

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4648463

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KA IMAGING INC.	10/18/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CHRISTIE MEDICAL HOLDINGS, INC.
<b>Street Address:</b>	3175 LENOX PARK BOULEVARD
<b>Internal Address:</b>	SUITE 200
<b>City:</b>	MEMPHIS
<b>State/Country:</b>	TENNESSEE
<b>Postal Code:</b>	38115
<b>PROPERTY NUMBERS Total: 3</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15266051
<b>Application Number:</b>	62398592
<b>Application Number:</b>	62503408
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(416)920-1350
<i>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.</i>	
<b>Phone:</b>	(416) 920-8170
<b>Email:</b>	docketing@pckip.com
<b>Correspondent Name:</b>	PERRY + CURRIER INC.
<b>Address Line 1:</b>	1300 YONGE STREET
<b>Address Line 2:</b>	SUITE 500
<b>Address Line 4:</b>	TORONTO, CANADA M4T1X3
<b>ATTORNEY DOCKET NUMBER:</b>	A1040CA00
<b>NAME OF SUBMITTER:</b>	ARYA GHADIMI
<b>SIGNATURE:</b>	/Arya Ghadimi/
<b>DATE SIGNED:</b>	10/19/2017
<b>Total Attachments: 8</b>	
source=A1040CA00_SecurityAgreement#page1.tif	
source=A1040CA00_SecurityAgreement#page2.tif	

source=A1040CA00\_SecurityAgreement#page3.tif

source=A1040CA00\_SecurityAgreement#page4.tif

source=A1040CA00\_SecurityAgreement#page5.tif

source=A1040CA00\_SecurityAgreement#page6.tif

source=A1040CA00\_SecurityAgreement#page7.tif

source=A1040CA00\_SecurityAgreement#page8.tif



## Security Agreement

Date: October 18, 2017

Parties:

**Christie Medical Holdings, Inc. (the "Lender")**

3175 Lenox Park Boulevard, Suite 200  
Memphis, TN  
USA 38115

**KA Imaging Inc. (the "Borrower")**

809 Wellington Street North  
Kitchener, ON  
Canada N2H 5L6

---

### Background

- A. The Borrower is issuing a debenture ("Debenture 1") concurrently with the execution of this agreement and a loan agreement (the "Loan Agreement") pursuant to which the Lender has agreed to lend to the Borrower [REDACTED] on the terms and conditions set forth in the Loan Agreement and Debenture 1; and
- B. Pursuant to the terms of Debenture 1, the Borrower has agreed to grant to the Lender a security interest in all of the Borrower's right title and interest, whether presently existing or hereafter acquired in, to and under all of the Intellectual Property Collateral (as defined herein).

### Agreed Terms

#### 1. Definitions

- (a) "Intellectual Property Collateral" means all intellectual property of the Borrower in any jurisdiction, including all: (i) trade-marks, service marks, brand names, certification marks, logos, distinguishing guises, trade dress and other indication of origin and the goodwill pertaining to any of these; (ii) business names, trade names, assumed names and the like; (iii) utility patents, design patents and/or industrial designs, together with all applications therefor and any divisionals, continuations, continuations-in-part, renewals, extensions, re-issues, re-examinations, disclaimers, and patents or patent applications,

claiming priority therefrom; (iv) licenses of patents of third parties granted to the Borrower; (v) trade secrets and other confidential or non-public business information, including ideas, formulas, compositions, inventor's notes, discoveries and improvements, know-how, manufacturing and production processes and techniques, and research and development information, invention disclosures, unpatented blue prints, drawings, specifications, designs, plans, proposals and technical data, business and marketing plans and customer and supplier lists and information; (vi) writings and other copyrightable works of authorship, including promotional and advertising material, computer programs (including source and object code), databases and documentation therefor, and all copyrights to any of the foregoing; (vii) integrated circuit topographies, custom silicon firmware and hardware components, mask works, chip designs and chip design-related materials; (viii) moral rights (to the extent that these are owned by the Borrower); (ix) Internet protocol addresses and all other network addresses; (x) any similar intellectual property or proprietary rights; (xi) registrations of, and applications to register, any of the foregoing with any governmental authority and any renewals or extensions thereof; and (xii) all proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing; and includes without limitation all rights as listed in EXHIBIT A, and any other intellectual property which the Borrower may, either at law or in equity have rights to, whether registered or not, at any time in the future; but excludes the Technology License Agreement dated September 22, 2017 between Simon Fraser University and the Borrower.

- (b) "Obligations" has the meaning given in Debenture 1.
- (c) "PPSA" means the *Personal Property Security Act* (Ontario).

