More on patent analysis...

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Patent Search Strategy

Control patents

1	US20040117007A1	06/17/2004	STS Biopolymers	Medicated stent having multi-layer polymer coating
2	US6468649B1	10/22/2002	Scimed Life Systems	Antimicrobial adhesion surface
3	US20030153983A1	08/14/2003	Scimed Life Systems	Implantable or insertable medical device resistant to microbial growth and biofilm formation
4	US20090187254A1	07/23/2009	Boston Scientific Scimed	Urological medical devices for release of urologically beneficial agents
5	US20090171465A1	07/02/2009	Boston Scientific Scimed	Polymeric Regions For Implantable Or Insertable Medical Devices
6	US20080097349A1	04/24/2008	Boston Scientific Scimed	Partially soluble implantable or insertable medical devices
7	US5554147A	09/10/1996	CApHCO	Compositions and devices for controlled release of active ingredients

Patent Classes

1	A61F2/00	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents
2	A61F2/01D	ECLA	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body-Filters implantable into blood vessels -Distal protection devices, i.e. devices placed distally in combination with another endovascular procedure, e.g. angioplasty or stending
3	A61F2/04	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Prostheses implantable into the body-Hollow or tubular parts of organs, e.g. bladders, tracheae, bronchi, bile ducts (A61F 2/18, A61F 2/20 take precedence; devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents
4	A61F2/06	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Prostheses implantable into the body-Hollow or tubular parts of organs, e.g. bladders, tracheae, bronchi, bile ducts (A61F 2/18, A61F 2/20 take precedence; devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents-Blood vessels
5	A61F2/06P	ECLA	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Prostheses implantable into the body-Hollow or tubular parts of organs, e.g. bladders, tracheae, bronchi, bile ducts (A61F 2/18, A61F 2/20 take precedence; devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents-Blood vessels -Stent-graft or graft for the treatment of aneurysms (instruments for placement or removal; external stent or sleeve around aneurysm
6	A61F2/82	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents
7	A61F2/84	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents -Instruments specially adapted for their placement or removal
8	A61F2/86	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents-Stents formed from wire-like elements
9	A61F2/88	IPC	

			Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents-Stents formed from wire-like elements-formed as helical or spiral coils.
10	A61F2/90	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents-Stents formed from wire-like elements-the wire-like elements forming a net structure.
11	A61F2/92	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents-Stents in the form of a rolled-up sheet expanding after insertion into the vessel.
12	A61F2/94	IPC	Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. Stents -Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents-Stents retaining their form after locating in the predetermined place.
13	A61M29/00	IPC	Devices for introducing media into, or onto, the body-Dilators with or without means for introducing media, e.g. remedies
14	623/1.1	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel)
15	623/1.11	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel) -Stent combined with surgical delivery system (e.g., surgical tools, delivery sheath, etc.)
16	623/1.12	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel) -Stent combined with surgical delivery system (e.g., surgical tools, delivery sheath, etc.) -Expandable stent with constraining means
17	623/1.13	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel) -Stent in combination with graft
18	623/1.14	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel) -Stent in combination with graft -Stent in combination with graft-Stent penetrating natural blood vessel
19	623/1.15	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel) -Stent structure
20	623/1.2	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel) -Stent structure -Self-expanding stent
21	623/11.11	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Implantable Prosthesis
22	623/23.64	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Implantable Prosthesis-Hollow tubular part or organ (e.g., bladder, urethra, bronchi, bile duct, etc.)
23	623/1.49	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel) -Made of synthetic material
24	623/1.42	USPC	Prosthesis (i.e., artificial body members), parts thereof, or aids and accessories therefor-Arterial prosthesis (i.e., blood vessel) -Drug delivery
25	606/191	USPC	Surgery-Instruments-Internal pressure applicator (e.g., dilator)
26	606/200	USPC	Surgery-Instruments-Internal pressure applicator (e.g., dilator) -With emboli trap or filter
27	606/194	USPC	Surgery-Instruments-Internal pressure applicator (e.g., dilator) -Inflatable or expandable by fluid-Inserted in vascular system
28	606/195	USPC	Surgery-Instruments-Internal pressure applicator (e.g., dilator) -Inflatable or expandable by fluid-Inserted in vascular system -Detachable from inflation means
29	606/108	USPC	Surgery-Instruments-Means for inserting or removing conduit within body

