**Small world effect of the miRNA science field drives its growth**

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In our work, we show that the growth of the miRNA science field is governed by the small-world architecture of the scientific institution network [2], and experiences power-law growth. Here we treat the knowledge spreading process as the infection-like process. The small-world graphs have the average shortest path length of the order of log(N) resulting in the compact structure of the graph. Such effect slows down the exponential growth of the infection/knowledge spreading to power because compactness results in transmission of infection/knowledge to hit nodes already infected by the alternate paths. We show using the «small-world-ness» metric [3] that the miRNA field has the small-world property, and it follows the small-world models’ [2] criteria of the power-law growth. The model states that the initial power growth of the nodes count should have the D-1 exponentiation parameter, where D is the average shortest path length. In our case, the D=3.46, and the approximated exponentiation parameter D-1=2.64, which shows 7% deviation from the model’s one. This result shows that the research field dynamics might be governed by the small-world properties.

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