

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6446706

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
DR. ELTON CARVALHO GONÇALVES	12/11/2020

**RECEIVING PARTY DATA**

<b>Name:</b>	TRAIT BIOSCEINCES, INC.
<b>Street Address:</b>	100 ENTRADA DR
<b>City:</b>	LOS ALAMOS
<b>State/Country:</b>	NEW MEXICO
<b>Postal Code:</b>	87544

**PROPERTY NUMBERS Total: 22**

Property Type	Number
Application Number:	62746053
PCT Number:	US2019056613
PCT Number:	US2018041710
Application Number:	16110954
Application Number:	16425654
Application Number:	16425744
Application Number:	16426059
Application Number:	16110728
PCT Number:	US2018024409
Application Number:	16242897
Application Number:	16242922
Application Number:	16242951
Application Number:	16514581
Application Number:	62885349
Application Number:	62720649
Application Number:	62889398
Application Number:	62621166
PCT Number:	US2019015039
Application Number:	16515377
Application Number:	62728546

PATENT

Property Type	Number
Application Number:	62842621
Application Number:	62969601

  

**CORRESPONDENCE DATA**

**Fax Number:** (303)402-1601

*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:** 3034021600

**Email:** docketing@bhgrlaw.com

**Correspondent Name:** DAVID S. KERR

**Address Line 1:** 1712 PEARL ST.

**Address Line 4:** BOULDER, COLORADO 80302

<b>NAME OF SUBMITTER:</b>	DAVID S. KERR
<b>SIGNATURE:</b>	/David S. Kerr/
<b>DATE SIGNED:</b>	12/13/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).

**Total Attachments: 6**

source=Master Assignment - Trait Biosciences-3#page1.tif

source=Master Assignment - Trait Biosciences-3#page2.tif

source=Master Assignment - Trait Biosciences-3#page3.tif

source=Master Assignment - Trait Biosciences-3#page4.tif

source=Master Assignment - Trait Biosciences-3#page5.tif

source=Master Assignment - Trait Biosciences-3#page6.tif

## CONFIRMATORY ASSIGNMENT OF PATENT RIGHTS

THIS Confirmatory Assignment (“**Assignment**”) is entered into between Trait Biosciences, Inc., having its principal office at 100 Entrada Dr, Los Alamos, 87544, NM (the “**Assignee**”) and the inventors listed below (the “**Assignors**”).

**WHEREAS** Assignors are collectively identified herein as:

**Dr. Richard T. Sayre**

**Dr. Tawanda Zidenga**

**Dr. Loan Huynh**

**Dr. Erick Scott LeBrun**

**Dr. Timothy S. Travers**

**Dr. Oliver Kayser**

**Dr. Omar Holguin**

**Dr. Jennifer Stamps**

**Dr. Maria Soto-Aguilar**

**Dr. Rick DeRose**

**Dr. Elton Carvalho Gonçalves**

**WHEREAS**, the Assignors may have contributed to some degree in conceiving or developing technology relating to one or more of the following:

Application No.	Title
N/A	Acid Stable Water-Soluble Vitamin-C Conjugate Cannabinoid Compounds and Methods of Making the Same
62/746,053; PCT/US19/56613	Conversion of Cannabis Terpenoids into Water-Soluble Compounds in Planta, Yeast and Plant Cell Suspension Cultures
62/531,123; PCT/US18/41710; 16/110,954; 16/425,654; 16/425,744; 16/426,059	IN VIVO GENERATION OF WATER-SOLUBLE CANNABINOID COMPOUNDS IN YEAST SUSPENSION CULTURES
16/110,728; PCT/US18/24409; 16/242,897; 16/242,922; 16/242,951; 16/514,581	High Level In Vivo Biosynthesis and Isolation of Water-Soluble Cannabinoids in Plant Systems
62/588,662	IN VIVO SYSTEM FOR CELLULAR LOCALIZATION OF CANNABINOID GLYCOSYLATION

