



Professor George N. Tzanakakis, MD, PhD, MIAC

Head of the Laboratory of Anatomy-Histology-Embryology, Head of Laboratory of Forensic Medicine, School of Medicine, University of Crete; Head of Laboratory of Forensic Sciences, School of Medicine, University of Crete

Present address: University of Crete, School of Medicine, Laboratory of Anatomy-Histology-Embryology, 71 003 Heraklion, Crete, Greece, Phone +30-2810-394719 (office), 394735 (lab.), E-mail: tzanakak@med.uoc.gr, tzanakak@uoc.gr

Education, Degrees and Professional Employment

- 1980: Medical degree, School of Medicine, University of Athens
1990: Doctoral dissertation (Ph.D), School of Medicine, University of Patras
1985: Specialization in Pathology, University Hospital of Patras, School of Medicine, Patras, Greece
1995: Specialization in Clinical Cytology, Huddinge University Hospital, Karolinska Institute, Stockholm, Sweden
1987-1989: Visiting researcher, Department of Surgery, and Department of Pathology, Brown University, Providence, Rhode Island, U.S.A.
1988-1989: Department of Electron Microscopy, V.A. Hospital, West Roxbury, M.A.,
1992-1996: Post-doc researcher and Research fellow at Department of Pathology, Huddinge University Hospital, Karolinska Institute, Stockholm, Sweden
1993-1995: Resident at the Department of Pathology, Huddinge University Hospital, Karolinska Institute, Stockholm, Sweden
1981-1992: Instructor (1981) and Lecturer (1991), Laboratory of Pathology, School of Medicine, University of Patras, Greece
1998-present: Board Member of the Hellenic Research Club for Connective Tissue and Matrix Biology
1998-2010: Associate Professor Anatomy-Histology, Laboratory of Anatomy-Histology Embryology, School of Medicine, University of Crete
2010-present: Professor of Anatomy-Histology, Laboratory of Anatomy-Histology-Embryology, School of Medicine, University of Crete
2010-present: Head of Laboratory of Anatomy-Histology-Embryology, School of Medicine, University of Crete
2015-present: Head of Laboratory of Forensic Sciences, School of Medicine, University of Crete

Editorial Scientific Boards/Reviewer & Awards

- Dr Tzanakakis is an Editorial Board member of a) Journal of Medical and Case reports and b) journal "Cancers".
- Upon invitation he has acted as a Reviewer for 60 International Journals in the areas of Biochemistry, Tumor Biology, Molecular Biology, Matrix Biology and Pathobiology, Biochemical & Pharmaceutical Analysis, Cell Biology, Cancer, Anticancer Agents, Oncology, Cell signaling, Targeted Molecular Therapeutic Approaches, Drug Pharmacological Evaluation, Cytotoxicity, Toxicology and Inflammation.
- George Tzanakakis has acted as a reviewer a) for the 3rd FEBS Congress & 11th IUBMB Conference, held in 2008, Athens, Greece and b) the 45th Congress of European Toxicology Societies, Eurotox held in 2008, Rhodes, Greece.
- Upon invitation he has acted as a reviewer for a number of National and International grant proposals including a) K. Karatheodoridi UOP 2008; b) Irakleitos II, Ministry of Education, Greece, 2009; c) IKY, ESPA 2012-2013; d) "Extracellular matrix

proteins as prognostic factors in cancer” for National Research, Development and Innovation Office (NKFIH) Hungary, 2015; e) “The effect of structurally different dermatan sulfate chainon behavior of breast cancer cells with registration number2015/17/N/NZ3/03644 submitted to National ScienceCenter (NCNoanel NZ3), Poland, 2015; f) "Extracellular matrix internalization: a novel modulator of breast cancer invasion," Reference 204343/Z/16/Z Wellcome Trust, London, UK, 2016.

- Member of the Committee for the thematical entity “Medical Sciences-Biomedical Sciences” foe the program “Hellenic Academic Electronic Textbooks and Handbooks”
- A number of awards have been conferred to Dr Tzanakakis group by various Scientific Societies, among them the Hellenic Society of Biochemical & Molecular Biology Society and the Hellenic Connective Tissue Society, Hellenic Society of Microbiology, Hellenic Society of Rheumatology, Hellenic Anticancer Society, Federation of European Biochemical Societies.
- Member of the selection committee for the contract offer of associate professor with the profile of Histology at the University of Barcelona (UB), Serra Húnter Programme (SHP) sponsored by the Government of Catalonia and the Catalan Public Universities.
- According to Biomed Experts and Scholar websites (links are given below) Dr. Tzanakakis among the top authors and most cited in the areas: Matrix Biology, Glycosaminoglycans, and Proteoglycans.

Editor/ Quest Editor

Dr Tzanakakis was editor / co-editor of Greek versions of the following textbooks:

1. *Histology*, Barry S Mitchell, Sandra Peel (Co-editor with D. Nikitovic)
2. *Human Embryology and Molecular Biology*, Bruce M Carlson (Co-editor with E. Petrou)
3. *Functional Histology*, Paul R Wheater, George Burkitt, Victor G Daniels (Partial editing of the book)
4. *Basic Histology*, Luiz Carlos Junqueira, Josi Carneiro (Partial editing of the book)
5. *Sobotta Human Anatomical Atlas*, R Putz, R Pabst (Partial editing of the book)
7. *Texbook of Anatomy*, Platzer Fritsch, Kuhnel, Kahle, Frotscher (Partial editing of the book)
8. *Clinical Neuroanatomy*, Stephen G. Waxman (Partial editing of the book)
9. Lead Guest editor of Special Issue “*Proteoglycans/Glycosaminoglycans: From Basic Research to Clinical Practice*”: Guest Editors: George Tzanakakis, Iona Kovalszky, Paraskevi Heldin, and Dragana Nikitovic; published in BioMed Research International-Pharmacology, 2014
10. *Human Embryology-From Conception to Birth-Moore Keith's Clinical Approach*. (Partial editing of the book)

Organization of meetings/symposia

- Member of the organizing committee of a series of scientific meetings of the Hellenic Connective tissue and Extracellular Matrix section, and of the 1st and 2nd Conference of Biosciences of the University of Patras as well as in a series of international conferences.

Publications/books

- Dr. Tzanakakis has 163 (Scopus) or 201 (Google Scholar) publications (Research and Reviews) in international peer reviewed journals; which have been cited 4717

(Scopus) or 6391 (Google Scholar) with an h-index 38 (Scopus) or 44 (Google Scholar). He has contributed chapters to 7 book series and full proceeding. He has more than 220 abstracts in proceedings of International and National scientific conferences.

Grants

- George Tzanakakis has acted as a Coordinator / Participant for 6 National and 3 International research projects. Major recent projects:
 - Co-financed by the European "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF) - Research Funding Program: Thales. Investing in knowledge society through the European Social Fund Union (European Social Fund – ESF) and Greek national funds through the Operational Program
 - Ministry of Education, Lifelong learning and Religion. Program “Lifelong training, updating knowledge for university graduates” with code 07.08.73.12.01. Course title “Contemporary diagnostic and therapeutic approaches for Medicine for the 21st century” Code: 144 16 1.5 2

Trainees

- He was Supervisor for 10 awarded PhD theses. He was / is member for 22 three-member committees for PhD theses. Furthermore he was supervisor for 18 biology students’ diploma theses.

Courses

- Undergraduate teaching: Histology A & B, Pathology A & B, Forensic medicine
- Graduate teaching: a. Cellular and genetic etiology, diagnostic and therapeutic targeting of human disease, b. Contemporary diagnostic and therapeutic approaches for Medicine for the 21st century”.

