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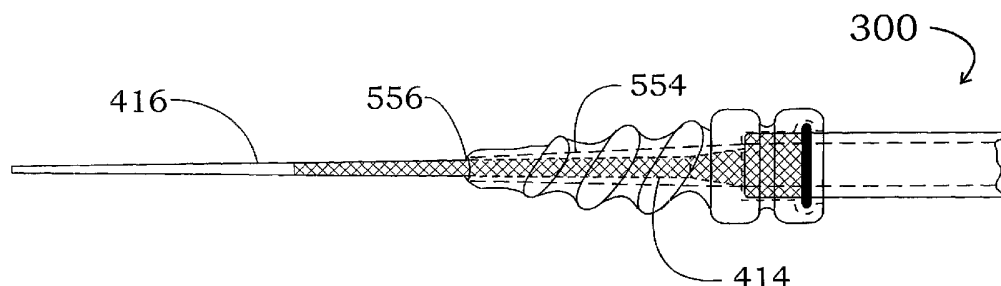
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(54) Title: APPARATUS FOR CREATING A PATHWAY IN AN ANIMAL AND METHODS THEREFOR



(57) Abstract: A method and apparatus for safer and more effective deep trans-cervical intra-uterine artificial insemination (AI) is provided. Such a deep AI catheter (300) causes minimal discomfort and risk of trauma, and does not require the services of a highly trained AI professional. First, a catheter (300) is inserted into the cervical tract of the animal. A membrane (410), initially positioned inside a tube section (420) of the catheter (300), is then extended from an opening (440) in the tube (420) and into the tract under pressure. The membrane (410) extends into the tract without friction thereby reducing the discomfort and the risk of trauma or injury to the animal. When the membrane (410) is fully extended into the tract, pressure causes the tip (418) of the membrane (410) to open thereby releasing the AI fluid and depositing the genetic material suspended in the fluid into the reproductive tract. Deployment of the membrane (410) is facilitated by tapering its wall thickness towards its tip (418). In addition to AI and embryo transplant, other applications for the pathway include therapeutic, diagnostic, or other procedures such as introducing fluoroscopic cameras, instruments, and drug delivery.

WO 2003/084584 A3

**INTERNATIONAL SEARCH REPORT**

International application No.

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**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC(7) : A01K 29/00  
 US CL : 119/174  
 According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**  
 Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 119/174; 600/35; 604/509  
 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,050,060 A (HOFFMAN) 12 August 1962 (12.08.1962), see drawing figures.	1-57
A	US 3,380,453 A (LEVEILLE) 30 April 1968 (30.04.1968), see entire document.	1-57
A	US 4,790,814 A (FISCHI et al) 13 December 1988 (13.12.1988), see specification.	1-57
A	US 6,071,231 A (MENDOZA et al) 06 June 2000 (06.06.2000), see entire document.	1-57

Further documents are listed in the continuation of Box C.  See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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