Morphological Features and Sanal's Magnetic Property of Primo Vascular System

Young-II Noh¹, Minsuk Rho¹, Yeong-MinYoo², Sharon JY Jung³, and Sang-Suk Lee^{1*}

¹Department of Oriental Biomedical Engineering, College of Health and Science,

Sangji University, Wonju-si, Gangwon-do, Republic of Korea

²Department of Biomedical Engineering, College of Health and Science,

Yonsei University, Wonju-si, Gangwon-do, Republic of Korea

³Nano Primo Research Center, Advanced Institute of Convergence Technology,

Seoul National University, Suwon-si, Gyeonggi-do, Republic of Korea

1. Morphological Features of Primo Vascular System Floating in Rabbit Lymph Vessel

Until now there have been no statistical data on the primo vessels and primo nodes in the lymph flow. We repeated the experiment with ten New Zealand White rabbits in order to obtain the statistical data about the primo vascular system. We suggest primo vessels could be easily identified in lymphatic nodes around abdominal aorta with simple Alcian blue staining under the digital microscope. Also, we observed the lymph valve and the primo vessel floating in lymph vessel without Alcian blue staining. The specimen reveals the rod-shaped nuclei stained by Acridine orange.



same specimen as in part A inset of (a). (b) Image by DAPI nuclear staining; (c) Image by Acridine orange and DAPI nuclear staining. The samples taken from the lymph vessel were put on the slide after washed with phosphate-buffered solution. The blue stained nuclei distributed in broken-lined stripe forms tube structure with about 20 mm diameter. The distance between two neighboring nuclei of the cells on an aligned line, and the diameter of the micro tube structure is measured about 5 μ m ~ 10 μ m. We obtained 3 ~ 5 primo nodes in the average length 2.4 mm and up to 5.6 mm in the longest of the primo vessels. The average size of the primo node was 50 μ m and the average diameters of the primo and lymph vessel were 26.0 μ m and 258.5 μ m, respectively. We also expect the traditional Korean meridian system which has stand on invisible world for the thousands of year could be revealed to visible scientific world soon.

2. Motion Property of Biomolecule Sanals of Primo Vascular System under Magnetic Field

The motion property of sanals of the primo vascular system (PVS) is investigated under a low static magnetic field of 100 Oe. The sanals with a size of about 1 μ m are selected and separated from the primo vessel and node of rabbits' organ surface. The average moving velocity of ten sanals inside of physiological saline solution parallel and perpendicular to the direction of applied magnetic field is about of 0.9 pixel/s and random, respectively. It implies that the rotating motion of sanal with nuclei DNA composed of many inorganic magnetic materials of Mn and Co is monotonically weakened by the increase of applied magnetic field.





This research was supported by the National Research Foundation of Korea (2011-0007552).