brodsky FM and Guagliardi LE. The cell biology of antigen processing and presentation. *Annu. Rev. Immunol.* 1991; 9: 707-44.
- Burton DR. Phage display. *Immunotechnology*. 1995; 1: 87-94.
- Cambier JC and Ransom JT. Molecular mechanisms of transmembrane signaling in B lymphocytes. *Annu. Rev. Immunol.* 1987; 5: 175.
- Capron A and Dessaint JP. Immunologic aspects of schistosomiasis. *Annu. Rev. Med.* 1992; 43: 209-18.
- Cella M, Salluto F and Lanzavecchia A. Origin, maturation and antigen presenting function of dendritic cells. *Curr. Opin. Immunol.* 1997; 9: 10-16.
- Cesareni G. Peptide display on filamentous phage capsids. A new powerful tool to study protein-ligand interaction. *FEBS Lett.* 1992; 307: 66-70.

- Chambers CA and Allison JP. Co-stimulation of T-cell responses. *Curr. Opin. Immunol.* 1997;9: 396-404.
- Cheng Y, Li X, Kamholz J, Burns FR. Organization of the mouse GP42/Basigin gene: a member of the Ig superfamily. *Biochim. Biophys. Acta.* 1994; 1217(3): 307-11.
- Chiampanichayakul S, Szekeres A, Khunkeawla P, Moonsom S, Leksa V, Drbal K, Zlabinger GJ, Stockinger H, Kasinrerak W. Engagement of Na, K-ATPase  $\beta$ 3 subunit by a specific monoclonal antibody suppresses T and B lymphocyte activation. *Int. Immunol.* 2002;14(12): 1407-14.
- Chow YH, Huang WL, Chi WK, Chu YD and Tao MH. Improvement of hepatitis B virus DNA vaccines by plasmids coexpressing hepatitis B surface antigen and interleukin-2. *J. Virol.* 1997;71: 169-78.
- Clevers H, Alarcon B, Wileman T and Terhost C. The T cell receptor/CD3 complex: A dynamic protein ensemble. *Annu. Rev. Immunol.* 1988;6: 629.
- Conry RM, Widera G, LoBuglio AF, Fuller JT, Moore ST, Barlow DL. Selected strategies polynucleotide immunization. *Gene Ther.* 1996;3: 67-74.
- Cui Z and Mumper RJ. Chitosan-based nanoparticles for topical genetic immunization. *J. Controlled Release* 2001;75: 400-19.
- Darji A, Guzman CA, Gerstel B, Wachholz P, Timmis KN, Wehland J, Chakraborty T and Weiss S. Oral somatic transgene vaccination using attenuated *S. typhimurium*. *Cell* 1997;91: 765-75.
- David PH and Huston DP. The biological of the immune system. *JAMA* 1997; 278: 1804-14.

- Davis HL, Whalen RG and Demeneix BA. Direct gene transfer into skeletal muscle in vivo: Factors affecting efficiency of transfer and stability of expression. *Hum. Gene Ther.* 1993;4: 151-9.
- Davis HL, McCluskie MJ, Gerin JL and Purcell RH. DNA vaccine for hepatitis B: evidence for immunogenicity in chimpanzees and comparison with other vaccines. *Proc. Natl. Acad. Sci. USA.* 1996;93(14):7213-8.
- Davis HL and Whalen RG. DNA-based immunization. *Mol Cell Biol Hum. Dis Ser.* 1995; 5: 368-87.
- Demangel C, Lafaye P and Mazie JC. Reproducing the immune response against the *Plasmodium vivax* merozoite surface protein 1 with mimotopes selected from a phage displayed peptide library. *Molecular Immunol.* 1996;33: 909-16.
- Dente L, Cesareni G, Felici F, Folgori A, Luzzago A, Monaci P, Nicosia A and Delmastro P. Monoclonal antibodies that recognize filamentous phage: tools for phage display technology. *Gene.* 1994;148: 7-13.
- Dietrich G, Gentschev I, Hess J, Ulmer JB, Kaufmann SHE and Goebel W. Delivery of DNA vaccines by attenuated intracellular bacteria. *Trends Immunol. Today* 1999;20:251-3.
- D'Mello F, Partidos CD, Steward MW and Howard CR. Definition of the primary structure of hepatitis B virus (HBV) pre-S hepatocyte binding domain using random peptide libraries. *Virology* 1997;237: 319-26.
- Donnelly JJ, Ulmer JB, Shiver JW and Liu MA. DNA vaccines. *Annu. Rev. Immunol.* 1997;15: 617-48.
- Dupuis M, Denis-Mize K, Woo C, Goldbeck C, Selby MJ, Chen M, Otten GR, Ulmer JB, Donnelly JJ, Ott G and McDonald DM. Distribution of DNA vaccines

