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11-08-2001



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TO THE COMMISSIONER OF
PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

Attorney Reference: 31847-138969

BOX ASSIGNMENTREQUEST FOR RECORDING AND COVER SHEET UNDER 37 C.F.R. 3.28 AND 3.31

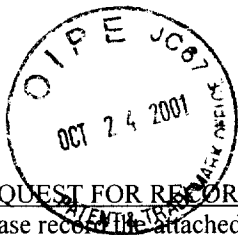
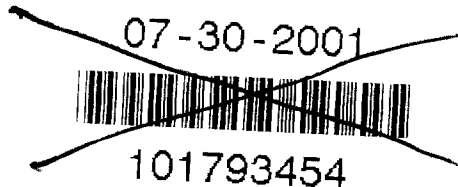
Please record the attached original document(s) or copy(ies) thereof.

1. Name of party conveying the interest:
Alusuisse Lonza Group, AG
Feldeggsstrasse 4
CH-8034 Zürich
Switzerland
2. Name and address of party receiving the interest:
Lonza Group, AG
Feldeggsstrasse 4
CH-8034 Zürich
Switzerland
3. Description of the interest conveyed or transaction to be recorded:
☒ **Assignment** ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other:
4. Patent Number: **5,672,502**
5. Address correspondence concerning this request to: **VENABLE,**
P.O. Box 34385, Washington, D.C. 20043-9998.
6. Number of Applications, Patents or Registrations and total fee:
Patents: **1** patent rights @ \$40 Total: **\$40.00**

If no fee is attached, or if a greater or lesser fee is required, please charge or credit our Account No. 22-0261.
7. Date of execution of document: **October 5, 1999**
8. If document is an assignment of a trademark right to an assignee who is not domiciled in the United States, such assignee has designated a domestic representative ☐ per attached designation ☐ other:
9. To the best of knowledge and belief of the undersigned, the foregoing information is true and correct and any attached copy is a true copy of the original document.
10. Date: **October 24, 2001**

Marina V. Schneller

Registration Number: 26,032



TO THE COMMISSIONER OF
PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

Attorney Reference: **31847-138969**

BOX ASSIGNMENT

REQUEST FOR RECORDING AND COVER SHEET UNDER 37 C.F.R. 3.28 AND 3.31

Please record the attached original document(s) or copy(ies) thereof.

1. Name of party conveying the interest:

Alusuisse Lonza Group, AG
Feldeggsstrasse 4
CH-8034 Zürich
Switzerland

07/23/01

2. Name and address of party receiving the interest:

Lonza Group, AG
Feldeggsstrasse 4
CH-8034 Zürich
Switzerland

3. Description of the interest conveyed or transaction to be recorded:

☒ **Assignment** ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other:

4. Patent Number: **5,672,502**

5. Address correspondence concerning this request to: **VENABLE,
P.O. Box 34385, Washington, D.C. 20043-9998.**

6. Number of Applications, Patents or Registrations and total fee:

Patents: **1** patent rights @ \$40 Total: **\$40.00**

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8. If document is an assignment of a trademark right to an assignee who is not domiciled in the United States, such assignee has designated a domestic representative ☐ per attached designation ☐ other:

9. To the best of knowledge and belief of the undersigned, the foregoing information is true and correct and any attached copy is a true copy of the original document.

10. Date: **July 23, 2001**

07/27/2001 DBYRNE 00000166 5672502

01 FC:581

40.00 OP

Marina V. Schneller

Registration Number: 26,032

Letter of Transfer and Assignment

between

Alusuisse Lonza Group AG
Feldeggstrasse 4
CH-8034 Zürich
Switzerland

(hereinafter "algroup")

and

Lonza Group AG
Feldeggstrasse 4
CH-8034 Zürich
Switzerland

(hereinafter "Lonza")

regarding the Patents and Intellectual Property Rights of former Alusuisse Holdings AG, CH-Neuhausen a. Rhf.

Preamble

Whereas Alusuisse Holdings AG was the registered or beneficial owner of the patents and intellectual property rights evidenced in the Patent Portfolio in **Annex 1** hereto (hereinafter collectively the "Patents").

Whereas, Alusuisse Holdings AG was merged into algroup and the Patents were thereby assumed by algroup as per the effective date of said merger.