Collaborations

- George Tzanakakis has collaborated at International level with a) Department of Surgery and Pathology, VA hospital, Brown University, Providence, Rhode, Island, U.S.A., b) Karolinska Institute, School of Medicine, Sweden, c) University of Insubria, School of Medicine, Varese-Italy, d) Department of Pharmacological and Biomolecular Sciences (DiSFeB), Università degli Studi di Milano, Milan, Italy, e) Department of Chemistry, University of Patras, Patras, Greece, as well as establishing several other collaborations in Europe and USA.

Research Interests

George Tzanakakis research interests are focused in the areas of Matrix Pathobiology, Tumor Biology and Signal Transduction, Disease Markers and Molecular Targets. Special emphasis is given to proteoglycans / glycosaminoglycans, matrix cell surface receptors and especially to their implication in tumorigenesis, inflammation and cytotoxicity. Specifically:

- Structure and functions of cell bound and cell-secreted proteoglycans (PGs)/ glycosaminoglycans (GAGs) and acidic glyco- and sialoproteins in malignancy.
- Effects of growth factors and their receptors on gene expression and synthesis of MMPs and PGs
- Structure, function, immunological and biological properties of carbohydrates, proteoglycans and glycoproteins

- Evaluation of pharmacological agents at molecular and cellular levels (functional cell properties, receptors and intracellular pathways, gene expression and regulation)
- Structure, analysis and interactions of important biological molecules (growth factors/peptides/hormones, growth factor receptors)
- ECM components as biomarkers of inflammation
- Evaluation of cytotoxicity

Useful links:

1. <https://scholar.google.gr/citations?user=D3D5g-EAAAAJ&hl=en>

Publications

1. Kalfarentzos F., Hatzimihael A., **Tzanakakis G.**, Tsolakis J., Bassaris H: Gutaneous and subcutaneous Phycomycosis due to abside. *Surgical Rounds* 10: 67-77, 1987.
2. Kotzamanoglou K., **Tzanakakis G.**, Michalopoulos E., Stathopoulos M: Orbital cellulites due to mucormycosis. *Graefe's Arch. Clin. Exp. Ophthalmol.* 226: 539-541, 1988
3. **Tzanakakis GN.**, McCully KS., Vezeridis MP: Benign papillary mesothelioma of the peritoneum: A consideration in the differential diagnosis of peritoneal implants. *Southern Medical Journal* 82: 1579-1580, 1989.
4. **Tzanakakis GN.**, Scopa CD., Vezeridis MP, Vagenakis A: Ectopic bone in multinodular goiter. *Rhode Island Medical Journal* 72: 171-172, 1989.
5. Vezeridis MP., Doremus CM., Tibbetts LM., **Tzanakakis GN.**, Jackson BT: Invasion and metastasis following orthotopic transplantation of human pancreatic cancer in the nude mouse. *Journal of Surgical Oncology* 40: 261-265, 1989.
6. Vezeridis MP., Doremus CM., Tibbetts LM., **Tzanakakis GN.**, Meitner PA: Experimental metastases from a human pancreatic adenocarcinoma in athymic mice. *Surgical Res. Comm.* 6: 313-319, 1989.
7. McCully KS., **Tzanakakis G.N.**, Vezeridis MP: Inhibition of neoplastic growth by N-homocysteine thiolactonyl retinamido cobalamin. *Res. Comm. Chem. Path and Pharmacology* 66: 117-122, 1989.
8. **Tzanakakis GN.**, Veronikis DK., Anastasiou ED. McCully KS., Dimitracopoulos G: Histopathological lesions produced by P. aeruginosa lipopolysaccharide in rats. *Journal of Exper. Pathology* 4: 199-211, 1989.
9. Vezeridis MP., Meitner PA., Tibbetts LM., Doremus CM., **Tzanakakis GN.**, Calabresi P: Heterogeneity of potential for hematogenous metastasis in a human pancreatic carcinoma. *Journal of Surgical Res.* 48: 51-55, 1990.
10. **Tzanakakis GN.**, McCully KS. Vezeridis MP: Solitary cervical node metastasis in renal cell carcinoma. *Rhode Island Med. Journal* 73: 113-115, 1990.
11. **Tzanakakis GN.**, Agarwal KC., Vezeridis MP: Inhibition of hepatic metastasis from a human pancreatic adenocarcinoma (RWP-2) in the nude mouse by prostacyclin, forskolin and

ketoconazole. *Cancer* 65: 446-451, 1990.

12. **Tzanakakis GN.**, Vezeridis MP., Jackson BT., Rodil JV., McCully KS: Primary extranodal non-Hodgkin's lymphoma of the extrahepatic biliary tract. *Rhode Island Med. Journal* 73: 483-486, 1990.

13. Schwalke MA., **Tzanakakis GN.**, Vezeridis MP: Effects of prostacyclin on hepatic metastases from human pancreatic cancer in the nude mouse. *Journal of Surg. Res.* 49: 164-167, 1990.

14. Bleday R., **Tzanakakis GN.**, Scwalke MA., Wanebo HJ., Vezeridis MP: Epidermal growth factor stimulation and metastatic rate in human pancreatic carcinoma cell lines. *Journal of Surg. Res.* 49: 276-279, 1990.

15. **Tzanakakis GN.**, Agarwal KC., Veronikis DK., Vezeridis MP: Effects of antiplatelet agents alone or in combinations on platelet aggregation and on liver metastases from a human pancreatic adenocarcinoma in the nude mouse. *Journal of Surg. Oncology* 48: 45-50, 1991.

16. Vezeridis MP., **Tzanakakis GN.**, Meitner PA., Doremus CM., Tibbetts LM., Calabresi P: In vivo selection of a highly metastatic line from a human pancreatic carcinoma in the nude mouse. *Cancer* 69: 2060-2063, 1992.

17. Andonopoulos AP., **Tzanakakis GN.**, Christofidou M: Light microscopy of dried saliva in the evaluation of xerostomia of the sicca syndrome. A preliminary report. *Journal Rheumatol.* 19: 1390-1392, 1992.

18. Perimenis P., Giannoulis S., **Tzanakakis GN.**, Assimakopoulou V., Melekos M., Barbalias G: Myelolipoma of the adrenal gland. *Urol. Int.* 50: 111-113, 1992.

19. McCully KS., **Tzanakakis GN.**, Vezeridis MP: Effect of the synthetic N-homocysteine thiolactonyl derivatives, thioretinaco, thioretinamide, and thioco on growth and lactate production by malignant cells. *Res. Comm. Chem. and Pharmacology* 77: 125-128, 1992.

20. Andonopoulos AP., **Tzanakakis GN.**: Excessive fibrosis of supraclavicular lymphnode granuloma in a patient with progressive systemic sclerosis. *Rheumatol Inter.* 12: 255-257, 1993.

21. Tibbetts LM., Doremus CM., **Tzanakakis GN.**, Vezeridis MP: Liver metastases with ten human colon carcinoma cell lines in nude mice and association with CEA production. *Cancer* 71: 315-321, 1993.

22. **Tzanakakis GN.**, Agarwal KC., Vezeridis MP: Prevention of human pancreatic cancer cell induced hepatic metastasis in nude mice by dipyridamole and its analog RA-233 *Cancer* 71: 2466-2471, 1993.

