PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5111693

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
TOMOAKI HASHIMOTO	08/16/2018
TSUYOSHI HASEGAWA	08/20/2018
RYOHEI KATSUKI	08/16/2018
YUUKI HARA	08/20/2018

RECEIVING PARTY DATA

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State/Country:	JAPAN
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PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16113386	

CORRESPONDENCE DATA

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Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 734-542-0900 Email: east@mstfirm.com

Correspondent Name: MACMILLAN, SOBANSKI & TODD, LLC / TERUMO

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Address Line 2: 720 WATER STREET Address Line 4: TOLEDO, OHIO 43604

ATTORNEY DOCKET NUMBER:	P2015-000672US01(18944)
NAME OF SUBMITTER:	RENEE D. EAST
SIGNATURE:	/Renee D. East/
DATE SIGNED:	08/27/2018

Total Attachments: 4

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Attorney Do	ocket Numbe	er P201.	5-00060	72US01(18	(944)

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

THIC OF THACHTON	DEVICE WITH HEARTBEAT SYNCHRONIZATION
This declaration is direct	ed to:
☐ United	ttached application, or I States application or PCT international application numberfiled on,
The above-identified app	dication was made or authorized to be made by me.
I hereby state that I have including the claims.	e reviewed and understand the contents of the specification in the above-identified application,
I believe that I am the or	iginal inventor or an original joint inventor of a claimed invention in the application.
for continuation-in-part	o disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including applications, material information which became available between the filing date of the prior nal or PCT international filing date of the continuation-in-part application.
employer, and for valuab KABUSHIKI KAISHA, hereinafter referred to as interest, throughout the including the right of the receive Letters Patent I organizations, in its or tassignee or ASSIGNEE or ASSIGNEE or ASSIGNEE and I hereby sell, assign of priority, including an entities and intergovern	ment agreement heretofore made and/or by other contractual obligation of myself or my ble consideration which is hereby acknowledged, I hereby sell, assign and transfer unto TERUMO having a place of business at 44-1, 2-chome, Hatagaya, Shibuya-ku, Tokyo 151-0072 Japan, the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and world, in and to the above-identified application and the inventions and discoveries thereof a ASSIGNEE, its successors, assigns or other legal representatives to make applications and to for the inventions and discoveries in any and all countries, entities and intergovernmental heir own name or names, or in my name, at its or their election (and I hereby authorize the deep legal representative to insert the serial/application number and filing date of the application to crein. Serial No. 16/113386 Filing Date 27-Aug-2018, and set over to the ASSIGNEE, its successors, assigns or other legal representatives, all rights y provisional applications, in and to the inventions and discoveries in any and all countries, thental organizations including all applications claiming benefit of the filing date hereof, ons-in-part, divisionals, reexaminations and reissue applications.
papers, including applications intergovernmental organization	myself, my heirs, successors, assigns or other legal representatives to execute any and all ations for Letters Patent of any and all kinds and in any and all countries, entities and izations, and to perform any and all acts which the ASSIGNEE, its successors, assigns or other deem necessary to secure thereto the rights herein sold, assigned and set over.
And I hereby represent a	nd warrant that I have not granted any rights inconsistent with the rights granted herein.
fine or imprisonment of	nat any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by not more than five (5) years or both.
LEGAL NAME OF INV	ENTOR
Inventor: Tomo	aki Hashimoto Date: August /6 , 2018
Signature:	· No Hashimoto in a company of the state of
	a Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this claration form for each additional inventor.

Attorney Docket Number | P2015-000672US01(18944)

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Inventi	on EXTRACORPOREAL CIRCULATION MANAGEMENT	
	DEVICE WITH HEARTBEAT SYNCHRONIZATION	
	Control of the second s	
This declaration i	s directed to:	
Ø	Processing and processing and processing and the second and the se	
	The attached application, or United States application or PCT international application number	
	filed on,	
The above-identif	fied application was made or authorized to be made by me.	
I hereby state tha including the clai	t I have reviewed and understand the contents of the specification in the above-identified application, ms.	
I believe that I an	the original inventor or an original joint inventor of a claimed invention in the application.	
for continuation-i	duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including n-part applications, material information which became available between the filing date of the prior the national or PCT international filing date of the continuation-in-part application.	
Pursuant to my employment agreement heretofore made and/or by other contractual obligation of myself or my employer, and for valuable consideration which is hereby acknowledged, I hereby self, assign and transfer unto TERUMO KABUSHIKI KAISHA, having a place of business at 44-1, 2-chome, Hatagaya, Shibuya-ku, Tokyo 151-0072 Japan, hereinafter referred to as the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and interest, throughout the world, in and to the above-identified application and the inventions and discoveries thereof including the right of the ASSIGNEE, its successors, assigns or other legal representatives to make applications and to receive Letters Patent for the inventions and discoveries in any and all countries, entities and intergovernmental organizations, in its or their own name or names, or in my name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to insert the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. 16/113386 , Filing Date 27-Aug-2018), and I hereby self, assign and set over to the ASSIGNEE, its successors, assigns or other legal representatives, all rights of priority, including any provisional applications, in and to the inventions and discoveries in any and all countries, entities and intergovernmental organizations including all applications claiming benefit of the filing date hereof, continuations, continuations-in-part, divisionals, reexaminations and reissue applications. And I hereby agree for myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, including applications for Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental organizations, and to perform any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives may deem necessary to secure thereto the rights herein sold, assigned and set over.		
And I hereby represent and warrant that I have not granted any rights inconsistent with the rights granted herein.		
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years or both.		
LEGAL NAME C	DF INVENTOR	
Inventor:	Tsuyoshi Hasegawa Date;	
Signature:	Troyadi Husegawa	
Note: An Applicat	ion Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this	
	onal declaration form for each additional inventor.	

