

REFERENCES

- [1] Bhardwaj N., Kundu S.C. Electrospinning : A fascinating fiber fabrication technique. *Biotechnology Advances*. 2010; 28: 325-347.
- [2] Lee K.Y., Jeong L.,Kang Y.O., Lee SJ., Park WH. Electrospinning of polysaccharides for regenerative medicine. *Advanced Drug Delivery Reviews*. 2009; 61: 1020-1032.
- [3] Barnes C.P., Sell S.A., Boland E.D., Simpson DG., Bowlin GL. Nanofiber technology: Designing the next generation of tissue engineering scaffolds. *Advanced Drug Delivery Reviews*. 2007; 59: 1413-1433.
- [4] Chakrabarty S., Liao I.C., Adler A., Leong K.W. Electrohydrodynamics: A facile technique to fabricate drug delivery systems. *Advanced Drug Delivery Reviews*. 2009; 61: 1043-1054.
- [5] Huang Z.M.,Zhang Y.Z., Kotaki M., Ramakrishna S. A review on polymer nanofibers by electrospinning and their applications in nanocomposites. *Composites Science and Technology*. 2003; 63: 2223-2253.
- [6] Sill S.C., Recum HA von. Electrospinning: Application in drug delivery and tissue engineering. *Biomaterials*. 2008; 29: 1089-2006.
- [7] Reneker D.H., Yarin A.L. Electrospinning jets and polymer nanofibers. *Polymer*. 2008; 49: 2387-2425.
- [8] Goel H., Rai P., Rana V., Tiwary A.K. Orally disintegrating systems: Innovations in formulation and technology. *Recent Patent on Drug Delivery & Formulation*. 2008; 2: 258-274.

- [9] Forssten S.D., Bjorklund M., Ouwehand A.C. *Streptococcus mutans*, Caries and simulation models. *Nutrients*. 2010; 2: 290-298.
- [10] Marsh P.D. Controlling the oral biofilm with antimicrobials. *Journal of Dentistry*. 2010; 38: S11-S15.
- [11] Scazzocchio F., D' Auria F.D., Alessandrini D., Pantanella F. Multifactorial aspects of antimicrobial activity of propolis. *Microbiological Research*. 2006; 161: 327-333.
- [12] Liberio S.A., Pereira A.L.A., Araujo M.J., Dutra R.P., Nascimento F.R.F., Monteiro-Neto V., Ribeiro M.N., Goncalves A.G., Guerra R.N.M. The potential use of propolis as a cariostatic agent and its actions on mutans group streptococci. *Journal of Ethnopharmacology*. 2009; 125: 1-9.
- [13] Ramakrishna S., Fujihara K., Teo W.E., Lim T.C., Ma Z. *An introduction to electrospinning and nanofibers*. Singapore: World Scientific Publishing Co. Pte. Ltd., 2005.
- [14] Rutledge G.C., Fridrikh S.V. Formation of fibers by electrospinning. *Advanced Drug Delivery Reviews*. 2007; 59: 1384-1391.
- [15] Zhang C., Yuan X., Wu L., Han Y., Sheng J. Study on morphology of electrospun poly (vinyl alcohol) mats. *European Polymers Journal*. 2005; 41: 423-432.
- [16] Megelski S., Stephens J.S., Chase D.B., Rabolt J.F. Micro- and nanostructured surface morphology on electrospun polymer fibers. *Macromolecules*. 2002; 35: 8456-8466.
- [17] Zong X., Kim K., Fang D., Ran S., Hsiao B.S., Chu B. Structure and process relationship of electrospun bioadsorbable nanofiber membrane. *Polymer*. 2002; 439: 4403-4412.

