## 7 References

- Ahuja, A., Ali, J. and Rahman, S. "Biodegradable periodontal intrapocket device containing metronidazole and amoxycillin: formulation and characterisation," *Die Pharmazie-An International Journal of Pharmaceutical Sciences*, (1),**61**(2006) 25-29.
- Albalasmeh, A.A., Berhe, A.A. and Ghezzehei, T.A. "A new method for rapid determination of carbohydrate and total carbon concentrations using UV spectrophotometry," *Carbohydrate Polymers*, (2),**97**(2013) 253-261.
- Ali, J., Pramod, K., Tahir, M.A. and Ansari, S. "Autoimmune responses in periodontal diseases," *Autoimmunity reviews*, (7),**10**(2011) 426-431.
- Alou, L., Giménez, M., Manso, F., Sevillano, D., Torrico, M., González, N., Granizo, J., Bascones, A., Prieto, J. and Maestre, J. "Tinidazole inhibitory and cidal activity against anaerobic periodontal pathogens," *International Journal of Antimicrobial Agents*, (5),33(2009) 449-452.
- Apatzidou, D. and Kinane, D. "Quadrant root planing versus same- day full- mouth root planing," *Journal of Clinical Periodontology*, (2),**31**(2004) 132-140.
- Armitage, G.C. "Periodontal diagnoses and classification of periodontal diseases," *Periodontology* 2000, (1),**34**(2004) 9-21.
- Avachat, A.M., Gujar, K.N. and Wagh, K.V. "Development and evaluation of tamarind seed xyloglucan-based mucoadhesive buccal films of rizatriptan benzoate," *Carbohydrate Polymers*, (2),**91**(2013) 537-542.
- Bansal, K., Rawat, M., Jain, A., Rajput, A., Chaturvedi, T. and Singh, S. "Development of satranidazole mucoadhesive gel for the treatment of periodontitis," *AAPS PharmSciTech*, (3),**10**(2009) 716.
- Bansal, M., Mittal, N., Yadav, S.K., Khan, G., Mishra, B. and Nath, G. "Clinical evaluation of thermoresponsive and mucoadhesive Chitosan in situ gel containing Levofloxacin and Metronidazole in the treatment of periodontal pockets—A splitmouth, clinical study," *Journal of Pierre Fauchard Academy (India Section)*, (1),30(2016) 6-14.
- Bhardwaj, N. and Kundu, S.C. "Electrospinning: a fascinating fiber fabrication technique," *Biotechnology Advances*, (3),**28**(2010) 325-347.
- Botelho, M.A., Martins, J.G., Ruela, R.S., Queiroz, D.B. and Ruela, W.S. "Nanotechnology in ligature-induced periodontitis: protective effect of a doxycycline gel with nanoparticules," *Journal of Applied Oral Science*, (4),**18**(2010) 335-342.
- Bottino, M.C., Thomas, V. and Janowski, G.M. "A novel spatially designed and functionally graded electrospun membrane for periodontal regeneration," *Acta Biomaterialia*, (1),7(2011) 216-224.

- Bressolle, F., Bromet-Petit, M. and Audran, M. "Validation of liquid chromatographic and gas chromatographic methods Applications to pharmacokinetics," *Journal of Chromatography B: Biomedical Sciences and Applications*, (1),**686**(1996) 3-10.
- Budhian, A., Siegel, S.J. and Winey, K.I. "Haloperidol-loaded PLGA nanoparticles: systematic study of particle size and drug content," *International Journal of Pharmaceutics*, (2),**336**(2007) 367-375.
- Carranza, F.A. and Camargo, P., The periodontal pocket; Clinical Periodontology, 10th ed. Philadelphia: Saunders/Elsevier, Saunders/Elsevier, Philadelphia, USA, 2006.
- Charernsriwilaiwat, N., Rojanarata, T., Ngawhirunpat, T., Sukma, M. and Opanasopit, P. "Electrospun chitosan-based nanofiber mats loaded with Garcinia mangostana extracts," *International Journal of Pharmaceutics*, (1),**452**(2013) 333-343.
- Chaturvedi, T., Srivastava, R., Srivastava, A., Gupta, V. and Verma, P.K. "Doxycycline poly e-caprolactone nanofibers in patients with chronic periodontitis—a clinical evaluation," *Journal of clinical and diagnostic research: JCDR*, (10),7(2013) 2339.
- Chaturvedi, T.P., Srivastava, R., Srivastava, A.K., Gupta, V. and Verma, P.K. "Evaluation of metronidazole nanofibers in patients with chronic periodontitis: A clinical study," *International journal of pharmaceutical investigation*, (4),**2**(2012) 213.
- Chaubey, P., Patel, R.R. and Mishra, B. "Development and optimization of curcumin-loaded mannosylated chitosan nanoparticles using response surface methodology in the treatment of visceral leishmaniasis," *Expert Opinion on Drug Delivery*, (8),11(2014) 1163-1181.
- Chong, E., Phan, T., Lim, I., Zhang, Y., Bay, B., Ramakrishna, S. and Lim, C. "Evaluation of electrospun PCL/gelatin nanofibrous scaffold for wound healing and layered dermal reconstitution," *Acta Biomater*, (3),3(2007) 321-330.
- Cobb, C.M. "Non-surgical pocket therapy: mechanical," *Annals of Periodontology*, (1),**1**(1996) 443-490.
- Costa, P. and Lobo, J.M.S. "Modeling and comparison of dissolution profiles," *European Journal of Pharmaceutical Sciences*, (2),**13**(2001) 123-133.
- Crich, A. "Blastomycosis of the gingiva and jaw," *Canadian Medical Association Journal*, (6),**26**(1932) 662.
- Davoudi, Z., Rabiee, M., Houshmand, B., Eslahi, N., Khoshroo, K., Rasoulianboroujeni, M., Tahriri, M. and Tayebi, L. "Development of chitosan/gelatin/keratin composite containing hydrocortisone sodium succinate as a buccal mucoadhesive patch to treat desquamative gingivitis," *Drug Development and Industrial Pharmacy*, 2017) 1-16.