23. Andonopoulos AP., Gogos CA., **Tzanakakis GN.**: Subcutaneous edema: an "unrecognized" feature of acute polymyositis. *Rheumatol Inter.* 13: 159-161, 1993.

24. Tsamandas A., **Tzanakakis GN.**, Karatzas T., Repandi M., Karavias D: Mesenteric fibromatosis. *BJCP* 48: 79-81, 1994.

25. Karamanos NK., Axelson S., Vanky P., **Tzanakakis GN.**, Hjerpe A: Determination of hyaluronan and galactosaminoglycan disaccharides by high-performance capillary electrophoresis at the attomole level. Applications to analyses of tissue and cell culture proteoglycans. *Journal of Chromatography A*. 696: 295-305, 1995.
26. **Tzanakakis GN.**, Karamanos NK., Klominek J. Hjerpe A: Glycosaminoglycans from two human malignant mesothelioma cell lines: Determination, distribution and effect of platelet-derived growth factor on their synthesis. *Bioch. Biology* 73: 59-66, 1995.
27. **Tzanakakis GN.**, Karamanos NK., Hjerpe A: Effects on glycosaminoglycan synthesis in cultured human mesothelioma cells of transforming, epidermal and fibroblast growth factors and their combinations with platelet-derived growth factor. *Exp. Cell Res* 220: 130-137, 1995.
28. **Tzanakakis GN.**, Karamanos NK., Syrokou A., Hjerpe A: Effect of insulin and epidermal growth factors on the synthesis of glycosaminoglycans/proteoglycans in cultured human malignant mesothelioma cells of different phenotypic morphology. *APMIS* 104: 718-728, 1996.
29. Karamanos NK., Vanky P., **Tzanakakis GN.**, Hjerpe A: High-performance capillary electrophoresis method to characterize heparin and heparan sulfate disaccharides. *Electrophoresis* 17: 391-395, 1996.
30. Karamanos NK., Vanky P., **Tzanakakis GN.**, Tseggenidis T., Hjerpe A: Ion-pair high-performance liquid chromatography for determining disaccharide composition in heparin and heparan sulfate. *Journal of Chromatography A*. 765: 169-179, 1997.
31. **Tzanakakis GN.**, Hjerpe A, Karamanos NK.: Proteoglycan synthesis induced by transforming and basic fibroblast growth factors in human malignant mesothelioma is mediated through specific receptors and the tyrosine kinase intracellular pathway. *Biochimie* 79: 323-332, 1997
32. Syrokou A., **Tzanakakis GN.**, Tseggenidis T., Hjerpe A., Karamanos NK.: Effects of glycosaminoglycans on proliferation of epithelial and fibroblast human malignant mesothelioma cells: a structure-function relationship. *Cell Prolif.* 32: 85-99, 1999.
33. Syrokou A., **Tzanakakis GN.**, Hjerpe A., Karamanos NK.: Proteoglycans in human malignant mesothelioma. Stimulation of their synthesis induced by epidermal, insulin and platelet-derived growth factors involves receptors with tyrosine kinase activity. *Biochimie* 81: 733-744, 1999.
- 2.34 Tsatsakis AM., Bertsiak GK., Liakou V., Mammias IN., Stiakakis I., **Tzanakakis GN.**: Severe fenthion intoxications due to ingestion and inhalation with survival outcome. *Human & Experimental Toxicology* 21: 49-54, 2002.
35. Mitropoulou TN., **Tzanakakis GN.**, Nikitovic D., Tsatsakis A., Karamanos NK.: In vitro effects of genistein on the synthesis and distribution of glycosaminoglycans / proteoglycans by estrogen receptor-positive and negative human breast cancer epithelial cells. *Anticancer Research* 22: 2841-2846, 2002.
36. Baritaki S., **Tzanakakis GN.**, Alifragis J., Zafiroopoulos A., Tashmukhamedov R., Tsatsakis A., Shtilmand MI., Rizos AK., Krambovitis E.: Light scattering and in vitro biocompatibility studies

of poly (vinyl pyrrolidone) derivatives with amino acid-dependent groups. *J. Biomedical Material Research* 63: 830-837, 2002.

37. **Tzanakakis GN.**, Krambovitis E., Tsatsakis AM., Vezeridis MP.: The preventive effect of ketoconazole on experimental metastasis from a human pancreatic carcinoma may be related to its effect on prostaglandin synthesis. *International J. of Gasrointestinal Cancer* 32: 23-30, 2002.

38. Syrokou A., Dobra K., **Tzanakakis GN.**, Hjerpe A., Karamanos NK.: Synthesis and expression of mRNA encoding for different versican splice variants is related to aggregation of human malignant mesothelioma cells. *Anticancer Research* 22: 4157-4162, 2002.

39. Nikitovic D., Tsatsakis AM., Karamanos NK., **Tzanakakis GN.**: The effects of genistein on synthesis and distribution of glycosaminoglycans/proteoglycans by the two osteosarcoma cell lines depends on the tyrosine kinase and the estrogen receptor density. *Anticancer Research* 23: 459-464, 2003.

40. Mitropoulou T., **Tzanakakis GN.**, Kletsas D., Kalofonos H., Karamanos NK.: Letrozole as a potent inhibitor of cell proliferation and expression of metalloproteinase (MMP-2 and MMP-9) by human epithelial breast cancer cells. *Int. J. Cancer* 104: 155-160, 2003.

41. **Tzanakakis GN.**, Margioris AN., Tsatsakis AM., Vezeridis MP.: The metastatic potential of human pancreatic cell lines in the liver of nude mice correlates well with cathepsin B activity. *International J. of Gastrointestinal Cancer* 34: 27-38, 2003.

42. Dialyna I., **Tzanakakis G.**, Dolapsakis G., Tsatsakis A.: A tetranucleotide repeat polymorphism in the CYP19 gene and breast cancer susceptibility in a Greek population exposed and not exposed to pesticides. *Toxicology Letters* 151: 267-271, 2004.

43. Mitropoulou TN., Theocharis AD., Nikitovic D., Karamanos NK., **Tzanakakis GN.**: IGF-I affects glycosaminoglycans/proteoglycans synthesis in breast cancer cells through tyrosine kinase-dependent and -independent pathways. *Biochimie* 86: 251-259, 2004.

44. Bertias GK., Katonis P., **Tzanakakis GN.**, Tsatsakis AM. Review of clinical and toxicological features of acute pesticide poisonings in Crete (Greece) during the period 1991-2001. *Med Sci Monit* 10: CR622-627, 2004.

45. Savopoulos MA., Palis E., Tzatzarakis MN., Dialyna IA., **Tzanakakis GN.**, Tsatsakis AM. Legal issues of addiction assessment: the experience with hair testing in Greece. *J Appl Toxicol* 25: 143-152, 2005.

46. Vlata Z., Porichis F., **Tzanakakis G.**, Tsatsakis A., Krambovitis E. In vitro cytopathic effects of mycotoxin T-2 on human peripheral blood T lymphocytes. *Toxicol Lett* 160: 60-68, 2005.

47. Nikitovic D., Zafiropoulos A., **Tzanakakis GN.**, Karamanos NK., Tsatsakis AM. Effects of glycosaminoglycans on cell proliferation of normal osteoblasts and human osteosarcoma cells depend on their type and fine chemical compositions. *Anticancer Res* 25: 2851-2856, 2005.

48. **Tzanakakis GN.**, Syrokou A., Kanakis I., Karamanos NK. Determination and distribution of N-acetyl- and N-glycolylneuraminic acids in culture media and cell-associated glycoconjugates

from human malignant mesothelioma and adenocarcinoma cells. *Biomed Chromatogr* 20: 434-439, 2006.