62/888,065	Modified cannabinoid synthase configured to enhance production of cannabidiolic acid (CBDA)
62/983,019	Novel systems, methods and compositions for the glycosylation of cannabinoid compounds
62/903,006	Novel Water-Soluble Vitamin-C Conjugate Cannabinoid Compounds and Methods of Making the Same
62/885,349	Stably Transformed Cannabis Plant and Methods of Making the Same
62/720,649; 62/889,398	Subcellular Localization of Cannabinoid Synthesis, Glycosylation and Storage
62/621,108; 62/896,952; 62/728,578	System and Methods for the Modification of Targeted Cannabinoid Biosynthetic Pathways
62/621,166; PCT/US19/15039; 16/515,377; 62/728,546	System for Enhanced Production and Accumulation of Cannabinoids in an In Vivo System
62/893,326	Systems and Methods for the Production of Novel Functionalized Cannabinoid Compositions and Their Methods of Use
62/842,621	Systems, Methods and Compositions for the In Vitro and In Planta Conversion of CBD and THC to Minor Cannabinoid Compounds
62/800,692; PCT/US20/16642	SYSTEMS, METHODS, AND COMPOSITIONS FOR THE GENERATION OF WATER-SOLUBLE CANNABINOIDS UTILIZING FATTY-ACID BINDING PROTEINS AND FATTY-ACID BINDING-LIKE PROTEINS AS CANNABINOID-CARRIERS
62/800,708; PCT/US20/16672	SYSTEMS, METHODS, AND COMPOSITIONS FOR THE GENERATION OF WATER-SOLUBLE CANNABINOIDS UTILIZING LIPOCALINS, ODORANT-BINDING, AND ODORANT-BINDING-LIKE PROTEINS AS A CANNABINOID-CARRIERS
62/810,435	Systems, Methods, and Compositions for the Generation of Water-Soluble Cannabinoids Utilizing Plant Lipocalin, Plant-Like Lipocalin Proteins, and Novel Plant Lipocalin Protein Cannabinoid Binding Domains as Cannabinoid-Carriers
62/800,684; 62/969,601	SYSTEMS, METHODS, AND COMPOSITIONS FOR THE GENERATION OF WATER-SOLUBLE CANNABINOIDS UTILIZING SERUM ALBUMIN AND SERUM ALBUMIN-LIKE PROTEINS AS CANNABINOID-CARRIERS

This Assignment also includes those improvements and additional embodiments which are related to the subject matter of such technology to the extent conceived or developed during the time serving as a consultant or employee of the Assignee, or its subsidiaries, affiliates, or related parties, and to improvements related to such technology which are identified, developed, or conceived using trade secret or confidential information of the Assignee or which are likely to cause disclosure of such trade secret or confidential information (collectively, the “**Invention**”);

**WHEREAS**, Assignors, either by herself/himself or in conjunction with other individuals, may be an inventor of the Invention;

**WHEREAS**, Assignors acknowledge all his/her right, title and interest in any and all patent rights and any other proprietary rights in the Invention was vested in Assignee; and

**WHEREAS**, Assignors desire to formalize his/her obligation for assignment of all right, title and interest to the Invention to Assignee to the extent he/she has any such rights worldwide; and

**WHEREAS**, Assignors acknowledge his/her obligation to assign all right, title and interest in any and all patent rights and any other proprietary rights in the Invention, to Assignee;

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, each of the undersigned hereby agree as follows:

1. Assignors warrant that:

a. he/she has the authority to assign all right, title, and interest originated now or hereafter by her/ involving the Invention;

b. he/she has conveyed no right, title, or interest in the Invention to any party other than Assignee;

c. to the extent any Assignor conducted any efforts relevant to the ownership of all rights to the Invention under, on behalf of, or through any entity or assumed name, he/she has the authority to act as agent for such an entity and to fully transfer such rights; and

d. at the time of signing of this Assignment, he/she neither knows nor has reason to know of any outstanding right, title, or interest in the Invention inconsistent with a full assignment of rights to Assignee other than any right, title, or interest which may exist as a result of any other’s co-inventorship.

2. Assignors, for good and valuable consideration, hereby sell, grant, transfer, authorize application for, agree to support, and assign to Assignee the entire right, title, and interest in and to the Invention, including, but not limited to:

a. all such worldwide rights to make, use, and sell the Invention;

b. all rights to make, own, and control any applications for United States or foreign patents relating to or based upon the Invention, including, but not limited to: all rights to the above-identified application, all rights to make any claim for any priority to which such applications may be entitled, all rights to any continuing application(s),

divisional application(s), substitution application(s), continuation application(s), continuation-in-part application(s), national phase application(s), regional phase application(s), foreign application(s); and all patents which may be granted thereon; and all reissues, extensions, or other related rights related thereto;

c. all related rights involving the Invention in any country such as utility-model registrations, inventor's certificates, and the like, and all rights, titles, and interests involving the Invention under any foreign government;

d. all rights to any documents, notes, and evidence regarding any aspect of the Invention; and

e. all rights to seek protection covering such aspects or claims as Assignee deems appropriate, specifically, including, but not limited to: claims which seek protection for device, apparatus, method, process, business method, or other coverage; claims which seek protection for as broad a level of coverage as might be desired by Assignee; claims which address any aspect conceived, developed, or disclosed as separate inventions; claims which address any permutations or combinations of any aspects; claims which address any aspects independent of any initial context considered as preferred embodiments; and claims which seek broad protection in general.