determines their immunogenicity after intramuscular injection in mice. *J. Immunol.* 2000;16(5): 2850-8.

Fadool JM and Linser PJ. 5A11 antigen is a cell recognition molecule which is involved in neuroglial interactions in avian neural retina. *Dev. Dyn.* 1993; 1996(4): 252-62.

Feltquate DM, Heaney S, Webster RG and Robinson HL. Different T helper cell types and antibody isotypes generated by saline and gene gun DNA immunization. *J. Immunol.* 1997; 158: 2278-84.

Felzmann T, Gadd S, Majdic O, Maurer D, Petera P, Smolen J and Knapp W. Analysis of function-associated receptor molecules on peripheral blood and synovial fluid granulocytes from patients with rheumatoid and reactive arthritis. *J. Clin. Immunol.* 1991; 11: 205-12.

Fields PE, Gajewski TF and Frank WF. Blocked ras activation in anergic CD4<sup>+</sup> T cells. *Science.* 1996;273: 1276-8.

Forrer P, Jung S and Plckthun A. Beyond binding: using phage display to select for structure, folding and enzymatic activity in proteins. *Current Opinion in Structural Biology.* 1999; 9: 514–20.

Fossum S, Mallett S and Barclay AN. The MRC OX-47 antigen is a member of the immunoglobulin superfamily with an unusual transmembrane sequence. *Eur. J. Immunol.* 1991; 21(3): 671-9.

- Greenwood J, Willis AE and Perham RN. Multiple display of foreign peptides on a filamentous bacteriophage peptides from *Plasmodium falciparum* circumsporozoite protein as antigens. *J. molecular Biol.* 1991;220: 821-7.
- Gregoriadis G. Engineering targeted liposomes: Progress and problems. *Trends Biotechnol.* 1995;13: 469-75.
- Gregoriadis G. *Liposome Technology*, 2<sup>nd</sup> Vols I-III, CRC Press, Boca Raton, FL. 1993.
- Gregoriadis G, Davis D and Davies A. Liposomes as immunological adjuvants: Antigen incorporation studies. *Vaccine* 1987;5: 143-9.
- Gregoriadis G, Saffie R and Hart SL. High yield incorporation of plasmid DNA within liposomes: Effect on DNA integrity and transfection efficiency. *J. Drug Targeting.* 1996;3: 469-75.
- Gregoriadis G, Saffie R and de Souza JB. Liposome-mediated DNA vaccination. *FFBS Lett.* 1997;402: 107-10.
- Gregoriadis G. Genetic vaccines: strategies for optimization. *Pharm. Res.* 1998;15: 661-70.
- Griffiths AD. Production of human antibodies using bacteriophage. *Curr. Opin. Immunol.* 1993;5: 263-7.
- Guerder S, Meyerhoff J and Flavell RA. The role of T cell costimulator B7.1 in autoimmunity and the induction and maintenance of tolerance to peripheral antigen. *Immunity.* 1994;1: 155-66.