## 2. Grant of security interest

As collateral security for the prompt and complete payment and performance of all of the Obligations, the Borrower does hereby pledge, mortgage and hypothecate to and in favour of the Lender, and grants a security interest in all of the Borrower's right, title and interest in, to and under the Intellectual Property Collateral.

## 3. Intellectual Property Collateral

Exhibit A accurately lists the registered Intellectual Property Collateral as of the date hereof. If after the date hereof, EXHIBIT A ceases to accurately reflect the existence and status of all registered Intellectual Property Collateral, the Borrower shall on an annual basis provide written notice to the Lender with a replacement EXHIBIT A, which upon acceptance by the Lender shall become part of this agreement.

## 4. Authorization

The Borrower hereby represents and warrants that it has the unqualified right to enter into this agreement and perform its obligations hereunder in accordance with its terms; the execution, delivery and performance by the Borrower of this agreement have been duly and validly authorized and do not conflict with the Borrower's formation documents or any other agreements to which the Borrower is a party; and, when executed and delivered by the undersigned authorized representative of the Borrower, this agreement shall constitute a legal, valid and binding obligation of the Borrower.

## 5. Title and subordination

Unless consented to by the Lender in writing, the Borrower will keep the Intellectual Property Collateral free and clear of all security interests of any kind, except (i) the security interest granted hereunder, and (ii) the security interest granted in favour of Grand Challenges Canada pursuant to an intellectual property security agreement dated April 21, 2016. Notwithstanding anything to the contrary herein, the security interests granted to the Lender pursuant to this agreement and the exercise of any right or remedy by the Lender hereunder are subject to any subsequent intercreditor agreement to which the Lender becomes a party. In the event of a conflict between the terms of such intercreditor agreement and this agreement, the terms of

the intercreditor agreement shall govern and control.

## 6. No sale

The Borrower will not assign, transfer, encumber or otherwise dispose of any Intellectual Property Collateral or any interest therein without the Lender's prior written consent.

## 7. Recordation

The Borrower authorizes and requests that the Register of Copyrights, the Commissioner of Patents and Trademarks, the Canadian Intellectual Property Office, and such other recording authorities deemed reasonable by the Lender, record this agreement, and any amendments thereto, or copies thereof.

## 8. Further assurances; attorney in fact

- (a) The Borrower will, upon request by Lender, subject to any prior licenses and restrictions and prospective licenses, make, execute, acknowledge and deliver, and file and record in the proper filing and recording places in the United States and in Canada, all such instruments, including appropriate financing and continuation statements and collateral agreements and filings with the Canadian Intellectual Property Office and pursuant to the PPSA, and take all such action as may reasonably be deemed necessary or advisable, or as requested by Lender, to perfect Lender's security interest in all Intellectual Property Collateral.
- (b) The Borrower hereby irrevocably appoints Lender as Borrower's attorney-in-fact, with full authority in the place and stead of the Borrower and in the name of Borrower, the Lender or otherwise, from time to time in the Lender's discretion, upon the Borrower's failure or inability to do so, to take any action and to execute any instrument which the Lender may deem necessary or advisable to file, in its sole discretion, one or more financing or continuation statements and amendments thereto, or other notice filings or notations in appropriate filing offices, relative to any of the Intellectual Property Collateral, without notice to the Borrower, with all appropriate jurisdictions, as the Lender deems appropriate, in order to further perfect or protect the Lender's interest in the Intellectual Property Collateral.

## 9. Events of default

The term "Event of Default" shall have the meaning attributed thereto in the Loan Agreement.

## 10. Remedies

Upon the occurrence and continuance of an Event of Default, Lender shall have all the rights and remedies to which the Lender may be entitled under the PPSA, including without limitation the right to require The Borrower to assemble the Intellectual Property Collateral and any tangible property in which Lender has a security interest and to make it available to Lender at a place designated by Lender. On occurrence of an Event of Default, Lender shall have a nonexclusive, royalty free license to use the Intellectual Property Collateral to the extent reasonably necessary to permit Lender to exercise its rights and remedies upon the occurrence of an Event of Default. The Borrower will pay any expenses (including reasonable attorney's fees) incurred by Lender in connection with the exercise of any of Lender's rights hereunder, including without limitation any expense incurred in disposing of the Intellectual Property Collateral. All of Lender's rights and remedies with respect to the Intellectual Property Collateral shall be cumulative.

## 11. Termination

At such time as the Borrower shall completely satisfy all of the obligations secured hereunder, Lender shall execute and deliver to the Borrower all releases, terminations, and other instruments as may be necessary or proper to release the security interest hereunder.

