

## PATENT ASSIGNMENT

Electronic Version v1.1  
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SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
CONVEYING PARTY DATA																	
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Hua Ai</td><td>12/27/2006</td></tr><tr><td>Jeffrey L. Duerk</td><td>12/22/2006</td></tr><tr><td>Chris Flask</td><td>12/20/2006</td></tr><tr><td>Jinming Gao</td><td>12/22/2006</td></tr><tr><td>Jonathan S. Lewin</td><td>12/06/2006</td></tr><tr><td>Xintao Shuai</td><td>12/27/2006</td></tr><tr><td>Brent Weinberg</td><td>01/03/2007</td></tr></tbody></table>		Name	Execution Date	Hua Ai	12/27/2006	Jeffrey L. Duerk	12/22/2006	Chris Flask	12/20/2006	Jinming Gao	12/22/2006	Jonathan S. Lewin	12/06/2006	Xintao Shuai	12/27/2006	Brent Weinberg	01/03/2007
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Xintao Shuai	12/27/2006																
Brent Weinberg	01/03/2007																
RECEIVING PARTY DATA																	
<table border="1"><tr><td>Name:</td><td>Case Western Reserve University</td></tr><tr><td>Street Address:</td><td>10900 Euclid Avenue</td></tr><tr><td>City:</td><td>Cleveland</td></tr><tr><td>State/Country:</td><td>OHIO</td></tr><tr><td>Postal Code:</td><td>44106</td></tr></table>		Name:	Case Western Reserve University	Street Address:	10900 Euclid Avenue	City:	Cleveland	State/Country:	OHIO	Postal Code:	44106						
Name:	Case Western Reserve University																
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PROPERTY NUMBERS Total: 1																	
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>PCT Number:</td><td>US0519308</td></tr></tbody></table>		Property Type	Number	PCT Number:	US0519308												
Property Type	Number																
PCT Number:	US0519308																
CORRESPONDENCE DATA																	
Fax Number: (216)621-6165 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																	
Phone: 2166211113																	
Email: dbachtel@rennerotto.com																	
Correspondent Name: Heidi A. Boehlefeld																	
Address Line 1: 1621 Euclid Avenue																	
Address Line 2: Nineteenth Floor																	
Address Line 4: Cleveland, OHIO 44115																	
ATTORNEY DOCKET NUMBER:	CASEP0887WOUS																

PATENT

501345031

REEL: 025330 FRAME: 0518

OP \$40.00 US0519308

NAME OF SUBMITTER:

Heidi A. Boehlefeld

**Total Attachments: 40**

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## ASSIGNMENT

For One Dollar (\$1.00) and other good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, I/we the undersigned:

~~Hua Ai~~  
~~2540 N. Moreland Blvd. 3A~~  
~~Cleveland, Ohio 44120~~

for

Chris Flask  
32115 Augusta Drive  
Avon Lake, Ohio 44012

Jonathan S. Lewin  
104 Ridgewood Road  
Baltimore, Maryland 21210

Jeffrey L. Duerk  
519 Rockwood Court  
Avon Lake, Ohio 44012

Jinming Gao  
28800 S. Woodland Road  
Pepper Pike, Ohio 44124

Xintao Shuai  
2433 Overlook Road, #23  
Cleveland Heights, Ohio 44106

Brent Weinberg  
2580 N. Moreland Blvd., F23  
Shaker Heights, Ohio 44120

hereby sell and assign to Case Western Reserve University, an Ohio nonprofit corporation with offices at 10900 Euclid Avenue, Cleveland, Ohio 44106, U.S.A., its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the inventions in

## DUAL FUNCTION POLYMER MICELLES

set forth in the application for United States Letters Patent filed on June 2, 2005 and assigned Serial No. PCT/US2005/019308 executed by the undersigned on the dates indicated below, said application for United States Letters Patent, any and all other applications for Letters Patent on said inventions in countries foreign to the United States, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said applications and said Letters Patent;

said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise;

Hua Ai  
29 Wangjiang Rd.  
Tao Lin Village 2-10,  
Chengdu, Sichuan 610064  
P. R. CHINA

Attorney Docket: CASEP0887WOUS

the Commissioner of Patents of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith;


this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

I/We also appoint Case Western Reserve University as my common representative to represent me/us before all the competent International Authorities in connection with any and all international applications.