49. Papanikolaou NC., Hatzidaki EG., Belivanis S., **Tzanakakis GN.**, Tsatsakis AM. Lead toxicity update. A brief review. *Med Sci Monit* 11: 329-336, 2005.

50. Charvalos E., Tzatzarakis MN., Van Bambeke F., Tulkens PM., Tsatsakis AM., **Tzanakakis GN.**, Mingeot-Leclercq MP. Water-soluble amphotericin B-polyvinylpyrrolidone complexes with maintained antifungal activity against *Candida* spp. And *Aspergillus* spp. And reduced haemolytic and cytotoxic effects. *J of Antimicrobial Chemotherapy* 57: 236-244, 2006.

51. Nikitovic D., Zafiropoulos A., Katonis P., Tsatsakis A., Theocharis AD., Karamanos NK., **Tzanakakis GN.** Transforming growth factor- β as a key molecule triggering the expression of versican isoforms V0 and V1, hyaluronan synthase-2 and synthesis of hyaluronan in malignant osteosarcoma cells. *IUMB Life* 58: 47-53, 2006.

52. Kousidou OCh., **Tzanakakis GN.**, Karamanos NK. Effects of the natural isoflavoid genistein on growth, signaling pathways and gene expression of matrix macromolecules by breast cancer cells. *Mini Rev Med Chem* 6: 331-337, 2006.

53. Vlata Z., Porichis F., **Tzanakakis G.**, Tsatsakis A., Krambovitis E. A study of zearalenone cytotoxicity on human peripheral blood mononuclear cells. *Toxicol Lett* 165: 274-281, 2006.

54. Fthenou E., Zafiropoulos A., Tsatsakis A., Stathopoulos A., Karamanos NK., **Tzanakakis GN.** Chondroitin sulfate A chains enhance platelet derived growth factor-mediated signaling in fibrosarcoma cells. *Int J Biochem Cell Biol* 38: 2141-2150, 2006.

55. Sifaki M., Assouti M., Nikitovic D., Krasagakis K., Karamanos NK., **Tzanakakis GN.** Lumican, a small leucine-rich proteoglycan substituted with keratin sulfate chains is expressed and secreted by human melanoma cells and not normal melanocytes. *IUBMB Life* 58: 606-610, 2006.

56. Theocharis AD., Tsolakis I., **Tzanakakis GN.**, Karamanos NK. Chondroitin sulfate as a key molecule in the development of atherosclerosis and cancer progression. *Adv Pharmacol* 53: 281-295, 2006.

57. Hajioannou JK., Nikolidakis A., Naumidi I., Helidonis E., **Tzanakakis GN.**, Velegarakis GA. In vitro enzymatic treatment and carbon dioxide laser beam irradiation of morphologic cartilage specimens. *Arch Otolaryngol Head Neck Surg* 132: 1363-1370, 2006.

58. Kolokythas G., Kostakis IK., Pouli N., Marakos P., Kousidou OCh., **Tzanakakis GN.**, Karamanos NK. Design and synthesis of new pyranoxanthenones bearing a nitro group or an aminosubstituted side chain on the pyran ring. Evaluation of their growth inhibitory activity in breast cancer cells. *Eur J Med Chem* 42: 307-319, 2007.

59. **Tzanakakis GN.**, Nikitovic D., Katonis P., Kanakis I., Karamanos NK. Expression and distribution of N-acetyl and N-glycolylneuraminic acids in secreted and cell-associated glycoconjugates by two human osteosarcoma cell lines. *Biomed Chromatogr* 21: 406-409, 2007.

60. Giannouli V., Kostakis IK., Pouli N., Marakos P., Kousidou OC., **Tzanakakis GN.**, Karamanos

NK. Design, Synthesis, and Evaluation of the Antiproliferative Activity of a Series of Novel Fused Xanthenone Aminoderivatives in Human Breast Cancer Cells. *J Med Chem* 50: 1716-1719, 2007.

61. Roussidis AE., Theocharis AD., **Tzanakakis GN.**, Karamanos NK. The Importance of c-Kit and PDGF Receptors as Potential Targets for Molecular Therapy in Breast Cancer. *Curr Med Chem* 14: 735-743, 2007.

62. Chatzinikolaou G., Nikitovic D., Stathopoulos EN., Velegrakis GA., Karamanos NK., **Tzanakakis GN.** Protein tyrosine kinase and estrogen receptor dependent pathways regulate the synthesis and distribution of glycosaminoglycans / proteoglycans produced by two human colon cancer cell lines. *Anticancer Res* 27: 4101-4106, 2007.

63. Stahtea XN., Roussidis AE., Kanakis I., **Tzanakakis GN.**, Chalkiadakis G., Mavroudis D., Kletsas D., Karamanos NK. Imatinib inhibits colorectal cancer cell growth and suppresses stromal-induced growth stimulation, MT1-MMP expression and pro-MMP2 activation *Int J Cancer* 121: 2808-2814, 2007.

64. Kostakis IK., Pouli N., Marakos P., Kousidou OC., Roussidis A., **Tzanakakis GN.**, Karamanos NK. Design, synthesis and cell growth inhibitory activity of a series of novel aminosubstituted xanthanol [1,2-d] imidazoles in breast cancer cells. *Bioorg Med Chem* 16: 3445-3455, 2007.

65. Nikitovic D., Assouti M., Sifaki M., Katonis P., Krasagakis K., Karamanos NK., **Tzanakakis GN.** Chondroitin sulfate and heparin sulfate-containing proteoglycans are both partners and targets of basic fibroblast growth factor-mediated proliferation in human metastatic melanoma cell lines *Int J Biochem Cell Biol*, 40: 72-83, 2007.

66. Fthenou E., Zafiropoulos., Katonis P., Tsatsakis A., Karamanos NK., **Tzanakakis GN.** Chondroitin sulfate prevents platelet derived growth factor-mediated phosphorylation of PDGF-RB in normal human fibroblasts severely impairing mitogenic responses. *J Cell Biochem* 103: 1866-1876, 2007.

67. Katonis P., Pasku D., Tzermiadianos M., **Tzanakakis G.**, Kontakis G, Hadjipavlou A. Intradural tumours of the lumbar spine presenting with low back pain: Report of two cases and review of the literature. *Acta Orthopaedica Belgica* 74: 282-288, 2008.

68. Katonis P., Papoutsidakis A., Aligizakis A., **Tzanakakis G.**, Kontakis G., Papagelopoulos P. *Mechanoreceptors of the posterior cruciate ligament" The Journal of International Medical Research* 36: 387-393, 2008.

69. Berdiaki A., Zafiropoulos A., Fthenou E., Katonis P., Tsatsakis A., Karamanos NK., **Tzanakakis GN.** Regulation of hyaluronan and versican deposition by growth factors in fibrosarcoma cell lines. *Biochim Biophys Acta* 1780: 194-202, 2008.

70. Malavaki CJ., Asimakopoulou AP., Lamari FN., Theocharis A., **Tzanakakis GN.**, Karamanos NK. Capillary electrophoresis for the quality control of chondroitin sulfates in raw materials and formulations. *Anal Biochem* 374: 213-220, 2008.

71. Nikitovic D., Berdiaki A., Zafiropoulos A., Katonis P., Tsatsakis A., Karamanos NK., **Tzanakakis GN.** Lumican is positively correlated with human osteosarcoma cell differentiation and negatively with their growth. *FEBS J* 275: 350-361, 2008.