- De Vrieze, S., Van Camp, T., Nelvig, A., Hagström, B., Westbroek, P. and De Clerck, K. "The effect of temperature and humidity on electrospinning," *Journal of materials science*, (5),44(2009) 1357.
- De Vrieze, S., Westbroek, P., Van Camp, T. and Van Langenhove, L. "Electrospinning of chitosan nanofibrous structures: feasibility study," *Journal of Materials Science*, (19),**42**(2007) 8029-8034.
- Dey, R.K. and Ray, A.R. "Synthesis, characterization, and blood compatibility of polyamidoamines copolymers," *Biomaterials*, (18),**24**(2003) 2985-2993.
- Drug-Bank; https://www.drugbank.ca/drugs/DB00911 (Accessed on 20.04.2015)
- Dulnik, J., Denis, P., Sajkiewicz, P., Kołbuk, D. and Choińska, E. "Biodegradation of bicomponent PCL/gelatin and PCL/collagen nanofibers electrospun from alternative solvent system," *Polymer Degradation and Stability*, **130**(2016) 10-21.
- Elieh-Ali-Komi, D. and Hamblin, M.R. "Chitin and chitosan: production and application of versatile biomedical nanomaterials," *International journal of advanced research*, (3),**4**(2016) 411-427.
- Gannu, R., Yamsani, V.V., Yamsani, S.K., Palem, C.R. and Yamsani, M.R. "Optimization of hydrogels for transdermal delivery of lisinopril by Box–Behnken statistical design," *AAPS PharmSciTech*, (2),**10**(2009) 505-514.
- Gomes-Filho, I.S., Cruz, S.S., Costa, M.d.C.N., Passos, J.S., Cerqueira, E.M., Sampaio, F.P., Pereira, E.C. and Miranda, L.F. "Periodontal therapy and low birth weight: preliminary results from an alternative methodologic strategy," *Journal of Periodontology*, (12),**81**(2010) 1725-1733.
- Goodson, J., Holborow, D., Dunn, R., Hogan, P. and Dunham, S. "Monolithic tetracycline-containing fibers for controlled delivery to periodontal pockets," *Journal of Periodontology*, (10),**54**(1983) 575-579.
- Guimarães, A.N., Silva-Mato, A., Miranda Cota, L.O., Siqueira, F.M. and Costa, F.O. "Maternal periodontal disease and preterm or extreme preterm birth: an ordinal logistic regression analysis," *Journal of Periodontology*, (3),**81**(2010) 350-358.
- Harrington, W.F. and von Hippel, P.H. "Formation and stabilization of the collagenfold," *Archives of Biochemistry and Biophysics*, (1),**92**(1961) 100-113.
- Harvey, C.E. and Emily, P.P., Hyperplastic gingivitis; Small Animal Dentistry, Mosby-Year Books, St. Louis, MO, 1993.
- Hong, H., Chi, P. and Liu, C. "Fabrication and properties of multilayer chitosan membrane loaded with tinidazole," *Journal of Wuhan University of Technology-Mater. Sci. Ed.*, (1),**22**(2007) 102-107.
- Hu, C. and Cui, W. "Hierarchical Structure of Electrospun Composite Fibers for Long- Term Controlled Drug Release Carriers," *Advanced Healthcare Materials*, (6),1(2012) 809-814.