I/We authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this assignment document when that information becomes available.

Signed:

Dated:

  
\_\_\_\_\_  
Hua Ai

2006-12-27

\_\_\_\_\_  
Jeffrey L. Duerk

\_\_\_\_\_

\_\_\_\_\_  
Chris Flask

\_\_\_\_\_

Attorney Docket: CASEP0887WOUS

Signed:

Dated:

\_\_\_\_\_  
Jinming Gao

\_\_\_\_\_  
Jonathan S. Lewin

\_\_\_\_\_  
Xintao Shuai

\_\_\_\_\_  
Brent Weinberg

STATE OF        }  
                  } ss.  
COUNTY OF     }

Before me personally appeared the above named Hau Ai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        }  
                  } ss.  
COUNTY OF     }

Before me personally appeared the above named Jeffrey L. Duerk who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF        }  
                  } ss.  
COUNTY OF     }

Before me personally appeared the above named Chris Flask who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        }  
                  } ss.  
COUNTY OF     }

Before me personally appeared the above named Jinming Gao who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        }  
                  } ss.  
COUNTY OF     }

Before me personally appeared the above named Jonathan S. Lewin who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        }  
                  } ss.  
COUNTY OF     }

Before me personally appeared the above named Xintao Shuai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF        )  
                  ) ss.  
COUNTY OF     )

Before me personally appeared the above named Brent Weinberg who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

# 公 证 书

(2006)成武证外字第 1381 号

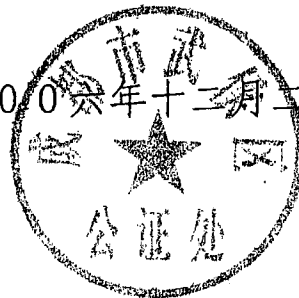
兹证明艾华于二 0 0 六年十二月二十七日来到我处,在我的面前,在前面的《双功能高分子胶束专利转让文件》(专利申请序列号 PCT/US2005/019308)和《基于高分子纳米微囊的药物传导系统专利转让文件》(专利申请序列号 10/838,289)上签名。

中华人民共和国四川省成都市武侯区公证处

公 证 员:

杨 硕 娟

二 0 0 六年十二月二十七日



XW 06258011



# NOTARIAL CERTIFICATE

(Translation)

(2006) Cheng-Wu-Zheng-Wai-Zi No.1381

This is to certify that Ai Hua came to my office on December 27, 2006, and signed his autograph in my presence, on the DUAL FUNCTION POLYMER MICELLES ASSIGNMENT (Serial No. PCT/US2005/019308) and DRUG DELIVERY SYSTEM BASED ON POLYMER NANOSHELLS (Serial No. 10/838,289) attached hereto.

Notary: Yang Lijuan (Signature)

Wuhou District Notary Public Office (Seal)

Chengdu City, Sichuan Province

The People's Republic of China

December 27, 2006

XW06258012

# 证 明 书

(2006)成武证外字第 1382 号

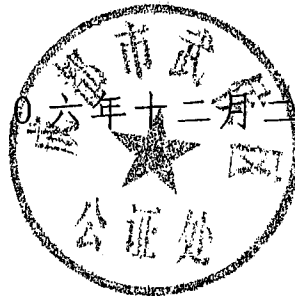
兹证明前面(2006)成武证外字第 1381 号《公证书》的英文译本与该公证书中文原本内容相符。

中华人民共和国四川省成都市武侯区公证处

公 证 员:

杨 硕 娟

二 0 0 六 年 十 二 月 二 十 七 日



XIV 06258013

# CERTIFICATE

(Translation)

(2006) Cheng-Wu-Zheng-Wai-Zi No.1382

This is to certify that the English translated copy of "NOTARIAL CERTIFICATE" (2006) Cheng-Wu-Zheng-Wai-Zi No.1381 attached hereto is in conformity with the Chinese original copy of the Notarial Certificate.

