

Niigata Area

Creation and Expansion of Nanomedicine Industry that Enables Safety, High-function and Low Cost

Niigata Industrial Creation Organization

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Core Research Organizations

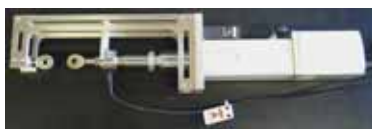
Niigata University, Niigata University of Health and Welfare, Meirin College, Industrial Research Institute of Niigata Prefecture

Major Participating Research Organizations
 Industry...MORI TEKKO CO., LTD., MIZUHO Co., Ltd., Touseiyoukou Co., Ltd
 Academia...Niigata University, Niigata University of Health and Welfare, Meirin College
 Government...Industrial Research Institute of Niigata Prefecture

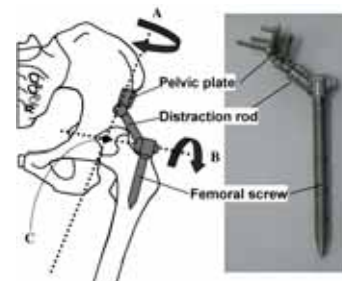
Typical result of City Area Program

1. "Load bearing device for hip joint" and "spine surgery monitoring system" based on the integral analysis of bones and parts

According to the bone structure analysis, the load bearing device for hip joint" was developed, which has high strength and long life. This make patients to return to their normal lifestyle even though the were suffered from avascular necrosis of the femoral head or Pelves disease as QOL is guaranteed even during the treatment. Moreover, the research development continued, a spine surgery monitoring system for a pinpoint assessment of spinal disorder and degeneration, which was difficult to diagnosticate from even MRI or CT scan.



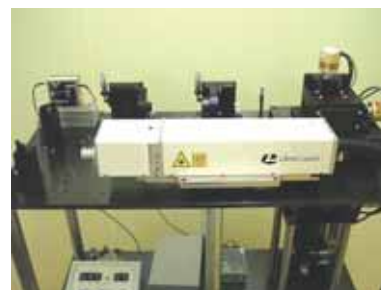
Monitoring system during spine surgery



Load bearing device for hip joint

2. Development of diseased part pinpoint treatment and device

The laser beam scanning method with high precision lens using the shrink-fitter technologies made the laser beam to apply in a wide range. Based on this technology, a small and low-cost laser device PDT laser to take pimples, a laser treatment device for moles and wide view laser microscope for skin inspection to obtain a precise view of the target.



Laser therapy equipment for birth marks and moles

About the approach after the project

1. Advanced functions, commercialization, and further research and development

Niigata University Venture Business Laboratory of the related product, including improvement of functions of the monitor system for spine surgery, and advanced functions of laser medical equipment using high precision lens and scanning technologies. Moreover, the idea of hip joint load bearing device was used effectively for development of locking mechanism for small animals and hip joint devices for human.

2. Execution of medical industry creation business

Niigata Industrial Creation Organization attempts the promotion of the business related to medical equipment "Medical Industry Creation Project". Through "Niigata Medicare Creations" coordinate medical and health related projects with involvement of companies and university researchers. As part of the project, business market research and development as well as exchanges with Koriyama area were conducted in FY 2005 and 2004.

Through these projects, the relationship with universities and companies were deepen using external funds aiming to create the mini cluster or the top cluster in the nitch market.