

(A)

- **Aberg, KM.; Man, MQ. and Brown, BE. :** Co-regulation and interdependence of the mammalian epidermal permeability and antimicrobial barriers. *J Invest Dermatol* 2008 ;128:917-25.
- **Adams, M.; Navabi , H.; Croston, D .; Coleman, S. and Clayton, A.:** The rationale for combined chemo /immunotherapy using a TLR3 agonist and tumour-derived exosomes in advanced ovarian cancer. *Vaccine* 2005 ; 23:2374 -2378.
- **Agarwala, SS.; Kirkwood, JM. and Bryant, JM. :** Phase I, randomized, double-blind trial of loxoribine in advanced cancer .*Cytokines Cell Mol Ther* 2000 ; 6 :171–176.
- **Ahonen, CL.; Gibson, SJ.; Smith, RM. and Vasilakos, JP. :** Dendritic cell maturation and subsequent enhanced T-cell stimulation induced with the novel synthetic immune response modifier R-848. *Cell Immunol* 1999 ; 197: (1): 62–72.
- **Akamine, M.; Higa, F.; Arakaki, N.; Kawakami, K.; Takeda, K. and Saito , A. :** Differential roles of toll-like receptors 2 and 4 in in vitro responses of macrophages to *Legionella pneumophila*. *Infect Immun* 2005 ; 73: 352–361.
- **Akira, S. :** Toll receptor families: structure and function. *Semin Immunol* 2004 ; 16: 1–2.
- **Akira, S. and Takeda ,K. :** Toll-like receptor signaling . *Nature Rev Immunol* 2004 ; 4: 499-511.
- **Akira, S.; Uematsu, S. and Takeuchi, O. :** Pathogen recognition and innate immunity. *Cell* 2006 ; 124: 783–801.

-
- **Albiger, B.; Dahlberg, S. and Henriques-Normark, B. :** Role of the innate immune system in host defence against bacterial infections: focus on TLRs . J Intern Med 2007; 261: 511-528.
 - **Alcami, A.; Symons, A. and Khanna, A. :**Poxviruses: capturing cytokines and chemokines. Semin Virol 1998 ;5:419-427 .
 - **Alexopoulou, L.; Holt, AC.; Medzhitov, R. and Flavell, RA. :** Recognition of double-stranded RNA and activation of NF-kappaB by Toll-like receptor 3. Nature 2001 ; 413 :732-738.
 - **Aliprantis, AO.; Yang, RB.; Weiss, DS.; Godowski, P. and Zychlinsky :** The apoptotic signaling pathway activated by Toll-like receptor-2. EMBO J 2000 ; 19: 3325–3336.
 - **Almawi, WY.; Melemedjian, OK .; Spruance, SL. and Esmann :** Negative regulation of nuclear factor-kappaB activation and function by glucocorticoids . J Mol Endocrinol 2002 ; 28 :69–78 .
 - **Amanda Büchau, S. and Richard Gallo, L.:** Innate immunity and antimicrobial defense systems in psoriasis . clin in dermatol 2007; 25 :(6): 616 -624 .
 - **Amlie, L. ; Chilton, PM .;Ward ,JR.; Evans, JT. and Mitchell, TC. :** Innate immunity for biodefense: a strategy whose time has come. J Allergy Clin Immunol 2005 ; 116: 1134–1142.
 - **Anderson, KV. and Nusslein, VC. :** Information for the dorsal ventral pattern of the Drosophila embryo is stored as maternal mRNA. Nature 1984 ; 7: 311-223.
 - **Andersen, N ; Hawn, TR.; Smith, KD.; Nachman, A.; Lampano, AE. and Uematsu , S . :** Cutting edge: Tlr5-/- mice are more susceptible to Escherichia coli urinary tract infection . J Immunol 2007 ;178: 4717–4720.
-

- **Anderson, KV.; Jurgens, G. and Nusslein-Volhard, C. :** Establishment of dorsal-ventral polarity in the *Drosophila* embryo: genetic studies on the role of the Toll gene product . Cell 1985 ;42:779-789.
- **Anja, T.; Andrea, K. and Harald, G. :** Update in retinoid therapy of acne. Dermatol Ther 2006 ; 19 :5 :272-279.
- **Aravind, L.; Dixit, VM. and Koonin, EV. :** Apoptotic molecular machinery: Vastly increased complexity in vertebrates revealed by genome comparisons. Science 2001 ; 291: 1279-128.

(B)

- **Baker, BS.; Ovigne, JM.; Powles, AV.; Corcoran, S. and Fry, L. :** Normal keratinocytes express Toll-like receptors (TLRs) 1, 2 and 5 : Modulation of TLR expression in chronic plaque psoriasis . Br J Dermatol 2003 ;148: 670–679.
- **Bartfai, T.; Parker, LC.; Wilson, AG. and Whyte, MK. :** A low molecular weight mimic of the Toll/IL-1 receptor/resistance domain inhibits IL-1 receptor-mediated responses . Proc Natl Acad Sci U S A 2003 ; 100:7971–7976.
- **Barton, GM.; Kagan, JC. and Medzhitov, R. :** Intracellular localization of TLR9 prevents recognition of self DNA but facilitates access to viral DNA. Nat Immunol 2006 ;7: 49–56.
- **Barton, GM. and Medzhitov, R.:** Control of adaptive immune responses by TLRs: Curr Opin Immunol 2002 ; 14:380-383.
- **Beck, LA.; Gregory, M .; Gail S. and Habicht, L. :** Immunity and the Invertebrates. Scien American 2007 ; 12:60–66.

-
- **Belvin, MP.; and Anderson, KV. :** A conserved signaling pathway: The Drosophila toll-dorsal pathway . *Annu Rev Cell Dev Biol* 1996 ; 12: 393-416.
 - **Bennett-Guerrero, E.; Grocott, HP.; Levy, JH.; Stierer, KA.; Hogue, CW. and Cheung, AT.:** A phase II, double-blind, placebo-controlled, ascending-dose study of Eritoran (E5564), a lipid A antagonist, in patients undergoing cardiac surgery with cardiopulmonary bypass. *Anesth Analg* 2007 ; 104: 378–383.
 - **Berman, B. and Kaufman Pilotm, J. :** study on the effect of postoperative imiquimod 5% cream on the recurrence rate of excised keloids. *J Am Acad Dermatol* 2002 ; 47 : S 209-S211.
 - **Berman, B.; Sullivan, T. and De Araujo, T.:** Expression of Fas-receptor on basal cell carcinomas after treatment with imiquimod 5% cream or vehicle. *Br J Dermatol* 2003 ;149 :59–61.
 - **Bernasconi, NL.; Onai, N. and Lanzavecchia, A. :** A role for Toll-like receptors in acquired immunity: up-regulation of TLR9 by BCR triggering in naive B cells and constitutive expression in memory B cells. *Blood* 2003 ; 101: 4500-4504.
 - **Biragyn, PA.; Ruffini, CA.; Leifer, E.; Shakhov, A. and Chertov, O. :**Toll-like receptor 4-dependent activation of dendritic cells by β -defensin 2. *Science* 2002 ; 298: 1025–1029.
 - **Birchler T, Seibl R , Buchner K, Loeliger S , Seger R and Hossle, JP. :** Human Toll-like receptor 2 mediates induction of the antimicrobial peptide human β -defensin 2 in response to bacterial lipoprotein . *Eur J Immunol* 2001 ; 31 : 3131–3137.
 - **Bishop, GA.; Ramirez, LM.; Baccam, M.; Pederson, LK. and Tomai, MA. :** The immune response modifier resiquimod mimics CD40-induced B cell activation. *Cell Immunol* 2001 ; 208: 9–17.
-

