

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	16459463
<b>Application Number:</b>	13954834
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1155
<b>Title of Invention:</b>	METHOD OF CANCER TREATMENT WITH 2-(1H-INDOLE-3-CARBONYL)-THIAZOLE-4-CARBOXYLIC ACID METHYL ESTER
<b>First Named Inventor/Applicant Name:</b>	Jiasheng Song
<b>Customer Number:</b>	32885
<b>Filer:</b>	Cong Ding/Francine VanAelst
<b>Filer Authorized By:</b>	Cong Ding
<b>Attorney Docket Number:</b>	18806N/130561C
<b>Receipt Date:</b>	30-JUL-2013
<b>Filing Date:</b>	
<b>Time Stamp:</b>	19:53:21
<b>Application Type:</b>	Utility under 35 USC 111(a)

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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Application Data Sheet	aia0014.pdf	1503673 a33cf6e92263546e63491ab67d53a6d6d11bdlb97	no	6
<b>Warnings:</b>					
<b>Information:</b>					
2	Information Disclosure Statement (IDS) Form (SB08)	updated_IDS.pdf	613933 f49278da6325c9a75dcf9729c37a7a5ff944cf9bb	no	5
<b>Warnings:</b>					
<b>Information:</b>					
3		SONG_CIP_utility_application_cancer_treatment_using_ITE_.pdf	1337699 209b33d0aa4299941ee97ee8dfb1571da4b5cafb	yes	37
	<b>Multipart Description/PDF files in .zip description</b>				
	<b>Document Description</b>		<b>Start</b>	<b>End</b>	
	Specification		1	32	
	Claims		33	36	
	Abstract		37	37	
<b>Warnings:</b>					
<b>Information:</b>					
4	Drawings-only black and white line drawings	SONG_CIP_Drawings.PDF	164446 87350b86817a83e8292c59998ec0c8a97edf952f0	no	2
<b>Warnings:</b>					
<b>Information:</b>					
5	Fee Worksheet (SB06)	fee-info.pdf	33114 cb550a3a3cef7e8fb62b4b0209c8ca0b5550f5e96	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			3652865		

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**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	18806N/130561C
		Application Number	
Title of Invention	Method of Cancer Treatment with 2-(1H-Indole-3-Carbonyl)-Thiazole-4-Carboxylic Acid Methyl Ester		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

**Secrecy Order 37 CFR 5.2**

<input type="checkbox"/>	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
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**Inventor Information:**

Inventor 1 <span style="float: right;">Remove</span>					
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Jiasheng		Song		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Madison	State/Province	WI	Country of Residence	US
Mailing Address of Inventor:					
Address 1	7880 Wood Reed Drive				
Address 2					
City	Madison	State/Province	WI		
Postal Code	53719	Country i	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. <span style="float: right;">Add</span>					

**Correspondence Information:**

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
<input type="checkbox"/> An Address is being provided for the correspondence information of this application.	
Customer Number	32885
Email Address	<span style="float: right;">Add Email Remove Email</span>

**Application Information:**

Title of the Invention	Method of Cancer Treatment with 2-(1H-Indole-3-Carbonyl)-Thiazole-4-Carboxylic Acid Methyl Ester		
Attorney Docket Number	18806N/130561C	Small Entity Status Claimed	<input checked="" type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

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<b>Application Data Sheet 37 CFR 1.76</b>	Attorney Docket Number	18806N/130561C
	Application Number	
Title of Invention	Method of Cancer Treatment with 2-(1H-Indole-3-Carbonyl)-Thiazole-4-Carboxylic Acid Methyl Ester	

**Publication Information:**

<input type="checkbox"/>	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/>	<b>Request Not to Publish.</b> I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application <b>has not and will not</b> be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

**Representative Information:**

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	32885		

**Domestic Benefit/National Stage Information:**

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Pending	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation in part of	13503657	2012-04-24
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13503657	a 371 of international	PCT/US10/52729	2010-10-14
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US10/52729	non provisional of	61257422	2009-11-02

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

**Foreign Priority Information:**

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	18806N/130561C
		Application Number	
Title of Invention	Method of Cancer Treatment with 2-(1H-Indole-3-Carbonyl)-Thiazole-4-Carboxylic Acid Methyl Ester		

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)<sup>1</sup> the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country <sup>1</sup>	Filing Date (YYYY-MM-DD)	Access Code <sup>1</sup> (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

## Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

## Authorization to Permit Access:

Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	18806N/130561C
		Application Number	
Title of Invention	Method of Cancer Treatment with 2-(1H-Indole-3-Carbonyl)-Thiazole-4-Carboxylic Acid Methyl Ester		

## Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

**Applicant 1**

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Assignee       Legal Representative under 35 U.S.C. 117       Joint Inventor

Person to whom the inventor is obligated to assign.       Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here.

Organization Name      AhR Pharmaceuticals, Inc.

