

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY AGREEMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
Gambro, Inc.	11/17/2006

<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Citicorp Trustee Company Limited, as Security Agent
<b>Street Address:</b>	Citigroup Centre, 33 Canada Square
<b>Internal Address:</b>	Canary Wharf
<b>City:</b>	London
<b>State/Country:</b>	UNITED KINGDOM
<b>Postal Code:</b>	E14 5LB

**PROPERTY NUMBERS Total: 181**

Property Type	Number
Patent Number:	5356365
Patent Number:	5421812
Patent Number:	5676645
Patent Number:	5817042
Patent Number:	5263831
Patent Number:	5605842
Patent Number:	5611997
Patent Number:	6319471
Patent Number:	6652476
Patent Number:	6869411
Patent Number:	5345070
Patent Number:	5520218
Patent Number:	5352371
Patent Number:	5437624

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Patent Number:	5704888
Patent Number:	5879280
Patent Number:	5496265
Patent Number:	5658240
Patent Number:	5712798
Patent Number:	5970423
Patent Number:	6233525
Patent Number:	5674173
Patent Number:	5722926
Patent Number:	5906570
Patent Number:	5913768
Patent Number:	5939319
Patent Number:	5951877
Patent Number:	6071422
Patent Number:	5704889
Patent Number:	5876321
Patent Number:	5653887
Patent Number:	5941842
Patent Number:	6497674
Patent Number:	6790195
Patent Number:	7108672
Patent Number:	5738644
Patent Number:	6179801
Patent Number:	6196987
Patent Number:	6231537
Patent Number:	5722946
Patent Number:	5720716
Patent Number:	6129656
Patent Number:	5702357
Patent Number:	6613009
Patent Number:	6902539
Patent Number:	5837150
Patent Number:	5750025
Patent Number:	5795317
Patent Number:	6234989

Patent Number:	6361518
Patent Number:	5676644
Patent Number:	5919154
Patent Number:	5921950
Patent Number:	6409696
Patent Number:	5824881
Patent Number:	5734464
Patent Number:	5936714
Patent Number:	5792038
Patent Number:	5904645
Patent Number:	5954626
Patent Number:	5906589
Patent Number:	6280406
Patent Number:	6764460
Patent Number:	D406894
Patent Number:	D406893
Patent Number:	6051146
Patent Number:	6053856
Patent Number:	6200287
Patent Number:	6773413
Patent Number:	6022306
Patent Number:	6153113
Patent Number:	6280622
Patent Number:	6315767
Patent Number:	6334842
Patent Number:	6514189
Patent Number:	7029430
Patent Number:	6258577
Patent Number:	6277337
Patent Number:	6268120
Patent Number:	6828323
Patent Number:	7072769
Patent Number:	6730055
Patent Number:	6945948
Patent Number:	6899691

Patent Number:	6736768
Patent Number:	7094196
Patent Number:	6354986
Patent Number:	6548241
Patent Number:	4861242
Patent Number:	4824339
Patent Number:	4850995
Patent Number:	4900298
Patent Number:	4795314
Patent Number:	4810090
Patent Number:	4897185
Patent Number:	4978446
Patent Number:	4968432
Patent Number:	5167238
Patent Number:	5301686
Patent Number:	5639810
Patent Number:	4818490
Patent Number:	4935140
Patent Number:	4897200
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Patent Number:	7094197
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Patent Number:	6348031
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Patent Number:	7097774
Patent Number:	6740239
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Patent Number:	5503801
Patent Number:	5591251
Patent Number:	5674199
Patent Number:	5322516
Patent Number:	5453089
Patent Number:	5409612
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Patent Number:	5609770
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Patent Number:	6322551
Patent Number:	6468427
Patent Number:	6949214
Patent Number:	6526357
Patent Number:	4909713
Patent Number:	4769009
Patent Number:	4744808
Patent Number:	4769151
Patent Number:	4897184
Patent Number:	4814073
Patent Number:	4885001
Patent Number:	4950391
Patent Number:	5041215

**CORRESPONDENCE DATA**

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*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*  
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Address Line 4: New York, NEW YORK 10019-6131

ATTORNEY DOCKET NUMBER:

70-40024061

NAME OF SUBMITTER:

Melissa Schrader

**Total Attachments: 27**

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This **INTELLECTUAL PROPERTY SECURITY AGREEMENT** (as amended, amended and restated, supplemented or otherwise modified from time to time, the "**IP Security Agreement**") dated as of 17 November 2006, is made by Gambro, Inc. (the "**Grantor**") in favor of Citicorp Trustee Company Limited, as Security Agent (the "**Security Agent**") for the Secured Parties (as defined below).

