

# Immune Complex Formation, Reaction Energy, Pathophysiology, and Nanoquantum Medicine

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The complexity of immunological system is a very interesting issue in clinical immunology. In fact, immune system plays an important role in defense mechanism of living things, and it is the useful tool to counteract the invading foreign body. The immunological response is the determinant for cure or fail to a disease. The normal immune system will result in success in disease management. Nevertheless, the abnormal immune system will result in no success in disease management as well as the starting point of immunological disease. Of several immunological response processes, the immune complex formation is an interesting phenomenon. This is the basic process that occurs when there is an action body; then, there will be a reaction body. Bonding formation is the common molecular phenomenon. The bonding formation follows the general chemical principle and this might be explainable by basic chemistry principle.

Assessing the biochemical change due to bonding reaction in immune complex formation can inform the interesting nanomolecular phenomenon in immunological process. The formation of the immune complex can result in reaction energy generation. The expelled energy can be the good explanation for the occurrence of pathological problem in immune complex

disease. It is also the explanation for the destroying of the unwanted foreign body through the immune complex formation process. This is the same as the phenomenon seen in non-immunological process such as drug reaction (good example can be seen in iron-chelating reaction<sup>[1]</sup> or glycation).<sup>[2]</sup> Using the nanoquantum medicine principle, the energy reaction can be assessed, calculated, and further interpreted. This is the new approach in clinical immunology. Further, researches on this area can be the new facet in immunological study.

## REFERENCES

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