**Mailing Address Information For Applicant:**

Address 1	7880 Wood Reed Drive		
Address 2			
City	Madison	State/Province	WI
Country	US	Postal Code	53719
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

## Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	18806N/130561C
		Application Number	
Title of Invention	Method of Cancer Treatment with 2-(1H-Indole-3-Carbonyl)-Thiazole-4-Carboxylic Acid Methyl Ester		

<b>Assignee 1</b>				
Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest), as the patent application publication will include the name of the applicant(s).				
If the Assignee is an Organization check here. <input type="checkbox"/>				
Prefix	Given Name	Middle Name	Family Name	Suffix
<b>Mailing Address Information For Non-Applicant Assignee:</b>				
Address 1				
Address 2				
City		State/Province		
Country i	Postal Code			
Phone Number		Fax Number		
Email Address				
Additional Assignee Data may be generated within this form by selecting the Add button.				

**Signature:**

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.					
Signature	/Cong Ding/			Date (YYYY-MM-DD)	2013-07-30
First Name	Cong	Last Name	Ding	Registration Number	62273
Additional Signature may be generated within this form by selecting the Add button.					

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**



<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date		2013-07-26	
	First Named Inventor	Jiasheng Song		
	Art Unit			
	Examiner Name			
	Attorney Docket Number		18806N/130561C	

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	6916834		2005-07-00	DeLuca, et al.	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1	WO02064138	WO		2002-08-22	DeLuca, et al.	para[0014]-[0016], [0039]-[0042],[0048]	<input type="checkbox"/>
	2	WO0228832	WO		2002-04-11	Safe	para [2002],[0023], [0039]-[0045],[0049]-[0050],[0052]-0053],[0075]	<input type="checkbox"/>

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**NON-PATENT LITERATURE DOCUMENTS**

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	2013-07-26
First Named Inventor	Jiasheng Song
Art Unit	
Examiner Name	
Attorney Docket Number	18806N/130561C

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1	DIETRICH ET AL., "The aryl hydrocarbon receptor (AhR) in the regulation of cell-cell contact and tumor growth", Carcinogenesis, 2010;31(8):1319-1328	<input type="checkbox"/>
	2	SIMON ET AL., "Estimates of cancer potency of 2,3,7,8-tetrachlorodibenzo(p)dioxin using linear and nonlinear dose-response modeling and toxicokinetics", Toxicological sciences. 2009;112(2):490-506.	<input type="checkbox"/>
	3	ISHIDA ET AL., "Activation of the aryl hydrocarbon receptor pathway enhances cancer cell invasion by upregulating the MMP expression and is associated with poor prognosis in upper urinary tract urothelial cancer", Carcinogenesis. 2010;31(2):287-295.	<input type="checkbox"/>
	4	RAY ET AL., "Activation of the aryl hydrocarbon receptor by TCDD inhibits senescence: a tumor promoting event?", Biochem. Pharmacol. 2009;77(4):681-688.	<input type="checkbox"/>
	5	KNERR ET AL., "Carcinogenicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin in experimental models.", Mol Nutr Food Res. 2006;50(10):897-907	<input type="checkbox"/>
	6	YU ET AL., "In utero exposure of mice to dibenzo[a,l] pyrene produces lymphoma in the offspring: role of the aryl hydrocarbon receptor.", Cancer Res. 2006;66(2):755-762.	<input type="checkbox"/>
	7	McDOUGAL ET AL: Inhibition of 7,12-dimethylbenz [a] anthracene-induced rat mammary tumor growth by aryl hydrocarbon receptor agonists", Cancer Lett. 1997;120(1):53-63.	<input type="checkbox"/>
	8	HOLCOMB M ET AL.: Inhibition of 7,12-dimethylbenzanthracene-induced rat mammary tumor growth by 2,3,7,8-tetrachlorodibenzo-p-dioxin", Cancer Lett. 1994;82(1):43-7	<input type="checkbox"/>
	9	McDOUGAL ET AL "Tamoxifen-induced antitumorigenic/antiestrogenic action synergized by a selective aryl hydrocarbon receptor modulator", Cancer Res_ 2001;61(10):3902-3907.	<input type="checkbox"/>
	10	GIERTHY ET AL "Correlation of in vitro and in vivo growth suppression of MCF-7 human breast cancer by 2,3,7,8-tetrachlorodibenzo-p-dioxin", Cancer Res. 1993;53(13):3149-3153.	<input type="checkbox"/>

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2013-07-26
First Named Inventor	Jiasheng Song	
Art Unit		
Examiner Name		
Attorney Docket Number	18806N/130561C	

11	ZHANG ET AL, "The aryl hydrocarbon receptor as a target for estrogen receptor-negative breast cancer chemotherapy.", Endocr. Relat_ Cancer 2009;16(3):835-844.	<input type="checkbox"/>
12	O'Donnell EF, Kopparapu PR, Koch DC, et al. The aryl hydrocarbon receptor mediates leflunomide-induced growth inhibition of melanoma cells. PLoS ONE. 2012;7(7):e40926.	<input type="checkbox"/>
13	LO PIPARO et. al.:Virtual screening for aryl hydrocarbon receptor binding prediction", J Med Chem,2006,Vo1 49(19), pp 5702-5709; pg 5702- pg 5703;pg5708	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

**EXAMINER SIGNATURE**

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2013-07-26
First Named Inventor	Jiasheng Song	
Art Unit		
Examiner Name		
Attorney Docket Number	18806N/130561C	

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

- See attached certification statement.
- The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Cong Ding/	Date (YYYY-MM-DD)	2013-07-30
Name/Print	Cong Ding	Registration Number	62273

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**