- [18] Torres G., Gimenez E., Lagaron J.M. Characterization of the morphology and thermal properties of Zein Prolamine nanostructures obtained by electrospinning. *Food Hydrocolloids*. 2008; 22: 601-614.
- [19] Neo Y.P., Ray S., Easteal A.J., Nikolaidis M.G., Quek S.Y. Influence of solution and processing parameters towards the fabrication of electrospun zein fibers with sub-micron diameters. *Journal of Food Engineering*. 2012; 109: 645-651.
- [20] Homayani H., Ravandi S.A.H., Valizadeh M. Electrospinning of chitosan nanofibers: Process optimization. *Carbohydrate Polymers*. 2009; 77: 656-661.
- [21] Jannesari M., Varshosaz J., Morshed M., Zamani M. Composite poly (vinyl alcohol)/ poly (vinyl acetate) electrospun nanofibrous mats as a novel wound dressing matrix for controlled release of drugs. *International Journal of Nanomedicine*. 2011; 6: 993-1003.
- [22] Agarwal S., Wendorff JH, Greiner A. Use of electrospinning technique for biomedical applications. *Polymer*. 2008; 49: 5603-5621.
- [23] Meinel A.J., Gernershaus O., Luhmann T., Merkle H.P., Meinel L. Electrospun matrices for localized drug delivery: Current technologies and selected biomedical applications. *European Journal of Pharmaceutics and Biopharmaceutics*. 2012; 81:1-13.
- [24] Bolgen N., Vargel I., Korkusuz P., Menciloglu Y.Z., Piskin E. In vivo performance of antibiotic embedded electrospun PCL membranes for prevention of abdominal adhesion. *Journal of Biomedical Materials Research Part B: Applied Biomaterials*. 2007; 81: 530-543.

- [25] Lu Y., Jiang H., Tu K., Wang L. Mild immobilization of diverse macromolecular bioactive agents onto multifunctional fibrous membranes prepared by coaxial electrospinning. *Acta Biomaterialia*. 2009; 5: 1562-1574.
- [26] Casper C.L., Yang W., Farach-Carson M.C., Rabolt J.F. Coating electrospun collagen and gelatin fibers with perlecan domain I for increased growth factor binding. *Biomacromolecules*. 2007; 8: 1116-1123.
- [27] Taepaiboon Y., Rungsardthong U., Supaphol P. Drug loaded electrospun mats of poly (vinyl alcohol) fibres and their release characteristics of four model drugs. *Nanotechnology*. 2006; 17: 2317-2329.
- [28] Yu D.G., Shen X.X., Brandford-White C., White K., Zhu L.M., Bligh S.W.A. Oral fast-dissolving drug delivery membranes prepared from electrospun PVP ultrafine fibers. *Nanotechnology*. 2009b; 20: 055104.
- [29] Shen X., Yu D.G., Zhu L., Brandford-White C., White K., Chatterton N.P. Electrospun diclofenac sodium loaded Eudragit[®]L 100-55 nanofibers for colon-targeted drug delivery. *International Journal of Pharmaceutics*. 2011; 408: 200-207.
- [30] Yu D.G., Brandford-White C., White K., Li X.L., Zhu L.M. Dissolution improvement of electrospun nanofiber-based solid dispersions for acetaminophen. *AAPS PharmSciTech*. 2010; 11(2): DOI 10.1208/S12249-010-9438-4.
- [31] Nguyen T.T.T., Chung O.H., Park J.S. Coaxial electrospun poly (lactic acid)/chitosan (core/shell) composite nanofibers and their antibacterial activity. *Carbohydrate Polymers*. 2011;86: 1799-1806.

- [32] Fathi-Azarbayjani A., Qun L., Chan Y.H., Chan S.Y. Novel vitamin and gold-loaded nanofiber facial mask for topical delivery. *AAPS PharmSciTech*. 2010; 11(3): DOI 10.1208/S12249-010-9475-2.
- [33] Siddiqui N., Gard G., Sharma P.K. A short review on “A novel approach in oral fast dissolving drug delivery system and their patents”. *Advances in Biological Research*. 2011; 5(6): 291-303.
- [34] Arya A., Chandra A., Sharma V., Pathak K. Fast dissolving oral films: An innovative drug delivery system and dosage form. *International Journal of ChemTech Research*. 2010; 2(1): 576-583.
- [35] Bhyan B., Jangra S., Kaur M., Singh H. Orally fast dissolving films: Innovations in formulation and technology. *International Journal of Pharmaceutical Sciences Review and research*. 2011; 9(2): 50-57.
- [36] Dixit R.P., Puthli S.P. Oral strip technology: Overview and future potential. *Journal of Controlled release*. 2009; 139: 94-107.
- [37] Nagar P., Chanhan I., Yasir M. Insights into polymers: Film formers in mouth dissolving films. *Drug Invention Today*. 2011; 3(12): 280-289.
- [38] Mashru K.C., Sutariya V.B., Sankalia M.G., Parikh P. Development and evaluation of fast dissolving film of salbutamol sulphate. *Drug Development and Industrial Pharmacy*. 2005; 31: 25-34.
- [39] Gaisford S., Verma A., Saunders M., Royall P.G. Monitoring crystallization of drugs from fast-dissolving oral films with isothermal calorimetry. *International Journal of Pharmaceutics*. 2009; 380: 105-111.
- [40] Li X., Kanjwal M.A., Lin L., Chronakis I.S. Electrospun polyvinyl-alcohol nanofibers as oral fast-dissolving delivery system of caffeine and riboflavin. *Colloids and Surfaces B: Biointerfaces*. 2013; 103: 182-188.