- Hu, X., Liu, S., Zhou, G., Huang, Y., Xie, Z. and Jing, X. "Electrospinning of polymeric nanofibers for drug delivery applications," *Journal of Controlled Release*, **185**(2014) 12-21.
- Humphrey, L.L., Fu, R., Buckley, D.I., Freeman, M. and Helfand, M. "Periodontal disease and coronary heart disease incidence: a systematic review and meta-analysis," *Journal of General Internal Medicine*, (12),**23**(2008) 2079-2086.
- Ikinci, G., Şenel, S., Akıncıbay, H., Kaş, S., Erciş, S., Wilson, C. and Hıncal, A. "Effect of chitosan on a periodontal pathogen Porphyromonas gingivalis," *International Journal of Pharmaceutics*, (1),235(2002) 121-127.
- Inanç, B., Arslan, Y.E., Seker, S., Elçin, A.E. and Elçin, Y.M. "Periodontal ligament cellular structures engineered with electrospun poly (DL- lactide- co- glycolide) nanofibrous membrane scaffolds," *Journal of Biomedical Materials Research Part A*, (1),**90**(2009) 186-195.
- Indian-Pharmacopoeia "Indian Pharmacopoeia, vol. 3," *Worldwide Book Service*, 2014).
- Ivanovski, S., Vaquette, C., Gronthos, S., Hutmacher, D. and Bartold, P. "Multiphasic scaffolds for periodontal tissue engineering," *Journal of Dental Research*, (12),**93**(2014) 1212-1221.
- Jacobs, V., Anandjiwala, R.D. and Maaza, M. "The influence of electrospinning parameters on the structural morphology and diameter of electrospun nanofibers," *Journal of Applied Polymer Science*, (5),**115**(2010) 3130-3136.
- Jain, N., Jain, G.K., Javed, S., Iqbal, Z., Talegaonkar, S., Ahmad, F.J. and Khar, R.K. "Recent approaches for the treatment of periodontitis," *Drug discovery today*, (21),**13**(2008) 932-943.
- Jayakumar, R., Chennazhi, K.P., Srinivasan, S., Nair, S.V., Furuike, T. and Tamura, H. "Chitin scaffolds in tissue engineering," *International journal of molecular sciences*, (3),**12**(2011) 1876-1887.
- Jayakumar, R., Menon, D., Manzoor, K., Nair, S. and Tamura, H. "Biomedical applications of chitin and chitosan based nanomaterials—A short review," *Carbohydrate Polymers*, (2),**82**(2010a) 227-232.
- Jayakumar, R., Nair, S., Furuike, T. and Tamura, H. (2010b) Tissue Engineering, Intech.
- Jiang, W., Li, L., Zhang, D., Huang, S., Jing, Z., Wu, Y., Zhao, Z., Zhao, L. and Zhou, S. "Incorporation of aligned pcl-peg nanofibers into porous chitosan scaffolds improved the orientation of collagen fibers in regenerated periodontium," *Acta Biomaterialia*, 25(2015) 240-252.
- Jing, X., Mi, H.-Y., Peng, J., Peng, X.-F. and Turng, L.-S. "Electrospun aligned poly (propylene carbonate) microfibers with chitosan nanofibers as tissue engineering scaffolds," *Carbohydrate Polymers*, **117**(2015) 941-949.