3. Assignors acknowledge a legal and equitable obligation to assign to Assignee any and all patent rights and any other proprietary rights related to the Invention to the extent conceived (even if later reduced to practice) or developed while he/she is an employee or consultant of Assignee or its subsidiaries, affiliates, or related parties, and covenants that he/she has not and will not execute any agreement in conflict with this Assignment and will not offer any opinions, or take or assist in taking any actions which might tend to diminish the scope of protection available to Assignee. Further, Assignors warrant that other than rights of Assignee, he/she maintains the entire right, title, and interest in and to the Invention as may exist by virtue of his/her contribution and has made no conveyance of any rights whatsoever to any other person. Each Assignor also covenants that he/she will promptly and continuously inform Assignee of any articles, patents, or other references, or prior art of which he/she becomes aware which may be material to the assessment of patentability of the Invention.

4. Assignors further covenant and agree that he/she will communicate to Assignee any facts known to him/her respecting any improvements involving or in any way related to the Invention, and will testify in any legal proceeding, sign all lawful papers, execute all division, continuation, continuation-in-part, substitute, foreign, or reissue applications, make all rightful oaths, and generally do everything possible to aid Assignee to obtain and enforce full protection and title in and to said Invention in all countries without further consideration but at the expense of Assignee.

5. Assignors acknowledge that pursuant to the sale, grant, transfer, and assignment to Assignee of the entire right, title, and interest in and to the Invention, as provided in the above paragraphs, this Assignment shall be complete as to all rights owned.

6. Assignors recognize that, until published by a governmental authority, each feature of all designs which relate to the Invention and all associated information, including but not limited to patent prosecution information such as amendments to the claims, supporting

affidavits, or the like, shall be considered confidential, whether labeled as such or not, whether disclosed before or after entering into this Assignment, whether of a technical, business, or legal nature including but not limited to any aspects relevant to any prosecution of a patent application in any country, and whether discovered by explicit disclosure or mere inspection of any item or facility. In addition, it is agreed that the Invention and its associated information represent trade secrets and may become subject to patent, trademark, or other additional proprietary protection. In recognition of such existing and potential proprietary rights which exist or may be obtained, Assignors agree to take all reasonable steps to maintain, continue, and protect the secrecy of the Invention and all related information as he/she may possess, to subject his/her employees to like restrictions, and to subject any third persons to which he/she discloses information to like restrictions. Assignors may disclose the information to any of its employees or other persons only as appropriate as determined by Assignee. Assignors agree not to utilize, exploit, or incorporate any of the information for his/her own benefit directly or indirectly except as expressly agreed by Assignee in writing.

7. Assignors grant the firm of Berg Hill Greenleaf & Ruscitti LLP the power to insert on this Assignment or any other document any further identification which may be necessary or desirable such as to indicate filing information or to comply with the rules of the United States Patent Office or any foreign patent office for recordation of this document, including, but not limited to, inserting the application number, the execution date, mailing information, or the filing date of the above-identified United States Patent Application.

8. This Assignment shall be binding on all parties, their heirs, executors, administrators, successors, or assigns, and may be recorded in the United States Patent and Trademark Office or elsewhere. In the event any provision of this Assignment is found to be unenforceable or to be unreasonable in scope, such provision shall be modified to the extent necessary to make it enforceable, and as so modified, this Assignment shall remain in full force and effect.

9. This Assignment shall be construed and enforced in accordance with the laws and jurisdiction of the State of Colorado or under the federal laws of the United States to the extent they supersede state law. In the event any claim or controversy arises under this Assignment or the parties' relationship, the parties agree to submit to exclusive jurisdiction and venue for the resolution of such dispute in the District Court of Los Alamos County, New Mexico, or to the extent necessary in federal court in the District of New Mexico, United States of America.

---

**Dr. Richard T. Sayre**  
Assignor

DocuSigned by:  
  
C60A38B47F4F484...

---

**Dr. Elton Carvalho Gonçalves**

Assignor

DocuSigned by:

*Tawanda Zidenga*

8BE86EE1AAEC4F1...

**Dr. Tawanda Zidenga**

Assignor

DocuSigned by:

*Erick LeBrun*

8D7C889A1FC24D6...

**Dr. Erick Scott LeBrun**

Assignor

DocuSigned by:

*Timothy Travers*

46827488C5834D8...

**Dr. Timothy S. Travers**

Assignor

DocuSigned by:

*Oliver Kayser*

F416C7F117AF413...

**Dr. Oliver Kayser**

Assignor

DocuSigned by:

*F. Omar Holguin*

AD874F51E4AB4D8...

**Dr. Omar Holguin**

Assignor

*Stamps*

**Dr. Jennifer Stamps**

Assignor

DocuSigned by:

*Rick DeRose*

8635C1AEC27F464...

**Dr. Rick DeRose**

Assignor

DocuSigned by:

*Maria Soto-Aguilar*

26101F8A8DEA44C...

**Dr. Maria Soto-Aguilar**

Assignor

DocuSigned by:

*Loan Huynh*

E96217E9CDE4CC...

**Dr. Loan Huynh**

Assignor