Concept Table

1	ureter	stent	microbes	A61F 2/86	A61F 2/82B	623/1.11	Boston Scientific Scimed Inc
2	ureteral	strut	bacteria	A61F 2/82	A61F 2/84B	623/1.12	Bactiguard AB
3	urethral	tubular wire		A61F 2/88	A61F 2/88B	623/1.13	Scimed Life Systems
4	urethral	tubular body		A61F 2/90	A61F 2/06P	623/1.14	STS Biopolymers
5		implant		A61F 2/92	A61F 2/01D	623/1.15	
6		prosthesis		A61F 2/94		623/1.2	
7		endoprosthesis		A61F 2/02		623/23.64	
8				A61F 2/04		623/23.66	
9				A61F 2/06		623/23.7	
10				A61M 29/00		606/108	
11						606/191	
12						606/194	
13						606/195	
14						623/1.42	
15						623/1.49	

Micropatent Database Search

- Search queries are in english language
- Searched in: Micropatent
- Date of search: 8 February 2011
- Databases: USG USA EPA EPB WO JP DEG DEA DET DEU GBA FRA

1	Ureteral Stent	Claims, Title and Abstract	(ureter* OR urether* OR ureth* OR uretr*) AND (stent* OR strut OR (tubular ADJ2 wire*1) OR (tubular ADJ1 body) OR implant OR endoprosthe* OR ((medical ADJ device) NEAR10 member)) NOT (balloon)	3082

2	Ureteral Stent	Full Spec.	(ureter* OR urether* OR ureth* OR uretr*) NOT (balloon)	429732
3	Classes of stent	IPC, ECLA and US classes	A61F000206 OR A61F000202 OR A61F000204 OR A61F000282 OR A61F000284 OR A61F000286 OR A61F000288 OR A61F000290 OR A61F000292 OR A61F000294 A61F000206P OR A61F000292 OR A61F000282B OR A61F000284B OR A61F000288B OR 62300111 OR 62300112 OR 62300113 OR 62300114 OR 62300115 OR 62300012 OR 62302364 OR 60600108 OR 60600191 OR 60600194 OR 60600195	62250
4	Combined query	-	2 AND 3	3919
5	German keywords	Full Spec.	(Harnleiter OR Harnröhre OR Urethral) AND (stent* OR Strebe OR (röhrenförmigen ADJ2 Draht) OR (röhrenförmigen ADJ1 Körper) OR implantat OR Endoprothese OR ((medizinische ADJ Gerät) NEAR10 Mitglied))	410
6	French Keywords	Full Spec.	(uretère OR urétérale OR urètre OR urétral) AND (stent* OR Support OR (Tubulaire ADJ2 wire*1) OR (Tubulaire ADJ1 Organe) OR implant OR Endoprothèse OR ((medical ADJ device) NEAR10 membres))	86
7	Top Assignee	-	boston OR (vance ADJ products) OR (american ADJ medical) OR STS OR SRS OR angiotech OR cryolife OR SciMed	23813
8	Combined query	-	7 AND 2	1750
9	Top Inventors	-	Chappa NEAR2 Ralph OR Gellman NEAR2 Barry OR Lye NEAR2 Whye OR Miller NEAR2 Kathleen OR Whitbourne NEAR2 Richard OR Devonec NEAR2 Marian OR Neisz NEAR2 Johann OR Porter NEAR2 Christopher OR Shalaby NEAR2 Shalaby OR Ollerenshaw NEAR2 Jeremy OR Lavelle NEAR2 Shay	1839
10	Combined query	-	9 AND 3	414
11	Combined query	-	1 OR 4 OR 5 OR 6 OR 8 OR 10	8102
12	Balloon and Catheter	Claims, Title and Abstract	balloon OR catheter	111489
13	Combined query	-	11 NOT 12	6969 **(2989 unique hits)**

- **F-term search**
- Date of search: 9 February 2011
- Searched in time line :01/01/2005 to 09/02/2011