Attorney Docket Number | P2015-000672US01(18944)

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention	- 1	EXTRACORPOREAL CIRCULATION MANAGEMENT		
		DEVICE WITH HEARTBEAT SYNCHRONIZATION		
This declaration is	directe	ed to:		
	The att	ached application, or		
		States application or PCT international application number filed on		
The above-identifi	ed appl	ication was made or authorized to be made by me.		
I hereby state that including the clain		reviewed and understand the contents of the specification in the above-identified application,		
I believe that I am	the orig	ginal inventor or an original joint inventor of a claimed invention in the application.		
I am aware of the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.				
employer, and for KABUSHIKI KAI hereinafter referred interest, throughout including the right receive Letters Paraganizations, in it ASSIGNEE or Astroceive Letters Parand I hereby sell, a of priority, including entities and intergraph.	valuable ISHA, I d to as to to the value for the state of the SSIGNI tent her assign a ing any governm	nent agreement heretofore made and/or by other contractual obligation of myself or my e consideration which is hereby acknowledged, I hereby sell, assign and transfer unto TERUMO having a place of business at 44-1, 2-chome, Hatagaya, Shibuya-ku, Tokyo 151-0072 Japan, the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and world, in and to the above-identified application and the inventions and discoveries thereof ASSIGNEE, its successors, assigns or other legal representatives to make applications and to or the inventions and discoveries in any and all countries, entities and intergovernmental eir own name or names, or in my name, at its or their election (and I hereby authorize the EE's attorney to insert the serial/application number and filing date of the application to rein: Serial No. 16/113386 , Filing Date 27-Aug-2018), and set over to the ASSIGNEE, its successors, assigns or other legal representatives, all rights provisional applications, in and to the inventions and discoveries in any and all countries, mental organizations including all applications claiming benefit of the filing date hereof, ins-in-part, divisionals, reexaminations and reissue applications.		
And I hereby agree for myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, including applications for Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental organizations, and to perform any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives may deem necessary to secure thereto the rights herein sold, assigned and set over.				
And I hereby repre	esent an	d warrant that I have not granted any rights inconsistent with the rights granted herein.		
		at any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by the more than five (5) years or both.		
LEGAL NAME O	F INVE	ENTOR		
Inventor:	Ryohei	Katsuki Date: August 16, 2018		
Signature:	Ryshe	ri fortsubi		
		Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this		
form. Use an additio	nal decl	aration form for each additional inventor.		

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention	EXTRACORPOREAL CIRCULATION MANAGEMENT DEVICE WITH HEARTBEAT SYNCHRONIZATION
This declaration is din	scied to:
☐ Uni	attached application, or ted States application or PCT international application number filed on
The above-identified a	pplication was made or authorized to be made by me.
I hereby state that I hat including the claims.	we reviewed and understand the contents of the specification in the above-identified application,
I believe that I am the	original inventor or an original joint inventor of a claimed invention in the application.
for continuation-in-pa	to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including applications, material information which became available between the filing date of the prior tional or PCT international filing date of the continuation-in-part application.
employer, and for value KABUSHIKI KAISH hereinafter referred to interest, throughout the including the right of receive Letters Patent organizations, in its of ASSIGNEE or AS	oyment agreement heretofore made and/or by other contractual obligation of myself or my table consideration which is hereby acknowledged. I hereby sell, assign and transfer unto TERUMO A, having a place of business at 44-1, 2-chome, Hatagaya, Shibuya-ku, Tokyo 151-0072 Japan, as the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and ne world, in and to the above-identified application and the inventions and discoveries thereof the ASSIGNEE, its successors, assigns or other legal representatives to make applications and to for the inventions and discoveries in any and all countries, entities and intergovernmental retheir own name or names, or in my name, at its or their election (and I hereby authorize the GNEE's attorney to insert the serial/application number and filing date of the application to herein: Serial No. 16/113386 , Filing Date 27-Aug-2017 , and set over to the ASSIGNEE, its successors, assigns or other legal representatives, all rights any provisional applications, in and to the inventions and discoveries in any and all countries, entities and properly in the part, divisionals, reexaminations and reissue applications. For myself, my heirs, successors, assigns or other legal representatives to execute any and all odications for Letters Patent of any and all kinds and in any and all countries, entities and anizations, and to perform any and all acts which the ASSIGNEE, its successors, assigns or other
legal representatives r	hay deem necessary to secure thereto the rights herein sold, assigned and set over. t and warrant that I have not granted any rights inconsistent with the rights granted herein.
fine or imprisonment	that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by of not more than five (5) years or both.
LEGAL NAME OF II	WENTOR
Inventor: Yu	iki Hara Date: Ataguji 20, 2018
Signature:	uuki Hara
Note: An Application	Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this

PATENT REEL: 046712 FRAME: 0280

RECORDED: 08/27/2018