**WHEREAS**, Gambro Holding AB (formerly known as Indap AB) (the "**Parent**"), a company organized under the laws of Sweden, and certain of its Subsidiaries (including the Grantor pursuant to an accession letter dated on or about the date hereof) have entered into a Senior Facilities Agreement dated 5 June 2006 as amended on 7 June 2006, 18 July 2006 and amended and restated pursuant to a amendment and restatement agreement dated 9 November 2006, with Citigroup Global Markets Limited and Morgan Stanley Bank International Limited as Mandated Lead Arrangers, the financial institutions listed therein as Original Lenders, Citibank International plc as Agent and Issuing Bank, and the Security Agent, as security trustee on behalf of the Senior Creditors, any Receivers and Mezzanine Creditors (each term being defined in the Intercreditor Agreement and collectively the "**Secured Parties**"), (said Agreement, as it may hereafter be amended, amended and restated, supplemented or otherwise modified from time to time, being the "**Senior Facilities Agreement**").

**WHEREAS**, the Parent and certain of its Subsidiaries (including the Grantor pursuant to an accession letter dated on or about the date hereof) have entered into a Mezzanine Facility Agreement dated 5 June 2006 as amended on 7 June 2006 and amended and restated pursuant to a amendment and restatement agreement dated 9 November 2006, with Citigroup Global Markets Limited and Morgan Stanley Bank International Limited as Mandated Lead Arrangers, the financial institutions listed therein as Original Lenders, Citibank International plc as Agent, and the Security Agent (said Agreement, as it may hereafter be amended, amended and restated, supplemented or otherwise modified from time to time, being the "**Mezzanine Facility Agreement**", and together with the Senior Facilities Agreement, the "**Facilities Agreements**").

**WHEREAS**, the Parent has entered into an Intercreditor Agreement dated 5 June 2006 as amended on 7 June 2006 and amended and restated pursuant to a amendment and restatement agreement dated 9 November 2006, with Indap Holding AB, the banks and financial institutions listed therein as the Original Senior Lenders and the Original Mezzanine Lenders, Citibank International plc as the Senior Facility Agent, Senior Issuing Bank and the Mezzanine Facility Agent and the Security Agent, as security trustee (said Agreement, as it may hereafter be amended, amended and restated, supplemented or otherwise modified from time to time, being the "**Intercreditor Agreement**").

**WHEREAS**, the Grantor has entered into a Security Agreement dated 17 Nov., 2006 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "**Security Agreement**"), with the Security Agent. Terms defined in the Security Agreement and not otherwise defined herein are used herein as defined in the Security Agreement.

**WHEREAS**, under and subject to the terms of the Security Agreement, the Grantor has granted a security interest in, among other property, certain intellectual property of the Grantor to the Security Agent for the rateable benefit of the Secured Parties, and has agreed



as a condition thereof to execute this IP Security Agreement covering certain of such intellectual property for recording with the U.S. Patent and Trademark Office, the United States Copyright Office and other governmental authorities.

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor agrees as follows:

1. **Grant of Security**

The Grantor hereby grants to the Security Agent for the rateable benefit of the Secured Parties a security interest in and to all of the Grantor's right, title and interest in and to the following (the "**Collateral**"):

- 1.1 all United States patents, patent applications and patent licenses set forth in Schedule A hereto (as such Schedule A may be supplemented from time to time by supplements to the Security Agreement and this IP Security Agreement, each such supplement being in substantially the form of Exhibit C to the Security Agreement (an "**IP Security Agreement Supplement**"), executed and delivered by the Grantor to the Security Agent from time to time), together with all reissues, divisions, continuations, continuations-in-part, extensions and re-examinations thereof, and all rights therein provided by international treaties or conventions (the "**Patents**");
- 1.2 all United States trademark and service mark registrations, applications, and licenses set forth in Schedule B hereto (as such Schedule B may be supplemented from time to time by IP Security Agreement Supplements executed and delivered by the Grantor to the Security Agent from time to time) (the "**Trademarks**");
- 1.3 all United States copyrights, copyright registrations and applications and copyright licenses set forth in Schedule C hereto (as such Schedule C may be supplemented from time to time by IP Security Agreement Supplements executed and delivered by the Grantor to the Security Agent from time to time) (the "**Copyrights**");
- 1.4 any and all claims for damages for past, present and future infringement, misappropriation or breach with respect to the Patents, Trademarks and Copyrights, with the right, but not the obligation, to sue for and collect, or otherwise recover, such damages; and
- 1.5 any and all proceeds of the foregoing.

2. **Recordation**

The Grantor authorizes and requests that the Register of Copyrights and the Commissioner of Patents and Trademarks and any other applicable government officer record this IP Security Agreement.