- [41] Nagy Z.K., Nyul K., Wagner I., Molnar K., Marosi G. Electrospun water soluble polymer mat for ultrafast release of Donepezil HCl. *Express Polymer Letters*. 2010; 4(12): 763-772.
- [42] Quan J., Yu Y., White C.B., Williams G.R., Yu D.G., Nie W., Zhu L.M. Preparation of ultrafine fast-dissolving feruloyl-oleyl-glycerol loaded polyvinyl pyrrolidone fiber mats via electrospinning. *Colloids and Surfaces B: Biointerfaces*. 2011; 88: 304-309.
- [43] Bakri L.M., Douglas C.W.I. Inhibitory effect of garlic extract on oral bacteria. *Archives of Oral Biology*. 2005; 50: 645-651.
- [44] Nishikawara F., Katsumura S., Ando A., Tamaki Y., Nakamura Y., Sato K., Nomura Y., Hanada N. Correlation of cariogenic bacteria and dental caries in adults. *Journal of Oral Science*. 2006; 48(4): 245-251.
- [45] Filoche S., Wong L., Sissons C.H. Oral biofilm: Emerging concepts in microbial ecology. *Journal of Dental Research*. 2010; 89: 8-18.
- [46] Forssten S.D., Bjorklund M., Ouwehand A.C. *Streptococcus mutans*, Caries and simulation models. *Nutrients*. 2010; 2: 290-298.
- [47] Laverett D.H., Proskin H.M., Featherstone J.D., Adair S.M., Eisenberg A.D., Mundorff-shrestha S.A., Shields C.P., Shaffer C.L., Billings R.J. Caries risk assessment in a longitudinal discrimination study. *Journal of Dental Research*. 1993; 72: 538-543.
- [48] Hannig M., Hannig C. Nanomaterials in preventive dentistry. *Nature Nanotechnology*. 2010; 5: 565-569.
- [49] Garrett T.R., Bhakoo M., Zhang Z. Bacterial adhesion and biofilms on surfaces. *Progress in Natural Science*. 2008; 18: 1049-1056.

- [50] Fletcher M. *Microbial adhesion to surfaces*. Chichester: Ellis Horwood; 1980.
- [51] Hamada S., Slade H.D. Biology, immunology and cariogenicity of *Streptococcus mutans*. *Microbiology Reviews*. 1980; 44: 331-384.
- [52] Schilling K.M., Bowen W.H. Glucans synthesized in situ in experimental salivary pellicle function as specific binding sites for *Streptococcus mutans*. *Infection Immunity*. 1992; 60: 284-295.
- [53] Baehni P.C., Takeuchi Y. Anti-plaque agents in the prevention of biofilm-associated oral diseases. *Oral Diseases*. 2003; 9: 23-29.
- [54] Marsh P.D. Controlling the oral biofilm with antimicrobials. *Journal of Dentistry*. 2010; 38S1: S11-S15.
- [55] Badria F.A., Zidan O.A. Natural products for dental caries prevention. *Journal of Medicinal Food*. 2004; 3: 381-384.
- [56] Moghbel A., Farajzadeh A., Aghel N., Agheli H., Raisi N. Formulation and evaluation of green tea mouthwash: A new, safe and nontoxic product for children and pregnant woman. *Toxicology Letters*. 2009; 189S: S257.
- [57] Limsong J., Benjavongkulchai E., Kuvatanasuchati J. Inhibitory effect of some herbal extracts on adherence of *Streptococcus mutans*. *Journal of Ethnopharmacology*. 2004; 92: 281-289.
- [58] Verkaik M.J., Busscher H.J., Jager D., Slomp A.M., Abbas F., van der Mei H.C. Efficacy of natural antimicrobials in toothpaste formulations against oral biofilms in vitro. *Journal of Dentistry*. 2011; 39: 218-224.