Whereas, algroup contributed the Patents to Lonza by way of capital contribution in kind pursuant to a capital contribution contract of October 5, 1999.

Now, therefore, the parties agree as follows:

1. In accordance with and based upon above mentioned capital contribution contract of October 5, 1999, Algroup herewith assigns to Lonza the Patents with all rights and obligations.
2. Algroup undertakes to give all necessary declarations, to sign all necessary documents and to take all necessary actions in order to effect the valid transfer of the Patents to Lonza, in particular with regard to necessary entries in the relevant registers or with the relevant authorities.
3. Algroup shall provide Lonza with all documents, files and data regarding to the Patents, which Lonza may require, in particular for their transfer and their entry in the registers.
4. All cost, fees and expenses with regard to the assignement and transfer of the Patents or with regard to the other undertakings hereunder shall be born by Lonza.
5. This Letter of Assignment shall enter into full force and effect upon its due execution by all parties.
6. This Letter of Assignment is governed by the Laws of Switzerland.
7. Jurisdiction: the ordinary courts of the Canton of Zürich, venue being Zürich 8.

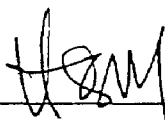
Zurich, October 5, 1999

ALUSUISSE LONZA GROUP LTD



Zurich, October 5, 1999

LONZA GROUP AG



Annex 1

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 01 (PA 21)

Subject Matter: Anti-interferon α monoclonal antibodies, e.g. NK2

Title: Monoclonal Antibody

Origin: Medical Research Council/University of Warwick
joint invention, see Agreements Nos. 623, 624

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Dates: 11th April 1980 (GB 8012096) and 7th November 1980 (GB 8035884)

Earliest Publication Date/No: 15th October 1981 (WO81/02899)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ *Europe	13.04.81	811900967.1	0050129	13.04.01	yes	---
¹ Japan	13.04.81	501198/81	2128920	13.04.01	yes	---
¹ United Kingdom	13.04.81	8136630	2083836	13.04.01	yes	---
¹ USA	10.12.81	06/333856	4423147	27.12.00	yes	---
¹ USA (div.,cont.)	31.05.85	739507		abandoned	yes	---

*includes: Austria (A: y, R: ---), France (A: y, R: ---), Germany (A: y, R: ---), Luxembourg (A: y, R: ---), Netherlands (A: y, R: ---), Sweden (A: y, R: ---), Switzerland (A: y, R: ---)

¹ ex PCT

pk 
13.09.99

PATENT PORTFOLIO

LONZA Ref. No. L.B.P.02 (PA 22)
Subject Matter: Monoclonal antibody (e.g. NK2) based assay for interferon
Title: Assay for Interferon
Origin: Medical Research Council/University of Warwick
 joint invention, see Agreements Nos. 623, 624
Registered Owner: Celltech Limited
Beneficial Owner: Alusuisse Holdings AG
Priority Application Date: 7th November 1980 (GB 8035884)
Earliest Publication Date/No: 27th May 1982 (WO82/01773)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ *Europe	09.11.81	81902975.2	0064063	09.11.01	yes	---
¹ USA	28.06.82	06/396911	4514507	30.04.02	yes	---
¹ Japan	09.11.81	503431/81	abandoned			

*includes: Austria (A: y, R: ---), France (A: y, R: ---), Germany (A: y, R: ---), Luxembourg (A: y, R: ---), Netherlands (A: y, R: ---), Sweden (A: y, R: ---), Switzerland (A: y, R: ---), United Kingdom (A: y, R: ---)

¹ ex PCT

42 00 00

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 03 (PA 23)

Subject Matter: Monoclonal Antibodies recognising B-type blood cells

Title: Monoclonal Antibody

Origin: Medical Research Council invention, see Agreement No. 243

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 6th March 1981 (GB 81 07179)

Earliest Publication Date/No: 16th September 1982/WO82/03089

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Germany	08.03.82	P3235924.1	3235924	08.03.02	yes	pend.
¹ Japan	08.03.82	500822/82			yes	pend.
United Kingdom	08.03.82	8206773	2097425	08.03.02	yes	yes
¹ USA (cont.)	17.11.86	06/931880	4760026	26.07.05	yes	yes

¹ ex PCT

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 04 (PA 43)

Subject Matter: Mixtures of anti-blood group A and anti-blood group B monoclonal antibodies