## 12. Course of dealing

No course of dealing, nor any failure to exercise, nor any delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof.

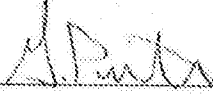
## 13. Copy of agreement and financing statement

The Borrower acknowledges receiving a copy of this agreement, and waives all rights to receive from the Lender a copy of any financing statement, financing change statement, or verification statement filed, issued, or obtained at any time in respect of this agreement.

## 14. General

- (a) This agreement
  - (i) is the entire agreement of the parties about its subject matter and supersedes all previous agreements about its subject matter;
  - (ii) is governed by the laws of Ontario and the laws of Canada applicable in Ontario;
  - (iii) may not be assigned by the Borrower without the prior written consent of the Lender;
  - (iv) may be assigned by the Lender to any affiliate of the Lender without the consent of the Borrower;
  - (v) is binding on and is for the benefit of the parties and their respective successors and assigns;
  - (vi) may be signed in separate counterparts and all counterparts together make one instrument; and
  - (vii) may be exchanged by facsimile or email transmission of duly signed counterparts (the exchange of the facsimile or email transmission of this agreement duly signed creates an immediately binding agreement once that exchange has occurred).
- (b) The Borrower accepts for itself and in connection with its properties, unconditionally, the non-exclusive jurisdiction of the Courts of the Province of Ontario in any action, suit, or proceeding of any kind, against it which arises out of or by reason of this agreement. Notwithstanding the foregoing, the Lender shall have the right to bring any action or proceeding against the Borrower or its property in the Courts of any other jurisdiction which the Lender deems necessary or appropriate in order to realize on the Intellectual Property Collateral or to otherwise enforce the Lender's rights against the Borrower or its property.

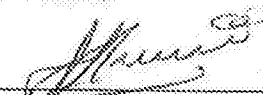
**Christie Medical Holdings, Inc.**

By:  \_\_\_\_\_

Name: George Pinho

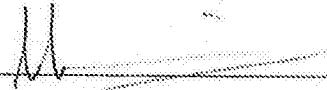
Title: President

**KA Imaging Inc.**

By:  \_\_\_\_\_

Name: Amol S. Karnick

Title: Chief Executive Officer

By:  \_\_\_\_\_

Name: Karim S. Karim

Title: Chief Technology Officer

{execution page of Security Agreement dated October 18, 2017}

EXHIBIT A

INTELLECTUAL PROPERTY COLLATERAL

Registrations of the Borrower in the name "KA Imaging"

www.kaimaging.com

	Title and Registration or Application Number	Owner(s) / Assignee(s)	Licensee	Form of IP	Country filed in	Filing/Issue Date	Status (Issued, Pending etc)
1	Apparatus for radiation detection in a radiography imaging system, US Patent Application No. 15/209,864	Dose Smart Imaging Inc.	KA Imaging Inc. <sup>1</sup>	Patent	US, Brazil, China, India	7/14/2015 (USA)	Received Notice of Allowance in US
2	Photoconductive element for radiation detection in a radiography imaging system, US Patent No. 9,401,383	Dose Smart Imaging Inc.	KA Imaging Inc. <sup>2</sup>	Patent	US	7/26/2016 (USA)	Granted
3	Apparatus for radiation detection in a radiography imaging system, US Patent App. No. 14/245,200	Dose Smart Imaging Inc.	KA Imaging Inc. <sup>3</sup>	Patent	US	4/4/2014 (USA)	Filed, In Office Action

<sup>1</sup> Agreement dated July 15, 2015 between Dose Smart Imaging Inc. and KA Imaging Inc. granting a worldwide exclusive license in all fields to develop, make, have made, use and have used and market any product produced by or with the use of the licensed technology. The patent transfers to KA Imaging Inc. within 30 days after KA Imaging Inc. has raised at least C\$5,000,000 in funding.

<sup>2</sup> Agreement dated July 6, 2015 between Dose Smart Imaging Inc. and KA Imaging Inc. granting a worldwide exclusive license in all fields to develop, make, have made, use and have used and market any product produced by or with the use of the licensed technology. The patent transfers to KA Imaging Inc. within 30 days after KA Imaging Inc. has raised at least C\$5,000,000 in funding.

<sup>3</sup> See footnote 2.