- Hart PH. Regulation of the inflammatory response in the asthma by mast cell products. *Immunol. Cell Biol.* 2001;79(2): 149-53.
- Halpern MD, Kurlandder RJ and Pisetsky DS. Bacterial DNA induces murine interferon- $\gamma$  production by stimulation of interleukin-12 and tumor necrosis factor-cell. *Immunol.* 1996;167: 72.
- Harlow E, Lane D. *Antibody : a laboratory manual.* Cold Spring Harbor, N.Y: Cold Spring Harbor Laboratory, 1988.
- Hasan UA, Abai AM, Harper DR, Wren BW and Morrow WJ. Nucleic acid immunization: concepts and techniques associated with third generation vaccines. *J Immunol Methods* 1991; 229: 1-22.
- Hassett DE and Whitton JL. DNA immunization. *Trends Microbiol* 1996; 4: 307-12.
- Henkart PD. Lymphocyte-mediated cytotoxicology: two pathways and multiple effector molecules. *Immunity* 1994; 1: 343-6.
- Hogg N and Landis RC. Adhesion molecules in cell interactions. *Curr. Opin. Immunol.* 1993;5: 383-90.
- Hoogenboom HR, de Bruïne AP, Hufton SE, Hoet RM, Arends JW and Roovers RC. Antibody phage display technology and its applications. *Immunotechnology.* 1998;4: 1-20.
- Hu G-J, Wang RY-H, Han DS, Alter HJ and Shih WK. Characterization of the humoral and cellular immune responses against hepatitis C virus core induced by DNA-based immunization. *Vaccine* 1999;17: 3160-70.

- Intasaia N, Arooncharus P, Kasinrerak W, Tayapiwatana C. Construction of high density display of CD147 ectodomain on VCSM13 phage via gpVIII: effects of temperature, IPTG and helper phage infection-period. *Prot. Express Purification* 2003;32: 323-31.
- Iwasaki A, Stiernholm BJN, Chan AK, Berinstein NL and Barber BH. Enhanced CTL responses mediated by plasmid DNA immunogens encoding costimulatory molecules and cytokines. *J. Immunol.* 1997;158: 4591-601.
- Jain J, Loh C and Roa A. Transcriptional regulation of the IL-2 gene. *Curr. Opin. Immunol.* 1995;7:333-42.
- Jing J, Jian-Ying Y, and Jing L. DNA immunization with fusion genes encoding different regions of hepatitis C virus E2 fused to the gene for hepatitis B surface antigen elicits immune responses to both HCV and HBV. *World J. Gastroenterol.* 2002;8(3): 505-10.
- Kaiser GE. BIOL 230 WWW: UNITS OF STUDY. [Online]. 2002 May 20 [cited 2002 Sep 20]; Available from: URL:<http://www.cat.cc.md.us/courses/bio141/biounits.html>.
- Kaname T, Miyauchi T, Kuwano A, Matsuda Y, Muramatsu T and Kajii T. Mapping basigin (BSG), a member of the immunoglobulin superfamily, to 19p 13.3. *Cytogenet Cell Genet* 1993; 64(3-4): 195-7.
- Kasinrerak W, Tokrasinwit N and Changtumrourng K. Production of anti-CD4 antibodies in rabbits by DNA Immunization. *Asian Pac. J. Mol. Biol. Biotech.* 1997;5: 123-9.



- Kasinrerk W and Tokrasinwit N. Inhibition of PHA-induced cell proliferation by polyclonal CD4 antibodies generated by DNA immunization. *Immunol. Letters* 1999; 67: 237-42.
- Kasinrerk W, Moonsom S and Chawansuntati K. Production of antibodies by single DNA immunization: Comparison of various immunization routes. *Hybridoma and Hybridomics* 2002; 21: 287-93.
- Kasinrerk W, Fiebiger E, Stefanova I, Baumruker T, Knapp W and Stockinger H. Human leukocyte activation antigen M6, a member of the Ig superfamily, is the species homologue of rat OX-47, mouse basigin, and chicken HT7 molecule. *J. Immunol.* 1992; 149(3): 847-54.
- Kasinrerk W, Tokrasinwit N and Phunpae P. CD147 monoclonal antibodies induce homotypic cell aggregation of monocytic cell line U937 via LFA-1/ICAM-1 pathway. *Immunol.* 1999; 96(2): 184-92.
- Kassner PD, Burg MA, Baird A and Larocca D. Genetic selection of phage engineered for receptor-mediated gene transfer to mammalian cells. *Biochem. Biophys. Res. Commun.* 1999; 264(3): 921-3.
- Khunkeawla P, Moonsom S, Staffer G, Kongtawelert P and Kasinrerk W. Engagement of CD147 molecule-induced cell aggregation through the activation of protein kinases and reorganization of the cytoskeleton. *Immunobiology* 2001; 203(4): 659-69.