Notary: Yang Lijuan (signature)

Wuhou District Notary Public Office (seal)

Chengdu City, Sichuan Province

The People's Republic of China

December 27, 2006

XIV 062

# 公 证 书

中华人民共和国四川省成都市武侯区公证处

## ASSIGNMENT

For One Dollar (\$1.00) and other good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, I/we the undersigned:

Hua Ai  
2540 N. Moreland Blvd. 3A  
Cleveland, Ohio 44120

Jeffrey L. Duerk  
519 Rockwood Court  
Avon Lake, Ohio 44012

Chris Flask  
32115 Augusta Drive  
Avon Lake, Ohio 44012

Jinming Gao  
28800 S. Woodland Road  
Pepper Pike, Ohio 44124

Jonathan S. Lewin  
104 Ridgewood Road  
Baltimore, Maryland 21210

Xintao Shuai  
2433 Overlook Road, #23  
Cleveland Heights, Ohio 44106

Brent Weinberg  
2580 N. Moreland Blvd., F23  
Shaker Heights, Ohio 44120

hereby sell and assign to Case Western Reserve University, an Ohio nonprofit corporation with offices at 10900 Euclid Avenue, Cleveland, Ohio 44106, U.S.A., its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the inventions in

### DUAL FUNCTION POLYMER MICELLES

set forth in the application for United States Letters Patent filed on June 2, 2005 and assigned Serial No. PCT/US2005/019308 executed by the undersigned on the dates indicated below, said application for United States Letters Patent, any and all other applications for Letters Patent on said inventions in countries foreign to the United States, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said applications and said Letters Patent;

said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise;

**Attorney Docket: CASEP0887WOUS**

the Commissioner of Patents of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith;

this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

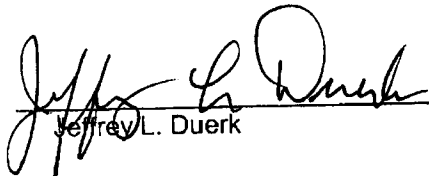
I/We also appoint Case Western Reserve University as my common representative to represent me/us before all the competent International Authorities in connection with any and all international applications.

I/We authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this assignment document when that information becomes available.

Signed:

Dated:

\_\_\_\_\_  
Hua Ai

\_\_\_\_\_  
  
Jeffrey L. Duerk

\_\_\_\_\_  
12-22-06

\_\_\_\_\_  
Chris Flask

Attorney Docket: CASEP0887WOUS

Signed:

Dated:

\_\_\_\_\_  
Jinming Gao

\_\_\_\_\_  
Jonathan S. Lewin

\_\_\_\_\_  
Xintao Shuai

\_\_\_\_\_  
Brent Weinberg

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Hau Ai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

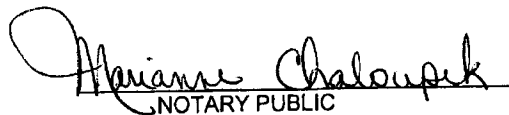
Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jeffrey L. Duerk who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: 12-22-06

  
\_\_\_\_\_  
NOTARY PUBLIC

**Attorney Docket: CASEP0887WOUS**

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Chris Flask who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jinming Gao who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jonathan S. Lewin who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Xintao Shuai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC



**Attorney Docket: CASEP0887WOUS**

STATE OF       )  
                  } ss.  
COUNTY OF    )

Before me personally appeared the above named Brent Weinberg who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

## ASSIGNMENT

For One Dollar (\$1.00) and other good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, I/we the undersigned:

Hua Ai  
2540 N. Moreland Blvd. 3A  
Cleveland, Ohio 44120

Jeffrey L. Duerk  
519 Rockwood Court  
Avon Lake, Ohio 44012

Chris Flask  
32115 Augusta Drive  
Avon Lake, Ohio 44012

Jinming Gao  
28800 S. Woodland Road  
Pepper Pike, Ohio 44124

Jonathan S. Lewin  
104 Ridgewood Road  
Baltimore, Maryland 21210

Xintao Shuai  
2433 Overlook Road, #23  
Cleveland Heights, Ohio 44106

Brent Weinberg  
2580 N. Moreland Blvd., F23  
Shaker Heights, Ohio 44120

hereby sell and assign to Case Western Reserve University, an Ohio nonprofit corporation with offices at 10900 Euclid Avenue, Cleveland, Ohio 44106, U.S.A., its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the inventions in

### DUAL FUNCTION POLYMER MICELLES

set forth in the application for United States Letters Patent filed on June 2, 2005 and assigned Serial No. PCT/US2005/019308 executed by the undersigned on the dates indicated below, said application for United States Letters Patent, any and all other applications for Letters Patent on said inventions in countries foreign to the United States, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said applications and said Letters Patent;

said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise;

**Attorney Docket: CASEP0887WOUS**

the Commissioner of Patents of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith;

this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

I/We also appoint Case Western Reserve University as my common representative to represent me/us before all the competent International Authorities in connection with any and all international applications.