3. **Grants, Rights and Remedies**

This IP Security Agreement has been entered into in conjunction with the provisions of the Security Agreement. The Grantor does hereby acknowledge and confirm that the

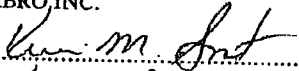
grant of the security interest hereunder to, and the rights and remedies of, the Security Agent with respect to the Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated herein by reference as if fully set forth herein.

4. **Governing Law**

This IP Security Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

IN WITNESS WHEREOF, the Grantor has caused this IP Security Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first above written.

GAMBRO, INC.

By 

Name: Kevin M. Smith

Title: President

Address for Notices:

10810 W. Collins Avenue  
Lakewood, Colorado 80215  
United States of America  
Fax: +1 (303) ~~239-2313~~ 231-4915  
Attention: General Counsel

**SCHEDULE A**  
**PATENTS**

Country	Patent Number	Owner	Grant Date	Expires	Title
US	5356365	Gambro, Inc.	18-Oct-1994	25-Feb-2014	Temperature Controlled Centrifuge
US	5421812	Gambro, Inc.	06-Jun-1995	06-Jun-2012	Method and Apparatus for Controlling Concentrations in Tubing System
US	5676645	Gambro, Inc.	14-Oct-1997	14-Oct-2014	Method and Apparatus for Controlling Concentrations in Vivos and in Tubing Systems
US	5817042	Gambro, Inc.	06-Oct-1998	04-Mar-2012	Method and Apparatus for Controlling Concentrations in Vivos and in Tubing Systems
US	5263831	Gambro, Inc.	23-Nov-1993	19-Feb-2012	Improvements to Spectra Roller Pump
US	5605842	Gambro, Inc.	25-Feb-1997	25-Feb-2014	Method for Producing Blood Component Products
US	5611997	Gambro, Inc.	18-Mar-1997	18-Mar-2014	Apparatus for Producing Blood Component Products

Country	Patent Number	Owner	Grant Date	Expires	Title
US	6319471	Gambro, Inc.	20-Nov-2001	20-Nov-2018	Apparatus For Producing Blood Component Products
US	6652476	Gambro, Inc.	25-Nov-2003	10-Jul-2012	Method and Apparatus for Producing Blood Component Products
US	6869411	Gambro, Inc.	22-Mar-2005	17-Oct-2021	Apparatus for Producing Blood Component Products
US	5345070	Gambro, Inc.	06-Sep-1994	25-Sep-2012	Radio Frequency Tubing Sealer
US	5520218	Gambro, Inc.	28-May-1996	28-May-2013	Medical Tubing Set For The Use With An Improved Radio Frequency Tubing Sealer
US	5352371	Gambro, Inc.	04-Oct-1994	24-Feb-2013	Multi-Pass Blood Treatment Tubing Set
US	5437624	Gambro, Inc.	01-Aug-1995	23-Aug-2013	Single Needle Apheresis Control
US	5704888	Gambro, Inc.	06-Jan-1998	14-Apr-2015	Intermittent Collection of Mononuclear Cells in a Centrifuge Apparatus

Country	Patent Number	Owner	Grant Date	Expires	Title
US	5879280	Gambro, Inc.	09-Mar-1999	14-Apr-2015	Intermittent Collection Of Mononuclear Cells In A Centrifuge Apparatus
US	5496265	Gambro, Inc.	05-Mar-1996	21-Oct-2013	Blood Collection Optimizer
US	5658240	Gambro, Inc.	19-Aug-1997	19-Aug-2014	Blood Component Collection System with Optimizer
US	5712798	Gambro, Inc.	26-Jan-1998	21-Feb-2013	Blood Collection Optimizer
US	5970423	Gambro, Inc.	19-Oct-1999	04-Mar-2013	Blood Component Collection System with Optimizer
US	6233525	Gambro, Inc.	15-May-2001	04-Mar-2013	Blood Component Collection System with Optimizer
US	5674173	Gambro, Inc.	07-Oct-1997	18-Apr-2015	Apparatus for Separating Particles
US	5722926	Gambro, Inc.	03-Mar-1998	18-Apr-2015	Method for Separating Particles
US	5906570	Gambro, Inc.	25-May-1999	18-Apr-2015	Particle Filter Apparatus
US	5913768	Gambro, Inc.	22-Jun-1999	18-Apr-2015	Particle Filter Apparatus
US	5939319	Gambro, Inc.	17-Aug-1999	18-Apr-2015	Particle Separation Method and Apparatus
US	5951877	Gambro,	14-Sep-	18-Apr-	Particle Filter