- Joshi, D., Garg, T., K Goyal, A. and Rath, G. "Development and characterization of novel medicated nanofibers against periodontitis," *Current Drug Delivery*, (5),12(2015) 564-577.
- Karunakar, B., Sabu, K., Udupa, N. and Varma, B. "Design and evaluation of tinidazole dental implants," *Drug Development and Industrial Pharmacy*, (3),**20**(1994) 409-416.
- Kassem, A.A., Ismail, F.A., Naggar, V.F. and Aboulmagd, E. "Preparation and evaluation of periodontal films based on polyelectrolyte complex formation," *Pharmaceutical Development and Technology*, (3),**20**(2015) 297-305.
- Khan, G., Patel, R.R., Yadav, S.K., Kumar, N., Chaurasia, S., Ajmal, G., Mishra, P.K. and Mishra, B. "Development, optimization and evaluation of tinidazole functionalized electrospun poly (ε-caprolactone) nanofiber membranes for the treatment of periodontitis," *RSC Advances*, (102),**6**(2016a) 100214-100229.
- Khan, G., Yadav, S.K., Patel, R.R., Kumar, N., Bansal, M. and Mishra, B. "Tinidazole functionalized homogeneous electrospun chitosan/poly (ε-caprolactone) hybrid nanofiber membrane: development optimization and its clinical implications," *International Journal of Biological Macromolecules*, 2017).
- Khan, G., Yadav, S.K., Patel, R.R., Nath, G., Bansal, M. and Mishra, B. "Development and Evaluation of Biodegradable Chitosan Films of Metronidazole and Levofloxacin for the Management of Periodontitis," *AAPS PharmSciTech*, (6),17(2016b) 1-14.
- Kim, S.E., Heo, D.N., Lee, J.B., Kim, J.R., Park, S.H., Jeon, S.H. and Kwon, I.K. "Electrospun gelatin/polyurethane blended nanofibers for wound healing," *Biomedical Materials*, (4),**4**(2009) 044106.
- Kopytynska-Kasperczyk, A., Dobrzynski, P., Pastusiak, M., Jarzabek, B. and Prochwicz, W. "Local delivery system of doxycycline hyclate based on  $\epsilon$ -caprolactone copolymers for periodontitis treatment," *International Journal of Pharmaceutics*, (1),**491**(2015) 335-344.
- Lawrence, X.Y. "Pharmaceutical quality by design: product and process development, understanding, and control," *Pharmaceutical Research*, (4),**25**(2008) 781-791.
- Laxminarayan, R., Duse, A., Wattal, C., Zaidi, A.K., Wertheim, H.F., Sumpradit, N., Vlieghe, E., Hara, G.L., Gould, I.M. and Goossens, H. "Antibiotic resistance—the need for global solutions," *The Lancet infectious diseases*, (12),**13**(2013) 1057-1098.
- Li, D., McCann, J.T., Xia, Y. and Marquez, M. "Electrospinning: a simple and versatile technique for producing ceramic nanofibers and nanotubes," *Journal of the American Ceramic Society*, (6),89(2006) 1861-1869.
- Li, J., Parada, C. and Chai, Y. "Cellular and molecular mechanisms of tooth root development," *Development*, (3),**144**(2017) 374-384.

- Liew, V., Mack, G., Tseng, P., Cvejic, M., Hayden, M. and Buchanan, N. "Single-dose Concentrations of Tinidazole in Gingival Crevicular Fluid, Serum, and Gingival Tissue in Adults with Periodontitis," *Journal of Dental Research*, (5),**70**(1991) 910-912.
- Liu, Y., Ji, Y., Ghosh, K., Clark, R.A., Huang, L. and Rafailovich, M.H. "Effects of fiber orientation and diameter on the behavior of human dermal fibroblasts on electrospun PMMA scaffolds," *Journal of biomedical materials research Part A*, (4),90(2009) 1092-1106.
- Löe, H. and Silness, J. "Periodontal disease in pregnancy I. Prevalence and severity," *Acta Odontologica Scandinavica*, (6),**21**(1963) 533-551.
- Maestre, J., Bascones, A., Sánchez, P., Matesanz, P., Aguilar, L., Giménez, M., Pérez-Balcabao, I., Granizo, J. and Prieto, J. "Odontogenic bacteria in periodontal disease and resistance patterns to common antibiotics used as treatment and prophylaxis in odontology in Spain," *Revista Española de Quimioterapia*, (1),20(2007) 61-67.
- Maheshwari, M., Miglani, G., Mali, A., Paradkar, A., Yamamura, S. and Kadam, S. "Development of tetracycline-serratiopeptidase-containing periodontal gel: formulation and preliminary clinical study," *AAPS PharmSciTech*, (3),**7**(2006) E162-E171.
- Mayet, N., Kumar, P., Choonara, Y.E., Tomar, L.K., Tyagi, C., du Toit, L.C. and Pillay, V. "Synthesis of a semi-interpenetrating polymer network as a bioactive curcumin film," *AAPS PharmSciTech*, (6),**15**(2014) 1476-1489.
- Meng, Z., Zheng, W., Li, L. and Zheng, Y. "Fabrication and characterization of three-dimensional nanofiber membrance of PCL–MWCNTs by electrospinning," *Materials Science and Engineering: C*, (7),**30**(2010) 1014-1021.
- Muià, C., Mazzon, E., Maiere, D., Zito, D., Di Paola, R., Domenico, S., Crisafulli, C., Britti, D. and Cuzzocrea, S. "Pyrrolidine dithiocarbamate reduced experimental periodontitis," *European Journal of Pharmacology*, (3),**539**(2006) 205-210.
- Mundargi, R.C., Srirangarajan, S., Agnihotri, S.A., Patil, S.A., Ravindra, S., Setty, S.B. and Aminabhavi, T.M. "Development and evaluation of novel biodegradable microspheres based on poly (d, 1-lactide-co-glycolide) and poly (ε-caprolactone) for controlled delivery of doxycycline in the treatment of human periodontal pocket: in vitro and in vivo studies," *Journal of Controlled Release*, (1),119(2007) 59-68.
- Nagaraju, R., Udupa, N. and Varma, B. "Tinidazole concentration in human gingival crevicular fluid after insertion of biodegradable dental implants," *Indian Journal of Pharmaceutical Sciences*, (5),**65**(2003) 540.
- Napimoga, M.H., Benatti, B.B., Lima, F.O., Alves, P.M., Campos, A.C., Pena-dos-Santos, D.R., Severino, F.P., Cunha, F.Q. and Guimarães, F.S. "Cannabidiol decreases bone resorption by inhibiting RANK/RANKL expression and pro-