- Kiel DJ, Burns EH, Kisker WR, Bemis D and Fenwick B. Cloning and immunologic characterization of a truncated *Bordetella bronchiseptica* filamentous hemagglutinin fusion protein. *Vaccine* 2000; 18: 860-7.
- Kim JJ, Ayavoo V, Bagarazzi ML, Chattergoon MA, Dang K, Wang B. *In vivo* engineering of a cellular immune response by coadministration of IL-12 expression vector with a DNA immunogen. *J. Immunol.* 1997; 158: 816-26.
- Kim JJ, Bagarazzi ML, Trivedi N, Hu Y, Kazahaya K, Wilson DM. Engineering of *in vivo* immune responses to DNA immunization via codelivery of costimulatory molecule genes. *Nature Biotechnol.* 1997; 15: 341-6.
- Kirsch AH, Diaz LA, Jr., Bonish B, Antony PA and Fox DA. The pattern of expression of CD147/neurothelin during human T-cell ontogeny as defined by the monoclonal antibody 8D6. *Tissue Antigens* 1997; 50(2): 147-52.
- Klinman DM, Yamshchikov G and Ishigatsubo Y. Contribution of CpG motifs to the immunogenicity of DNA vaccine. *J. Immunol.* 1997; 158: 3635-9.
- Klinman DM, Yi AK, Beaucage SL, Conover J and Krieg AM. CpG motifs present in bacterial DNA rapidly induce lymphocytes to secrete interleukin-6, interleukin-12 and interferon  $\gamma$ . *Proc. Natl. Acad. Sci. USA* 1996; 93: 2879-83.
- Koch C, Staffler G, Uuttinger R, Hilgert I, Prager E and Cerny J, *et al.* T cell activation-associated epitopes of CD147 in regulation of the T cell response, and their definition by antibody and antigen density. *Int. Immunol.* 1999; 11(5): 777-86.

- Krieg AM. CpG DNA: a novel immunomodulator. *Trends Microbiol.* 1999; 7: 64-5.
- Krieg AM, Yi A, Matson S, Waldschmidt TJ, Bishop GA and Teasdale R. CpG motifs in bacterial DNA trigger direct B cell activation. *Nature* 1995; 374: 543-9.
- Ladner RC. Constrained peptides as binding entities. *Trends Biotechnol.* 1995; 13: 426-30.
- Ladner RC. Phage display and pharmacogenomics. *Pharmacogenomics.* 2000; 1: 199-202.
- Larocca D, Burg MA, Jensen-Pergakes K, Ravey EP, Gonzald AM and Baird A. Evolving phage vectors for cell targeted gene delivery. *Curr. Pharm. Biotechnol.* 2002; 3(1): 45-57.
- Lenschow DJ, Walunad TL and Bluestone JA. CD28/B7 system of T cell costimulation. *Annu. Rev. Immunol.* 1996; 14: 233-58.
- Lewis PJ, Babiuk LA. DNA vaccines: a review. *Adv Virus Res.* 1999; 44: 129-88.
- Linehan SA, Martinez-Pomares L and Gordon S. Mannose receptor and scavenger receptor: two macrophage pattern recognition receptors with diverse functions in tissue homeostasis and host defense. *Adv. Exp. Med. Biol.* 2000; 479: 1-14.
- Lowrie DB and Whalen RG. DNA vaccines : methods and protocols. Humana Press Inc. Totowa, New Jersey, 2000.
- Lydyard PM, Whelan A and Fanger MW. *Instant Notes in Immunology.* Oxford: BIOS Scientific Publishers Ltd. 2000.

Male D, Champion B and Cooke A. *Advance immunology*. Philadelphia: J.B. Lippincott, 1987.

Manickan E, Kanangat S, Rouse RJD, Yu Z and Rouse BT. Enhancement of immune response to naked DNA vaccine by immunization with transfected dendritic cells. *J. Leukocyte Biol.* 1997; 61: 125-32.