-
- **Blanco, AM. ; Valles, SL. ; Pascual, M. and Guerri, C. :** Involvement of TLR4/type I IL-1 receptor signaling in the induction of inflammatory mediators and cell death induced by ethanol in cultured astrocytes. *J Immunol* 2005 ;175:6893–6899.
 - **Blander, JM. and Medzhitov, R. :** Regulation of phagosome maturation by signals from TLRs. *Science* 2004 ; 304: 1014–1018.
 - **Blander, JM. and Medzhitov, R. :** Toll-dependent selection of microbial antigens for presentation by dendritic cells. *Nature* 2006; 440: 808 12.
 - **Bouis, DA.; Popova, TG. and Takashima, A. :** Dendritic cells phagocytose and are activated by *Treponema pallidum* . *Infect Immun* 2001 ; 69 :518–528.
 - **Bowie, A.; Kiss-Toth, E.; Symons, JA.; Smith, GL.; Dower, SK. and O'Neill, LA. :** A46R and A52R from vaccinia virus are antagonists of host IL-1 and toll-like receptor signaling . *Proc Natl Acad Sci USA* 2000 ; 97: 10162–10167.
 - **Brown, T.; Zirvi M. and Cotsarelis, G . :** Vitiligo-like hypopigmentation associated with imiquimod treatment of genital warts. *J Am Acad Dermatol* 2005 ; 52 :715–716.
 - **Buates, S. and Matlashewski, G. :** Treatment of experimental leishmaniasis with the immunomodulators imiquimod : efficacy and mode of action. *J Infect Dis* 1999 ; 179: (6): 1485–1494.
 - **Buchau, AS.; Schaubert, J.; Hultsch, T. and Gallo, RL. :** Pimecrolimus enhances TLR2/6-induced expression of AMPs in keratinocytes . *J Invest Dermatol* 2008;128:2646-54.
 - **Bucov, M. :** A role of cytokines in local and systemic inflammation, and septic shock . *Vnitr Lek* 2002 ; 48: 755-762.
-

(C)

- **Cabral, ES. ; Gelderblom, H. and Hornung, RL. :** Borrelia burgdorferi lipoprotein-mediated TLR2 stimulation causes the down-regulation of toll like receptor 5 in human monocytes . J Infect Dis 2006 ;193: 849–859.
- **Cao, W. and Liu, YJ. :** Innate immune functions of plasmacytoid dendritic cells . Curr Opin Immunol 2007;19:24-30.
- **Caramalho, I.; Lopes-Calcalho, T.; Oster, D;Zelenay, S.; Haury, M. and Demengeot, J. :** Regulatory T cells selectively express Toll-like receptors and are activated by lipopolysaccharide. J Exp Med 2003 ; 197: 403–411.
- **Carty, M.; Goodbody, R.; Schroder, M.; Stack, J.; Moynagh, PN. and Bowie, AG. :** The human adaptor SARM negatively regulates adaptor protein TRIF-dependent Toll like receptor signaling . Nat Immunol 2006 ; 7: 1074–1081.
- **Ceilley, RI. and Del Rosso, JQ. :** Current modalities and new advances in the treatment of basal cell carcinoma . Int J Dermatol 2006 ; 45:489–98.
- **Chang, YC.; Madkan, V. and Cook, NR. :** Current and potential uses of imiquimod. South Med J 2005; 98:914–920
- **Chen K ; Jian, H ; Iribarren, d.; Nancy, M. and Ji, M. :** Toll like receptors in inflammation , infection and cancer . Intern Immuno pharmacol 2007 ; 7:1271–1285.
- **Cho, SH.; Strickland, I.; Tomkinson, A.; Fehring, AP. and Leung :** Preferential binding of Staphylococcus aureus to skin sites of Th2-mediated inflammation in a murine model . J Invest Dermatol 2001 ; 116 : 658–663.

- **Choi, KB.; Wong F.; Harlan, JM. and Chaudhary, PM. :** Lipopolysaccharide mediates endothelial apoptosis by a FADD-dependent pathway . J Biol Chem 1998 ; 273: 20185–20188.
- **Chuang, T. and Ulevitch, RJ. :** Identification of hTLR10: a novel human Toll-like receptor preferentially expressed in immune cells. Biochem Biophys Acta 2001 ;1518: 157-161.
- **Coban, C.; Ishii, KJ.; Kawai, T.; Hemmi, H.; Sato, S. and Uematsu, S. :**TLR 9 mediates innate immune activation by the malaria pigment hemozoin . J Exp Med 2005 ; 201: 19–25.
- **Crowson, AN. and Magro, C. :** The cutaneous pathology of lupus erythematosus: a review. J Cutan Pathol 2001 ; 28: 1–23.
- **Curry, L.; Qin, JZ.; Bonish, B.; Carrick, R.; Bacon, P. and Panella, J. :** Innate immune-related receptors in normal and psoriatic skin. Arch Pathol Lab Med 2003 ; 127: 178–186.

(D)

- **Dabbagh, K. and Lewis, DB. :** Toll-like receptors and T-helper-1/T-helper-2 responses. Curr Opin Infect Dis 2003;16:199–204.
- **De Veer, MJ.; Curtis, JM.; Baldwin, TM. ; McConville, MJ. and Schofield, L. :** MyD88 is essential for clearance of *Leishmania major*: Possible role for lipophosphoglycan and TLR 2 signaling . Eur J Immunol 2003 ; 33: 2822–2831.
- **Deva, R.; Shankaranarayanan, P.; Ciccoli, R. and Nigam, S.:** *Candida albicans* induces selectively transcriptional activation of cyclooxygenase-2 in HeLa cells: pivotal roles of toll-like receptors, p38 MAP kinases and NFkB . J Immunol 2003; **171**:3047–3055.
- **Di, ML.; Cinque, B.; Cupelli, F. and Giuliani, M. :** Increase of skinceramide levels in aged subjects following a short-term topical

application of bacterial sphingomyelinase from *Streptococcus thermophilus*. *Int J Immunopathol Pharmacol* 2008 ; 21:137-43.

- **Diebold, S.; Kaisho, T.; Hemmi, H. and Reis Sousa, C. :** Innate antiviral responses by means of TLR7-mediated recognition of single-stranded RNA. *Science* 2004 ; 303: 1529–1531.
- **Du, X.; Poltorak, A.; Wei, Y. and Beutler, B. :** Three novel mammalian toll-like receptors: gene structure, expression and evolution. *Eur Cytokine Netw* 2000 ;11: 362-371.
- **Duramad ; Beaudette, BC.; Shlomchik, MJ. and Marshak-Rothstein :** A Inhibitors of TLR-9 act on multiple cell subsets in mouse and man in vitro and prevent death in vivo from systemic inflammation . *J Immunol* 2005 ; 5193–5200.