- inflammatory cytokines during experimental periodontitis in rats," *International Immunopharmacology*, (2),**9**(2009) 216-222.
- Natarajan, V., Krithica, N., Madhan, B. and Sehgal, P.K. "Formulation and evaluation of quercetin polycaprolactone microspheres for the treatment of rheumatoid arthritis," *Journal of Pharmaceutical Sciences*, (1),**100**(2011) 195-205.
- Niemiec, B.A. "Periodontal disease," *Topics in Companion Animal Medicine*, (2),**23**(2008) 72-80.
- Oz, H.S. and Puleo, D.A. "Animal models for periodontal disease," *BioMed Research International*, **2011**(2011) 1-8.
- Park, S.-H., Kim, T.-I., Ku, Y., Chung, C.-P., Han, S.-B., Yu, J.-H., Lee, S.-P., Kim, H.-W. and Lee, H.-H. "Effect of hydroxyapatite-coated nanofibrous membrane on the responses of human periodontal ligament fibroblast," *Journal of the Ceramic Society of Japan*, (1349),**116**(2008) 31-35.
- Patel, K., Vadalia, K. and Patel, J. "Development and evaluation of in situ gelling system for treatment of periodontitis," *Development*, (7),6(2014a) 2102-2112.
- Patel, R.R., Chaurasia, S., Khan, G., Chaubey, P., Kumar, N. and Mishra, B. "Cromolyn sodium encapsulated PLGA nanoparticles: An attempt to improve intestinal permeation," *International Journal of Biological Macromolecules*, **83**(2016) 249-258.
- Patel, R.R., Khan, G., Chaurasia, S., Kumar, N. and Mishra, B. "Rationally developed core—shell polymeric-lipid hybrid nanoparticles as a delivery vehicle for cromolyn sodium: implications of lipid envelop on in vitro and in vivo behaviour of nanoparticles upon oral administration," *RSC Advances*, (93),5(2015) 76491-76506.
- Patel, R.R., Kumar, N., Khan, G., Chaurasia, S. and Mishra, B. "Investigation of Critical Variables of Core–Shell Polymer Lipid Hybrid Nanoparticles by Using Plackett-Burman Screening Design," *Advanced Science Letters*, (5-6),**20**(2014b) 923-932.
- Pelipenko, J., Kocbek, P. and Kristl, J. "Critical attributes of nanofibers: preparation, drug loading, and tissue regeneration," *International Journal of Pharmaceutics*, (1),**484**(2015) 57-74.
- Peng, H.T., Martineau, L. and Shek, P.N. "Hydrogel-elastomer composite biomaterials: 3. Effects of gelatin molecular weight and type on the preparation and physical properties of interpenetrating polymer networks," *Journal of Materials Science: Materials in Medicine*, (3),19(2008) 997-1007.
- Pham, Q.P., Sharma, U. and Mikos, A.G. "Electrospinning of polymeric nanofibers for tissue engineering applications: a review," *Tissue Engineering*, (5),**12**(2006) 1197-1211.