Manickan E, Karem KL, Rouse BT. DNA vaccines-a modern gimmick or a boon to vaccination. *Curr. Rev. Immunol.* 1997; 17: 139-54.

Medzhitov R and Janeway CA, Jr. Innate immunity: impact on the adaptive immune response. *Curr. Opin. Immunol.* 1997; 9(1): 4-9.

Meola A, Delmastro P, Monaci P, Luzzago A, Nicosia A, Felici F, Cortese R and Galfrè G. Derivation of vaccines from mimotopes immunologic properties of human hepatitis B virus antigen mimotopes displayed on filamentous phage. *J. Immunol.* 1995; 154: 3162-72.

Minami Y, Kono T and Miyazaki T. The Il-2 receptor complex: its structure, function, and target genes. *Annu. Rev. Immunol.* 1993; 11: 245-67.

Miyauchi T, Masuzawa Y and Muramatsu T. The basigin group of the immunoglobulin superfamily: complete conservation of a segment in and around transmembrane domains of human and mouse basigin and chicken HT7 antigen. *J. Biochem. (Tokyo)* 1991; 110(5): 770-4.

Moonsom S, Khunkeawla P, and Kasinrerkerk W: Production of polyclonal and monoclonal antibodies against CD54 molecules by intrasplenic immunization of plasmid DNA encoding CD54 protein. *Immunol letters* 2001; 76: 25-31.

- Nehme CL, Fayos BE and Bartles JR. Distribution of the integral plasma membrane glycoprotein CE9 (MRC OX-47) among rat tissues and its induction by diverse stimuli of metabolic activation. *J. Biochem.* 1995; 310(2): 693-8.
- Neri D, Petrucci H and Roncucci G. Engineering recombinant antibodies for immunotherapy. *Cell Biophysics.* 1995; 27: 47-61.
- Noelle RJ and Snow EC. T helper cell-dependent B cell activation. *J. FASEB* 1991; 5: 2770-6.
- Paglia P, Medina E, Arioli I, Guzman CA and Colombo MP. Gene transfer in dendritic cells, induced by oral DNA vaccination with *Salmonella typhimurium*, results in protective immunity against a murine fibrosarcoma. *Blood* 1998; 92(6): 3172-6.
- Palucka K and Banchereau J. How dendritic cells and microbes interact to elicit or subvert protective immune responses. *Curr. Opin. Immunol.* 2002; 14(4): 420-31.
- Pardoll DM and Beckerleg AM. Exposing the immunology of naked DNA. *Immunity* 1995; 3: 165-9.
- Parker DC. T cell-dependent B-cell activation. *Annu. Rev. Immunol.* 1993; 11: 331-40.
- Parkin J and Cohen B. An overview of the immune system. *Lancet.* 2001; 375: 1777-80.
- Parslow TG, Stites DP and Terr AL. *Basic and Clinical Immunology*, 10<sup>th</sup> ed. New York: Lange Medical Books/McGraw-Hill Medical Publishing Division, 2000.

- Parslow TG and Stites DP. Medical immunology. 10<sup>th</sup> ed. New York: Lange Medical Books/McGraw-Hill Medical Publishing Division, 2001.
- Paul WE and Seder RA. Lymphokine responses and cytokines. *Cell*. 1994; 76: 241-51.
- Perham RN, Terry TD, Wills AE, Greenwood J, Veronese FM and Appella E. Engineering a peptide epitope display system on filamentous bacteriophage. *FEMS Micro. Rev.* 1995; 17: 25-31.
- Perrie Y and Gregoriadis G. Liposome-mediated vaccination: the effect of vesicle composition. *J. Liposome Res.* 1998; 8: 95-6.
- Pertmer TM, Eisenbraun MD, McCabe D, Prayaga SK, Fuller DH and Haynes JR. Gene gun-based nucleic acid immunization: elicitation of humoral and cytotoxic T-lymphocyte responses following epidermal delivery of nanogram quantities of DNA. *Vaccine* 1995; 13: 1427-30.
- Pertmer TM, Roberts TR and Haynes JR. Influenza virus nucleoprotein specific immunoglobulin G subclass and cytokine responses elicited by DNA vaccination are dependent on the route of vector DNA delivery. *J. Virol.* 1996; 76: 6119-25.
- Picker LJ and Butcher EC. Physiological and molecular mechanisms of lymphocyte homing. *Annu. Rev. Immunol.* 1993; 10: 561-91.
- Pisetzki DS. Immune activation by bacterial DNA: a new genetic code. *Immunity* 1996; 5: 303-10.