Title: Blood Cell Grouping Reagent

Origin: East Anglian Regional Health Authority/Medical Research Council joint invention, see Agreement No. 1173

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 29th March 1982 (GB 8209235) 25th February 1983 (GB 8305364)

Earliest Publication Date/No: 13th October 1983 (WO83/03477)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ *Europe	18.03.83	83901088.1	0103620	18.03.03		
¹ Japan	18.03.83	501140/83	1649952	18.03.03	yes	yes
United Kingdom	25.02.83	8305364	2117789	25.02.03	yes	yes
¹ USA (cont.V)	05.06.95	08/461256			yes	yes

*includes: Austria (A: y, R: y), Belgium (A: y, R: y), France (A: y, R: y), Germany (A: y, R: p), Luxembourg (A: y, R: y), Netherlands (A: y, R: y), Sweden (A: y, R: y), Switzerland (A: y, R: y)

¹ ex PCT

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 05 (PA 46)

Subject Matter: Recovery of insoluble recombinant proteins by treatment with an alkali

Title: A Process for the Production of a Protein

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 25th March 1983 (GB 8308234); 7th June 1983 (PCT/GB 83/00152); 12th October 1983 (GB 8327345)

Earliest Publication Date/No. 27th September 1984 (WO84/03711)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
Canada	28.03.84	450723	1212053	30.09.03	yes	---
*Europe	23.03.84	84301995.1	0122080	23.03.04		
*Europe (div.)	23.03.84	87110601.9	0268743	abandoned		
¹ Japan	23.03.84	501611/84	1979026	23.04.04	yes	---
United Kingdom	23.03.84	8407570	2138004	23.03.04	yes	---
¹ USA (cont.III)	08.05.93	08/102697	5340926	23.08.11	yes	---
¹ USA (cont.V)	06.06.95	08/468348		abandoned	yes	---
¹ USA (cont.VI)	27.11.96	08/758060		abandoned	yes	---

*includes: Austria (A: y, R: ---), Belgium (A: y, R: ---), France (A: y, R: ---), Germany (A: y, R: ---), Italy (A: y, R: ---), Luxembourg (A: y, R: ---), Netherlands (A: y, R: ---), Sweden (A: y, R: ---), Switzerland (A: y, R: ---)

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 06 (PA 78)

Subject Matter: Feeding animal cells during batch culture with one or more energy sources and one or more amino acids

Title: Animal Cell Culture

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Dates: 09th July 1984 (GB 8417467) abandoned
28th June 1985 (GB 8516415)

Earliest Publication Date/No: 15th January 1987 (WO 87/00195)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Australia	30.06.86	61348/86	590600	30.06.06	yes	yes
¹ Bulgaria	30.06.86	78671	51050	abandoned	yes	---
² Canada	30.06.86	512797	1282360	02.04.08	yes	yes
¹ Denmark	30.06.86	956/87			yes	yes
^{1*} Europe	30.06.86	86904268.9	0229809	30.06.06	yes	pend.
¹ Hungary	30.06.86	3472/86	197042	abandoned		
¹ Japan	30.06.86	503865/86		abandoned	yes	---
¹ Russia	30.06.86	4202251/13	2015164	abandoned	---	---
¹ South Korea	30.06.86	700181/1987	62046	19.12.07	yes	---
¹ United Kingdom	30.06.86	8704450.9	2195655	30.06.06	yes	yes
¹ USA (cont. II)	28.02.95	08/397682	5672502	30.09.14	yes	pend.

*includes Austria (A: y, R: y), Belgium (A: y, R: y), France (A: y, R: y), Germany (A: y, R: p), Italy (A: y, R: y), Luxembourg (A: y, R: y), Netherlands (A: y, R: y), Sweden (A: y, R: y), Switzerland (A: y, R: y)

¹ ex PCT

² ex GB

PATENT PORTFOLIO

LONZA Ref. No. L.B.P.07 (PA 98)

Subject Matter: Expression of polypeptides, such as antibodies, in myeloma cell lines

Title: Transformed Myeloma Cell-Line and a Process for the Expression of a Gene Coding for a Eukaryotic Polypeptide Employing Same

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Dates: 1st April 1985(GB 8508442); 3rd September 1985 (GB 8521815)