(E)

- **Edwards, L.; Ferenczy, A. and Eron, L. :** Self-administered topical 5% imiquimod cream for external anogenital warts. HPV Study Group. *Arch Dermatol* 1998 ; 134 :25–30.
- **Elias, PM.; Hatano, Y. and Williams, ML. :** Basis for the barrier abnormality in atopic dermatitis: outside-inside-outside pathogenic mechanisms. *J Allergy Clin Immunol* 2008;121:1337-43.
- **Elmets, CA.; Bergstresser, PR.; Tigelaar, RE.; Wood, PJ. and Streilein, JW. :** Analysis of the mechanism of unresponsiveness produced by haptens painted on skin exposed to low dose ultraviolet radiation . *J Exp Med* 1983 ;158: 781–794.
- **Esche, C.; Stellato, C.; and Beck, LA. :** Chemokines key players in innate and adaptive immunity. *J Invest Dermatol* 2005 ;125 : 615–628.

(F)

- **Fenner, F.; Anderson, DA.; Arita, I. and Ladnyi, ID. :** Smallpox and its eradication, Geneva: World Health Organization 1988 .
J Am Acad Dermatol 2006.
- **Feuillet, V.; Medjane, S.; Mondor, I.; Demaria, O. and Galan JE. :** Involvement of TLR 5 in the recognition of flagellated bacteria. Proc Natl Acad Sci USA 2006 ;103: 12487–12492.
- **Finlay, BB. and Hancock, RE. :** Can innate immunity be enhanced to treat microbial infections?. Nat Rev Microbiol 2004; 2: 497-504.
- **Fitzgerald, KA. ; Palsson-McDermott, EM. ; Bowie, AG. ; Brady, G. and Brint, E. :** Mal (MyD88-adaptor-like) is required for TLR4 signal transduction. Nature 2001 ;413 :78–83. 79 .
- **Fitzgerald, KA.; Rowe, DC.; Barnes, BJ. and Latz, E. :** LPS-TLR4 signaling to IRF-3/7 and NF-kappaB involves the Toll adaptors TRAM and TRIF. J Exp Med 2003 ;198: 1043–1055.
- **Flacher, V.; Bouschbacher, M. and Verronese:** Human LCs express a specific TLR profile and differentially respond to viruses and Gram-positive bacteria. J Immunol 2006 ; 59 :167-177.
- **Frotscher, B.; Anton, K. and Worm, M. :** Inhibition of IgE production by the imidazoquinoline (resiquimod) in non-allergic and allergic donors. J Invest Dermatol 2002 ;119: 5:1059–1064.

(G)

- **Garland, SM. :** Human papillomavirus update with a particular focus on cervical disease. Pathology Broadsheet 2002; 34:213-224.
- **Garland, SM. :** Imiquimod. Curr Opin Infect Dis 2003 ; 16:85–89.

- **Gaspari, A.** : The evolution of dermatologic therapeutics Current uses of etanercept in psoriasis and other dermatoses . J Am Acad Dermatol 2006 ; 54 : 67-80 .
- **Gay, NJ. and Keith, FJ.** Drosophila Toll and IL-1 receptor. Nature. 1991 ;30;351(6325):355-6.
- **Geisse, JK .;Rich, P.; Pandya and *et al*** : Imiquimod 5% cream for the treatment of superficial basal cell carcinoma: A double blind, randomized, vehicle-controlled study. J Am Acad Dermatol 2002; 47:390-398.
- **Gewirtz, AT.; Navas, TA.; Lyons, S.; Godowski, PJ. and Madara, JL.** : bacterial flagellin activates basolaterally expressed TLR5 to induce epithelial proinflammatory gene expression . J Immunol 2001 ; 167:1882-1885.
- **Gibson, SJ.; Cluff, CW.; Johnson, DA. and Lacy, MJ.** : Cellular requirements for cytokine production in response to the immunomodulators imiquimod and S-27609 . J Interferon Cytokine Res 1995 ; 15 : 537–545. |
- **Gilliet , M.; Conrad , C.; Geiges, M.; Cozzio ,A. ; Thurlimann, W. and Burg, G.** : Psoriasis triggered by TLR7 agonist imiquimod in the presence of dermal plasmacytoid dendritic cell precursors. Arch Dermatol 2004 ;140: 1490–1495.
- **Goel, A. ; Dispenzieri, A. and Greipp, PR.** : PS-341-mediated selective targeting of multiple myeloma cells by synergistic increase in ionizing radiation-induced apoptosis . Exp Hematol 2005 ; 33:784–795.
- **Gollnick, H.; Cunliffe, W. and Berson, D.** : Management of acne: a report from a global alliance to improve outcomes in acne. J Am Acad Dermatol 2003 ; 49 : 1-2.

- **Gorski, LR .; Wong, YN.; Wheeler, JL.; Kao, RJ. and Perdomo, CA. :** Distinct indirect pathways govern human natural killer cell activation by toll like receptor 7 and 8 agonists. *Int Immunol* 2006 ;18: 1115–1126.
- **Gross, O.; Gewies, A.; Finger, K.; Schafer, M .;Peschel, C. and Ruland J :** Card9 controls a non-TLR signalling pathway for innate anti-fungal immunity. *Nature* 2006 ; 442 : 651–656.
- **Gupta, AK.; Rinaldi, A.; Bertoni, F.; Sallusto, F. and Lanzavecchia, A. :** Viral and non viral uses of imiquimod . *J Cutaneous Med Surg* 2004 ;8: 338–352.
- **Guy, R. and Kealey, T. :** Modelling the infundibulum in acne. *Dermatol* 1998 ;196 : 32–37. Gay NJ and Keith FJ : *Drosophila* Toll and IL-1 receptor. *Nature* 1991 ; 30: 351-355.

(H)

- **Harper, JC. and Thiboutot, DM. :** Pathogenesis of acne: research advances . *Adv Dermatol* 2003 ; 19 : 1-10.
- **Harrison, CJ .; Da Silva Correia, J.; Evans, JT. and Cluff, CW. :** Modification of immunological responses and clinical disease during topical R-837 treatment of genital HSV-2 infection . *Antiviral Res* 1988 ; 10: 209–223.
- **Harrison, CJ.; Miller, RL. and Bernstein, DI. :** Reduction of recurrent HSV disease using imiquimod alone or combined with a glycoprotein vaccine. *Vaccine* 2001 ;19: 1820–1826.
- **Harte, MT.; Haga, IR.; Maloney, G. and Bartlett, NW. :** The poxvirus protein A52R targets TLRs signaling complexes to suppress host defense . *J Exp Med* 2003 ; 197 : 343–351.

- **Hashimoto, C.; Hudson, K. and Anderson, K. :** The toll gene in *Drosophila*, required for dorsal-ventral embryonic polarity, appears to encode a trans-membrane protein. *Cell* 1988 ; 52:269–279.
- **Hayashi, F.; Smith, KD.; and Ozinsky, A. :** The innate immune response to bacterial flagellin is mediated by Toll-like receptor 5. *Nature* 2001 ; 410: 109–103.
- **Heil, F.; Ahmad-Nejad, P.; Hemmi, H.; Hochrein, H. and Gellert, T. :** The Toll-like receptor 7 specific stimulus loxoribine uncovers a strong relationship within the TLR7, 8 and 9 subfamily. *Eur J Immunol* 2003 ; 33:2987–2997.
- **Hemmi, H.; Kaisho, T.; Takeuchi, O.; Sato, S.; Sanjo, H.; Hoshino, K. and Akira, S.:** Small antiviral compounds activate immune cells via the TLR7 MyD88-dependent signaling pathway. *Nat Immunol* 2002 ; 3 : 196–200.
- **Hemmi, H.; Wang, I. and Lehrer, RI. :** The roles of two IkappaB kinase-related kinases in lipopolysaccharide and dsRNA signaling and viral infection . *J Exp Med* 2004 ; 199:1641–1650.
- **Henderson, J.; Northstone, K.; Lee SP, Liao, H.; Zhao, Y.; Pembrey M. et al :** The burden of disease associated with filaggrin mutations: a population-based, longitudinal birth cohort study. *J Allergy Clin Immunol* 2008;121:872-7.
- **Hengge, UR. and Ruzicka, T. :** Topical immunomodulation in dermatology : potential of toll-like receptor agonists . *Dermatol Surg* 2004 ; 30:1101–1112.
- **Hertz, CJ.; Wu ,Q. and Porter, EM. :** Activation of TLR2 on human tracheobronchial epithelial cells induces the antimicrobial peptide human beta defensin-2 . *J Immunol* 2003 ;171: 6820–6826.

