



Editorial

The Felicitous Success of the Subsection Molecular Oncology of International Journal of Molecular Sciences

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Abstract: The evolvement of the newly started subsection IJMS molecular oncology is discussed. The breadth and depth of the journal articles is alluded to. A bright future for this subsection is anticipated, developing into a top tier cancer journal.

This editorial commemorates the publication of more than 1000 articles in the *International Journal of Molecular Sciences*, subsection *Molecular Oncology*. This is an incredible success considering that the first article was published in 2018. The scope of the subsection is posted as follows on the Journal website:

"This section of the *International Journal of Molecular Sciences* (IJMS) aims to rapidly publish contributions on all aspects of the most recent research on human cancers. This section lies at the interface between medicinal chemistry and oncology research. We encourage the submission of high-quality manuscripts that provide novel mechanistic insights and details of the molecular signatures of oncogenic transformation. The scope of this section includes, but is not limited to, the following:

- Biological processes like gene activity and metabolisms in the development and progression of cancers
- Mechanisms of metastasis (vascular and lymphatic dissemination and seeding)
- Molecular pathology and immunology in tumor development
- Biomarkers in diagnostic processes
- Novel therapies like drug therapy, radiotherapy, gene therapy, hormonal therapy, and immunotherapy
- Cancer vaccines"

It easily can be claimed that these anticipations have successfully been met when assessing the journal's current track record. Thus far, 564 original articles and 420 reviews have been published, and 133 Special Issues are open or have been completed. The publications cover a broad range of various aspects of molecular oncology. Addressed are different tumor types such as prostate, lung, breast, gastric, colon, skin, leukemia and others. Molecular signaling responsible for conferring cancer phenotypes, examples of which are related to the cell cycle [1], epithelial–mesenchymal transition [2] or changes in cell–cell [3] or cell–matrix [4] interactions, mitogen-activated protein kinase (MAPK) [5], phosphatidyl inositol 3' kinase (PI3K) [6], mammalian target of rapamycin (mTOR) [7], Wnt [8], p53 [9], Myc [10], cytokines/chemokines [11,12], gene mutations [13], epigenetics [14] and miRNA [15], are addressed in a broad and/or deep manner.

Recent topics of cancer research are well represented. Novel diagnostics and biomarkers [16,17], the use of exosomes as biomarkers and/or relevance for the development of disease [18,19], and the influence of the microbiome for cancer initiation and progression [20] are addressed in abundance. Immuno-oncology [12] and tumor angiogenesis [21] have had numerous contributions, and epidemiological papers or other translational approaches are plentiful [22,23]. Papers addressing novel therapies including cancer vaccines are also frequently represented [5,9,10,24].



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In summary, the journal aims have all been successfully fulfilled during the short time it has been active and the future seems bright. The challenge lying ahead is to spread the excellence of *IJMS Molecular Oncology* in the cancer community, making it widely accepted as a top tier journal for the publication of the most recent cancer research of the highest quality.