Earliest Publication Date/No: 9th October 1986 (WO86/05807)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Australia	01.04.86	56665/86	584417	01.04.06	yes	yes
¹ Bulgaria	01.04.86	77296	60107	01.04.06	yes	---
Canada	01.04.86	505555	1319120	15.06.10	yes	yes
¹ *Europe	01.04.86	86901978.6	0216846	01.04.06		
¹ Japan	01.04.86	501959/86	2532858	abandoned	yes	yes
¹ Russia	01.04.86	4028654.13	2079553	01.04.06	yes	---
¹ United Kingdom	01.04.86	8628482	2183662	01.04.06	yes	yes
¹ USA (cont I)	13.05.91	701374		abandoned	yes	yes
¹ USA (cont. II)	07.06.95	470587		abandoned	---	---
¹ USA (cont.III)	07.06.95	483813	allowance		yes	pend.

*includes: Austria (A: y, R: y), Belgium ((A: y, R: y), France (A: y, R: y), Germany (A: y, R: p), Italy (A: y, R: y), Luxembourg (A: y, R: y), Netherlands (A: y, R: y), Sweden (A: y, R: y), Switzerland (A: y, R: y)

¹ex PCT

13.09.99

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 08 (PA 109)

Subject Matter: Use of butyric acid and its salts in animal cell culture

Title: Production of Proteins by Cell Culture

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 14th March 1986 (GB 8606386)

Earliest Publication Date/No: 24th September 1987 (WO87/05626)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Canada	13.03.87	531962			yes	yes
² *Europe	13.03.87	87302156.2	0239292	13.03.07	yes	pend.
¹ Japan	13.03.87	501738/87	2525436		yes	yes
¹ United Kingdom	13.03.87	8726077.4	2196636	13.03.07	yes	yes
¹ USA (cont IV)	14.12.94	08/358552	5681718	28.10.14	yes	yes
¹ USA (cont V)	14.05.97	08/856,249			yes	yes
¹ USA (cont VI)	22.10.97	08/955,526				

*includes: Austria (A: y, R: y), Belgium (A: y, R: y), France (A: y, R: y), Germany (A: y, R: p), Greece (A: y, R: y), Italy (A: y, R: y), Luxembourg (A: y, R: y), Netherlands (A: y, R: y), Spain (A: y, R: y), Sweden (A: y, R: y), Switzerland (A: y, R: y), United Kingdom (A: y, R: y)

¹ ex PCT

² ex GB

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 09 (PA 140)

Subject Matter: Expression systems containing a hCMV promoter

Title: Recombinant DNA Expression Vectors

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 23rd July 1987 (GB 8717430)

Earliest Publication Date/No: 9th February 1989 (WO89/01036)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ *Europe	22.07.88	88906008.3	0323997	22.07.08		
¹ Japan	22.07.88	506088/88	2505268	22.07.08	yes	yes
¹ USA (cont.II)	09.02.94	08/300063	5591639	07.01.14	yes	pend.
¹ USA (divisional)	16.04.96	08/633013	5658759	19.08.14	yes	yes

*includes: Austria (A: y, R: y), Belgium (A: y, R: y), France (A: y, R: y), Germany (A: y, R: p), Italy (A: y, R: y), Luxembourg (A: y, R: y), Netherlands (A: y, R: y), Sweden (A: y, R: y), Switzerland (A: y, R: y), United Kingdom (A: y, R: y)

¹ ex PCT

13.09.99

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 10 (PA 177)

Subject Matter: Operation of glutamine synthetase expression systems in lymphoid cells

Title: Recombinant DNA Methods, Vectors and Host Cells

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 18th April 1988 (GB 8809129)

Earliest Publication Date/No: 25th October 1989 (EP 0338841)
02nd November 1989 (WO 8910404)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Australia	18.04.89	35545/89	624616	18.04.09	yes	yes
Canada	18.04.89	597034	1338891	04.02.14	yes	yes
*Europe	18.04.89	89303964.4	0338841	18.04.09		
*Europe	18.04.89	89303965.1		abandoned		
¹ Japan	18.04.89	505128/89	2007380	18.04.09	yes	yes
¹ USA (cont I)	12.06.92	07/898165	5879936	09.03.16	yes	pend.
¹ USA (cont II)	23.01.95	08/376380	5891693	06.04.16	yes	yes