- Podack ER. Functional significance of two cytolytic pathways of cytotoxic T lymphocytes. *J. Leukoc Biol.* 1995; 57: 548-52.
- Puttikhunt C, Kasinrerak W, Srisa-ad S, Duangchinda T, Silakate W, Moonsom S, Sittisombut N and Malasit P. Production of anti-dengue NS1 monoclonal antibodies by DNA immunization. *J Virol Methods* 2003; 109(1): 55-61.
- Rammensee HG. Chemistry of peptides associated with MHC class I and II molecules. *Curr. Opin. Immunol.* 1995; 7: 85-96.
- Raz E, Tighe H, Sato Y, Corr M, Dudler JA and Roman M. Preferential induction of a Th1 immune response and inhibition of specific IgE antibody formation by plasmid DNA immunization. *Proc. Natl. Acad. Sci. USA* 1996; 91: 9519-23.
- Razi-Wolf Z, Freeman GJ, Glavin F, Benacerraf B, Nadler L and Reiser H. Expression and function of the murine B7 antigen, the major co-stimulatory molecule expressed by peritoneal exudates cells. *Proc. Natl. Acad. Sci. USA.* 1992; 89: 4210-4.
- Roitt IM. *Roitt's essential immunology.* 9<sup>th</sup> ed. Oxford:Blackwell Science, 1997.
- Rudd CE. Upstream-downstream: CD28 cosignaling pathways and T cell function. *Immunity.* 1996; 4: 527-34.
- Sato Y, Roman M, Tighe H, Lee D, Corr M, Nguyen MD. Immunostimulatory DNA sequences necessary for effective intradermal gene immunization. *Science* 1996; 273: 352-4.

- Schlosshauer B and Herzog KH. Neurothelin: an inducible cell surface glycoprotein of blood-brain barrier-specific endothelial cells and distinct neurons. *J. Cell Biol.* 1990; 110(4): 1260-74.
- Sela M. Antigenicity: Some molecular aspects. *Science.* 1969; 166: 1365-74.
- Seulberger H, Lottspeich F and Risau W. The inducible blood-brain barrier-specific molecule HT7 is a novel immunoglobulin-like cell surface glycoprotein. *J. Embo.* 1990; 9(7): 2151-8.
- Shi Z, Curiel DT and Tang C. DNA based non invasive vaccination onto the skin. *Vaccine* 1999; 17: 2136-41.
- Siegel DL. Research and clinical applications of antibody phage display in transfusion medicine. *Transfus. Med. Rev.* 2001; 15: 35-52.
- Skerra A and Plückthun A. Assembly of a functional immunoglobulin Fv fragment in *Escherichia coli*. *Science.* 1988; 240: 1038-17.
- Smith GP. Filamentous fusion phage: novel expression vectors that display cloned antigen on the virion surface. *Science.* 1985; 228: 1315-17.
- Spring FA, Holmes CH, Simpson KL, Mawby WJ, Mattes MJ, Okubo Y, *et al.* The Oka blood group antigen is a marker for the M6 leukocyte activation antigen, the human homolog of OX-47 antigen, basigin and neurothelin, an immunoglobulin superfamily molecule that is widely expressed in human cells and tissues. *Eur. J. Immunol.* 1997; 27(4): 891-7.
- Squier MKT and Cohen JJ. Cell-mediated cytotoxic mechanisms. *Curr Opin Immunol.* 1994; 6: 447-54.



