Supplementary information

Supplementary Table Legends

Table S1. Determination of Minimum Inhibitory Concentration of palladium(II) complexes (c and f)

Table S2. Raw data of Energy Dispersive X- ray analysis of palladium(II) complex (**f**) coated on urinary catheter.

Table S3. Real-time primer sequence

Supplementary Figure Legends

Figure S1. (A) Effectiveness of Palladium(II) salt and ligand against test pathogens (B) Antibacterial effects of Palladium(II) salt and ligand against test pathogens.

Figure S2. Growth curve of *P. aeruginosa* and *S. marcescens* treated with palladium(II) complexes (**c** and **f**) after 24h incubation. MC-media and cells alone, VC-vehicle control, C - Complex C, F- Complex F (A) PAO1 (ATCC) (B) clinical isolate of *P. aeruginosa* (AU07-PACI-01) (C) *S. marcescens* (PS1).

Figure S3. Cell viability in (A) PAO1 (ATCC) (B) clinical isolate of *P. aeruginosa* (AU01-PACI-01) and (C) *S. marcescens* (PS1) by palladium (II) complexes (**c** and **f**). One Way ANNOVA test demonstrates significant difference between the tests and the control (P<0.05). VC – Vehicle Control.

Figure S4.Toxicity effect of palladium(II) complexes on human breast adenocarcinoma cell line (MCF7)

Figure S5.Stability of (A) Palladium (II) complexes (c) coated on urinary catheter (B)Palladium (II) complexes (f) coated on urinary catheter, which was incubated in synthetic urine media for 6 days.

Figure S6. Percentage inhibition of hemolysin production by palladium(II) complexes (\mathbf{c} and \mathbf{f}) against (A)ATCC (PAO1) (B) clinical isolate of *P. aeruginosa* (AU01-PACI-01) and (C) *S. marcescens* (PS1). One Way ANNOVA test demonstrates significant difference between the tests and the control (*P*<0.05).

Pd(II) complexes	P. aeruginosa			P. aeruginosa		S. marcescens			
	(PAO1)		(AU07-F	J07-PACI-01)		(PS1)			
	MIC	BIC		MIC	BIC		MIC	BIC	
		1/2	1/4		1/2	1/4		1/2	1/4
а	900			800			700		
b	700			600			900		
c	400	200	100	400	200	100	300	150	75
d	800			600			800		
e	600			700			600		
f	300	150	75	400	200	100	300	150	75
g	600			900			500		

Table S1.

	Complex c		Complex f			
Element	Weight Percentage (%)	Atomic Percentage (%)	Element	Weight Percentage (%)	Atomic Percentage (%)	
С	45.11	52.24	С	78.29	67.33	
N	16.27	16.15	Ν	8.69	6.40	
0	33.18	28.84	0	25.79	16.65	
Si	0.67	0.33	F	15.66	8.52	
S	0.48	0.21	Si	0.62	0.23	
Cl	0.50	0.19	S	2.13	0.68	
Pd	1.23	0.16	Ca	0.34	0.09	
			Pd	1.03	0.10	

Table S2.

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
lasI	CGTGCTCAAGTGTTCAAGG	TACAGTCGGAAAAGCCCAG
rhlI	TTCATCCTCCTTTAGTCTTCCC	TTCCAGCGATTCAGAGAGC
fimA	ACTACACCCTGCGTTTCGAC	GCGTTAGAGTTTGCCTGACC
flhD	TGTCGGGATGGGGAATATGG	CGATAGCTCTTGCACTAAATGG
16S rRNA	ACTCCTACGGGAGGCAGCAG	ATTACCGCGGCTGCTGG

Table S3.



Figure S1.



Figure S2.







Figure S3.



Figure S4

- Spectrum processing : Peaks possibly omitted : 1.044, 1.261, 4.020 keV (A) Processing option : All elements analyzed (Normalised) Number of iterations = 10 Standard : Sundard : C CaCO3 1-Jun-1999 12:00 AM N Not defined 1-Jun-1999 12:00 AM O SiO2 1-Jun-1999 12:00 AM Si SiO2 1-Jun-1999 12:00 AM

 - S FeS2 1-Jun-1999 12:00 AM

 - Cl KCl 1-Jun-1999 12:00 AM Pd Pd 1-Jun-1999 12:00 AM

(B)

Spectrum processing : Peaks possibly omitted : 1.043, 1.257 keV Processing option : All elements analyzed (Normalised) Number of iterations = 7

Standard :

- C CaCO3 1-Jun-1999 12:00 AM N Not defined 1-Jun-1999 12:00 AM O SiO2 1-Jun-1999 12:00 AM
- Grad
 1-Jun-1999 12:00 AM

 F
 MgF2

 1-Jun-1999 12:00 AM

 S
 SiO2

 1-Jun-1999 12:00 AM

 S
 FeS2

 1-Jun-1999 12:00 AM

 Cl
 KCl

 1-Jun-1999 12:00 AM







Spectrum 2

10

keV

Element	Weight%	Atomic%	
СК	19.84	24.75	
NK	32.15	34.38	
ОК	40.10	37.55	
Si K	0.26	0.14	
SK	1.03	0.48	
СІК	6.31	2.66	
Pd L	0.33	0.05	
Totals	100.00		







Element	Weight%	Atomic%
СК	36.91	43.48
NK	16.03	16.19
ОК	42.37	37.47
FK	2.69	2.00
Si K	1.10	0.56
S K	0.25	0.11
CI K	0.45	0.18
Pd L	0.20	0.03
Totals	100.00	

30 µm

Pd(II) complex (f) coated Urinary catheter incubated in synthetic urine media for 6 days

Figure S5.









Figure S6.