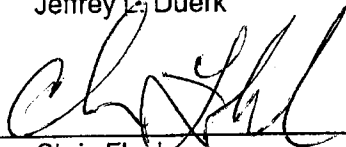
I/We authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this assignment document when that information becomes available.

Signed:

Dated:

\_\_\_\_\_  
Hua Ai

\_\_\_\_\_  
Jeffrey L. Duerk

  
Chris Flask

\_\_\_\_\_  
12-20-66

Attorney Docket: CASEP0887WOUS

Signed:

Dated:

\_\_\_\_\_  
Jinming Gao

\_\_\_\_\_  
Jonathan S. Lewin

\_\_\_\_\_  
Xintao Shuai

\_\_\_\_\_  
Brent Weinberg

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Hau Ai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jeffrey L. Duerk who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF )  
          ) ss. OHIO  
COUNTY OF ) CUYAHOGA

Before me personally appeared the above named Chris Flask who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: 12-20-06

Virginia A. Olszewski  
NOTARY PUBLIC



**VIRGINIA A. OLSZEWSKI**  
Notary Public  
in and for the State of Ohio  
My Commission Expires Oct. 20, 2007  
**Recorded in Lake County**

Before me personally appeared the above named Jinming Gao who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF )  
          ) ss.  
COUNTY OF )

Before me personally appeared the above named Jonathan S. Lewin who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF )  
          ) ss.  
COUNTY OF )

Before me personally appeared the above named Xintao Shuai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Brent Weinberg who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

## ASSIGNMENT

For One Dollar (\$1.00) and other good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, I/we the undersigned:

Hua Ai  
2540 N. Moreland Blvd. 3A  
Cleveland, Ohio 44120

Jeffrey L. Duerk  
519 Rockwood Court  
Avon Lake, Ohio 44012

Chris Flask  
32115 Augusta Drive  
Avon Lake, Ohio 44012

Jinming Gao  
~~28800 S. Woodland Road~~  
~~Pepper Pike, Ohio 44124~~

(JG)

3200 Preston Wood Dr.  
Plano, TX 75093

Jonathan S. Lewin  
104 Ridgewood Road  
Baltimore, Maryland 21210

Xintao Shuai  
2433 Overlook Road, #23  
Cleveland Heights, Ohio 44106

Brent Weinberg  
2580 N. Moreland Blvd., F23  
Shaker Heights, Ohio 44120

hereby sell and assign to Case Western Reserve University, an Ohio nonprofit corporation with offices at 10900 Euclid Avenue, Cleveland, Ohio 44106, U.S.A., its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the inventions in

## DUAL FUNCTION POLYMER MICELLES

set forth in the application for United States Letters Patent filed on June 2, 2005 and assigned Serial No. PCT/US2005/019308 executed by the undersigned on the dates indicated below, said application for United States Letters Patent, any and all other applications for Letters Patent on said inventions in countries foreign to the United States, including all divisional, renewal, substitute, continuation and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said applications and said Letters Patent;

said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise;

**Attorney Docket: CASEP0887WOUS**

the Commissioner of Patents of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith;

this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

I/We also appoint Case Western Reserve University as my common representative to represent me/us before all the competent International Authorities in connection with any and all international applications.

I/We authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this assignment document when that information becomes available.

