PATENT REEL: 014194 FRAME: 0271

P.O. Box 1450 Alexandria, VA 22313-1450

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Application No.: 10/087,013 Client Code: NIH176.001C1 Filing Date: February 21, 2002 Page 1

ASSIGNMENT

WHEREAS, I, Pierre Buffet, a French citizen, residing at 157 BD Davout 75020, Paris France, have invented certain new and useful improvements in a IDENTIFICATION OF THE DOMAIN OF PLASMODIUM FALCIPARUM ERYTHROCYTE MEMBRANE PROTEIN 1 (PFEMP1) THAT MEDIATES ADHESION TO CHONDROITIN SULFATE A for which I have filed an application for Letters Patent in the United States, U.S. Pat. Appl. No. 10/087,013 filed February 21, 2002, which claims the benefit of priority of PCT/US00/24195 filed September 1, 2000, which claims the benefit of priority of U.S. Pat. Appl. No. 60/152,023 filed September 1, 1999;

AND WHEREAS, Institut Pasteur (hereinafter "ASSIGNEE"), with its principal place of business at Paris, France, desires to acquire the entire right, title, and interest in and to the said improvements and the said Application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, the said inventor, do hereby acknowledge that I have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in, to and under the said improvements, and the said application and all provisional applications relating thereto, and all divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and I hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND I HEREBY covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 2 V day of 26 10 J

ASSIGN1
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030603

INSTITUT PASTEUR

Pierre Buffet

Centre Médical Dr Pierre BUFFET Directeur

208-211, rue de Vaugirard 75724 Paris Cedex 15 18:-01 45 68 81 15 73x:-01 40 81 30 19 15 de pabuffet @pusteur.fr

PATENT REEL: 014194 FRAME: 0272

PATENT

Application No.: 10/087,013 Client Code: NIH176.001C1 Filing Date: February 21, 2002 Page 1

ASSIGNMENT

WHEREAS, I, Christine Scheidig, a French citizen, residing at 33, avenue du General Delestraint, 77176 Savigny le Temple, France, have invented certain new and useful improvements in a IDENTIFICATION OF THE DOMAIN OF PLASMODIUM FALCIPARUM ERYTHROCYTE MEMBRANE PROTEIN 1 (PFEMP1) THAT MEDIATES ADHESION TO CHONDROITIN SULFATE A for which I have filed an application for Letters Patent in the United States, U.S. Pat. Appl. No. 10/087,013 filed February 21, 2002, which claims the benefit of priority of PCT/US00/24195 filed September 1, 2000, which claims the benefit of priority of U.S. Pat. Appl. No. 60/152,023 filed September 1, 1999;

AND WHEREAS, Institut Pasteur (hereinafter "ASSIGNEE"), with its principal place of business at Paris, France, desires to acquire the entire right, title, and interest in and to the said improvements and the said Application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, the said inventor, do hereby acknowledge that I have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in, to and under the said improvements, and the said application and all provisional applications relating thereto, and all divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all extensions, renewals and reissues thereof; and I hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND I HEREBY covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 26 day of 1000, 2003.

Christine Scheidig

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PATENT REEL: 014194 FRAME: 0273

PATENT

Application No.: 10/087,013 Client Code: NIH176.001C1 Filing Date: February 21, 2002

Page 1

ASSIGNMENT

WHEREAS, I, Artur Scherf, a German citizen, residing at 42, rue Mathurin Regnier, F-75015 Paris, France, have invented certain new and useful improvements in a IDENTIFICATION OF THE DOMAIN OF PLASMODIUM FALCIPARUM ERYTHROCYTE MEMBRANE PROTEIN 1 (PFEMP1) THAT MEDIATES ADHESION TO CHONDROITIN SULFATE A for which I have filed an application for Letters Patent in the United States, U.S. Pat. Appl. No. 10/087,013 filed February 21, 2002, which claims the benefit of priority of PCT/US00/24195 filed September 1, 2000, which claims the benefit of priority of U.S. Pat. Appl. No. 60/152,023 filed September 1, 1999;

AND WHEREAS, Institut Pasteur (hereinafter "ASSIGNEE"), with its principal place of business at Paris, France, desires to acquire the entire right, title, and interest in and to the said improvements and the said Application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, the said inventor, do hereby acknowledge that I have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in, to and under the said improvements, and the said application and all provisional applications relating thereto, and all divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and I hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND I HEREBY covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 2 day of Q n

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RECORDED: 06/23/2003

PATENT REEL: 014194 FRAME: 0274