72. Krasagakis K., Krüger-Krasagakis S., **Tzanakakis GN.**, Darivianaki K., Stathopoulos EN., Tosca A.D. Interferon-alpha inhibits proliferation and induces apoptosis of Merkel cell carcinoma in vitro. *Cancer Invest* 26: 562-568, 2008.
73. Zafiropoulos A., **Tzanakakis GN.** Decorin- mediated effects in cancer cell biology. *Connective Tissue Research* 49: 244-248, 2008.
74. Stahtea X., Kousidou O., Roussidis AE., **Tzanakakis GN.**, Karamanos NK. Small tyrosine kinase inhibitors as key molecules in the expression of metalloproteinases by solid tumors. *Connective Tissue Research* 49: 211-214, 2008.
75. Zafiropoulos A., Nikitovic D., Katonis P., Tsatsakis A., Karamanos N.K., **Tzanakakis G.N.** Decorin-induced growth inhibition is overcome through protracted expression and activation of EGFRs in osteosarcoma cells *Mol. Cancer Res* 6: 785-794, 2008.
76. Nikitovic D., Berdiaki B., Chalkiadaki G., Karamanos NK., **Tzanakakis GN.** The role of SLRP-proteoglycans in osteosarcoma pathogenesis. *Connective Tissue Research* 49: 235-238, 2008.
77. Asimakopoulou A., Theocharis A., **Tzanakakis GN.**, Karamanos NK. The biological role of chondroitin sulfate in cancer and chondroitin based anticancer drugs. *In vivo* 22: 385-389, 2008.
78. Zafiropoulos A., Fthenou E., Chatzinikolaou G., **Tzanakakis GN.** Glycosaminoglycans and PDGF signaling in mesenchymal cells. *Connective Tissue Research* 49: 153-156, 2008.
- 2.79 Chatzinikolaou G., Nikitovic D., Asimakopoulou A., Tsatsakis A., Karamanos NK., **Tzanakakis GN.** Heparin a unique stimulator of human colon cancer cells' growth. *IUBMB Life* 60: 333-340, 2008.
80. Kousidou OC., Berdiaki A., Kletsas D., Zafiropoulos A., Theocharis AD., Tzanakakis GN, Karamanos NK. Estrogen receptors mediate the effect of estradiol on the expression of syndecans and metalloproteinases in breast cancer cells. *Molecular Oncology* 2: 223-232, 2008.
81. Tsatsakis AM., Zafiropoulos A., Tzatzarakis M., Tzanakakis GN., Kafatos A. Relation of PON1 and CYP1A1 genetic polymorphisms to clinical findings in a cross-sectional study of a Greek rural population professionally exposed to pesticides. *Toxicol Lett* 186: 66-72, 2009.
82. Nikitovic D., Katonis P., Tsatsakis AM., Karamanos NK., **Tzanakakis GN.** Lumican, a small leucine-rich proteoglycan. *IUBMB-Life* 60: 818-823, 2008.
83. Fthenou E., Zong F., Zafiropoulos A., Dobra K., Hjerpe A and **Tzanakakis GN.** Chondroitin sulfate A regulates fibrosarcoma cell adhesion, motility and migration through JNK and tyrosine kinase signaling pathways. *In vivo* 23: 69-76, 2009.
84. Chalkiadaki G., Nikitovic D., Berdiaki A., Sifaki M., Krasagakis K., Katonis P., Karamanos NK., **Tzanakakis GN.** Fibroblast growth factor-2 modulates melanoma adhesion and migration through a syndecan-4-dependent mechanism. *Int J Biochem Cell Biol* 41: 1323-1331, 2009.

85. Zarogoulidis K., Boutsikoy E., Zarogoulidis P., Eleftheriadou E., Kontakiotis T., Tzanakakis GN., Kanakis J., Karamanos NK. The impact of zoledronic acid therapy in survival of lung cancer patients with bone metastasis *Int J Cancer* 125: 1705-1709, 2009.
86. Chatzinikolaou G., Nikitovic D., Berdiaki A., Zafiropoulos A., Katonis P., Karamanos NK., Tzanakakis GN. Heparin regulates colon cancer cell growth through p38 mitogen activated protein kinase signaling. *Cell Proliferation* 43: 9-18, 2010.
87. Fang Z., Fthenou E., Castro J., Peterfia B., Kovalszky I., Szilak L., Tzanakakis G., Dobra K. Effect of syndecan-1 overexpression on mesenchymal tumour cell proliferation with focus on different functional domains. *Cell Proliferation* 43: 29-40, 2010.
88. Berdiaki A., Nikitovic D., Tsatsakis A., Katonis P., Karamanos NK., **Tzanakakis GN.** bFGF induces changes in hyaluronan synthase and hyaluronidase isoform expression and modulates the migration capacity of fibrosarcoma cells. *Biochim Biophys Acta* 1790: 1258-1265, 2009.
89. Gialeli CH., Kletsas D., Kalofonos C., Mauroudis D., **Tzanakakis GN.**, Karamanos NK. Strategies to target epidermal growth factor receptor in solid tumor: critical evaluation of the biological importance of the therapeutic monoclonal antibodies. *Current Medical Chemistry* 16: 3797-3804, 2009.
90. Zong F., Fthenou E., Wolmer N., Hollosi P., Kovalszky I., Szilak L., Mogler C., Nilsonne G., **Tzanakakis G.**, Dobra K. Syndecan-1 and FGF-2, but Not FGF Receptor-1, Share a Common Transport Route and Co-localize with Heparanase in the Nuclei of Mesenchymal Tumor Cells. *PLoS ONE* 4: e7346, 2009.
91. Katonis P., Pasku D., Alpantaki K., Bano A., **Tzanakakis G.**, Karantas. Treatment of pathologic spinal fractures with combined radiofrequency ablation and ballon kyphoplasty. *World Journal of Surgical Oncology* 7: 90, 2009.
92. Karadimas SK., Gialeli Ch., Klironomos G., **Tzanakakis GN.**, Panagiotopoulos E., Karamanos NK., Gatzounis G. The role of oligodendrocytes in the molecular pathobiology and potential molecular treatment of cervical spondylotic myelopathy. *Current Medical Chemistry* 17: 1048-1058, 2010.
93. Bano A., Karantanas A., Pasku D., Datsis G., **Tzanakakis G.**, Katonis P. Persistent sciatica induced by quadratus femoris muscle tear and treated by surgical decompression. *Journal of Medical Case Reports* 2: 236, 2010.
94. Zafiropoulos A., Linardakis M., Jansen EHJM., Tsatsakis AM., Kafatos A and **Tzanakakis GN.** Paraoxonase 1 R/Q alleles are associated with differential accumulation of saturated versus 20:5n3 fatty acid in human adipose tissue. *Journal of Lipid Research* 51: 1991-2000, 2010.
95. Berdiaki A., Datsis G., Nikitovic D., Tsatsakis A., Katonis P., Karamanos NK., **Tzanakakis GN.** Parathyroid hormone (PTH) peptides through the regulation of hyaluronan metabolism affect osteosarcoma cell migration. *IUBMB Life* 62: 377-386, 2010.
96. Theocharis AD., Skandalis SS., **Tzanakakis GN.**, Karamanos NK. Proteoglycans in health and disease: novel roles for proteoglycans in malignancy and their pharmacological targeting.

FEBS J 277(19): 3904-23, 2010.