Country	Patent Number	Owner	Grant Date	Expires	Title
		Inc.	1999	2015	Method
US	6071422	Gambro, Inc.	06-Jun-2000	18-Apr-2015	Particle Separation Method and Apparatus
US	5704889	Gambro, Inc.	06-Jan-1998	14-Apr-2015	Centrifugal System for Spillover Collection of Sparse Components Such as Mononuclear Cells in Centrifuge Apparatus
US	5876321	Gambro, Inc.	09-Mar-1999	14-Apr-2015	Control System for the Spillover Collection of Sparse Components Such As Mononuclear Cells In A Centrifuge Apparatus
US	5653887	Gambro, Inc.	05-Aug-1997	07-Jun-2015	Apheresis Blood Processing Method Using Pictorial Displays
US	5941842	Gambro, Inc.	24-Aug-1999	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	6497674	Gambro, Inc.	24-Dec-2002	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus

Country	Patent Number	Owner	Grant Date	Expires	Title
US	6790195	Gambro, Inc.	14-Sep-2004	23-Jan-2018	Extracorporeal Blood Processing Methods and Apparatus
US	7108672	Gambro, Inc.	19-Sep-2006	07-Jan-2022	Extracorporeal Blood Processing Methods and Apparatus
US	5738644	Gambro, Inc.	14-Apr-1998	07-Jun-2015	Blood Processing Vessel (Re-examination No.-90/005616)
US	6179801	Gambro, Inc.	30-Jan-2001	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	6196987	Gambro, Inc.	06-Mar-2001	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	6231537	Gambro, Inc.	15-May-2001	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	5722946	Gambro, Inc.	03-Mar-1998	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	5720716	Gambro, Inc.	24-Feb-1998	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus (C-Shaped Channel Configuration)

Country	Patent Number	Owner	Grant Date	Expires	Title
US	6129656	Gambro, Inc.	10-Oct-2000	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	5702357	Gambro, Inc.	30-Dec-1997	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	6613009	Gambro, Inc.	02-Sep-2003	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	6902539	Gambro, Inc.	07-Jun-2005	12-Apr-2018	Extracorporeal Blood Processing Methods and Apparatus
US	5837150	Gambro, Inc.	17-Nov-1998	17-Nov-2015	Extracorporeal Blood Processing Method (High Packing Factor)
US	5750025	Gambro, Inc.	12-May-1998	07-Jun-2015	Disposable for an Apheresis System with a Contoured Support (Platelet collect well)
US	5795317	Gambro, Inc.	18-Aug-1998	18-Aug-2015	Extracorporeal Blood Processing Methods and Apparatus (Tubing Circuit)
US	6234989	Gambro, Inc.	22-May-2001	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus



Country	Patent Number	Owner	Grant Date	Expires	Title
US	6361518	Gambro, Inc.	26-Mar-2002	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus
US	5676644	Gambro, Inc.	14-Oct-1997	07-Jun-2015	Extracorporeal Blood Processing Methods and Apparatus (cassette/mount assembly interface)
US	5919154	Gambro, Inc.	06-Jul-1999	07-Jun-2015	Extracorporeal Blood Processing Method and Apparatus
US	5921950	Gambro, Inc.	13-Jul-1999	07-Jun-2015	Extracorporeal Blood Processing Method and Apparatus
US	6409696	Gambro, Inc.	25-Jun-2002	10-Oct-2017	Extracorporeal Blood Processing Method and Apparatus
US	5824881	Gambro, Inc.	20-Oct-1998	13-Sep-2016	Gas/Fluid Detector for Contained Fluid Systems
US	5734464	Gambro, Inc.	31-Mar-1998	06-Nov-2016	Red Blood Cell Spillover Detection Technique
US	5936714	Gambro, Inc.	10-Aug-1999	06-Nov-2016	Red Blood Cell Spillover Detection Technique

Country	Patent Number	Owner	Grant Date	Expires	Title
US	5792038	Gambro, Inc.	11-Aug-1998	15-May-2016	Method and Apparatus for Reducing Turbulence in Fluid Flow
US	5904645	Gambro, Inc.	18-May-1999	15-May-2016	Apparatus for Reducing Turbulence in Fluid Flow
US	5954626	Gambro, Inc.	21-Sep-1999	15-May-2016	Method Of Minimizing Coriolis Effects In A Centrifugal Separation Channel
US	5906589	Gambro, Inc.	25-May-1999	13-Nov-2016	Method and Apparatus for Occlusion Monitoring Using Pressure Waveform Analysis (Ac Occlusion Monitor
US	6280406	Gambro, Inc.	28-Aug-2001	12-Sep-2017	Extracorporeal Blood Processing System
US	6764460	Gambro, Inc.	20-Jul-2004	12-Nov-2018	Extracorporeal Blood Processing System
US	D406894	Gambro, Inc.	16-Mar-1999	16-Mar-2013	Design for Apheresis System
US	D406893	Gambro, Inc.	16-Mar-1999	16-Mar-2013	Design for Apheresis Cabinet
US	6051146	Gambro,	18-Apr-	20-Jan-2018	Methods for Separation of

