

# Cardiovascular Convergence Research Center



Director  
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## Major Research Goals

Cardiovascular disease is one of the major causes of mortality in the whole world including the United States and other developed countries. It increases the costs of health care. Cardiovascular Convergence Research Center is a cooperative research system comprised of industry, the academic community, laboratories, and Chonnam National University Hospital. Its purpose is to solve the unmet medical needs of a globalized and aging population. The goals of our center are to develop or commercialize health technology products and enter into clinical trials.

## Major Research Topics

1. Development of next-generation drug-eluting coronary artery stents,
2. Development of global therapeutic candidates for cardiovascular diseases such as Histone deacetylase inhibitors and NF- $\kappa$ B inhibitors,
3. Regeneration of vessels and bone using bone forming peptide and 3D printing technology.

## Major achievements

1. We published 90 international papers(SCI) from 2014 to 2016.
2. We applied for 26 patents from 2014 to 2016.
3. We registered 6 patents including international(US and Japan) or domestic patents, from 2014 to 2016.
4. We transferred technology to company from 2014 to 2016.
5. We hold the Gwangju International Interventional Cardiology Symposium annually.
6. We held 133 weekly seminars every Tuesday from 2014 to 2016.
7. We applied to the Korea Food and Drug Administration(KFDA) for clinical trials of TiO<sub>2</sub>-drug eluting stent.
8. We managed the Korea Cardiovascular Stent Research Institute.
9. We commercialized the Chonnam National University Hospital(CNUH) stent called as the "Tiger" stent.
10. We set up a company for MaengHo Stent in 2016.
11. The director received the Ministry of Health and Welfare prize for 2016.

## Representative Figures for Major Achievements

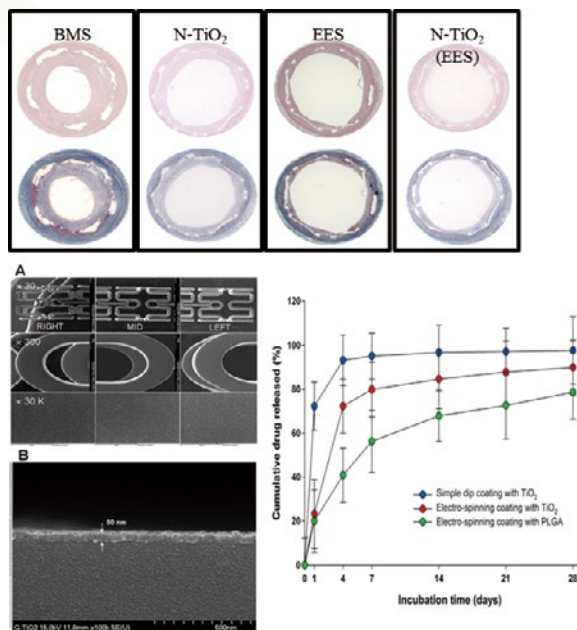


Fig. 1. Development of polymer-free drug eluting stent using plasma technique.

## Major Relevant Publications

- Ji MS, Jeong MH et al., Clinical outcome of statin plus ezetimibe versus high-intensity statin therapy in patients with acute myocardial infarction propensity-score matching analysis. *Int J Cardiol* 2016, 225:55-59
- Sim DS, Jeong MH et al., A novel polymer-free drug-eluting stent coated with everolimus using nitrogen-doped titanium dioxide film deposition in a porcine coronary restenosis model. *Int J Cardiol* 2016, 222: 436-440
- Sim DS, Jeong MH et al., Clinical impact of immediate invasive strategy in patients with non-ST-segment elevation myocardial infarction. *Int J Cardiol* 2016, 221:937-943
- Park KH, Jeong MH et al., Comparison of short-term clinical outcomes between ticagrelor versus clopidogrel in patients with acute myocardial infarction undergoing successful revascularization; from Korea Acute Myocardial Infarction Registry-National Institute of Health. *Int J Cardiol* 2016, 215:193-200
- Park SH, Jeong MH et al., Effects of combination therapy of statin and N-acetylcysteine for the prevention of contrast-induced nephropathy in patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention. *Int J Cardiol* 2016, 212:100-106

## Major Networks