97. Krasagakis K., Fragiadaki I., Metaxari M., Kruger-Krasagakis S., **Tzanakakis GN.**, Stathopoulos EN., Eberle J., Tavernarakis N., Tosca AD. Kit receptor activation by autocrine and paracrine stem cell factor stimulates growth of merkel cell carcinoma in vitro. *Journal of Cellular Physiology* 226(4): 1099-109, 2011.

98. Malavaki Ch., Theocharis AD., Lamari FN., Kanakis J., Tsegenidis T., **Tzanakakis GN.**, Karamanos NK. Heparan sulfate: biological significance, tools for biochemical analysis and structural characterization. *Biomed Chromatogr* 25: 11-20, 2011.

99. Chalkiadaki G., Nikitovic D., Berdiaki A., Katonis P., Karamanos NK., **Tzanakakis GN.** Heparin plays a key regulatory role via a p53/FAK-dependent signaling in melanoma cell adhesion and migration. *IUBMB Life* 63(2): 109-19, 2011.

100. Katonis P., Alpantaki K., Michail K., Lianoudakis S., Christoforakis Z., **Tzanakakis G.**, Karantanas A. Spinal Chondrosarcoma: A review. *Sarcoma* 2011: 378957, 2011.

101. Nikitovic D., Chalkiadaki G., Berdiaki A., Aggelidakis J., Katonis P., Karamanos NK and **Tzanakakis GN.** Lumican regulates osteosarcoma cell adhesion by modulating TGF β 2 activity. *Int J Biochem Cell Biol* 43(6): 928-35, 2011.

102. Zong F., Fthenou E., Mundt F., Szatmari T., Kovalszky I., Szilak L., Brodin D., **Tzanakakis G.**, Hjerpe A., Dobra K. Specific syndecan-1 domains regulate mesenchymal tumor cell adhesion, motility and migration. *PLoS ONE* 6(6): e14816, 2011.

103. Datsis G., Berdiaki A., Nikitovic D., Mytilineou M., Katonis P., Karamanos NK., **Tzanakakis GN.** Parathyroid hormone affects the fibroblast growth factor / proteoglycan signaling axis to regulate osteosarcoma cell migration. *FEBS Journal* 278(19): 3782-92, 2011.

104. Chalkiadaki G., Nikitovic D., Katonis P., Berdiaki A., Tsatsakis A., Kotsikoianni I., Karamanos NK., **Tzanakakis GN.** Low molecular weight heparin inhibits melanoma cell adhesion and migration through a PKCa/JNK signaling pathway inducing actin cytoskeleton changes. *Cancer Letters* 312(2): 235-244, 2011.

105. Kouvidi K., Berdiaki A., Nikitovic D., Katonis P., Afratis N., Hascall VC., Karamanos NK., **Tzanakakis GN.** Role of receptor for hyaluronan mediated motility (RHAMM) in low molecular weight hyaluronan (LMWHA) mediated fibrosarcoma cell adhesion. *Journal of Biological Chemistry* 286(44): 38509-38520, 2011.

106. Karamanos NK., **Tzanakakis GN.** Glycosaminoglycans: from "cellular glue" to novel therapeutical agents. *Current Opinion in Pharmacology* 12(2): 220-222, 2012.

107. Afratis N., Gialeli C., Nikitovic D., Tsegenidis T., Karousou E., Theocharis A., Pavao M., **Tzanakakis GN.**, Karamanos NK. Glycosaminoglycans: key players in cancer cell biology and treatment. *FEBS Journal* 279(7): 1177-1197, 2012.

108. Skandalis SS., Aletras AJ., Gialeli C., Theocharis AD., Afratis N., **Tzanakakis GN.**, Karamanos NK. Targeting the tumor proteasome as a mechanism to control the synthesis and bioactivity of matrix macromolecules. *Current Molecular Medicine* 12(8): 1068-1082, 2012.

109. Nikitovic D., Aggelidakis J., Young MF., Iozzo RV., Karamanos NK., **Tzanakakis GN**. The biology of small leucine-rich proteoglycans in bone pathophysiology. *J. Biol Chem.* 287(41): 33926-33933, 2012.
1110. Nikitovic D., Chatzinikolaou G., Tsiaoussis J., Tsatsakis A., Karamanos NK., **Tzanakakis GN**. Insights into Targeting Colon Cancer Cell Fate at the Level of Proteoglycans/Glycosaminoglycans. *Current Medical Chemistry* 19(25): 4247-4258, 2012.
11. Dedes PD., Chrisostomi G., Tsonis AI, Kanakis I., Achilleas D Theocharis AD., Kletsas D., **Tzanakakis GN.**, Karamanos NK. Expression of matrix macromolecules and functional properties of breast cancer cells are modulated by the bisphosphonate zoledronic acid. *Biochim Biophys Acta* 1820(12): 1926-1939, 2012.
112. Gialeli Ch., Theocharis AD., Kletsas D., **Tzanakakis GN.**, Karamanos NK. Expression of matrix macromolecules and functional properties of EGF-responsive colon cancer cells are inhibited by panitumumab. *Invest New Drugs* 31(3): 516-524, 2013.
113. Mytilinaiou M., Banos A., Nikitovica D., Berdiakia A., Voudouria K., Kalogeraki A., Karamanos NK., **Tzanakakis GN**. Syndecan-2 is a Key Regulator of TGF beta / Smad2 Mediated Adhesion in Fibrosarcoma Cell. *IUBMB Life* 65(2): 134-143, 2013.
114. Dedes PG., Kanakis I., Ch. Gialeli Ch., Theocharis AD., Tsegenidis T., Kletsas D., **Tzanakakis GN.**, and Karamanos NK. Preclinical evaluation of zoledronate using an *in vitro* mimetic cellular model for breast cancer metastatic bone disease. *Biochim Biophys Acta* 1830(6): 3625-3634, 2013.
115. Tsonis A., Afratis N., Gialeli Ch., Ellina, MI., Piperigkou Z., Skandalis S., Theocharis A., **Tzanakakis G.**, Karamanos N. Evaluation of the coordinated actions of estrogen receptors with EGFR and IGFR in the expression of cell surface heparan sulfate proteoglycans and cell motility in breast cancer cells. *FEBS Journal* 280(10): 2248-2259, 2013.
116. Malavaki Ch., Roussidis A., Gialeli Ch., Kletsas D, Tsegenidis Th., Theocharis A., **Tzanakakis G.**, Karamanos N. Imatinib as a key inhibitor of the PDGF-R mediated expression of cell surface heparan sulfate proteoglycans and functional properties of breast cancer cells. *FEBS Journal* 280(10): 2477-2489, 2013.
117. Nikitovic D, Berdiaki A, Banos A, Tsatsakis A, Karamanos NK, Tzanakakis GN. Could growth factor-mediated extracellular matrix deposition and degradation offer the ground for directed pharmacological targeting in fibrosarcoma? *Curr Med Chem.* 20(23):2868-2880, 2013.
118. Nikitovic D., Corsini E., Kouretas D., Tsatsakis A., **Tzanakakis GN**. ROS-major mediators of extracellular matrix remodeling during tumor progression. *Food Chem Toxicol.* 69(13): 381-385, 2013.
119. Nikitovic D., Kouvidi K., Karamanos NK., Tzanakakis GN. The roles of hyaluronan/RHAMM/CD44 and their respective interactions along the insidious pathways of fibrosarcoma progression. *BioMed Research International* 2013:929531.
120. Skandalis S., Afratis N., Smirlaki G., Nikitovic D., Theocharis A., **Tzanakakis GN.**, Karamanos NK. Cross-talk between estradiol receptor and EGFR/IGF-IR signaling pathways in

estrogenresponsive breast cancers: focus on the role and impact of proteoglycans. *Matrix Biology* 35:182-193, 2014.