*includes: Austria (A: y, R: y), Belgium (A: y, R: y), France (A: y, R: y), Germany (A: y, R: p), Greece (A: y, R: y), Italy (A: y, R: y), Luxembourg (A: y, R: y), Netherlands (A: y, R: y), Spain (A: y, R: y), Sweden (A: y, R: y), Switzerland (A: y, R: y), United Kingdom (A: y, R: y)

¹ ex PCT

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 11 (PA 213)

Subject Matter: Protein production in eukaryotic hosts using a gene encoding a transactivator to improve expression of the protein

Title: Recombinant DNA Method and Host Cells

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 10th January 1989 (GB 8900483)

Earliest Publication Date/No: 26th July 1990 (WO90/08191)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Australia)	10.01.90	48253/90		abandoned	---	---
¹ Australia (Div.)	10.01.90	39941/93	662416	10.01.10	yes	yes
¹ Canada	10.01.90	2024607			yes	yes
¹ *Europe	10.01.90	90300270.7	0378382	10.01.10	yes	yes
¹ Japan	10.01.90	501787/90			yes	pend.
¹ USA (Cont. IV)	16.05.95	08/442646	5866359	02.02.16	yes	yes
¹ USA (Cont. V)	06.07.98	09/110,153			yes	yes

*includes: Austria, Belgium, Denmark, France, Germany, Greece, Italy, Luxembourg, Netherlands, Spain, Sweden, Switzerland, United Kingdom

¹ ex PCT

13.09.99

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 12 (PA 251)

Subject Matter: A GS expression system in which the GS gene is used in tandem with a weak or regulatable promoter

Title: Recombinant DNA Method and Vectors for use therein

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 25th October 1989 (GB 8924021)

Earliest Publication Date/No: 16th May 1991 (WO91/06657)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
Australia				abandoned		
¹ Canada	25.10.90	2071543.0			yes	yes
¹ *Europe	25.10.90	90916069.9	0491875	25.10.10	yes	yes
¹ Japan	25.10.90	514839/90			yes	pend.
¹ USA (cont. III)	07.02.95	08/385063	5747308		yes	pend.

*includes: Austria, Belgium, Denmark, France, Germany, Greece, Italy, Luxembourg, Netherlands, Spain, Sweden, Switzerland, United Kingdom

¹ ex PCT

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 13 (PA 297)

Subject Matter: Use of low salt concentrations in animal cell culture

Title: Cell Culture Process and Medium for the Growth of Adherent Animal Cells

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 30th August 1991(GB 9118664)

Earliest Publication Date/No: 18th March 1993 (WO93/05145)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ *Europe	28.08.92	92918738.3	0555454	28.08.12	yes	yes
¹ Japan	28.08.92	505023/93			yes	pend.
¹ USA (cont.)	13.12.94	08/355103	0587199	16.02.16	yes	yes

*includes: Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Monaco, Luxembourg, Netherlands, Spain, Sweden, Switzerland, United Kingdom

¹ ex PCT

13.09.99

PATENT
REEL: 012295 FRAME: 0656

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 14 (PA 328)

Subject Matter: Use of tropolone in animal cell culture

Title: Animal Cell Culture

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 24th July 1992 (GB 9215834)

Earliest Publication Date/No: 3rd February 1994 (WO94/02592)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Australia	26.07.93	47164/93	677960		yes	yes
¹ Canada	26.07.93	2116221			yes	yes
^{1*} Europe	26.07.93	93917913.1			yes	yes
¹ Japan	26.07.93	504318/94			yes	pend.
¹ USA	07.04.95	08/418930			yes	yes

*includes: Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Monaco, Netherlands, Portugal, Spain, Sweden, Switzerland, United Kingdom

¹ ex PCT

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 15 (BC 31)

Subject Matter: A kit for determining the concentration ratio of two antigenic solutes, for use e.g. in predicting ovulation

Title: The use of a Synthetic Bifunctional Ligand for the Immunometric Determination of the Concentration Ratio of two Solutes

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date 1st September 1978 (GB 7835257)

Earliest Publication Date/No: 12th March 1980 (GB2029011)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
Canada	12.03.82	398267	1183080	abandoned 1.9.98	yes	---
*Malaya	01.09.78	---	565/1985	01.09.98	---	---
*Sarawak	01.09.78	---	C.2255	01.09.98	---	---
*Sabah	01.09.78	---	258/1985	01.09.98	---	---
United Kingdom	01.09.78	7835257	2029011	01.09.98	yes	---