Country	Patent Number	Owner	Grant Date	Expires	Title
		Inc.	2000		Particles
US	6053856	Gambro, Inc.	25-Apr-2000	08-May-2017	Tubing Set Apparatus and Method for Separation of Fluid Components
US	6200287	Gambro, Inc.	13-Mar-2001	05-Sep-2017	Extracorporeal Blood Processing Method and Apparatus
US	6773413	Gambro, Inc.	10-Aug-2004	11-Apr-2019	Extracorporeal Blood Processing Method and Apparatus
US	6022306	Gambro, Inc.	08-Feb-2000	05-Sep-2017	Method And Apparatus For Collecting Hyperconcentrated Platelets
US	6153113	Gambro, Inc.	28-Nov-2000	22-Feb-2019	Method for Using Ligands in Particle Separation
US	6280622	Gambro, Inc.	28-Aug-2001	22-Feb-2019	System and Method for Using Ligands in Particle Separation
US	6315767	Gambro, Inc.	13-Nov-2001	19-Aug-2018	Cell Storage Maintenance and Monitoring System
US	6334842	Gambro, Inc.	01-Jan-2002	16-Mar-2019	Centrifugal Separation Apparatus and Method for Separating Fluid

Country	Patent Number	Owner	Grant Date	Expires	Title
					Components
US	6514189	Gambro, Inc.	04-Feb-2003	16-Mar-2019	Centrifugal Separation Apparatus and Method for Separating Fluid Components
US	7029430	Gambro, Inc.	18-Apr-2006	05-Apr-2019	Centrifugal Separation Apparatus and Method for Separating Fluid Components
US	6258577	Gambro, Inc.	10-Jul-2001	21-Jul-2018	Method And Apparatus For Inactivation Of Biological Contaminants Using Endogenous Alloxazine or Isoalloxazine Photosensitizers
US	6277337	Gambro, Inc.	21-Aug-2001	21-Jul-2018	Method and Apparatus for Inactivation of Biological Contaminants Using Photosensitizers
US	6268120	Gambro, Inc.	31-Jul-2001	19-Oct-2019	Isoalloxazine Derivatives To Neutralize Biological Contaminants
US	6828323	Gambro, Inc.	07-Dec-2004	19-Oct-2019	Isoalloxazine Derivatives To

Country	Patent Number	Owner	Grant Date	Expires	Title
					Neutralize Biological Contaminants
US	7072769	Gambro, Inc.	04-Jul-2006	10-Dec-2023	Extracorporeal Processing Information Management Systems
US	6730055	Gambro, Inc.	04-May-2004	31-Jan-2022	Extracorporeal Blood Processing Methods and Apparatus
US	6945948	Gambro, Inc.	20-Sep-2005	22-Jun-2021	Extra-corporeal Dual Stage Blood Processing Method and Apparatus
US	6899691	Gambro, Inc.	31-May-2005	18-Feb-2023	Extracorporeal Blood Processing Methods and Apparatus
US	6736768	Gambro, Inc.	18-May-2004	19-Mar-2022	Fluid Separation Devices, Systems and/or Methods Using A Fluid Pressure Driven and/or Balanced Approach
US	7094196	Gambro, Inc.	22-Aug-2006	01-Jul-2022	Fluid Separation Devices, Systems and/or Methods Using A Fluid Pressure Driven and/or Balanced Approach

Country	Patent Number	Owner	Grant Date	Expires	Title
US	6354986	Gambro, Inc.	12-Mar-2002	16-Feb-2020	Reverse-Flow Chamber Purging During Centrifugal Separation
US	6548241	Gambro, Inc.	15-Apr-2003	28-Nov-2020	Storage Solutions Containing Photosensitizers For Inactivation Of Biological Contaminants
US	4861242	Gambro, Inc.	29-Aug-1989	19-Aug-2007	Self-Loading Peristaltic Pump (Spectra Pump)
US	4824339	Gambro, Inc.	25-Apr-1989	19-Aug-2007	Peristaltic Pump Cartridge (Spectra-Cartridge)
US	4850995	Gambro, Inc.	25-Jul-1989	19-Aug-2007	Centrifugal Separation of Blood (Spectra-Rinseback)
US	4900298	Gambro, Inc.	13-Feb-1990	21-Aug-2007	Centrifuge Drive and Support Assembly (Spectra-Centrifuge Drive)
US	4795314	Gambro, Inc.	03-Jan-1989	24-Aug-2007	Condition Responsive Pump Control Utilizing Integrated, Commanded, and Sensed Flowrate Signals
US	4810090	Gambro, Inc.	07-Mar-1989	24-Aug-2007	Method and Apparatus for Monitoring Blood