- Stacey KJ, Sweet MJ and Hume DA. Macrophages ingest and are activated by bacterial DNA. *J. Immunol.* 1996; 157: 2116-22.
- Staffler G and Stockinger H. CD147. *J. Biol. Regul Homeost Agents.* 2000; 14(4): 327-30.
- Steinman RM. The dendritic cell system and its role in immunogenicity. *Annu. Rev Immunol.* 1991; 9: 271-96.
- Stockinger H, Ebel T, Hansmann C, Koch C, Majdic O, Prager E, *et al.* CD147 (neirothelin/basigin) Workshop Panel Report In: Kishimoto T, Kikutani H, Borne *et al.*, editor. *Leukocyte typing VI.* New York: Garland Publishing. 1997, p760.
- Stratford R, Douce G, Zhuang-Barber L, Fairweather N and Eskola J. Influence of codon usage on the immunogenicity of a DNA vaccine against tetanus. *Vaccine* 2001; 19: 810-5.
- Tang DC, Devit M and Johnston SA. Genetic immunization is a simple method for eliciting an immune response. *Nature* 1992; 356: 152-4.
- Tayapiwatana C and Kasinrerck W. Construction and characterization of phage displayed leukocyte surface molecule, CD99. *Appl Microbiol Biotechnol.* 2002; 60: 336-41.
- Tayapiwatana C, Arooncharus P and Kasinrerck W. Displaying and epitope mapping of CD147 on VCSM13 phages: influence of *Escherichia coli* strains. *J. Immunol Methods* 2003; 281: 177-85.
- Tomlinson S. Complement defense mechanisms. *Curr. Opin. Immunol.* 1993;5:83-9.

- Torres CAT, Iwasaki A, Barber BH and Robbinson HL. Differential dependence on target site tissue for gene gun and intramuscular DNA immunizations, *J. Immunol.* 1997; 158: 4529-32.
- Tsuji T, Hamajima K, Fukushima J, Xin KQ, Ishii N and Aoki I. Enhancement of cell-mediated immunity against HIV-1 induced by coinoculation of plasmid-encoded HIV-1 antigen with plasmid expressing IL-12. *J. Immunol.* 1997; 158: 4008-13.
- Ulmer JB, Donnelly JJ, Parker SE, Rhodes GH, Felgner PL, Dwarski VJ, Gromkowski SH, Deck RR, DeWitt CM, Friedman A, Hawe LA, Leander KR, Martinez D, Perry HC, Shiver JW, Montgomery DL, and Liu MA. Heterologous protection against influenza by injection of DNA encoding a viral protein. *Science* 1993; 259: 1745-8.
- Wan Y, Wu Y, Bian J, Wang XZ, Zhou W, Jia ZC, Tan Y and Zhou L. Induction of hepatitis B virus specific cytotoxic T lymphocytes response *in vivo* by filamentous phage display vaccine. *Vaccine* 2001; 19: 2918-23.
- Watts C. Capture and processing of exogenous antigens for presentation on MHC molecules. *Annu. Rev. Immunol.* 1997; 15: 821.
- Weiss R, Leitner WW, Scheiblhofer S, Chen D, Bernhaupt A, Mostb S, Thalhamer J and Lyon JA. Genetic vaccination against malaria infection by intradermal and epidermal injection of a plasmid containing the gene encoding the *Plasmodium berghei* circumsporozoite protein. *Infect. Immunol.* 2000; 68: 5914-9.
- Weiss A. and Littman DR. Signal transduction by lymphocyte antigen receptors. *Cell* 1994; 76: 263-74.

- Winter G, Griffiths AD, Hawkins RE and Hoogenboom HR. Making antibodies by phage display technology. *Annu. Rev. Immunol.* 1994; 12: 433-55.
- Whitton JL, Rodriguez F, Zhang J and Hassett DE. DNA immunization: mechanistic studies. *Vaccine* 1999; 17: 1612-9.
- Xiang Z and Ertl HCJ. Manipulation of the immune response to a plasmid-encoded viral antigen by coinoculation with plasmids expressing cytokines. *Immunity* 1995; 2: 129-35.
- Xu F, Hong M and Ulmer JB. Immunogenicity of an HIV-1 gag DNA vaccine carried by attenuated *Shigella*. *Vaccine.* 2003; 21: 644-8.
- Yip YL, Smith G and Ward RL. Comparison of phage pIII, pVIII and GST as carrier proteins for peptide immunisation in BALB/c mice. *Immunol. Lett.* 2001; 79: 179-202.