- [59] Figueiredo N.L., de Aguiar S.R.M.M., Fale P.L., Ascensao L., Serralheiro M.L.M., Lino A.R.L. The inhibitory effect of *Plectranthus barbatus* and *Plectranthus ecklonii* leaves on the viability, glucosyltransferase activity and biofilm formation of *Streptococcus sobrinus* and *Streptococcus mutans*. *Food Chemistry*. 2010; 119: 664-668.
- [60] Sforcin J.M., Bankova V. Propolis: Is there a potential for the development of new drug? *Journal of Ethnopharmacology*. 2011; 133: 253-260.
- [61] Castaldo S., Capasso F. Propolis, an old remedy used in modern medicine. *Fitoterapia*. 2002; 73 suppl.1: S1-S6.
- [62] Bankova V., Castro S.L., Marcucci M.C. Propolis: recent advances in chemistry and plant origin. *Apidologie*. 2000; 31: 3-15.
- [63] Burdock G.A. Review of the biological properties and toxicity of bee propolis (Propolis). *Food and Chemical Toxicology*. 1998; 36: 347-363.
- [64] Bankova V. Chemical diversity of propolis and the problem of standardization. *Journal of Ethnopharmacology*. 2005; 100: 114-117.
- [65] Takaisi-Kikumi N.B., Schilcher H. Electron microscopic and microcalorimetric investigations of the possible mechanism of the antibacterial action of a defined propolis provenance. *Planta Medica*. 1994; 60: 222-227.
- [66] Koo H., Rosalen B.P.L., Cury J.A., Park P.K., Ikegaki M., Sattler A. Effect of *Apis mellifera* Propolis from the Brazilian regions on caries development in desalivated rats. *Caries Research*. 1999; 33: 393-400.
- [67] Povolia A., Thomas M.S., Kundabala M., Mohan M. Propolis and its potential uses in oral health. *International Journal of Medicine and Medical Sciences*. 2010; 2(7): 210-215.

- [68] Sonmez S., Kirilmaz L., Yucesoy M., Yucel B., Yilmaz B. The effect of bee propolis on oral pathogens and human gingival fibroblasts. *Journal of Ethnopharmacology*. 2005; 102: 371-376.
- [69] Koo H., Rosalen P.L., Cury J.A., Park Y.K., Bowen W.H. Effects of compounds found in propolis on *Streptococcus mutans* growth and on glucosyltransferase activity. *Antimicrobial Agents and Chemotherapy*. 2002C; 46: 1302-1309.
- [70] Park Y.K., Koo M.H., Abreu J.A., Ikegaki M., Cury J.A., Rosalen P.L. Antimicrobial activity of propolis on oral microorganisms. *Current Microbiology*. 1998; 36: 24-28.
- [71] Hayachibara M.F., Koo H., Rosalen P.L., Duarte S., Franco E.M., Bowen W.H., Ikegaki M., Cury J.A. In vitro and in vivo effects of isolated fractions of Brazilian propolis on caries development. *Journal of Ethnopharmacology*. 2005; 101: 110-115.
- [72] Sanpa S., Sutjarittangtham K., Tunkasiri T., Eitssayeam S., Chantawannakul P. Antimicrobial effect of brazillian propolis/polycaprolactone polymer on some human pathogenic bacteria. *Advanced Materials Research*. 2012; 506: 537-540.
- [73] Miliauskas G., Venskutonis P.R. von., Beek T.A. Screening of medical scavenging activity of some medicinal and aromatic plant extracts. *Food Chemistry*. 2004; 85: 231-237.
- [74] Rahim Z.H.A., Khan H.B.S.G. Comparative studies on the effect of crude aqueous (CA) and solvent (CM) extracts of clove on the cariogenic properties of *Streptococcus mutans*. *Journal of Oral Science*. 2006; 48(3): 117-123.