Country	Patent Number	Owner	Grant Date	Expires	Title
					Components (Spectra-Platelets)
US	4897185	Gambro, Inc.	30-Jan-1990	06-Oct-2008	Cell Processing Apparatus and Method (Harvest)
US	4978446	Gambro, Inc.	18-Dec-1990	18-Jan-2010	Sterile Blood Component Collection (Spectra- Filter cont. II)
US	4968432	Gambro, Inc.	06-Nov-1990	18-May-2008	Treatment of Liquid Including Blood Components (LDL)
US	5167238	Gambro, Inc.	01-Dec-1992	02-May-2011	Fluid Sampling Device [CV Sampling]
US	5301686	Gambro, Inc.	12-Apr-1994	31-Aug-2012	Fluid Sampling Method [CIP Application]
US	5639810	Gambro, Inc.	17-Jun-1997	17-Jun-2014	Internally Lubricated Elastomers for Use in Biomedical Applications
US	4818490	Gambro, Inc.	04-Apr-1989	13-Aug-2007	Integral Blood Oxygenator [Must maintain under Sorin contract until expiration.]
US	4935140	Gambro, Inc.	19-Jun-1990	19-Jun-2007	Membrane and Process for Producing the

Country	Patent Number	Owner	Grant Date	Expires	Title
					Membrane
US	4897200	Gambro, Inc.	30-Jan-1990	30-Jan-2007	Macromolecular Carbonyl Groups Containing Material Suitable for Use as Sorbent for Nitrogen Compound
US	6773389	Gambro, Inc.	10-Aug-2004	08-Nov-2021	Fluid Separation Devices, Systems and/or Methods Using A Fluid Pressure Driven and/or Balanced Configuration
US	7094197	Gambro, Inc.	22-Aug-2006	05-May-2022	Fluid Separation Devices, Systems and/or Methods Using A Fluid Pressure Driven and/or Balanced Approach
US	4990132	Gambro, Inc.	05-Feb-1991	05-Feb-2008	Method and Apparatus For Plasmapheresis
US	5114396	Gambro, Inc.	19-May-1992	14-Mar-2010	Method of Washing Blood Cells and Container Assembly Thereof
US	5723050	Gambro, Inc.	03-Mar-1998	03-Mar-2015	Bag Set For Use in Centrifugal Separation
US	6315706	Gambro, Inc.	13-Nov-2001	17-Feb-2017	Method For Separating Cells, Especially



Country	Patent Number	Owner	Grant Date	Expires	Title
					Platelets, and Bag Assembly Therefor
US	6855102	Gambro, Inc.	15-Feb-2005	13-Aug-2018	Method For Separating Cells, Especially Platelets, and Bag Assembly Therefor
US	6348031	Gambro, Inc.	19-Feb-2002	12-Feb-2018	Centrifuge and Container System For Treatment of Blood and Blood Components
US	6689042	Gambro, Inc.	10-Feb-2004	12-Feb-2018	Centrifuge and Container System for Treatment of Blood and Blood Components
US	6835171	Gambro, Inc.	28-Dec-2004	22-Jan-2022	Centrifuge and Container System for Treatment of Blood and Blood Components
US	6656105	Gambro, Inc.	02-Dec-2003	26-May-2020	Centrifuge For Processing Blood and Blood Component In Ring-Type Blood Processing Bags
US	7097774	Gambro, Inc.	29-Aug-2006	23-Jan-2023	Centrifuge For Processing Blood and Blood Component In Ring-Type Blood Processing Bags

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US	6740239	Gambro, Inc.	25-May-2004	16-Jan-2021	Method and Apparatus for Processing Blood and Blood Components
US	6843961	Gambro, Inc.	18-Jan-2005	03-Feb-2023	Reduction of Contaminants in Blood and Blood Products Using Photosensitizers and Peak Wavelengths of Light
US	7052606	Gambro, Inc.	30-May-2006	13-May-2023	Methods and Apparatus for Leukoreduction of Red Blood Cells
US	6994790	Gambro, Inc.	07-Feb-2006	03-Feb-2023	Improved Whole Blood Collection and Processing
US	7049110	Gambro, Inc.	23-May-2006	21-Jul-2018	Inactivation of West Nile Virus and Malaria Using Photosensitizers
US	7077559	Gambro, Inc.	18-Jul-2006	15-Aug-2023	Container or Bag Mixing Apparatuses and/or Methods
US	7094378	Gambro, Inc.	22-Aug-2006	21-July-2018	Method and Apparatus for Inactivation of Biological Contaminants Using Photosensitizers