	Title and Registration or Application Number	Owner(s) / Assignee(s)	Licensee	Form of IP	Country filed in	Filing/Issue Date	Status (Issued, Pending etc)
4	Multi-layer flat panel x-ray detector, US Patent 9,526,466 B2	University of Waterloo	KA Imaging Inc. <sup>4</sup>	Patent	US, Canada	12/27/2016 (USA)	Granted
5	Radiation Detector System and Method of Manufacture, US 9,269,838 B2	University of Waterloo	KA Imaging Inc. <sup>5</sup>	Patent	US, Canada	2/23/2016 (USA)	Granted
6	Method and Apparatus for a Lateral Radiation Detector, US 8,836,069 B2	Karim S. Karim Kai Wang Amirhossein Goldan / University of Waterloo	KA Imaging Inc. <sup>6</sup>	Patent	US, Canada	9/16/2014 (USA)	Granted
7	Method and apparatus for a radiation detector, US 8,129,688 B2	Karim S. Karim Amirhossein Goldan / University of Waterloo	KA Imaging Inc. <sup>7</sup>	Patent	US, Canada	3/6/2012 (USA)	Granted
8	Multi-sensor pixel architecture for use in a digital imaging system, US Patent App. No. 15/266,051	KA Imaging Inc.	N/A	Patent	PCT, US	3/30/2017 (USA)	Notice of Allowance Received in US

<sup>4</sup> License Agreement dated July 6, 2015 (Ref # A-15-0031) between University of Waterloo and KA Imaging Inc. granting a worldwide exclusive license from University of Waterloo to KA Imaging Inc. in the field of x-ray imaging and x-ray inspection to (i) make, develop, use, import, export, offer for sale, sell, and otherwise exploit products, (ii) grant sub-licenses to any affiliate or other third party, (iii) engage distributors to market and sell products to end users, and (iv) otherwise practice the technology (including making improvements). The patent transfers to KA Imaging Inc. on or following its raising cumulative investment financing of at least C\$5,000,000.

<sup>5</sup> See footnote 4.

<sup>6</sup> See footnote 4.

<sup>7</sup> See footnote 4.



	Title and Registration or Application Number	Owner(s) / Assignee(s)	Licensee	Form of IP	Country filed in	Filing/Issue Date	Status (Issued, Pending etc)
9	Method and Apparatus for Improved Detective Quantum Efficiency in an X-ray Detector, PCT Patent Appin. No. PCT/CA2017/050200	University of Waterloo	KA Imaging Inc. <sup>8</sup>	Patent	PCT	2/16/2017 (USA)	PCT application filed
10	System and Method for an X-ray Detector, PCT Patent Appln. No. PCT/CA2017/050208	University of Waterloo	KA Imaging Inc. <sup>9</sup>	Patent	PCT	2/17/2017 (USA)	PCT application filed
11	A multi-mode readout IC for large area X-ray detectors, US Provisional Patent App. No. 62/398,592	KA Imaging Inc.	N/A	Patent	US	9/23/2016 (USA)	Filed, PCT application in preparation

<sup>8</sup> License Agreement dated February 17, 2017 (Ref # A-17-0019) between University of Waterloo and KA Imaging Inc. granting a worldwide exclusive license from University of Waterloo to KA Imaging Inc. in the field of x-ray imaging and x-ray inspection to (i) make, develop, use, import, export, offer for sale, sell, and otherwise exploit products, (ii) grant sub-licenses to any affiliate or other third party, (iii) engage distributors to market and sell products to end users, and (iv) otherwise practice the technology (including making improvements). The patent transfers to KA Imaging Inc. on or following its raising cumulative investment financing of at least C\$5,000,000 and achieves cumulative total of C\$6,000,000 net sales of the products incorporating the technology.

<sup>9</sup> License Agreement dated February 17, 2017 (ref # A-17-0020) between University of Waterloo and KA Imaging Inc. granting a worldwide exclusive license from University of Waterloo to KA Imaging Inc. in the field of x-ray imaging and x-ray inspection to (i) make, develop, use, import, export, offer for sale, sell, and otherwise exploit products, (ii) grant sub-licenses to any affiliate or other third party, (iii) engage distributors to market and sell products to end users, and (iv) otherwise practice the technology (including making improvements). The patent transfers to KA Imaging Inc. on or following its raising cumulative investment financing of at least C\$5,000,000 and achieves cumulative total of C\$6,000,000 net sales of the products incorporating the technology.

	Title and Registration or Application Number	Owner(s) / Assignee(s)	Licensee	Form of IP	Country filed in	Filing/Issue Date	Status (Issued, Pending etc)
12	Apparatus for radiation detection in a digital imaging system, U.S. Provisional Patent Appln. No. 62/503,408	KA Imaging Inc.	N/A	Patent	US	9/23/2016 (USA)	Filed, PCT application in preparation