- Qin, Y., Yuan, M., Li, L., Li, W. and Xue, J. "Formulation and evaluation of in situ forming PLA implant containing tinidazole for the treatment of periodontitis," *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, (8),**100**(2012) 2197-2202.
- Qiu, K., He, C., Feng, W., Wang, W., Zhou, X., Yin, Z., Chen, L., Wang, H. and Mo, X. "Doxorubicin-loaded electrospun poly (L-lactic acid)/mesoporous silica nanoparticles composite nanofibers for potential postsurgical cancer treatment," *Journal of Materials Chemistry B*, (36),1(2013) 4601-4611.
- Quirynen, M., Mongardini, C., Pauwels, M., Bollen, C.M., Eldere, J.V. and Steenberghe, D.V. "One stage full-versus partial-mouth disinfection in the treatment of chronic adult or generalized early-onset periodontitis. II. Long-term impact on microbial load," *Journal of Periodontology*, (6),**70**(1999) 646-656.
- Ramakrishna, S., Fujihara, K., Teo, W.-E., Lim, T.-C. and Ma, Z., An introduction to electrospinning and nanofibers; World Scientific Publisher, Singapore, 2005.
- Ranjbar-Mohammadi, M., Zamani, M., Prabhakaran, M., Bahrami, S.H. and Ramakrishna, S. "Electrospinning of PLGA/gum tragacanth nanofibers containing tetracycline hydrochloride for periodontal regeneration," *Materials Science and Engineering: C*, **58**(2016) 521-531.
- Reddy, R. "In vitro release of tinidazole from polyvinyl alcohol and polyvinyl pyrrolidone strips as a local drug delivery system to treat periodontal pockets," *International Journal of Dental Clinics*, (4),**3**(2011) 26-28.
- Reise, M., Wyrwa, R., Müller, U., Zylinski, M., Völpel, A., Schnabelrauch, M., Berg, A., Jandt, K.D., Watts, D.C. and Sigusch, B.W. "Release of metronidazole from electrospun poly (L-lactide-co-D/L-lactide) fibers for local periodontitis treatment," *Dental Materials*, (2),28(2012) 179-188.
- Reneker, D.H., Yarin, A.L., Fong, H. and Koombhongse, S. "Bending instability of electrically charged liquid jets of polymer solutions in electrospinning," *Journal of Applied Physics*, (9),87(2000) 4531-4547.
- Rinaudo, M. "Chitin and chitosan: properties and applications," *Progress in Polymer Science*, (7),**31**(2006) 603-632.
- Roshna, T. and Nandakumar, K. "Generalized aggressive periodontitis and its treatment options: case reports and review of the literature," *Case Reports in Medicine*, **2012**(2012) 1-17.
- Salvi, G.E., Mombelli, A., Mayfield, L., Rutar, A., Suvan, J., Garrett, S. and Lang, N.P. "Local antimicrobial therapy after initial periodontal treatment," *Journal of Clinical Periodontology*, (6),**29**(2002) 540-550.
- Samanta, H.S. and Ray, S.K. "Controlled release of tinidazole and theophylline from chitosan based composite hydrogels," *Carbohydrate Polymers*, **106**(2014) 109-120.

- Samprasit, W., Kaomongkolgit, R., Sukma, M., Rojanarata, T., Ngawhirunpat, T. and Opanasopit, P. "Mucoadhesive electrospun chitosan-based nanofibre mats for dental caries prevention," *Carbohydrate Polymers*, **117**(2015) 933-940.
- Schroeder, H.E. and de Boever, J. "The structure of microbial dental plaque," *Dental Plaque*, 1970) 49-74.
- Schwach-Abdellaoui, K., Vivien-Castioni, N. and Gurny, R. "Local delivery of antimicrobial agents for the treatment of periodontal diseases," *European Journal of Pharmaceutics and Biopharmaceutics*, (1),**50**(2000) 83-99.
- Schweikl, H. and Schmalz, G. "Toxicity parameters for cytotoxicity testing of dental materials in two different mammalian cell lines," *European Journal of Oral Sciences*, (3),**104**(1996) 292-299.
- Shah, V.P., Midha, K.K., Dighe, S., McGilveray, I.J., Skelly, J.P., Yacobi, A., Layloff, T., Viswanathan, C., Cook, C.E. and McDowall, R. "Analytical methods validation: bioavailability, bioequivalence, and pharmacokinetic studies," *Journal of Pharmaceutical Sciences*, (3),81(1992) 309-312.
- Shah, V.P., Midha, K.K., Dighe, S., McGilveray, I.J., Skelly, J.P., Yacobi, A., Layloff, T., Viswanathan, C.q., Cook, C. and McDowall, R. "Analytical methods validation: bioavailability, bioequivalence and pharmacokinetic studies. Conference report," *European Journal of Drug Metabolism and Pharmacokinetics*, (4),16(1991) 249-255.
- Shalumon, K., Anulekha, K., Girish, C., Prasanth, R., Nair, S. and Jayakumar, R. "Single step electrospinning of chitosan/poly (caprolactone) nanofibers using formic acid/acetone solvent mixture," *Carbohydrate Polymers*, (2),**80**(2010) 413-419.
- Sharma, A.K., Gangwar, M., Tilak, R., Nath, G., Sinha, A.S.K., Tripathi, Y.B. and Kumar, D. "Comparative in vitro antimicrobial and phytochemical evaluation of methanolic extract of root, stem and leaf of Jatropha curcas Linn," *Pharmacognosy Journal*, (30),**4**(2012) 34-40.
- Sharma, R., Garg, T., Goyal, A.K. and Rath, G. "Development, optimization and evaluation of polymeric electrospun nanofiber: A tool for local delivery of fluconazole for management of vaginal candidiasis," *Artificial cells, Nanomedicine, and Biotechnology*, (2),44(2016) 524-531.
- Sigusch, B.W., Pflaum, T., Völpel, A., Schinkel, M. and Jandt, K.D. "The influence of various light curing units on the cytotoxicity of dental adhesives," *Dental Materials*, (11), **25**(2009) 1446-1452.
- Silva-Boghossian, C.M., Neves, A.B., Resende, F.A. and Colombo, A.P.V. "Suppuration-associated bacteria in patients with chronic and aggressive periodontitis," *Journal of Periodontology*, (9),**84**(2013) e9-e16.