Country	Patent Number	Owner	Grant Date	Expires	Title
US	7033512	Gambro, Inc.	25-Apr-2006	20-Dec-2023	Fluid Separation Devices, Systems and/or Methods Using A Centrifuge and Roller Pump
US	7097209	Gambro, Inc.	29-Aug-2006	11-Aug-2021	Sterile Coupling
US	6861033	Gambro, Inc.	01-Mar-2005	07-Jan-2022	Purified Water Supply System for High Demand Devices and Applications
US	5679245	Gambro, Inc.	21-Oct-1997	21-Oct-2014	Retention Device for Extracorporeal Treatment Apparatus
US	5762805	Gambro, Inc.	09-Jun-1998	09-Jun-2015	Technique for Extracorporeal Treatment of Blood (Blood Leak Detection Technique)
US	5776345	Gambro, Inc.	07-Jul-1998	07-Jul-2015	Automatic Priming Technique
US	5910252	Gambro, Inc.	08-Jun-1999	08-Jun-2016	Technique for Extracorporeal Treatment of Blood
US	5441636	Gambro, Inc.	15-Aug-1995	12-Feb-2013	Integrated Blood Treatment Fluid Module (Multifunction Integrated Circuit for Renal Failure

Country	Patent Number	Owner	Grant Date	Expires	Title
					Treatmen
US	5510716	Gambro, Inc.	23-Apr-1996	23-Apr-2013	Differential Conductivity Recirculation Monitor
US	5510717	Gambro, Inc.	23-Apr-1996	23-Apr-2013	Differential Conductivity Recirculation Monitor
US	5570026	Gambro, Inc.	29-Oct-1996	29-Oct-2013	Differential Conductivity Recirculation Monitor
US	5631552	Gambro, Inc.	20-May-1997	20-May-2014	Differential Conductivity Hemodynamic Monitor
US	5644240	Gambro, Inc.	01-Jul-1997	01-Jul-2014	Differential Conductivity Hemodynamic Monitor
US	5900726	Gambro, Inc.	04-May-1999	23-Apr-2013	Differential Conductivity Hemodynamic Monitor
US	6075367	Gambro, Inc.	13-Jun-2000	01-Jul-2014	Differential Conductivity Hemodynamic Monitor
US	6452371	Gambro, Inc.	17-Sep-2002	23-Dec-2018	Differential Conductivity Hemodynamic Monitor
US	6614212	Gambro,	02-Sep-	02-May-	Method and

Country	Patent Number	Owner	Grant Date	Expires	Title
		Inc.	2003	2020	Apparatus for Quantitatively Determining A Degree of Recirculation Flow in A Vessel
US	6912917	Gambro, Inc.	05-Jul-2005	23-Apr-2013	Differential Fluid Parameter Determination
US	5503801	Gambro, Inc.	02-Apr-1996	29-Nov-2013	Bubble Trap with Cone Shaped Diverter
US	5591251	Gambro, Inc.	07-Jan-1997	07-Jan-2014	Side flow bubble trap
US	5674199	Gambro, Inc.	07-Oct-1997	29-Nov-2013	Top Flow Bubble Trap Method
US	5322516	Gambro, Inc.	21-Jun-1994	20-May-2013	Safety Needle and Method for Using the Same
US	5453089	Gambro, Inc.	26-Sep-1995	09-Mar-2014	Safety Needle and Method for Using the Same
US	5409612	Gambro, Inc.	25-Apr-1995	16-Jul-2013	Method and Apparatus for Cleaning a Dialysate Circuit Downstream of a Dialyzer

Country	Patent Number	Owner	Grant Date	Expires	Title
US	5589070	Gambro, Inc.	31-Dec-1996	31-Dec-2013	Method and Apparatus for Cleaning a Dialysate Circuit Downstream of a Dialyzer
US	5603902	Gambro, Inc.	18-Feb-1997	18-Feb-2014	Method and Apparatus for Cleaning a Dialysate Circuit Downstream of a Detector
US	5394732	Gambro, Inc.	07-Mar-1995	10-Sep-2013	Method and Apparatus for Ultrasonic Detection of Air Bubbles
US	5647984	Gambro, Inc.	15-Jul-1997	07-Jun-2015	Extracorporeal Fluid Treatment Systems Selectively Operable in A Treatment Mode or A Disinfecting Mo
US	5733457	Gambro, Inc.	31-Mar-1998	07-Jun-2015	Technique for Disinfecting Extracorporeal Fluid Treatment Systems
US	5650071	Gambro, Inc.	22-Jul-1997	07-Jun-2015	Technique for Priming and Recirculating Fluid through A Dialysis Machine to Prepare the