Signed:

Dated:

\_\_\_\_\_  
Hua Ai

\_\_\_\_\_  
Jeffrey L. Duerk

\_\_\_\_\_  
Chris Flask



Attorney Docket: CASEP0887WOUS

Signed:

Dated:

X [Signature]  
Jinming Gao

12/22/06

\_\_\_\_\_  
Jonathan S. Lewin

\_\_\_\_\_  
Xintao Shuai

\_\_\_\_\_  
Brent Weinberg

STATE OF )  
              ) ss.  
COUNTY OF )

Before me personally appeared the above named Hau Ai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF )  
              ) ss.  
COUNTY OF )

Before me personally appeared the above named Jeffrey L. Duerk who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Chris Flask who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

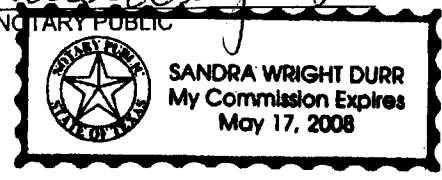
\_\_\_\_\_  
NOTARY PUBLIC

STATE OF       )  
*Texas*        ) ss.  
COUNTY OF    )  
*Dallas*

Before me personally appeared the above named Jinming Gao who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: 12-22-2006

*Sandra Wright Durr*  
\_\_\_\_\_  
NOTARY PUBLIC



STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jonathan S. Lewin who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Xintao Shuai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Brent Weinberg who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

## ASSIGNMENT

For One Dollar (\$1.00) and other good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, I/we the undersigned:

Hua Ai  
2540 N. Moreland Blvd. 3A  
Cleveland, Ohio 44120

Jeffrey L. Duerk  
519 Rockwood Court  
Avon Lake, Ohio 44012

Chris Flask  
32115 Augusta Drive  
Avon Lake, Ohio 44012

Jinming Gao  
28800 S. Woodland Road  
Pepper Pike, Ohio 44124

Jonathan S. Lewin  
104 Ridgewood Road  
Baltimore, Maryland 21210

Xintao Shuai  
2433 Overlook Road, #23  
Cleveland Heights, Ohio 44106

Brent Weinberg  
2580 N. Moreland Blvd., F23  
Shaker Heights, Ohio 44120

hereby sell and assign to Case Western Reserve University, an Ohio nonprofit corporation with offices at 10900 Euclid Avenue, Cleveland, Ohio 44106, U.S.A., its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the inventions in

### DUAL FUNCTION POLYMER MICELLES

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said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise;

**Attorney Docket: CASEP0887WOUS**

the Commissioner of Patents of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith;

this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

I/We also appoint Case Western Reserve University as my common representative to represent me/us before all the competent International Authorities in connection with any and all international applications.

I/We authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this assignment document when that information becomes available.

Signed:

Dated:

\_\_\_\_\_  
Hua Ai

\_\_\_\_\_  
Jeffrey L. Duerk

\_\_\_\_\_  
Chris Flask

Attorney Docket: CASEP0887WOUS

Signed:

Dated:

\_\_\_\_\_  
Jinming Gao

\_\_\_\_\_  
  
Jonathan S. Lewin

\_\_\_\_\_  
12-6-06

\_\_\_\_\_  
Xintao Shuai

\_\_\_\_\_  
Brent Weinberg

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Hau Ai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jeffrey L. Duerk who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF        )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Chris Flask who acknowledged the execution of the foregoing instrument as his/her free act and deed.

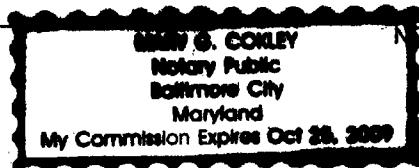
Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jinming Gao who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_



\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        )  
*MARYLAND*        ) ss.  
COUNTY OF    )  
*Baltimore City*

Before me personally appeared the above named Jonathan S. Lewin who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: 12.6.06

  
NOTARY PUBLIC

STATE OF        )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Xintao Shuai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**Attorney Docket: CASEP0887WOUS**

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Brent Weinberg who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC



## ASSIGNMENT

For One Dollar (\$1.00) and other good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, I/we the undersigned:

Hua Ai  
2540 N. Moreland Blvd. 3A  
Cleveland, Ohio 44120

Jeffrey L. Duerk  
519 Rockwood Court  
Avon Lake, Ohio 44012

Chris Flask  
32115 Augusta Drive  
Avon Lake, Ohio 44012

Jinming Gao  
28800 S. Woodland Road  
Pepper Pike, Ohio 44124

Jonathan S. Lewin  
104 Ridgewood Road  
Baltimore, Maryland 21210

Xintao Shuai  
2433 Overlook Road, #23  
Cleveland Heights, Ohio 44106

Brent Weinberg  
2580 N. Moreland Blvd., F23  
Shaker Heights, Ohio 44120

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### DUAL FUNCTION POLYMER MICELLES

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said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise;

**Attorney Docket: CASEP0887WOUS**

the Commissioner of Patents of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith;

this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

I/We also appoint Case Western Reserve University as my common representative to represent me/us before all the competent International Authorities in connection with any and all international applications.

