

# **Teaser Memorandum**

INDUSTRY-ACADEMIC COOPERATION FOUNDATION, INHA UNIVERSITY

**Urethal Catheter** 



## **Executive Summary**

- The Inha-Industry Partnership Institute is an exclusive organization that manages and supports business of Inha University involved in industry-academic cooperation, such as those who are developing technologies, attempting to start a business, cultivating human resources, transferring technologies and commercializing technologies.
- The Industry-University Cooperation Foundation Inha University, a Technology Licensing Organization in Inha University, intends to enter into a technology transfer or licensing transaction with regard to skin whiting composition. Terms of the transaction are not set, and interested parties may further discuss the details if they wish to enter into an agreement.

#### Industry Sector :

Medical Devices

## Therapeutic Target :

Genito-urinary

#### State of Development :

Stage for entry of full clinical test

#### Key Technology Highlights

- A plurality of expansion parts are provided, and the expansion parts hang at the outside of the neighborhood of a bladder neck so that a patient's feeling of discomfort can be reduced.
- A urine inlet is formed more towards the inside of an axial direction of a main pipe instead of towards the expansion part to prevent that it from being inserted into the urethra because the end part of the pipe is folded.
- □ A guide wire is inserted into a guide hole which is previously formed in the end of the main pipe that is closed so that a urethra catheter can be easily entered into the bladder when it is inserted.
- An insertion groove is formed at the outside of the main pipe in which a urine passage is formed in its inner part, and an auxiliary pipe having a fluid passage is inserted into the insertion groove, thereby forming a separate passage.
- □ A fluid inlet is integrally formed with a urine outlet to reduce the volume, thereby preventing the central part from being folded.

## Proposal Abstract

It is easy for the urethra catheter to hang in the vicinity of the bladder neck, and thus a patient's pain can be reduced and urine can be more easily discharged. Also, it is advantageous that a patient can easily manage the catheter and the damage done to the catheter can be reduced because the fluid inlet and the urine outlet are integrally formed, so that it has a decreased volume

#### IP Owner Summary

Head of the Industry Partnership Institute: Yeon Seong KIM Establishment Date: April 2004 Number of Employees: 35

#### Personal Description of Researcher

- □ Name : LEE TACK
- Derived Present Position : Clinical professor
- □ Major : Medicine
- Research interest : Micturition disorder, pediatric urinary organ
- Office address : #528, Professor's laboratory, 5th Fl., Jeongseok Bldg., Sinheung-dong 3-ga, Jung-gu, Incheon, Korea

#### Market Feasibility

Domestic and global market size:

- Domestic market size: \$32 million(USD)Global market size: \$175 million(USD)
- (based on 2010)

 Domestic and foreign market opportunity (competitors and competing product) :
Competitors who are manufacturing urethal catheters are as follows.

- Domestic competitors : Sewoon medical Corp, Korea vaccine Corp, Yushin Medical Corp
- Global competitors : C.R.Bard Inc, Coloplast, Covidien Ltd, Rochester Medicals Corp

#### Trend & Partnership

- Future outlook and trends related to technology : Medical devices
- Technology transfer and conditions of commercialization : Present technology
- Type of business relationship sought (including licensing availability) : Technology transactions, licensing, technical cooperation and joint research



### **Technology Overview**

#### Technology Platform

The present invention relates to a urethra catheter, more particularly, a urethra catheter which is placed within the bladder so that a patient's urine can be easily discharged from the bladder, in the cases where: urination is required during the normal persons' surgery when the patient is placed under anesthaesia for a long time; urine is not discharged due to the abnormality of the functioning of the bladder and urethra caused by spinal injury; factitious urethral catheterization is required, but it is difficult to insert a Foley catheter at the time of urination because the rigidity of the urethra sphincter is too strong or an internal diameter of the urethra narrows due to serious urethral stricture; there is a marked decline in the ability of urine storage within the bladder because the bladder is contracted due to its excessive sharpness or fibrosis of the perivesical; and it is difficult to frequently perform catheterization due to the urethra having been injured.

#### Background and unmet needs

A Foley catheter which has been generally used has a structure to discharge a patient's urine within the bladder characterized in that in a urine catheter to discharge urine within a patient's bladder, a urine inlet and a balloon shaped expansion part which is expandible are installed at one side of a main body, and a main pipe is located at the center of a pipe and is formed to communicate with a urine outlet which is located at other side of the main body.

This urethra catheter has the problems of the urethra catheter easily deviating from its fixed original position when it is pulled to the outside when being used because the balloon shaped expansion part that fixes the urethra catheter in the bladder is provided, and that there are many patients who complain of discomfort because patients have an uncomfortable feeling in a part of the bladder neck which comes into contact with the lower part of the balloon when the urethra catheter is inserted.

In addition, the catheter is problematic because residual urine is left behind even after the urethra catheter is inserted because when a certain amount of a patient's urine is discharged through a urine passage even after the urethra catheter has been inserted, the dome of the bladder comes down, and thus the urine inlet can be pressed and trap the urine so that the urine is not completely discharged.

#### Discoveries and Achievements

- 1. The plurality of expansion parts is mounted, a direct contact with the bladder neck which causes a patient's feeling of discomfort is avoided, and the expansion parts hang at the outside of the neighborhood of the bladder neck, thereby reducing a patient's feeling of discomfort.
- 2. The urine inlet is formed more towards the inside of the main pipe rather than towards the expansion parts or is formed to slightly overlap with the expansion part to reduce an unnecessary part of the end, to prevent the end part of the pipe from being bent when it is inserted into the urethra which would make insertion impossible, and to prevent the bladder mucous membrane from coming down towards the expansion part and block the urine inlet, thereby allowing a patient's urine to be easily discharged at all times.
- 3. Because the guide hole is previously formed in an end of the main pipe that is closed so as to communicate with the urine passage and then the guide wire can be inserted into the guide hole, when the urethra catheter is inserted into the narrow urethra in a state of being connected to the guide wire which is previously inserted using endoscopy, its entry into the urinary bladder can be easily guided.
- 4. The insertion groove is formed at the outside of the main pipe having the urine passage formed in its inner part, and the auxiliary pipe having the fluid passage is inserted into the insertion groove so that a separate passage is formed, and accordingly, the catheter can be easily produced and the production cost can be reduced. Also, because the urine passage and the fluid passage are separately formed, unlike the conventional catheter, this catheter can prevent contamination caused by urine.
- 5. Because the fluid inlet is integrally formed with the urine outlet and thus the volume can be reduced, the central part is prevented from being bent and the catheter can be produced. Accordingly, it is provided with the effect of being easily managed by patients.





Country	Appln. No.	Status	Description	
Korea	10-0992872	Granted	Urethra catheter	

## Contact Point

KHIDI (Korea Health Industry Development Institute) is currently receiving inquiries from interested parties in this transaction. If you are interested, please contact any of the KHIDI professionals below :

Name	Title	Tel. number	E-mail address
Yong-U Kim	Business Development Manager	82-43-713-8842	gkimyw@gmail.com