- Singh, B., Kumar, R. and Ahuja, N. "Optimizing drug delivery systems using systematic" design of experiments." Part I: fundamental aspects," *Critical Reviews* TM in Therapeutic Drug Carrier Systems, (1),22(2005).
- Singh, Y., Vuddanda, P.R., Jain, A., Parihar, S., Chaturvedi, T.P. and Singh, S. "Mucoadhesive gel containing immunotherapeutic nanoparticulate satranidazole for treatment of periodontitis: development and its clinical implications," *RSC Advances*, (59),5(2015) 47659-47670.
- Solanki, A.B., Parikh, J.R. and Parikh, R.H. "Formulation and optimization of piroxicam proniosomes by 3-factor, 3-level Box-Behnken design," *AAPS PharmSciTech*, (4),**8**(2007) 43-49.
- Southard, G.L. and Godowski, K.C. "Subgingival controlled release of antimicrobial agents in the treatment of periodontal disease," *International Journal of Antimicrobial Agents*, (4),**9**(1998) 239-253.
- Souza, D.M.d., Ricardo, L.H., Prado, M.d.A., Prado, F.d.A. and Rocha, R.F.d. "The effect of alcohol consumption on periodontal bone support in experimental periodontitis in rats," *Journal of Applied Oral Science*, (6),**14**(2006) 443-447.
- Sridevi, S., Babu, R.J., Mittal, N., Kumar, D.S. and Pandit, J. "Development and evaluation of acrylic strips of metronidazole for the therapy of periodontal disease," *Die Pharmazie*, (2),**50**(1995) 153-154.
- Sun, X., Xu, C., Wu, G., Ye, Q. and Wang, C. "Poly (Lactic-co-Glycolic Acid): Applications and Future Prospects for Periodontal Tissue Regeneration," *Polymers*, (6),9(2017) 189.
- Thonemann, B., Schmalz, G., Hiller, K.-A. and Schweikl, H. "Responses of L929 mouse fibroblasts, primary and immortalized bovine dental papilla-derived cell lines to dental resin components," *Dental Materials*, (4),**18**(2002) 318-323.
- Tian, Y., Shen, Y. and Jv, M. "Synthesis, characterization and evaluation of tinidazole-loaded mPEG-PDLLA (10/90) in situ gel forming system for periodontitis treatment," *Drug Delivery*, (8),**23**(2016) 2726-2735.
- Tripathi, K., Essentials of Medical Pharmacology; JP Medical Ltd, India, India, 2013.
- Verma, S., Lan, Y., Gokhale, R. and Burgess, D.J. "Quality by design approach to understand the process of nanosuspension preparation," *International Journal of Pharmaceutics*, (1),**377**(2009) 185-198.
- Wang, H.-S., Fu, G.-D. and Li, X.-S. "Functional polymeric nanofibers from electrospinning," *Recent Patents on Nanotechnology*, (1),**3**(2009) 21-31.
- Wangyu, F. and Shengnan, M. "Preparation of tinidazole microcapsule [J]," *Chinese Journal of Natibiotics*, **22**(1997) 90-92.
- WHO; http://www.who.int/mediacentre/factsheets/fs318/en/ (Accessed on 28.02.2016)
- Wiggs, R.B. and Lobprise, H.B., Veterinary dentistry: principles and practice; Lippincott-Raven Publishers, 1997.