- [75] Espinosa-Cristobal L.F., Martinez-Castonon G.A., Tellez-Dector E.J., Nino-Martinez N., Zavala-Alonso N.V., Loyola-Rodriguez J.P. Adherence inhibition of *Streptococcus mutans* on dental enamel surface using silver nanoparticles. *Material Science and Engineering C*. 2013; 33: 2197-2202.
- [76] Trusheva B., Trunkova D., Bankova V. Different extraction methods of biologically active components from propolis: a preliminary study. *Chemistry Central Journal*. 2007; 1(13): doi:IO.1186/1752-153X-1-13.
- [77] Gomez-Caravaca A.M., Gomez-Romero M., Arraez-Roman D., Segura-Carretero A., Fernandez-Gutierrez A. Advances in the analysis of phenolic compounds in products derived from bees. *Journal of Pharmaceutical and Biomedical Analysis*. 2006; 41: 1220-1234.
- [78] Kumazawa S., Hamazaka T., Nakayama T. Antioxidant activity of propolis of various geographic origins. *Food Chemistry*. 2004; 84: 329-339.
- [79] Silva J.C., Rodrigues S., Feas X., Estevinho L.M. Antimicrobial activity, phenolic profile and role in the inflammation of propolis. *Food and Chemical Toxicology*. 2012; 50: 1790-1795.
- [80] Deitzel J.M., Kleinmeyer J., Harris D. The effect of processing variables on the morphology of electrospun nanofibers and textiles. *Polymer*. 2001; 42: 261-272.
- [81] Fong H., Chun I., Reneker D.H., Beaded nanofibers formed during electrospinning. *Polymer*. 1999; 40: 4585-4592.
- [82] Yan L., Lin W., Bangal P.R. Nanofiber formation of hydroxypropylcellulose (HPC). *Macromolecular Bioscience*. 2006; 6: 532-539.

- [83] Francis L., Balakrishnan A., Sanosh K.P., Marsano E. Characterization and tensile strength of HPC-PEO composite fibers produced by electrospinning. *Materials Letters*. 2010; 64: 1806-1808.
- [84] Moghe A.K., Gupta B.S. Co-axial electrospinning for nanofibers structures: preparation and applications. *Polymer Reviews*. 2008; 48: 353-377.
- [85] Luepong K., Koombhongse P., Kongkachuichay P. Ceria fibers via electrospinning process: the effect of co-solvent. *Chiang Mai Journal of Science*. 2010; 37(1): 85-91.
- [86] de Vrieze S., van Camp T., Nelvig A., Hagstrom B., Westbroek P., de Clerck K. The effect of temperature and humidity on electrospinning. *Journal of Material Science*. 2009; 44(5): 1357-1362.
- [87] Pelipenko J., Kristt J., Jankovic B., Baumgartner S., Kacbek P. The impact of relative humidity during electrospinning on the morphology and mechanical properties of nanofibers. *International Journal of Pharmaceutics*. 2013; 456: 125-134.
- [88] Kibbe H. *Handbook of Pharmaceutical Excipients*, American Pharmaceutical Association and Pharmaceutical Press, 3rd Edition, 2000.
- [89] Bai J., Li Y., Sun L., Zhang C., Yang Q. Biocomponent AgCl/PVP nanofibers fabricated by electrospinning with gel-sol method. *Bulletin of Materials Science*. 2009; 32(2): 161-164.
- [90] Sukhontha K., Jones D.V., Tantishaiyakul V. Properties of felodipine-poly(vinyl pyrrolidone) solid dispersion film and the impact of solvents. *Science Asia*. 2012; 38: 188-195.

- [91] Mot A.C., Dumitrescu R.S., Sarbu C. Rapid and effective evaluation of the antioxidant capacity of propolis extracts using DPPH bleaching kinetic profiles, FT-IR and UV-vis spectroscopic data. *Journal of Food Composition and Analysis*. 2011; 24: 516-522.
- [92] Wu Y.W., Sun S.Q., Zhao J., Li Y., Zhou Q. Rapid discrimination of extracts of Chinese propolis and poplar buds by FT-IR and 2D IR correlation spectroscopy. *Journal of Molecular Structure*. 2008; 48-54: 883-884.
- [93] Jia Y.T., Gong J., Gu X.H., Kim H.Y., Dund J., Shen X.Y. Fabrication and characterization of poly (vinyl alcohol)/chitosan blend nanofibers produced by electrospinning method. *Carbohydrate Polymer*. 2007; 67: 403-409.
- [94] Seidal V., Peyfoon E., Watson D.G., Fearnley J. Comparative study of the antibacterial activity of propolis from different geographical and climatic zones. *Phytotherapy Research*. 2008; 22(9): 1256-1263.
- [95] Ahn M.R., Kumazawa S., Hamasaka T., Bang K.S., Nagayama T. Antioxidant activity and constituents of propolis collected in various area of Korea. *Journal of Agricultural and Food Chemistry*. 2004; 52: 7286-7292.
- [96] Bankova V., Christov R., Kujumgiev A., Marcucci M.C., Popov S. Chemical composition and antibacterial activity of Brazilian propolis. *Journal of Biosciences*. 1995; 50(3-4):167-172.
- [97] Duarte S., Rosalen P.L., Hayachibara M.F., Cury J.A., Bowen W.H., Marquis R.E., Rehder V.L.G., Sartoratto A., Ikegaki M., Koo H. The influence of a novel propolis on mutans streptococci biofilms and caries development in rats. *Archives of Oral Biology*. 2006; 51: 15-22.