121. Nikitovic D., Paputsidakis A., Karamanos NK., **Tzanakakis GN**. Lumican affects tumor cell functions, tumor-ECM interactions, angiogenesis and inflammatory response. *Matrix Biology* 35:206-214, 2014.

122. Gialeli Ch., Nikitovic D., Kletsas D., Theocharis AD., **Tzanakakis GN**, and Karamanos NK. PDGF/PDGFR signaling and targeting in cancer growth and progression: focus on tumor microenvironment and cancer-associated fibroblasts. *Current Pharmaceutical Design* 20(17):2843-2848, 2014.

123. Nikitovic D., Mytilinaiou M., Berdiaki A, Karamanos NK., **Tzanakakis GN**. Heparan sulfate proteoglycans and heparin regulate melanoma cell functions. *BBA General Subjects* 18408):2471-2481, 2014.

124. Sahnazidou D., Geromichalos GD., Stagos D., Apostolou A., Haroutounian SA., Tsatsakis AM., **Tzanakakis GN**, Hayes AW., Kouretas D. Anticarcinogenic activity of polyphenolic extracts from grape stems against breast, colon, renal and thyroid cancer cells. *Toxicology Letters* 230(2):218-224, 2014.

125. Nikitovic D., Juranek I., Wilks MF., Tzardi M., Tsatsakis A., **Tzanakakis GN**. Anthracycline-dependent cardiotoxicity and extracellular matrix remodeling. *CHEST* 146(4):1123-30, 2014.

126. Kouvidi K, Nikitovic D, Berdiaki A, **Tzanakakis GN**. Hyaluronan/RHAMM interactions in mesenchymal tumor pathogenesis: role of growth factors. *Adv Cancer Res* 123:319-349, 2014.

127. Nikitovic D, Kouvidi K, Voudouri K, Berdiaki A, Karousou E, Passi A, **Tzanakakis GN**. The motile breast cancer phenotype roles of proteoglycans /glycosaminoglycans. *Biomed Res Int*. 2014;124321, 2014.

128. Nikitovic D., Berdiaki A., Galbiati V., Kavasi RM., Papale A., Tsatsakis A., **Tzanakakis GN**, M.D., Corsini E. Hyaluronan regulates chemical allergen-induced IL-18 production in human keratinocytes. *Toxicology Letters* 1;232(1):89-97, 2014.

129. Nikitovic D., Juranek I., Wilks MF., Tzardi M., Tsatsakis A., **Tzanakakis GN**. Anthracycline-dependent cardiotoxicity and extracellular matrix remodeling. *Chest*. 146(4):1123-30, 2014.

130. **Tzanakakis G.**, Kovalszky I., Heldin P., Nikitovic D. Proteoglycans/glycosaminoglycans: from basic research to clinical practice. *Biomed. Res Int*. 2014:295254, 2014.

131. Nikitovic D., Tzardi M., Berdiaki A., Tsatsakis A., **Tzanakakis GN**. Cancer microenvironment and inflammation: role of hyaluronan. *Front Immunol*. 6:169, 2015.

132. Vouduri K., Berdiaki A., Tzardi M., **Tzanakakis GN**, Nikitovic D. Insulin-like growth factor and epidermal growth factor signaling in breast cancer cell growth: focus on endocrine resistant disease. *Anal Cell Pathol* 2015:975495, 2015.

133. Nikitovic D., Kouvidi K., Kavasi RM., Berdiaki A., **Tzanakakis GN**. Hyaluronan/Hyaladherins-a Promising Axis for Targeted Drug Delivery in Cancer. *Curr Drug Deliv*. 2015.
134. Zacharopoulos GV., Manios A., Kau CH., Velegrakis G., **Tzanakakis GN.**, de Bree E. Anthropometric Analysis of the Face. *J Craniofac Surg*. 27(1): 71-75, 2016.
135. Kouvidi K., Berdiaki A., Tzardi M., Karousou E., Passi A., Nikitovic D., **Tzanakakis GN**. Receptor for hyaluronic acid-mediated motility (RHAMM) regulates HT1080 fibrosarcoma cell proliferation via a b-catenin/c-myc signaling axis. *Biochim Biophys Acta* 1860(4): 814-824, 2016.
136. Zurac S, Neagu M, Constantin C, Cioplea M, Nedelcu R, Bastian A, Popp C, Nichita L, Andrei R, Tebeica T, Tanase C, Chitu V, Caruntu C, Ghita M, Popescu C, Boda D, Mastalier B, Maru N, Daha C, Andreescu B, Marinescu I, Rebosapca A, Staniceanu F, Negroiu G, Ion DA, Nikitovic D, **Tzanakakis GN**, Spandidos DA, Tsatsakis AM. Variations in the expression of TIMP1, TIMP2 and TIMP3 in cutaneous melanoma with regression and their possible function as prognostic predictors. *Oncol Lett*. 11(5):3354-3360, 2016.
137. Voudouri K, Nikitovic D, Berdiaki A, Kletsas D, Karamanos NK, **Tzanakakis GN**. IGF-I/EGF and E2 signaling crosstalk through IGF-IR conduit point affects breast cancer cell adhesion. *Matrix Biol*.53X(16)30145-7, 2016.
138. Nikitovic D, Kavasi RM, Berdiaki A, Papachristou DJ, Tsiaoussis J, Spandidos DA, Tsatsakis AM, **Tzanakakis GN**. Parathyroid hormone/parathyroid hormone-related peptide regulate osteosarcoma cell functions: Focus on the extracellular matrix (Review). *Oncol Rep*.36(4):1787-92, 2016.
139. Shishatskaya EI, Nikitovic D, Vasilievich AS, **Tzanakakis GN**, Tsatsakis AM, Menzianova NG. Short-term culture of monocytes as an in vitro evaluation system for bionanomaterials designated for medical use. *Food Chem Toxicol*. 96:302-8, 2016.
140. Voudouri K, Nikitovic D, Berdiaki A, Papachristou DJ, Tsiaoussis J, Spandidos DA, Tsatsakis AM, **Tzanakakis GN**. Heparin regulates B6FS cell motility through a FAK/actin cytoskeleton axis. *Oncol Rep*. 36(5): 2471-2480, 2016.
141. Gangemi S, Gofita E, Costa C, Teodoro M, Briguglio G, Nikitovic D, **Tzanakakis G**, Tsatsakis AM, Wilks MF, Spandidos DA, Fenga C. Occupational and environmental exposure to pesticides and cytokine pathways in chronic diseases (Review). *Int J Mol Med*. 38(4): 1012-20, 2016.
142. Voudouri K, Nikitovic D, Berdiaki A, Tsiaoussis J, Kletsas D, Karamanos NK, **Tzanakakis GN**. Data on the putative role of p53 in breast cancer cell adhesion: Technical information for adhesion assay. *Data Brief*. 2016 Sep 30;9: 568-572, 2016.
143. Kavasi RM, Berdiaki A, Spyridaki I, Corsini E, Tsatsakis A, **Tzanakakis G**, Nikitovic D. HA metabolism in skin homeostasis and inflammatory disease. *Food Chem Toxicol*. 2017 Mar;101:128-138, 2017.
144. Hashemzaei M, Delarami Far A, Yari A, Heravi RE, Tabrizian K, Taghdisi SM, Sadegh SE, Tsarouhas K, Kouretas D, **Tzanakakis G**, Nikitovic D, Anisimov NY, Spandidos DA, Tsatsakis

AM, Rezaee R. Anticancer and apoptosis inducing effects of quercetin in vitro and in vivo. *Oncol Rep.* 2017 Aug;38(2):819-828, 2017.