- **Hoebe, K .; Du, X.; Georgel, P.; Janssen, E.; Tabeta, K .and Goode, J .:** Identification of Lps2 as a key transducer of MyD88-independent TIR signaling . *Nature* 2003 ; 424 :743-748.
- **Hornung ,V.; Rothenfusser, S .; Jahrsdorfer, B.; Giese, T.; Endres, S. and Hartmann, G. :** Quantitative expression of TLRs 1-10 mRNA in cellular subsets of human peripheral blood mononuclear cells and sensitivity to CpG oligo-deoxy-nucleotides. *J Immunol* 2002 ;168:4531–4537.
- **Howell, MD.; Kim, BE.; Gao, P.; Grant, AV. and Debenedetto, A. :** Cytokine modulation of AD filaggrin skin expression . *J Allergy Clin Immunol* 2007 ; 120 :150-155.
- **Hussain, I. and Kline, JN. :** CpG oligo-deoxy-nucleotides : A novel therapeutic approach for atopic disorders. *Curr Drug Targets Inflamm Allergy* 2003 ; 2: 199–205.

(I)

- **Into, T.; Kiura, K.; Yasuda, M.; Kataoka, H.; Inoue, N.; Takeda, K. and Shibata, K. :** Stimulation of human TLR 2 and TLR6 with membrane lipoproteins of *Mycoplasma fermentans* induces apoptotic cell death after NF-kappa B activation . *Cell Microbiol* 2004 ; 6:187-199.
- **Iwami, KI.; Matsuguchi, T. and Masuda, A. :** Cutting edge: Naturally occurring soluble form of mouse Toll-like receptor 4 inhibits LPS signaling . *J Immunol* 2000 ; 165: 6682–6686.

(J)

- **Jamie McInturff, E.; Robert Modlin, L. and Jenny, K. :** The role of TLRs in the pathogenesis and treatment of dermatological disease. *J Invest Dermatol* 2005 ;125:1-8.

- **Jamie, E. and Kim, J. :** The role of TLRs in pathophysiology of acne. *Semin Cutan Med Surg* 2005; 24:73-78.
- **Jamie, M. and Jenny, K. :** The role of Toll: How therapies targeting Toll-like receptors treat skin diseases .*Drug Discovery Today: Therapeutic Strategies* 2006 ; 3: (1): 75-80 .
- **Jugeau, S.; Tenaud, I.; Knol, AC. and Khammari, A. :** Induction of toll-like receptors by *Propionibacterium acnes* . *Br J Dermatol* 2005 ; 153 : 1105 -1113.
- **Jung, T. and Stingl, G. :** Atopic dermatitis: Therapeutic concepts evolving from new pathophysiologic insights . *J Allergy clin immunol* 2008.
- **Jurk, M.; Heil, F. and Vollmer, J. :** Human TLR7 or TLR8 independently confer responsiveness to the antiviral compound R-848 . *Nat Immunol* 2002 ; 3: 499 79.

(K)

- **Kafaja, S.; Lim, H. and Wang, S. :** *Propionibacterium acnes* induces antimicrobial pathways through toll-like receptor 2 in human neutrophils . *J Invest Dermatol* 2003 ;121 : A169.
- **Kang, SS.; Kauls, LS. and Gaspari, AA. :** TLRs : applications to dermatologic disease . *J Am Acad Dermatol* 2006 ;54:951–83 .
- **Kariko, K.; Buckstein, M.; Ni, H. and Weissman, D. :** Suppression of RNA recognition by TLRs: the impact of nucleoside modification and the evolutionary origin of RNA. *Immunity* 2005 ; 23:165–175.
- **Kawai, T. and Akira, S. :** Pathogen recognition with Toll like receptors. *Curr Opin Immunol* 2005 ; 17:338-344.

- **Kawai, T. and Akira, S. :** TLR signaling. *Cell Death Differ* 2006;13:816–25.
- **Khor, CC.; Chapman, SJ.; Vannberg, FO. and Murphy, C. :** A Mal functional variant is associated with protection against invasive pneumococcal disease, bacteremia, malaria and tuberculosis. *Nat Genet* 2007 ;39: 523–528.
- **Kim, J.; Ochoa, MT.; Krutzik, SR.; Takeuchi, O. and Legaspi, AJ. :** Activation of TLR2 in acne triggers inflammatory cytokine responses . *J Immunol* 2002 ;169:1535-1541.
- **Kim, J.;** Review of the innate immune responses in acne: Activation of TLR 2 in acne triggers inflammatory cytokine responses. *Dermatology* 2005;211:193-198.
- **Knor, T. :** The pathogenesis of acne . *Acta Dermato venereol Croat* 2005 ;13 :44-9.
- **Kollisch, G.; Kalali, BN.; Voelcker, V.; Wallich, R.; Behrendt, H.; Ring, J. and Mempel, M. :** Various members of the Toll-like receptor family contribute to the innate immune response of human epidermal keratinocytes. *Immunol* 2005 ;114:531–541.
- **Kotzin, BL.; Leung, DJ. and Marrack :** Superantigens and their potential role in human disease. *Adv Immunol* 1993 ; 54: 99–166.
- **Krieg, AM. :** Therapeutic potential of Toll-like receptor 9 activation. *Nat Rev Drug Discov* 2006 ;5:471–484.
- **Krieg, AM. and Vollmer, J. :** TLR 7, 8, and 9 : linking innate immunity to autoimmunity. *Revi Immunol* 2007 ; 220: 251–269.
- **Kropf, PF.; reudenberg, MA.; Modolell, M.; Antoniazi, S.; Smith, DF. and Muller, I. :** TLR 4 contributes to efficient control of infection with the protozoan parasite *Leishmania major*. *Infect Immun* 2004 ; 72 : 1920–1928.

- **Krueger, GG.; Bergstresser, PR.; Lowe, NJ. and Weinstein, GD. :** Psoriasis. *J Am Acad Dermatol* 1984 ;11: 937–947.
- **Krug, A.; French, AR.; Fischer, JA. and Dzionic, A. :** TLR9-dependent recognition of MCMV by IPC and DC generates coordinated cytokine responses that activate antiviral NK cell function . *Immunity* 2004 ; 21: 107–119 .
- **Krutzik, SR.; Ochoa, MT.; Sieling PA.; Uematsu, S.; Ng , YW. and Legaspi, A. :** Activation and regulation of TLR 2 and 1 in human leprosy. *Nat Med* 2003 ; 9 : 525–532.
- **Kulka, M.; Alexopoulou, L.; Flavell, RA. and Metcalfe, DD.:** Activation of mast cells by dsRNA: evidence for activation through Toll like receptor 3 . *J Allergy Clin Immunol* 2004 ;114:174–82.
- **Kyburz, D.; Brentano, F. and Gay, S. :** Mode of action of hydroxyl chloroquine in RA-evidence of an inhibitory effect on TLR signaling. *Nat Clin Pract Rheumatol* 2006 : 2 : 458–459.