- Wood, B., Faulkner, J. and Monro, A. "The pharmacokinetics, metabolism and tissue distribution of tinidazole," *Journal of Antimicrobial Chemotherapy*, (suppl A),**10**(1982) 43-57.
- Xie, R., Kuijpers-Jagtman, A.M. and Maltha, J.C. "Inflammatory responses in two commonly used rat models for experimental tooth movement: comparison with ligature-induced periodontitis," *Archives of Oral Biology*, (2),56(2011) 159-167.
- Xu, M., Mei, F., Li, D., Yang, X.P., Sui, G., Deng, X.L. and Hu, X., Electrospun poly (L-lacticacid)/nano-hydroxyapatite hybrid nanofibers and their potential in dental tissue engineering; Key Engineering Materials, Trans Tech Publications, Switzerland, Trans Tech Publications, Switzerland, 2007.
- Xu, Y. and Wei, W. "A comparative study of systemic subantimicrobial and topical treatment of minocycline in experimental periodontitis of rats," *Archives of Oral Biology*, (9),**51**(2006) 794-803.
- Xue, J., He, M., Liang, Y., Crawford, A., Coates, P., Chen, D., Shi, R. and Zhang, L. "Fabrication and evaluation of electrospun PCL-gelatin micro-/nanofiber membranes for anti-infective GTR implants," *Journal of Materials Chemistry B*, (39),**2**(2014a) 6867-6877.
- Xue, J., He, M., Liu, H., Niu, Y., Crawford, A., Coates, P.D., Chen, D., Shi, R. and Zhang, L. "Drug loaded homogeneous electrospun PCL/gelatin hybrid nanofiber structures for anti-infective tissue regeneration membranes," *Biomaterials*, (34),35(2014b) 9395-9405.
- Xue, J., He, M., Niu, Y., Liu, H., Crawford, A., Coates, P., Chen, D., Shi, R. and Zhang, L. "Preparation and in vivo efficient anti-infection property of GTR/GBR implant made by metronidazole loaded electrospun polycaprolactone nanofiber membrane," *International Journal of Pharmaceutics*, (1),475(2014c) 566-577.
- Yuwei, Q. and Jing, H. "Preparation and Its clinical Application of Compound Tinidazole Film [J]," *China Pharmacist*, **3**(2005) 045.
- Zamani, M., Morshed, M., Varshosaz, J. and Jannesari, M. "Controlled release of metronidazole benzoate from poly ε-caprolactone electrospun nanofibers for periodontal diseases," *European Journal of Pharmaceutics and Biopharmaceutics*, (2),**75**(2010) 179-185.
- Zeng, J., Yang, L., Liang, Q., Zhang, X., Guan, H., Xu, X., Chen, X. and Jing, X. "Influence of the drug compatibility with polymer solution on the release kinetics of electrospun fiber formulation," *Journal of Controlled Release*, (1),**105**(2005) 43-51.
- Zhang, C., Yuan, X., Wu, L., Han, Y. and Sheng, J. "Study on morphology of electrospun poly (vinyl alcohol) mats," *European Polymer Journal*, (3),**41**(2005) 423-432.

- Zhang, H.-t. and Ye, T. "Efficacy of tinidazole buccal tablet local using on periodontitis and pericoronitis [J]," *Practical Pharmacy and Clinical Remedies*, **8**(2012) 027.
- Zhang, Z., Li, G. and Shi, B. "Physicochemical properties of collagen, gelatin and collagen hydrolysate derived from bovine limed split wastes," *Journal-Society of Leather Technologists and Chemists*, (1),**90**(2006) 23-28.
- Zhao, Z., Li, J., Yuan, X., Li, X., Zhang, Y. and Sheng, J. "Preparation and properties of electrospun poly (vinylidene fluoride) membranes," *Journal of Applied Polymer Science*, (2),**97**(2005) 466-474.
- Zupančič, Š., Baumgartner, S., Lavrič, Z., Petelin, M. and Kristl, J. "Local delivery of resveratrol using polycaprolactone nanofibers for treatment of periodontal disease," *Journal of Drug Delivery Science and Technology*, **30**(2015) 408-416.
- Zupančič, S.p., Sinha-Ray, S., Sinha-Ray, S., Kristl, J. and Yarin, A.L. "Long-term sustained ciprofloxacin release from pmma and hydrophilic polymer blended nanofibers," *Molecular Pharmaceutics*, (1),**13**(2015) 295-305.

## Publications in International Refereed Journals from Ph.D. Thesis

S. No	Titles	Impact Factor
1	Gayasuddin Khan, Sarita K. Yadav, Ravi R. Patel, Nagendra Kumar, Monika Bansal, Brahmeshwar Mishra, Tinidazole functionalized homogeneous electrospun chitosan/ poly (ε-caprolactone) hybrid nanofiber membrane: development optimization and its clinical implications, International Journal of Biological Macromolecules 103 (2017) 1311-26	3.671
2	Gayasuddin Khan, Ravi R. Patel, Sarita K. Yadav, Nagendra Kumar, Sundeep Chaurasia, Gufran Ajmal, Pradeep K. Mishra, Brahmeshwar Mishra, Development, optimization and evaluation of tinidazole functionalized electrospun poly (ε-caprolactone) nanofiber membranes for the treatment of periodontitis, RSC Advances 6(102) (2016) 100214-229	3.106

## Patent Filed from Ph.D. Work

S. No	Inventors and Title of Invention	Application No.
1	Gayasuddin Khan and Brahmeshwar Mishra. Improved Pharmaceutical Formulations of Nanofiber and Process for the Preparations thereof	201711040147