- [98] Kumazawa S., Hayashi K., Kajiya K., Ishii T., Hamasaka T., Nakayama T. Studies of the constituents of Uruguayan propolis. *Journal of Agricultural and Food Chemistry*. 2002; 50(17): 4777-4780.
- [99] Noyes A.A., Whitney W.R. The rate of solution of solid substances in their own solutions. *Journal of the American Chemical Society*. 1897; 19: 930-934.
- [100] Wurster D.E., Taylor Y.W. Dissolution rates. *Journal of Pharmaceutical Sciences*. 1965; 54:169-175.
- [101] Mandel I.D. Antimicrobial mouthrinses: overview and update. *The Journal of The American Dental Association*. 1994; 125 (suppl 2): 2S-10S.
- [102] Ribeiro L.G.M., Hashizume L.N., Maltz M. The effect of different formulations of chlorhexidine in reducing levels of mutans streptococci in the oral cavity: A systematic review of the literature. *Journal of Dentistry*. 2007; 35: 359-370.
- [103] Chung J.Y., Choo J.H., Lee M.H., Hwang J.K. Anticariogenic activity of macleignan isolated from *Myristica fragrans* (nutmeg) against *Streptococcus mutans*. *Phytomedicine*. 2006; 13: 261-266.
- [104] Kawabata S., Torii M., Minami T., Fujiwara T., Hamada S. Effect of selected surfactants on purified glucosyltransferases from mutans streptococci and cellular adherence to smooth surfaces. *Journal of Medical Microbiology*. 1993; 38: 54-60.
- [105] Tomita T., Watanabe T., Takeuchi T., Nanbu A., Shinozaki N., Ikemi T., Fukushima K. Effects of surfactants on glucosyltransferase production and in vitro sucrose-dependent colonization by *Streptococcus mutans*. *Archives of Oral Biology*. 1998; 43: 735-740.

- [106] Pulliam L., Porschen R.K., Hadley W.K. Biochemical properties of CO₂-dependent Streptococci. *Journal of Clinical Microbiology*. 1980; 12(1): 27-31.
- [107] Corcoran B.M., Stanton C., Fitzgerald G.F., Ross R.P. Growth of probiotic lactobacilli in the presence of oleic acid enhances subsequent survival in gastric juice. *Microbiology*. 2007; 153: 291-299.
- [108] Jacques N.A., Jacques V.L., Wolf A.C., Wittenberger C.L. Does an increase in membrane unsaturated fatty acids account for Tween 80 stimulation of glucosyltransferase secretion by *Streptococcus salivarius*? *Journal of General Microbiology*. 1985; 131: 67-72.
- [109] Koo H., Komes B.P.F.A., Rosalen P.L., Ambrosano G.M.B., Park Y.K., Cury J.A. In vitro antimicrobial activity of propolis and *Arnica montana* against oral pathogens. *Archives of Oral Biology*. 2000; 45: 141-148.
- [110] Mirzoeva O.K., Grishanin R.N., Calder P.C. Antimicrobial action of propolis and some of its component: the effects on growth, membrane potential and motility of bacteria. *Microbiological Research*. 1997; 152(3): 239-246.
- [111] Kouidhi B., Zmantar T., Bakhrouf A. Anti-cariogenic and anti-biofilms activity of Tunisian propolis extract and its potential protective effect against cancer cells proliferation. *Anaerobe*. 2010; 16: 566-571.