(L)

- **Leadbetter, EA.; Rifkin, IR.; Hohlbaum, AM.; Beaudette, BC Shlomchik, MJ. and Marshak, RA. :** Chromatin-IgG complexes activate B cells by dual engagement of IgM and Toll-like receptors. *Nature* 2002 ; 416: 603-607.
- **Lebre, MC.; van der Aar AMG and van Baarsen, L. :** Human keratinocytes express functional Toll-like receptor 3, 4, 5, and 9. *J Invest Dermatol* 2007 ;127:(2): 331–341.
- **Lemaitre, B.; Nicolas, E.; Michaut, L.; Reichhart, JM. and Hoffmann, JA. :** The dorsoventral regulatory gene cassette Spatzle/Toll/Cactus controls the potent antifungal response in *Drosophila* adults . *Cell* 1996 ;86 : 973–983.

- **Lemaitre, B.; Reichhart, JM. and Hoffmann, JA. :** Drosophila host defense: Differential induction of antimicrobial peptide genes after infection by various classes of microorganisms . Proc Natl Acad Sci USA 1997 ; 94 : 14614-14169.
- **Leung, D. :** AD: new insights and opportunities for therapeutic intervention . J Allergy Clin Immunol 2000;105: 860- 876.
- **Liew, FY.; Xu, D. and Brint, EK. :** Negative regulation of TLRs-mediated immune responses. Nat Rev Immunol 2005; 5: 446–458.
- **Lindquist, S. and Craig, EA. :** The heat-shock proteins . Annu Rev Genet 1998 ;22 : 631–677.
- **Lippincott, W.; Susannah, K. and Simon, J. :** Sepsis since the discovery of Toll like receptors : Disease concepts and therapeutic opportunities . Crit Care Med 2007 ; 35: (5): 1404-1410.
- **Litjens, NH.; Rademaker, M.; Ravensbergen, B.; Rea, D.; Plas, MJ. and Thio, B. :** Monomethylfumarate affects polarization of monocyte derived dendritic cells resulting in down regulated Th1 lymphocyte responses. Eur J Immunol 2004 ; 34: 565–575.
- **Litman, G.; Cannon, J. and Dishaw, L. :** Reconstructing immune phylogeny: new perspectives .Nat Rev Immunol 2005;5:11:866-79.
- **Liu, H.; Komai, KM.; Xu, D.; Liew, FY. :**Toll-like receptor 2 signaling modulates the functions of CD4+ CD25+ regulatory T cells.Proc Natl Acad Sci USA 2006; 103:7048–53.
- **Liu, PT.; Krutzik, SR. and Kim, J. :** Cutting edge: All-trans retinoic acid down-regulates Toll like receptor-2 expression and function . J Immunol 2005 ;174 : 2467- 2470.
- **Liu, PT.; Stenger, S. and Li, H. :** TLR triggering of a vitamin D-mediated human antimicrobial response. Science 2006;311:1770-7.

- **Liu, PT.; Stenger, S.; Tang, DH. and Modlin, RL. :** Cutting edge: vitamin D-mediated human antimicrobial activity against *Mycobacterium tuberculosis* is dependent on the induction of cathelicidin . *J Immunol* 2007;179:2060-3.
- **Lopez, M.; Sly, LM.; Luu, Y.; Stefanato, CM. and Wax, FD. :** The 19-kDa *Mycobacterium tuberculosis* protein induces macrophage apoptosis through Toll-like receptor-2 . *J Immunol* 2003 ;170 : 2409–2416.
- **Lorenz, E.; Mira, JP.; Cornish, KL.; Arbour, NC. and Schwartz, DA. :** A novel polymorphism in the Toll-like receptor 2 gene and its potential association with staphylococcal infection . *Infect Immun* 2000 ; 68 : 6398–6401.
- **Lund, JM.; Alexopoulou, L.; Sato, A.; Karow, M.; Adams, NC. and Gale, NW. :** Recognition of single stranded RNA viruses by TLR 7. *Proc Natl Acad Sci USA* 2004 ;101: 5598–5603.

(M)

- **Mallapragada, SK. and Balaji, N. :** Immuno -modulatory biomaterials . *J Intern Pharmacol* 2008 ; 364:265–271.
- **Mark, GB.; Spruance, SL. and Esmann, L.:** Environmental factors and gene–environment interactions in the aetiology of asthma. *Clin Exp Pharmacol Physiol* 2006 ; 33:285–9.
- **Marshak, RA. :** Toll-like receptors in systemic autoimmune disease .*Nat Rev Immunol* 2006 ;6:823–835.
- **Martin, M.; Cummins, R. and Silverberg, NB. :** Toll-like receptor-mediated cytokine production is differentially regulated by glycogen synthase kinase 3. *Nat Immunol* 2005 ; 6: 777–784.

-
- **Mason, KA.; Ariga, H.; Neal, R.; Valdecanas, D.; Hunter, N. and Krieg, AM.** :Targeting Toll-like receptor 9 with CpG OND enhances tumor response to fractionated radiotherapy . Clin Cancer Res 2005 ;11:361–369.
 - **Mayer, S.; Lien, E.; Klagge, IM.:**Gene: Immunology - Chapter One: Innate Immunity.Microbiology and Immunology On-Line Textbook. USC School of Medicine. Retrieved on (2007).
 - **McInturff, JE.; Wang, SJ. and Hertz, CJ.** : Synthetic granulysin peptides demonstrate antimicrobial and anti-inflammatory effects against *P. acnes* . J Invest Dermatol 2004 ;122 : 120.
 - **Medvedev, AE.; Lentschat, A.; Kuhns, DB. and Zhang, S.** : Distinct mutations in IRAK-4 confer hyporesponsiveness to lipopolysaccharide and interleukin-1 in a patient with recurrent bacterial infections. J Exp Med 2003; **198**:521–531.
 - **Medzhitov, R.** : Recognition of microorganisms and activation of the immune response . Nature 2007 ;449 : 7164: 819–26.
 - **Medzhitov, R. and Janeway, CJ.** : Innate immunitythe virtues of a nonclonal system of recognition . Cell 1997 ;91: 295–298.
 - **Medzhitov, R.; Preston, HP. and Janeway, CA.** : A human homologue of the *Drosophila* Toll protein signals activation of adaptive immunity. Nature 1997; 388 : 394–397.
 - **Mempel, M.; Behnam, NK. and Johannes, R.** : Toll-Like Receptors in Dermatology . Dermatol Clin 2007 ; 25 :531–540.
 - **Mempel, M.; Voelcker, V. and Kollisch, G.** : TLRs expression in human keratinocytes : J Invest Dermatol 2003 ;121:1389–1396.
 - **Michelsen, KS.; Aicher, A.; Mohaupt, M.; Dimmeler, S. and Kirschning, CJ.** :The role of toll-like receptors in bacteria-induced maturation of murine dendritic cells (DCS). Peptidoglycan and
-

lipoteichoic acid are inducers of DC maturation and require TLR2. J Biol Chem 2001 ; 276: 25680–25686.

