*Iran J Public Health, Vol. 54, No.5, May 2025, pp.1116-1117*

**Letter to the Editor**

# Topology of Opsonization: A Cancer Geometry Hypothesis

***Babak Daneshfard [1,2,3,4], Mohammad Reza Sanaye [5]***

1. *Chronic Respiratory Diseases Research Center, National Research Institute of Tuberculosis and Lung Diseases (NRITLD), Shahid Beheshti University of Medical Sciences, Tehran, Iran*
2. *Canadian College of Integrative Medicine (CCIM), Montreal, Quebec, Canada*
3. *Persian Medicine Network (PMN), Universal Scientific Education and Research Network (USERN), Tehran, Iran*
4. *Mizaj Health Research Institute (MHRI), Tehran, Iran*
5. *Essence of Parsiyan Wisdom Institute, Phytopharmaceutical Technology and Traditional Medicine Incubator, Shiraz University of Medical Sciences, Shiraz, Iran*

***Corresponding Author:** Email: babakdaneshfard@gmail.com

**(Received 10 Nov 2024; accepted 21 Nov 2024)**

## Dear Editor-in-Chief

To enhance the natural immune response against cancer, different types of opsonizing reagents have been injected into the tumor microenvironment. Such chemical agents have acted towards getting the peripheral tumor cells to get "prepared" to receive levels of spontaneously stimulated natural killer cells.

Of course, this largely requires the "topological" attachment of the opsonizing (re-)agents to the outer micro-environment of the tumor, a factor that has been largely overlooked, possibly due to its complex interdisciplinary design (1). Although many biological and biochemical aspects of opsonization have been explored, the geometric engineering of the stimulants to the process of opsonization has not been (well) studied from the point of view of bringing chemical agents, opsonins, and the micro-environment of the tumor itself on the same level of immanency. This is to gauge the stereometric parameters of the proper molecular onslaught as metricized to the best possible precision, thus leading to a nearly fully successful act of opsonization.

Regarding the relationship between the functionality and the geometrical shaping of cells, we have hypothesized that the Atiyah-Hirzebruch spectral sequence (2) could have an application in predicting the topological properties of tumor microenvironments. This in itself makes it possible for the early diagnosis of some types of cancer, possibly even without leveling cultures, i.e., through immunocytochemistry tagging.

The whole process revolves around the idea that the cohomology, either through K-theory or by means of C-algebra, not only differentiates between normal and abnormal growth but also brings about the likelihood of discerning those sub-spaces in which stem cell structuration could be manipulated. Of course, the prediction becomes more accurate when CW-complexing is applied, provided that homeomorphism demonstrates differential co-planarity at the molecular level. This even goes to the extent of molecularly designing for culturing tissues, mostly regarded as non-regenerable.


DOI: https://doi.org/10.18502/ijph.v54i5.18649

Differential identities can be repetitive or quasi-repetitive. If the mathematical properties, especially those related to differentials, form the basis of logical proofs in any geometry, then there's a specific chance that analytic mathematics will play a significant role in predicting cancer-prone micro-environments.

Improving the binding of natural killer cells to the opsonized peripheral microenvironment could be accomplished by modifying flow cytometry using specially designed microfluids. These could be replicated in multiple stages with high energy consumption using biochips as the medium between the simulation *In Silico* and the actual *In Vitro*.

The process of getting the "eat-me" signal to the natural killer cells can also act according to the terminological hypothesis in Persian medicine, whereby the level of *Takhalkhol* (porosity) increase in a particular tissue would make it more vulnerable to the entering of resolving agent(s) (3). This is accomplishable as a result of the porosity grading matrix inserted by boundary-atom schemes, which most probably acts in response to adjuvant radiation therapy when 100 to 1000 molecules come out of their relatively stable biomolecular structure. It is to be noted that our non-conventional use of Bayesian statistics, in some cases, will cause changes in the aforesaid statistics (4).

It is necessary to develop a more experiential protocol to align the aforementioned treatment stages with sufficient data characterization. This will expand the scope of Persian medicine treatment methods into modern oncological prospects.

## Acknowledgements

None.

## Conflict of interest

The authors declare that there is no conflict of interest.

## References

1. Harold FM (1991). Biochemical topology: from vectorial metabolism to morphogenesis. *Biosci Rep*, 11(6):347-85.
2. Shiozaki K, Xiong CZ, Gomi K (2023). Generalized homology and Atiyah–Hirzebruch spectral sequence in crystalline symmetry protected topological phenomena. *Prog Theor Exp Phys*, 2023(8):083I01.
3. Nimrouzi M, Daneshfard B, Tafazoli V (2022). The Concept of Porosity and Condensity in Persian Medicine. *Res Hist Med*, 11(2):105-14.
4. Eddy SR (2004). What is Bayesian statistics? *Nat Biotechnol*, 22(9):1177-8.