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References

1. Liao, W.L.; Lin, J.Y.; Shieh, J.C.; Yeh, H.F.; Hsieh, Y.H.; Cheng, Y.C.; Lee, H.J.; Shen, C.Y.; Cheng, C.W. Induction of G2/M phase arrest by diosgenin via activation of Chk1 kinase and Cdc25C regulatory pathways to promote apoptosis in human breast cancer cells. *Int. J. Mol. Sci.* **2019**, *21*, 172. [[CrossRef](#)] [[PubMed](#)]
2. Zeng, P.; Sun, S.; Li, R.; Xiao, Z.X.; Chen, H. HER2 upregulates ATF4 to promote cell migration via activation of ZEB1 and downregulation of E-cadherin. *Int. J. Mol. Sci.* **2019**, *20*, 2223. [[CrossRef](#)]
3. Pence, L.J.; Kourtidis, A.; Feathers, R.W.; Haddad, M.T.; Sotiriou, S.; Decker, P.A.; Nassar, A.; Ocal, I.T.; Shah, S.S.; Anastasiadis, P.Z. PLEKHA7, an apical adherens junction protein, suppresses inflammatory breast cancer in the context of high E-cadherin and p120-catenin expression. *Int. J. Mol. Sci.* **2021**, *22*, 1275. [[CrossRef](#)] [[PubMed](#)]
4. Brandão-Costa, R.M.; Helal-Neto, E.; Vieira, A.M.; Barcellos-de-Souza, P.; Morgado-Díaz, J.; Barja-Fidalgo, C. Extracellular matrix derived from high metastatic human breast cancer triggers epithelial-mesenchymal transition in epithelial breast cancer cells through alphavbeta3 integrin. *Int. J. Mol. Sci.* **2020**, *21*, 2995. [[CrossRef](#)]
5. Lee, S.; Rauch, J.; Kolch, W. Targeting MAPK signaling in cancer: Mechanisms of drug resistance and sensitivity. *Int. J. Mol. Sci.* **2020**, *21*, 1102. [[CrossRef](#)]
6. Shorning, B.Y.; Dass, M.S.; Smalley, M.J.; Pearson, H.B. The PI3K-AKT-mTOR pathway and prostate cancer: At the crossroads of AR, MAPK, and WNT signaling. *Int. J. Mol. Sci.* **2020**, *21*, 4507. [[CrossRef](#)]
7. Hillmann, P.; Fabbro, D. PI3K/mTOR pathway inhibition: Opportunities in oncology and rare genetic diseases. *Int. J. Mol. Sci.* **2019**, *20*, 5792. [[CrossRef](#)]
8. Gajos-Michniewicz, A.; Czyz, M. WNT signaling in melanoma. *Int. J. Mol. Sci.* **2020**, *21*, 4852. [[CrossRef](#)]
9. Li, H.; Zhang, J.; Tong, J.H.M.; Chan, A.W.H.; Yu, J.; Kang, W.; To, K.F. Targeting the oncogenic p53 mutants in colorectal cancer and other solid tumors. *Int. J. Mol. Sci.* **2019**, *20*, 5999. [[CrossRef](#)]
10. Carabet, L.A.; Rennie, P.S.; Cherkasov, A. Therapeutic inhibition of myc in cancer. structural bases and computer-aided drug discovery approaches. *Int. J. Mol. Sci.* **2018**, *20*, 120. [[CrossRef](#)]
11. Kadomoto, S.; Izumi, K.; Mizokami, A. The CCL20-CCR6 axis in cancer progression. *Int. J. Mol. Sci.* **2020**, *21*, 5186. [[CrossRef](#)] [[PubMed](#)]
12. Zheng, T.; Ma, G.; Tang, M.; Li, Z.; Xu, R. IL-8 Secreted from M2 macrophages promoted prostate tumorigenesis via STAT3/MALAT1 pathway. *Int. J. Mol. Sci.* **2018**, *20*, 98. [[CrossRef](#)]
13. Siskova, A.; Cervena, K.; Kral, J.; Hucl, T.; Vodicka, P.; Vymetalkova, V. Colorectal adenomas-genetics and searching for new molecular screening biomarkers. *Int. J. Mol. Sci.* **2020**, *21*, 3260. [[CrossRef](#)] [[PubMed](#)]
14. Ruoss, M.; Damm, G.; Vosough, M.; Ehret, L.; Grom-Baumgarten, C.; Petkov, M.; Naddalin, S.; Ladurner, R.; Seehofer, D.; Nussler, A.; et al. Epigenetic modifications of the liver tumor cell line HepG2 increase their drug metabolic capacity. *Int. J. Mol. Sci.* **2019**, *20*, 347. [[CrossRef](#)]
15. Ingenito, F.; Roscigno, G.; Affinito, A.; Nuzzo, S.; Scognamiglio, I.; Quintavalle, C.; Condorelli, G. The role of Exo-miRNAs in cancer: A focus on therapeutic and diagnostic applications. *Int. J. Mol. Sci.* **2019**, *20*, 4687. [[CrossRef](#)] [[PubMed](#)]
16. Pajak, B.; Siwiak, E.; Soltyka, M.; Priebe, A.; Zielinski, R.; Fokt, I.; Ziemiak, M.; Jaskiewicz, A.; Borowski, R.; Domoradzki, T.; et al. 2-deoxy-d-glucose and its analogs: From diagnostic to therapeutic agents. *Int. J. Mol. Sci.* **2019**, *21*, 234. [[CrossRef](#)] [[PubMed](#)]
17. Treglia, G.; Muoio, B.; Trevisi, G.; Mattoli, M.V.; Albano, D.; Bertagna, F.; Giovanella, L. Diagnostic performance and prognostic value of PET/CT with different tracers for brain tumors: A systematic review of published meta-analyses. *Int. J. Mol. Sci.* **2019**, *20*, 4669. [[CrossRef](#)]
18. Varrone, F.; Caputo, E. The miRNAs role in melanoma and in its resistance to therapy. *Int. J. Mol. Sci.* **2020**, *21*, 878. [[CrossRef](#)]
19. Lorenc, T.; Klimczyk, K.; Michalczewska, I.; Slomka, M.; Kubiak-Tomaszecka, G.; Olejarcz, W. Exosomes in prostate cancer diagnosis, prognosis and therapy. *Int. J. Mol. Sci.* **2020**, *21*, 2118. [[CrossRef](#)]
20. Koliarakis, I.; Messaritakis, I.; Nikolouzakis, T.K.; Hamilos, G.; Souglakos, J.; Tsiaouassis, J. Oral bacteria and intestinal dysbiosis in colorectal cancer. *Int. J. Mol. Sci.* **2019**, *20*, 4146. [[CrossRef](#)]
21. Oshi, M.; Newman, S.; Tokumaru, Y.; Yan, L.; Matsuyama, R.; Endo, I.; Nagahashi, M.; Takabe, K. Intra-tumoral angiogenesis is associated with inflammation, immune reaction and metastatic recurrence in breast cancer. *Int. J. Mol. Sci.* **2020**, *21*, 6708. [[CrossRef](#)] [[PubMed](#)]

22. Machlowska, J.; Baj, J.; Sitarz, M.; Maciejewski, R.; Sitarz, R. Gastric cancer: Epidemiology, risk factors, classification, genomic characteristics and treatment strategies. *Int. J. Mol. Sci.* **2020**, *21*, 4012. [[CrossRef](#)] [[PubMed](#)]
23. Olivier, M.; Asmis, R.; Hawkins, G.A.; Howard, T.D.; Cox, L.A. The need for multi-omics biomarker signatures in precision medicine. *Int. J. Mol. Sci.* **2019**, *20*, 4781. [[CrossRef](#)] [[PubMed](#)]
24. Lookian, P.P.; Zhao, D.; Medina, R.; Wang, H.; Zenka, J.; Gilbert, M.R.; Pacak, K.; Zhuang, Z. Mannan-BAM, TLR ligands, anti-CD40 antibody (MBTA) vaccine immunotherapy: A review of current evidence and applications in glioblastoma. *Int. J. Mol. Sci.* **2021**, *22*, 3455. [[CrossRef](#)] [[PubMed](#)]