- **Miller, LS.; Sorensen, OE. and Liu, PT. :** TGF-alpha regulates toll like receptor expression and function on epidermal keratinocytes . J Immunol 2005 ;174:6137–6143.
- **Miyauchi, H.; Tanakam, K. and Horio, T. :** Enhanced inflammation and immunosuppression by UV radiation in group A XP model mice . J Invest Dermatol 1996 ; 107: 343–348.
- **Mizel, SB.; Honko, AN. and Moors, MA. :** Induction of macrophage nitric oxide production by Gram negative flagellin involves signaling via heteromeric TLR5/TLR4 complexes. J Immunol 2003 ;170:6217–23.
- **Mullarkey, M.; Latz, E.; Hayashi and Murali :** Inhibition of endotoxin response by E5564, a novel TLR4-directed endotoxin antagonist . J Pharmacol Exp Ther 2003 ;304: 1093–1102.

(N)

- **Nagelkerken, L.; Verzaal, P.; Lagerweij, T.; Persoon-Deen, C.; Berbee, JF. et al. :** Development of AD in mice transgenic for human apolipoprotein C1. J Invest Dermatol 2008;128:1165-72.
- **Nagy, I.; Pivarcsi, A.; Koreck, I.; Urban, E. and Kemeny, L. :** Distinct strains of *Propionibacterium acnes* induce selective human beta defensin- 2 and IL8 expression in human keratinocytes through toll-like receptors. J Invest Dermatol 2005 ;124:931-8.
- **Napoli, JL. :** Retinoic acid biosynthesis and metabolism . FASEB J 1996 ; 10:993–1001.

-
- **Netea, MG.; Van der, GC.; Van der, JW. and Kullberg, BJ.** :Recognition of fungal pathogens by Toll-like receptors . Eur J Clin Microbiol Infect Dis 2004 ; 23: 672–676.

(O)

- **O'Neill LA** : Signal transduction pathways activated by the IL-1 /TLRs superfamily. Curr Top Microbiol Immunol 2002;270:47–61.
- **O'Neill, LA.** : Therapeutic targeting of TLRs for inflammatory and infectious diseases . Curr Opin Pharmacol 2003 ; 3:396–403 .
- **O'Neill, LA. and Carpenter, S.:** How important are TLRs receptors for antimicrobial responses Cell Microbiol 2007; 9: 8 :1891–1901.
- **Oberemok, SS. and Shalita, AR.** : Acne vulgaris, I Pathogenesis and diagnosis . Cutis 2002 ;70 : 101–105.
- **Okamura, Y.; Watari, M.; Jerud, ES.; Young, DW.; Ishizaka, ST. and Rose, J.** : The extra domain A of fibronectin activates Toll-like receptor 4. J Biol Chem 2001 ;276 : 10229–10233.
- **Oliveira, RB.; Ochoa, MT. and Sieling, PA.** : Expression of Toll-like receptor 2 on human Schwann cells: a mechanism of nerve damage in leprosy. Infect Immun 2003 ;71:1427–1433.
- **O'Neill, DA.; Porter, EM.; Elewaut, D.; Anderson, GM. ; Eckmann, L. and Kagnoff, MF.:** Expression and regulation of the human β -defensins hBD-1 and hBD-2 in intestinal epithelium . J Immunol 1999 ; 163 : 6718–6724.
- **Ong, PY.; Ohtake, T.; Brandt, C.; Strickland, I. and Ganz, T.** : Endogenous antimicrobial peptides and skin infections in atopic dermatitis. Engl J Med 2002 ; 347: 1151–1160.

(P)

- **Parroche, P.; Lauw, FN.; Goutagny, N.; Monks, BG.; Visintin, A., et al.:** From the cover: malaria hemozoin is immunologically inert but radically enhances innate responses by presenting malaria DNA to TLR 9. *Proc Natl Acad Sci USA* 2007; 104: 1919–1924.
- **Pasare, C. and Medzhitov, R. :** Toll pathway-dependent blockade of CD4R-CD25R T cell-mediated suppression by dendritic cells. *Science* 2003 ; 299 :1033-1036.
- **Patel, GK.; Goodwin, R. and Chawla, M. :** Imiquimod 5% cream monotherapy for cutaneous squamous cell carcinoma in situ (Bowen's disease): a randomized, double blind, placebo-controlled trial . *J Am Acad Dermatol* 2006 ; 54:1025–32.
- **Peng, WM.; Jenneck, C.; Bussmann, C.; Bogdanow, M. and Leung, DY. :** Risk factors of atopic dermatitis patients for eczema herpeticum. *J Invest Dermatol* 2007;127:1261-3.
- **Perera, PY.; Mayadas, TN.; Takeuchi, O.; Akira, S.; Zaks-Zilberman, M.; Goyert, SM. and Vogel, SN :** CD11b/CD18 acts in concert with CD14 and Toll-like receptor (TLR) 4 to elicit full lipopolysaccharide and taxol inducible gene expression . *J Immunol* 2001 ; 166: 574–581.
- **Philip, LT.; Stephan, KR. and Robert, ML. :** Therapeutic implications of the TLR and VDR partnership . *TRENDS in Mol Med* 2007;13 :3.
- **Philpott, MP. :** Defensins and acne. *Mol Immunol* 2003;40:457-62.
- **Pias, EK.; Hilario-Vargas, J.; Li, N. and Diaz, LA. :** Humoral autoimmunity in pemphigus. *Autoimmunity* 2004 ;37 : 283–286.

-
- **Picard, PA.; Bonnet, M.; Ku, C.; Bustamante, J. and Yang, K. :** Pyogenic bacterial infections in humans with IRAK-4 deficiency . *Science* 2003 ; 299: 2076–2079.
 - **Pivarcsi, A.; Bodai, L. and Rethi, B. :** Expression and function of Toll like receptor 2 and 4 in human keratinocytes . *Int Immunol* 2003 ;15: 721–730.

(R)

- **Rabindra, BN. and Akira, S. :** Toll-Like Receptor Signaling: Emerging Opportunities in Human Diseases and Medicine . *Curr Immunol Rev* 2005 ; 1: 81-90 .
- **Renn, CN.; Sanchez, DJ. and Ochoa, MT. :** TLR activation of Langerhans cell-like dendritic cells triggers an antiviral immune response . *J Immunol* 2006 ;177: 298–305.
- **Rezaei, N.; Farhodi, A.; Ramyar, A.; Pourpak, Z.; Aghamo, hammadi, A. and Mohammad, B. :** Congenital neutropenia and primary immunodeficiency disorders: a survey of 26 Iranian patients . *J Pediatr Hematol Oncol* 2005 ; 27: 351–356.
- **Rifkin, IR.; Leadbetter, EA.; Busconi, L.; Viglianti, G. and Marshah, R. :** A Toll-like receptors, endogenous ligands, and systemic autoimmune disease. *Immunol Rev* 2005 ; 204,: 27–42.
- **Rivas, JM. and Ullrich, SE. :** Systemic suppression of delayed-type hypersensitivity by supernatants from UV-irradiated keratinocytes. An essential role for keratinocyte-derived IL-10 . *J Immunol* 1992 ;149 : 3865–3871.
- **Rogers, NC.; Slack, EC.; Edwards, AD.; Nolte, MA.; Schulz, O.; Tybulewicz, VL. and Brown, GD. :** Syk-dependent cytokine induction by Dectin-1 reveals a novel pattern recognition pathway for C type lectins . *Immunity* 2005 ; 22: 507–517.