Country	Patent Number	Owner	Grant Date	Expires	Title
					Machine for Use
US	5776091	Gambro, Inc.	07-Jul-1998	07-Jun-2015	Technique for Priming and Recirculating Fluid through A Dialysis Machine to Prepare the Machine for Use
US	5624572	Gambro, Inc.	29-Apr-1997	07-Jun-2015	Power Management System and Method for Maximizing Heat Delivered to Dialysate in A Dialysis Machine
US	5618441	Gambro, Inc.	08-Apr-1997	07-Jun-2015	Single Microcontroller Execution of Control and Safety System Functions in A Dialysis Machine
US	5609770	Gambro, Inc.	11-Mar-1997	07-Jun-2015	Graphical Operator Machine Interface and Method for Information Entry and Selection in A Dialysis Machine
US	5928177	Gambro, Inc.	27-Jul-1999	11-Sep-2016	Technique for Loading A Pump Header within A Peristaltic Pump of A Dialysis Machine

Country	Patent Number	Owner	Grant Date	Expires	Title
US	5641144	Gambro, Inc.	24-Jun-1997	07-Jun-2015	Dialyzer Holder
US	5629871	Gambro, Inc.	13-May-1997	07-Jun-2015	Wear Trend Analysis Technique for Components of A Dialysis Machine
US	5685835	Gambro, Inc.	11-Nov-1997	07-Jun-2015	Technique for Using A Dialysis Machine to Disinfect A Blood Tubing Set
US	5948251	Gambro, Inc.	07-Sep-1999	07-Jun-2015	Technique for Using A Dialysis Machine to Disinfect A Blood Tubing Set
US	5922162	Gambro, Inc.	13-Jul-1999	12-Jun-2017	Gas-Permeable Pathogen-Resistant Labyrinthine Seal and Method for Making Labyrinthine Seal
US	5693008	Gambro, Inc.	02-Dec-1997	07-Jun-2015	Dialysis Blood Tubing Set
US	6003556	Gambro, Inc.	21-Dec-1999	04-Oct-2016	Hinged Cap Priming Connector
US	5620608	Gambro, Inc.	15-Apr-1997	07-Jun-2015	Information Entry Validation System and Method for A Dialysis Machine
US	6189388	Gambro, Inc.	20-Feb-2001	12-Nov-2017	Access Flow Monitoring Using Reversal of



Country	Patent Number	Owner	Grant Date	Expires	Title
					Normal Blood Flow
US	6349170	Gambro, Inc.	19-Feb-2002	11-Jan-2020	Continuous Renal Replacement Therapy Heat Loss Compensation
US	6629946	Gambro, Inc.	07-Oct-2003	14-Apr-2022	Continuous Renal Replacement Therapy Heat Loss Compensation
US	6322551	Gambro, Inc.	27-Nov-2001	09-Jul-2019	Breakapart Dialyzer Connector
US	6468427	Gambro, Inc.	22-Oct-2002	21-Sep-2019	Fluid Filter for Use in Extracorporeal Blood Processing
US	6949214	Gambro, Inc.	27-Sep-2005	21-Mar-2020	Method and Apparatus for Injection Molding a Fluid Filter
US	6526357	Gambro, Inc.	25-Feb-2003	14-Mar-2021	Associated Parameter Measuring and/or Monitoring Such as in the Evaluation of Pressure Differences
US	4909713	Gambro, Inc.	20-Mar-1990	20-Mar-2007	Improved Peristaltic Pump
US	4769009	Gambro, Inc.	06-Sep-1988	10-Oct-2006	Apparatus for Displacing a Piston in a Chamber Having a

Country	Patent Number	Owner	Grant Date	Expires	Title
					Torque Resistor (C3-Heparin Pump)
US	4744808	Gambro, Inc.	17-May-1988	30-Oct-2006	Liquid Level Sensing and Control (C3-Level Sensor)
US	4769151	Gambro, Inc.	06-Sep-1988	30-Oct-2006	Heat Control for Liquid Flowing Through a Chamber (C3-Prep System III)
US	4897184	Gambro, Inc.	30-Jan-1990	30-Jan-2007	Fluid Flow Apparatus Control and Monitoring (C3-Prep System V)
US	4814073	Gambro, Inc.	21-Mar-1989	19-Aug-2007	Dialysate Preparation Apparatus with Improved Control (C3-Prep System II-Cont.)
US	4885001	Gambro, Inc.	05-Dec-1989	03-Jun-2008	Pump with Plural Flow Lines (Double)
US	4950391	Gambro, Inc.	21-Aug-1990	15-Feb-2009	Capillary Dialyzer (Secon GmbH)
US	5041215	Gambro, Inc.	20-Aug-1991	22-Nov-2009	Dialysis Unit Priming (Saline)