I/We authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this assignment document when that information becomes available.

Signed:

Dated:

\_\_\_\_\_  
Hua Ai

\_\_\_\_\_  
Jeffrey L. Duerk

\_\_\_\_\_  
Chris Flask

Attorney Docket: CASEP0887WOUS

Signed:

Dated:

\_\_\_\_\_  
Jinming Gao

\_\_\_\_\_  
Jonathan S. Lewin

\_\_\_\_\_  
*Xintao Shuai*  
Xintao Shuai

\_\_\_\_\_  
*Dec. 27, 2006*

\_\_\_\_\_  
Brent Weinberg

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Hau Ai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jeffrey L. Duerk who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**Attorney Docket: CASEP0887WOUS**

STATE OF        )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Chris Flask who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jinming Gao who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jonathan S. Lewin who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF        )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Xintao Shuai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF        )  
                  ) ss.  
COUNTY OF     )

Before me personally appeared the above named Brent Weinberg who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

## ASSIGNMENT

For One Dollar (\$1.00) and other good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, I/we the undersigned:

Hua Ai  
2540 N. Moreland Blvd. 3A  
Cleveland, Ohio 44120

Jeffrey L. Duerk  
519 Rockwood Court  
Avon Lake, Ohio 44012

Chris Flask  
32115 Augusta Drive  
Avon Lake, Ohio 44012

Jinming Gao  
28800 S. Woodland Road  
Pepper Pike, Ohio 44124

Jonathan S. Lewin  
104 Ridgewood Road  
Baltimore, Maryland 21210

Xintao Shuai  
2433 Overlook Road, #23  
Cleveland Heights, Ohio 44106

Brent Weinberg  
~~2580 N. Moreland Blvd., F23~~ 2745 Hampshire Rd #3  
~~Shaker Heights, Ohio 44120~~ Cleveland Heights, OH 44106

BW

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## DUAL FUNCTION POLYMER MICELLES

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**Attorney Docket: CASEP0887WOUS**

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I/We authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this assignment document when that information becomes available.

Signed:

Dated:

\_\_\_\_\_  
Hua Ai

\_\_\_\_\_  
Jeffrey L. Duerk

\_\_\_\_\_  
Chris Flask

Attorney Docket: CASEP0887WOUS

Signed:

Dated:

\_\_\_\_\_  
Jinming Gao

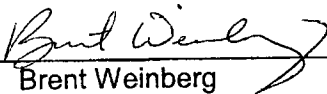
\_\_\_\_\_

\_\_\_\_\_  
Jonathan S. Lewin

\_\_\_\_\_

\_\_\_\_\_  
Xintao Shuai

\_\_\_\_\_

  
Brent Weinberg

01-03-07

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Hau Ai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF     )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jeffrey L. Duerk who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC



Attorney Docket: CASEP0887WOUS

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Chris Flask who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jinming Gao who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Jonathan S. Lewin who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

STATE OF       )  
                  ) ss.  
COUNTY OF    )

Before me personally appeared the above named Xintao Shuai who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: \_\_\_\_\_

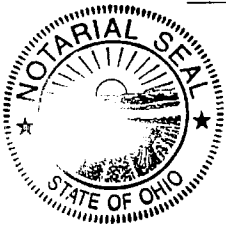
\_\_\_\_\_  
NOTARY PUBLIC

Attorney Docket: CASEP0887WOUS

STATE OF ) OHIO  
COUNTY OF ) ss. Cuyahoga

Before me personally appeared the above named Brent Weinberg who acknowledged the execution of the foregoing instrument as his/her free act and deed.

Date: 1-3-07



**VIRGINIA A. OLSZEWSKI**  
Notary Public  
In and for the State of Ohio  
My Commission Expires Oct. 20, 2007  
Recorded in Lake County

Virginia A. Olszewski  
NOTARY PUBLIC