-
- **Ruiz, IG.; Egurbide, MV. and Pijoan, JI. :** Effect of antimalarials on thrombosis and survival in patients with systemic lupus erythematosus. *Lupus* 2006; 15: 577.

(S)

- **Saijo, S.; Fujikado, N.; Furuta, T.; Chung, SH.; Sudo, K.; Akira, S. and Ohno, N. :** Dectin-1 is required for host defense against *Pneumocystis carinii* but not against *Candida albicans* . *Nat Immunol* 2007 ;8: 39–46.
 - **Sauder, DN.; Smith, MH.; Senta, MT. and Meng, TC. :** Randomized single-blind, placebo-controlled study of topical application of the immune response modulator resiquimod in healthy adults. *Antimicrob Agents Chemother* 2003;47: 3846 - 52.
 - **Scheinfeld, N. and Lehman, DS. :** An evidence-based review of medical and surgical treatments of genital warts . *Dermatol Online J* 2006 ; 12:3.
 - **Schiller, M.; Metze, D. and Luger, TA. :** Immune response modifiers –mode of action . *Exp Dermatol* 2006 ; 15:331–341.
 - **Schmidt, KN.; Leung, B.; Kwong, M.; Zarembek, KA.; Satyal, S.; Navas, TA.; Wang, F. and Godowski PJ:** APC-independent activation of NK cells by the Toll-like receptor 3 agonist double-stranded RNA . *J Immunol* 2004; 172: 138-143.
 - **Schon, MP. :** Imiquimod mode of action . *Br J Dermatol* 2007;157: 8–13.
 - **Schwarz, A.; Grabbe, S.; Aragane, Y.; Sandkuhl, K.; Riemann, H. and Luger, TA. :** Interleukin-12 prevents UVB-induced local immunosuppression and overcomes UVB-induced tolerance. *J Invest Dermatol* 1996 ;106: 1187–1191.
-

- **Schwarz, T.** : UV radiation-induced tolerance .
Allergy 1999 ;54 : 1252–1261.
- **Sergio, AA.; Carroll, JB.; Isabel, MA.; Paulina, S. and Marcella**
:Toll like receptors are Key Participants in Innate Immune
Responses . Biol Res 2007; 40: 97-112.
- **Shoham, S.; Huang, C.; Chen, JM.; Golenbock, DT.; and
Levitz, SM.** :TLR4 mediates intracellular signaling without TNF-
alpha release in response to Cryptococcus neoformans PS capsule.
J Immunol 2001 ; 166: 4620–4626.
- **Simon, R. and Samuel, CE.:** Activation of NFkBdependent gene
expression by Salmonella flagellins FliC and FljB .
Biochem Biophys Res Commun 2007 ; 355 : 280–285.
- **Skov, L.; Olsen, JV.; Giorno, A. and Baadsgaard, O. :**
Application of staphylococcal enterotoxin B on normal and atopic
skin induces up-regulation of T cells via a superantigenic-mediated
mechanism . J Allergy Clin Immunol 2000 ; 105 : 820–826.
- **Song, PI.; Park, YM. and Abraham.** : Human keratinocyte
express functional CD14 and TLR4 .
J Invest Dermatol 2002;119:4 : 424–432 .
- **Sontheimer, RD. :** Subacute cutaneous lupus erythematosus
:25-year evolution of a prototypic subset of lupus erythematosus
defined by characteristic cutaneous, pathological ,immunological,
and genetic findings . Autoimmun Rev 2005 ; 4: 253–263.
- **Stack, J.; Haga, IR. and Schroder, M. :** Vaccinia virus protein
A46R targets multiple Toll-like-interleukin-1 receptor adaptors and
contributes to virulence. J Exp Med 2005; 201:1007–1018.

-
- **Stary, G.; Bangert, C.; Stingl, G. and Kopp, T. :** Dendritic cells in AD : expression of Fc epsilon RI on two distinct inflammation-associated subsets. *Int Arch Allergy Immunol* 2005;138:278-90.
 - **Steeg, HV. and Kraemer, KH. :** Xeroderma pigmentosum and the role of UV-induced DNA damage in skin cancer . *Mol Med Today* 1999; 5: 86–94.
 - **Stockfleth, E.; Meyers, JL.; Zhang and Kudaravalli, Y. :** The use of Toll-like receptor-7 agonist in the treatment of basal cell carcinoma: an overview. *Br J Dermatol* 2003 ;149: 53–56.

(T)

- **Tabeta, K.; Georgel, P.; Janssen, E.; Du, X.; Hoebe, K. and Goode :** Toll-like receptors 9 and 3 as essential components of innate immune defense against mouse cytomegalovirus infection. *Proc Natl Acad Sci USA* 2004 ;101: 3516-3521.
 - **Takeda, K. and Akira, S. :** Toll-like receptors in innate immunity. *Int Immunol* 2005 ; 17 : 1–14.
 - **Takeda, K.; Kaisho, T. and Akira, S. :** Toll-like receptors . *Annu Rev Immunol* 2003 ; 21: 335–376.
 - **Takeuchi ,O.; Sato, S.; Horiuchi, T.; Hoshino, K.; Takeda, K. and Modlin, RL.:** Role of TLR1 in mediating immune response to microbial lipoproteins . *J Immunol* 2002 ;169: 10 -14.
 - **Takeuchi, J.; Watari, E. and Shinya, E. :** Down-regulation of TLRs expression in monocyte-derived Langerhans cell-like cells: Implications of low-responsiveness to bacterial components in the epidermal LCs. *Biochem Biophys Res Commun* 2003;306:674-79.
 - **Tatti, S.; Belardi, G. and Marini, M. :** Consenso en la metodologia de diagnóstica y terapeutica para las verrugas
-

anogenitales [in Spanish]. *Revista Obstetricia y Ginecologia Latino-americanas* 2001; (3): 59

- **Taylor, PR.; Tsoni, SV.; Willment, JA Dennehy, KM.; Findonm, H.; Haynes, K.; Botto, M. and Brown, GD. :** Dectin-1 is required for beta-glucan recognition and control of fungal infection . *Nat Immunol* 2007 ;8: 31-38.
- **Tenaud, I.; Khammari, A. and Dreno, B. :** In vitro modulation of TLR-2, CD1d and IL-10 by adapalene on normal human skin and acne inflammatory lesions. *Exp Dermatol* 2007 ;16:500-506.
- **Terhorst, D.; Kalali, BN. and Weidinger, S. :** Monocyte derived dendritic cells from highly atopic individuals are not impaired in their pro-inflammatory response to toll-like receptor ligands. *Clin Exp Allergy* 2007 ; 37:381–390.
- **Thoma-Uszynski , S.; Stenger, S. and Takeuchi, O. :** Induction of direct antimicrobial activity through mammalian toll-like receptors. *Science* 2001 ; 291: 1544–1547.
- **Tian, J.; Vielhauer, V. and Mayadas, T.:** Regulation of TLR9 dependent DNA immune complex mediated cell activation by high mobility group box protein 1 and the receptor for advanced glycation end products (RAGE). *Nat Immunol* 2007;8 :780 .
- **Ting, KM.; Rothaupt, MC.; Hammerberg, C. and Gilliam, AC. :** Overexpression of the oncofetal Fn variant containing the EDA splice-in segment in the dermal- epidermal junction of psoriatic uninvolved skin . *J Invest Dermatol* 2000 ; 114:706–711.
- **Traidl-Hoffmann, C.; Mariani, V.; Hochrein, H. and Ring, J. :** Pollen-associated phytoprostanes inhibit dendritic cell interleukin-12 production and augment T helper type 2 cell polarization. *J Exp Med* 2005;201:627-36.