145. Yang SH, Tsatsakis AM, **Tzanakakis G**, Kim HS, Le B, Sifaki M, Spandidos DA, Tsukamoto C, Golokhvast KS, Izotov BN, Chung G. Soyasaponin Ag inhibits α MSH induced melanogenesis in B16F10 melanoma cells via the downregulation of TRP 2. *Int J Mol Med.* 2017 Sep;40(3):631-636, 2017.

146. Lupu M, Caruntu A, Caruntu C, Papagheorghe LML, Ilie MA, Voiculescu V, Boda D, Constantin C, Tanase C, Sifaki M, Drakoulis N, Mamoulakis C, **Tzanakakis G**, Neagu M, Spandidos DA, Izotov BN, Tsatsakis AM. Neuroendocrine factors: The missing link in non melanoma skin cancer . *Oncol Rep.* 2017 Sep;38(3):1327-1340, 2017.

147. **Tzanakakis G**, Kavasi RM, Voudouri K, Berdiaki A, Spyridaki I, Tsatsakis A, Nikitovic D. Role of the extracellular matrix in cancer-associated epithelial to mesenchymal transition phenomenon. *Dev Dyn.* Jul 30. doi: 10.1002/dvdy.24557, 2017.

148. Mytilinaiou M, Nikitovic D, Berdiaki A, Kostouras A, Papoutsidakis A, Tsatsakis AM, **Tzanakakis GN**. Emerging roles of syndecan 2 in epithelial and mesenchymal cancer progression. *IUBMB Life.* Sep 23. doi: 10.1002/iub.1678, 2017.

149. Mytilinaiou M, Nikitovic D, Berdiaki A, Papoutsidakis A, Papachristou DJ, Tsatsakis A, **Tzanakakis GN**. IGF-I regulates HT1080 fibrosarcoma cell migration through a syndecan-2/Erk/ezrin signaling axis. *Exp Cell Res.* Sep 28. pii: S0014-4827(17)30515-3, 2017.

150. Caunii A, Oprean C, Cristea M, Ivan A, Danciu C, Tatu C, Paunescu V, Marti D, **Tzanakakis G**, Spandidos DA, Tsatsakis A, Susan R, Soica C, Avram S, Dehelean C. Effects of ursolic and oleanolic on SK MEL 2 melanoma cells: In vitro and in vivo assays. *Int J Oncol.* 2017.

151. Boda D, Docea AO, Calina D, Ilie MA, Caruntu C, Zurac S, Neagu M, Constantin C, Branisteanu DE, Voiculescu V, Mamoulakis C, **Tzanakakis G**, Spandidos DA, Drakoulis N, Tsatsakis AM. Human papilloma virus: Apprehending the link with carcinogenesis and unveiling new research avenues. *Int J Oncol.* Mar;52(3):637-655, 2018.

152 Nikitovic D, Berdiaki A, Spyridaki I, Krasanakis T, Tsatsakis A, **Tzanakakis GN**. Proteoglycans-Biomarkers and Targets in Cancer Therapy. *Front Endocrinol.* Mar 6;9:69, 2018.

152. Corsini E, Engin AB, Neagu M, Galbiati V, Nikitovic D, **Tzanakakis G**, Tsatsakis AM. Chemical-induced contact allergy: from mechanistic understanding to risk prevention. *Arch Toxicol.* Oct;92(10):3031-3050, 2018.

153. Papachristou NI, Blair HC, Kalyvioti ES, Syggelos SA, Karavia EA, Kontogeorgakos V, Nikitovic D, **Tzanakakis GN**, Kypreos KE, Papachristou DJ. Western-type diet differentially modulates osteoblast, osteoclast, and lipoblast differentiation and activation in a background of APOE deficiency. *Lab Invest.* Sep 11. doi: 10.1038/s41374-018-0107-7, 2018.

154. Aggelidakis J, Berdiaki A, Nikitovic D, Papoutsidakis A, Papachristou DJ, Tsatsakis AM, **Tzanakakis GN**. Biglycan Regulates MG63 Osteosarcoma Cell Growth Through a LPR6/ β -Catenin/IGFR-IR Signaling Axis. *Front Oncol.* Oct 23;8:470, 2018.

155. Dardiotis E, Aloizou AM, Markoula S, Siokas V, Tsarouhas K, **Tzanakakis G**, Libra M, Kyritsis AP, Brotis AG, Aschner M, Gozes I, Bogdanos DP, Spandidos DA, Mitsias PD, Tsatsakis A Cancer-associated stroke: Pathophysiology, detection and management (Review). *Int J Oncol*. Mar;54(3):779-796, 2019.
156. Mitroi M, Albulescu D, Capitanescu A, Docea AO, Musat G, Mitroi G, Zlatian O, Tsatsakis A, **Tzanakakis G**, Spandidos DA, Calina D. Differences in the distribution of CD20, CD3, CD34 and CD45RO in nasal mucosa and polyps from patients with chronic rhinosinusitis. *Mol Med Rep*. Apr;19(4):2792-2800, 2019.
157. Henrich-Noack P, Nikitovic D, Neagu M, Docea AO, Engin AB, Gelperina S, Shtilman M, Mitsias P, **Tzanakakis G**, Gozes I, Tsatsakis A. The blood-brain barrier and beyond: Nano-based neuropharmacology and the role of extracellular matrix. *Nanomedicine*. Apr;17:359-379, 2019.
158. **Tzanakakis G**, Neagu M, Tsatsakis A, Nikitovic D. Proteoglycans and Immunobiology of Cancer-Therapeutic Implications. Review *Front Immunol*. Apr 24;10:875, 2019.
159. Neagu M, Constantin C, Popescu ID, Zipeto D, **Tzanakakis G**, Nikitovic D, Fenga C, Stratakis CA, Spandidos DA, Tsatsakis AM. Inflammation and Metabolism in Cancer Cell-Mitochondria Key Player. Review *Front Oncol*. May 14;9:348, 2019.
160. Kavasi RM, Berdiaki A, Spyridaki I, Papoutsidakis A, Corsini E, Tsatsakis A, **Tzanakakis GN**, Nikitovic D. Contact allergen (PPD and DNCB)-induced keratinocyte sensitization is partly mediated through a low molecular weight hyaluronan (LMWHA)/TLR4/NF- κ B signaling axis. *Toxicol Appl Pharmacol*. 15;377:114632, 2019.
161. Tsatsakis A, Docea AO, Constantin C, Calina D, Zlatian O, Nikolouzakis TK, Stivaktakis PD, Kalogeraki A, Liesivuori J, **Tzanakakis G**, Neagu M. Genotoxic, cytotoxic, and cytopathological effects in rats exposed for 18 months to a mixture of 13 chemicals in doses below NOAEL levels. *Toxicol Lett*. 2019 Nov;316:154-170, 2019.
162. Tuaeva NO, Falzone L, Porozov YB, Nosyrev AE, Trukhan VM, Kovatsi L, Spandidos DA, Drakoulis N, Kalogeraki A, Mamoulakis C, **Tzanakakis G**, Libra M, Tsatsakis A. Translational Application of Circulating DNA in Oncology: Review of the Last Decades Achievements. *Cells*. Oct 14;8(10), 2019.