

NANOMEDICINE: FUTURE HOPE FOR INDOCHINA?

VIROJ WIWANITKIT*

ABSTRACT

Nanomedicine is the new branch of medicine dealing with the nanoparticles. The usefulness of nanomedicine in diagnosis and treatment in medicine is confirmed. The development of nanomedicine research in different areas of the world is very interesting. Here, the authors discuss on the current situation of nanomedicine in Indochina. It can be seen that there are still limited researches on nanomedicine from this area of the world.

KEY WORD: Nanomedicine, Indochina.

INTRODUCTION

Nanomedicine is the new branch of medicine dealing with the nanoparticles. The usefulness of nanomedicine in diagnosis and treatment in medicine is confirmed. The development of nanomedicine research in different areas of the world is very interesting. Here, the authors the current situation discuss on of nanomedicine in Indochina. It can be seen that limited there are still researches on nanomedicine from this area of the world.

SITUATION OF NANOMEDICINE INDOCHINA

MYANMAR

As a poor developing country, there is still no research group on nanomedicine in Myanamar. However, there is a company namely Zifam Pyrex Myanmar Co. Ltd., Yangon, Myanmar which participated in a publication in the nanomedicine field [1].

LAOS

As a poor developing country, there is still no research group on nanomedicine in Laos.

CAMBODIA

As a poor developing country, there is still no research group on nanomedicine in Camboodia.

THAILAND

Thailand. nanomedicine has been In implemented for a few years. The most famous group of investigators is the group of professor Viroj Wiwanitkit. Many international publications are from Wiwanitkit and his colleague [2 - 6]. Focusing on other active investigators, there is an interesting research group from Chulalongkorn University. There is a specific nanomedicine research center set in the Faculty of Medicine. Nevertheless, the production of this medical research center is low and not qualified as world class research group. The important fact is there is still a lack of specific professor of nanomedicine in Thailand.

^{*}Honorary Professor, Dr DY Patil University, Pune, India. *Correspondence E-mail Id:* editor@eurekajournals.com

VIETNAM

With the same level of development to Thailand, there are some specific reports on nanomedicine from Vietnam [7 - 10] but there is still no specific research group or famous medical scientist from Vietnam. Different from the research group in Thailand, which usually develop the technology by their own selves, the researchers in Vietnam usually joined with more developed countries, especially for Korea in nanomedicine research.

CONCLUSION

There are very few good publications on nanomedicine from Indochina. In some countries such as Laos and Myanmar, the nanomedicine has still not yet implemented. The development of nanomedicine in Indochina still has a very long way to walk and there is a need to promote the development of nanomedicine in this area.

CONFLICT OF INTEREST: None

REFERENCES

- Hussain A, Singh S, Sharma D, Webster TJ, Shafaat K, Faruk A.Elastic liposomes as novel carriers: recent advances in drug delivery. Int J Nanomedicine. 2017 Jul 17; 12:5087-5108.
- [2]. Sereemaspun A, Rojanathanes R, Wiwanitkit V.Effect of gold nanoparticle on renal cell: an implication for exposure risk. Ren Fail. 2008; 30(3):323-5.
- [3]. Wiwanitkit V, Sereemaspun Α, Rojanathanes R. Effect gold of nanoparticle the microscopic on morphology of white blood cell. Cytopathology. 2009 Apr; 20(2):109-10,

- [4]. Wiwanitkit V, Sereemaspun A, Rojanathanes R.Gold nanoparticle as an alternative tool for urine microalbumin test: the first world report. Ren Fail. 2007; 29(8):1047-8.
- [5]. Wiwanitkit V, Sereemaspun A, Rojanathanes R. Identification of gold nanoparticle in lymphocytes: a confirmation of direct intracellular penetration effect. Turk J Haematol. 2009 Mar 5;26(1):29-30.
- [6]. Wiwanitkit V, Sereemaspun A, Rojanathanes R.Gold nanoparticles and a microscopic view of platelets: a preliminary observation. Cardiovasc J Afr. 2009 Mar-Apr; 20(2):141-2.
- [7]. Nguyen TT, Mammeri F, Ammar S. Iron Oxide and Gold Based Magneto-Plasmonic Nanostructures for Medical Applications: A Review. Nanomaterials (Basel). 2018 Mar 7; 8(3). pii: E149.
- [8]. Lim C, Sim T, Hoang NH, Jung CE, Lee ES, Youn YS, Oh KT.A charge-reversible nanocarrier using PEG-PLL (-g-Ce6, DMA)-PLA for photodynamic therapy. Int J Nanomedicine. 2017 Aug 24; 12:6185-6196.
- [9]. Tran TT, Tran PH, Amin HH, Lee BJ.Biodistribution and in vivo performance of fattigation-platform theranostic nanoparticles. Mater SciEng C Mater Biol Appl. 2017 Oct 1; 79:671-678.
- [10]. Tran TH, Nguyen HT, Phuong Tran TT, Ku SK, Jeong JH, Choi HG, Yong CS, Kim JO. Combined photothermal and photodynamic therapy by hyaluronic acid-decorated polypyrrole nanoparticles. Nanomedicine (Lond). 2017 Jun 2. doi: 10.2217/nnm-2016-0438. [Epub ahead of print].