- **Trofatter, KF .; Ferenczy, A. and Fife, KH. :** HPV Study Group. Increased frequency of dosing of Imiquimod 5% cream in the treatment of external genital warts in women . Int J Gyn Obstet . 2002 ; 76:191-193.
- **Tsuji, S.; Matsumoto, M. and Takeuchi, O. :** Maturation of human dendritic cells by cell wall skeleton of Mycobacterium bovis bacillus Calmette-Guerin : Involvement of toll-like receptors. Infect Immun 2000 ; 68: 6883–6890.
- **Tyring, SK.; Johnson, DA.; Lacy, MJ. and Persing, DH. :** A randomized controlled molecular study of condylomata acuminata clearance during treatment with imiquimod . J Infect Dis 1998 ;178: 551–555.

(U)

- **Uchida, Y.; Holleran, WM. and Elias, PM. :** On the effects of topical synthetic pseudoceramides : comparison of possible keratinocyte toxicities provoked by the pseudoceramides, PC104 and BIO391 and natural ceramides. J Dermatol Sci 2008;51: 37-43.
- **Uematsu, S. and Akira, S.:** Toll-Like Receptors and Innate Immunity. J Allergy and Clin Immunol 2008 :1: 202-218 .
- **Ulevitch, RJ. :**Therapeutic targeting the innate immune system. Nat Rev Immunol 2004 ; 4: 512-520.
- **Underhill, DM.; Ozinsky, A.; Smith, KD. and Aderem, A. :** TLR-2 mediates mycobacteria-induced pro-inflammatory signaling in macrophages. Proc Natl Acad Sci USA 1999;96 : 14459–63 .

(V)

- **Van, SH. and Kraemer, KH. :** Xeroderma pigmentosum and the role of UV-induced DNA damage in skin cancer . Mol Med Today 1999 ; 5 : 86–94.
- **Vasilakos, JP.; Smith, RM.; Gibson, SJ. et al. :** Adjuvant activities of immune response modifier R-848: comparison with CpG ODN. Cell Immunol 2000;204:64–74.
- **Vega, B.; Ferret, C.; Jomard and Michel, S. :** Regulation of toll-like receptor-2 expression by adapalene. implications for the treatment of inflammatory acne. J Invest Dermatol 2003 ; 121:156.
- **Vender, RB. and Goldberg, O. :** Innovative uses of imiquimod . J Drugs Dermatol 2005 ; 4:58–63.
- **Viglianti, GA.; Lau, CM.; Hanley, TM.; Miko, BA.; Shlomchik MJ. and Marshak, RA. :** Activation of autoreactive B cells by CpG dsDNA. Immunity 2003 ;19:837 847.
- **Voelcker, V.; Gebhardt, C. and Averbeck, M. :** Small fragments of hyaluronic acid induce metalloprotease and cytokine upregulation in human melanoma cells . J Invest Dermatol 2006 ; 1 : 26- 30.
- **Vora, P.; Youdim, A.; Thomas, LS.; Fukata, M. and Lukasek, K. :** Beta-defensin-2 expression is regulated by TLR signaling in intestinal epithelial cells. J Immunol 2004 ;173: 5398–5405.

(W)

- **Wagner, H. :** The immunobiology of the TLR9 subfamily. Trends Immunol 2004 ; 25:381–6.

- **Wagner, TL.; Ahonen, CL.; Couture, AM.; Gibson, SJ.; Miller, RL.; Vasilakos, JP. and Tomai, MA. :** Modulation of Th1 and Th2 cytokine production with the immune response modifiers, R-848 and imiquimod . Cell Immunol 1999 ;191 : 10–19.
- **Weeratna, RD.; Bourne, LL.; Sullivan, SM. and Krieg, AM. :** Combination of a new TLR9 agonist immunomodulator (CpG - 7909) and paclitaxel for treatment of metastatic Lewis Lung Carcinoma . ASCO annual meeting proceedings 2004 ; 22: 7346.
- **Wenzel, J. and Tuting, T.:** Identification of type I interferon-associated inflammation in the pathogenesis of cutaneous lupus erythematosus opens up options for novel therapeutic approaches. Exper Dermatol 2007 ; 16: 454 - 463.
- **Wu, JJ.; Huang, DB.; Pang, KR. and Tying, SK. :** Vaccines and immunotherapies for the prevention of infectious diseases having cutaneous manifestations . J Am Acad Dermatol 2004; 50 :(4):495– 528.
- **Wysenbeek ; Weiss, H.; Duczyniner, KM.; Grunswald, MH. and Pick, AI. :** Immunologic alterations in xeroderma pigmentosum patients. Cancer 1986 ; 58: 219–221.

(Y)

- **Yamamoto, M.; Mori, K. and Hoshino, K. :** Role of adaptor TRIF in the MyD88-independent Toll-like receptor signaling pathway. Science 2003 ; 301 : 640–643.
- **Yamamoto, M., Sato, S.; Takeuchi, O.; Takeda, K. and Akira, S. :** A novel Toll/IL-1 receptor domain-containing adapter that preferentially activates the IFN-beta promoter in the Toll-like receptor signaling . J Immunol 2002 ; 169 : 6668 – 6672.

- **Yarovinsky, F.; Zhang, D.; Andersen, JF.; Bannenberg, GL. and Hayden, MS.** : TLR11 activation of dendritic cells by a protozoan profilin-like protein. *Science* 2005 ; 308: 1626–1629.
- **Yi, BA.; Nirenberg, MJ. and Goldstein, SM.** : Chronic neuropathic pain associated with imiquimod: report of 2 cases . *J Am Acad Dermatol* .2005 ; 52 :57–8.
- **Yoshikawa, T. and Streilein, JW.** : Genetic basis of the effects of ultraviolet light B on cutaneous immunity. Evidence that polymorphism at the TNF- α and LPS loci govern susceptibility. *Immunogenetics* . 1990 ; 32: 398–405.

(Z)

- **Zaenglein, AL.** : Topical Retinoids in the Treatment of Acne Vulgaris. *Semin Cutan Med Surg* 2008 ; 27:177-182.
- **Zaks, K.; Jordan, M. and Guth, A.** : Efficient immunization and cross-priming by vaccine adjuvants containing TLR3 or TLR9 agonists complexed to cationic liposomes . *J Immunol* 2006 ; 176 : 7335–45.
- **Zalaudek, I.; Petrillo, G. and Argenziano, G.** : Aphthous ulcers and imiquimod . *J Am Acad Dermatol* 2005 ; 53:360–361.
- **Zarembek, KA. and Godowski, PJ.** : Tissue expression of human TLRs and differential regulation of Toll like receptors mRNAs in leukocytes in response to microbes , their products, and cytokines. *J Immunol* 2002 ; 168: 554-561.
- **Zhang, G. and Ghosh, S.** : Toll-like receptor-mediated NF κ B activation: A phylogenetically conserved paradigm in innate immunity. *J Clin Invest* 2001; 107: 13-19