1	Stent	Medium introduction applicators	4C167	AA41	AA41*CC26	258
2	Ureter		4C167	CC26		

- **Non-Patent Search**
- Searched in PubMed database

1	Ureteral stent	Full text, and all MESH terms	(((ureteral) OR urethral) OR ureter) AND stent*	3942

Dolcera Patent Analysis

					Problem	**Solution**
1	US20090187254A1	07/23/2009	BOSTON SCIENTIFIC SCIMED, INC.	UROLOGICAL MEDICAL DEVICES FOR RELEASE OF UROLOGICALLY BENEFICIAL AGENTS	In previous attempts to develope a uerteral stent, encrustation was the problem associated with the stent. Along with this pain and discomfort by stent implantaion was there.	This invention provides a ueteral stent which release one or more urologically beneficial agents in effective amounts to reduce the problem of encrustation and pain related to stent.
2	US20090171465A1	07/02/2009	Boston Scientific Scimed, Inc.	Polymeric Regions For Implantable Or Insertable Medical Devices	In previous attempts to develope a uerteral stent, encrustation was the problem associated with the stent. Along with this pain and discomfort by stent implantaion was there.	This invention provides a ureteral stent with a coating of a material(EVA) that reduces the discomfort caused by the stent during implantation.
3	US20080097349A1	04/24/2008	Boston Scientific Scimed, Inc.	Partially soluble implantable or insertable medical devices	In previous attempts to develope a uerteral stent, encrustation was the problem associated with the stent. Along with this pain and discomfort by stent implantaion was there.	Here the device (Stent) is provided with at least one surface that contains one or more depressions, which are at least partially filled with a soluble material. This makes stent more flexible and soft after implantation hence minimizing pain and discomfort after implantation or insertion.
4	US5554147A	09/10/1996	CApHCO, Inc.	Compositions and devices for	During implantation of ureteral stent,pain and	In this invention stent is povided with a pH sensitive coating that

				controlled release of active ingredients	discomfort are the problem with previous stents. Also microbial or bacterial infection at the site of implantation was the problem.	includes antimicrobial agent to stop the infection. This coating also has the hydrogel property which Upon swelling, the hydrogel's coefficient of friction is reduced, and the polymer becomes slippery, this mechanism reduces the discomfort.
5	US6468649B1	10/22/2002	Scimed Life Systems, Inc.	Antimicrobial adhesion surface	In prior art problem was the lack of the device which can remain in vivo for extended periods of time without losing its antimicrobial efficacy and which can provides protection against bacterial and fungal organisms for extended periods of time without leaching substances into a patient.	This invention provides a medical device with a hydrophobic coating that inhibits the growth of microbes for extended period of time.
6	US20030153983A1	08/14/2003	Scimed Life Systems, Inc.	Implantable or insertable medical device resistant to microbial growth and biofilm formation	In previous attempts to develope a ureteral stent with coating the problem was the formation of biofilm and microbial growth.	The device of the present invention, therefore, overcomes the disadvantages associated with the use of coatings as discussed above, and provides a reduced risk of biofilm fouling that eventually results in encrustation, occlusion and failure of the device. In this invention medical device comprises at least one biocompatible matrix polymer region and bioactive agents comprising an antimicrobial agent and a microbial attachment/biofilm synthesis inhibitor.
7	US20030139800A1	07/24/2003	None	Stent assembly with therapeutic agent exterior banding	In earlier attempts for stent with a therapeutic property, the problem was the coating or the sheath (responsible for therapy) may covers side branch arteries, vessels, or other lumens extending from the main lumen in which the stent is installed. The sheath can reduce blood flow to or from the side branch and deliver medication into the side branch where it is unnecessary.	This invention provides a stent assembly with exterior banding for delivery of therapeutic agents that would overcome the previous disadvantages. Also this stent assembly which avoids side branch vessel blockage by a sheath, with increased drug storage capacity and allowing delivery of different drugs at different axial and radial locations.
8	US20040117007A1	06/17/2004	STS Biopolymers, Inc.	Medicated stent having multi-layer polymer coating	The problem associated with previous stent and their implantation was thrombus formation in vicinity of stent.	The stent assembly developed in this invention consistently provide therapeutic activity from the surfaces of stents in order to reduce the incidence of restenosis and thrombus formation after coronary stenting procedures in the clinic.
9	WO1990013332A1	11/15/1990	CEDARS-SINAI MEDICAL CENTER	STENT WITH SUSTAINED DRUG DELIVERY	Problem was to provide an intravascular stent that preserves vessel patency, inhibits luminal narrowing and at the same time stent can deliver a pharmaceutical agent to a specific body site or organ.	The stent assembly provided by this invention will release anticoagulants, antiplatelet drugs or drugs that inhibit excessive endothelial cell growth at the placement site, thereby preserving the vessels patency and inhibiting luminal narrowing.
10	WO2001036008A2	05/25/2001	STS BIOPOLYMERS, INC.	MEDICAL DEVICES COATED WITH ELASTIC POLYMERIC MATERIAL	The lack of flexibility, expandability and lubricity of coating surface was the problem with previous insertable medical device.	This invention provides a medical device with a polymeric coating adherent to the covering, such that the coating and covering possess desirable surface characteristics such as lubricity, or lack thereof, as well as flexibility, expandability and elasticity.

Click here to download the detail Patent analysis sheet

- **Note:** Patents are ranked in the detail analysis sheet
  - ♦ Ranking criteria followed is given in the table below.

Ranking Criteria

Dashboard

Dashboard