*registration of GB2029011

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 16 (BC 32)

Subject Matter: An assay for determining the relative concentrations of two analytes

Title: Assay

Origin: Celltech invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 10th February 1982 (GB 8203906)

Earliest Publication Date/No: 17th August 1983 (EP0086095)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
Argentina	09.02.83	292067	231477	abandoned 1.9.98	---	---
Brazil	09.02.83	PI 8300656		abandoned		
Colombia	10.02.83	219656				
Denmark	08.02.83	524/83		abandoned		
*Europe	04.02.83	83300569.7	0086095	abandoned 1.9.98		
Hong Kong	04.02.83		119/1987	abandoned 1.9.98		
Ireland	03.02.83	209/83	54109	abandoned 1.9.98		
Japan	10.02.83	21356/83	1660649	abandoned 1.9.98	yes	---
Mexico	10.02.83	196226	176058	abandoned 1.9.98		
Singapore	04.02.83		754/86	abandoned 1.9.98		
Spain	09.02.83	519667		abandoned		
United Kingdom	04.02.83	8303162	2116318	abandoned 1.9.98	yes	---
United Kingdom (Div.)	04.02.83	8507554	2165046	abandoned 1.9.98	yes	---
USA	07.02.83	06/464143	4508830	abandoned 1.9.98	yes	---

*includes: Austria (A: y, R: ---), Belgium (A: y, R: ---), France (A: y, R: ---), Germany (A: y, R: ---), Italy (A: y, R: ---), Luxembourg (A: y, R: ---), Netherlands (A: y, R: ---), Sweden (A: y, R: ---), Switzerland (A: y, R: ---)

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 17 (BC 41)

Subject Matter: Use of β -cyclodextrin to stabilise peroxidase substrates

Title: Improvements relating to Assay Reagents

Origin: Boots-Celltech Diagnostics Limited invention

Registered Owner: Boots-Celltech Diagnostics Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 7th March 1985 (GB 8505899)

Earliest Publication Date/No: 12th September 1986 (WO86/05207)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Australia (Div)	07.03.86	62428/90		abandoned	---	---
¹ Australia (Div.)	07.03.86	62501/90		abandoned	---	---
² Canada	07.03.86	503523	1277895	18.12.07	yes	---
^{1*} Europe	07.03.86	86901925.7	0214262	07.03.06		
^{1*} Europe (Div.)	07.03.86	88201315.4		abandoned	---	---
¹ Japan	07.03.86	501551/86	2501571	07.03.06	yes	---
¹ USA (cont. VII)	14.06.94	08/261007	5736353		yes	yes
¹ USA (cont. VIII)						

*includes: Austria (A: y, R: ---), Belgium (A: y, R: ---), France (A: y, R: ---), Germany (A: y, R: ---), Italy (A: y, R: ---), Luxembourg (A: y, R: ---), Netherlands (A: y, R: ---), Sweden (A: y, R: ---), Switzerland (A: y, R: ---), United Kingdom (A: y, R: ---)

¹ex PCT
²ex GB

13.09.99

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 18 (BC 42)

Subject Matter: Test strip device for use in e.g. pregnancy testing,
employing differential migration of assay components

Title: Binding Assay Device

Origin: Boots-Celltech Diagnostics Limited invention

Registered Owner: Boots-Celltech Diagnostics Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 30th October 1985 (GB 8526741)

Earliest Publication Date/No: 7th May 1987 (WO87/02774)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Australia	30.10.86	65926/86	606586	30.10.06	yes	---
² Canada	30.10.86	521835	1289070	17.09.08	yes	---
¹ Denmark	30.10.86	3339/87	165198	30.10.06	yes	---
¹ United Kingdom	30.10.86	8713842.6	2191578	abandoned	---	---
^{2*} Europe	30.10.86	86308450.5	0225054	30.10.06		
¹ Japan	30.10.86	61-505778	1995155	30.10.06	yes	---
¹ South Korea	30.10.86	700565/87	110306	30.10.06	yes	---
¹ USA (cont IV)	29.04.94	08/235261	5500350	19.03.13	yes	---
¹ USA (divisional)	07.06.95	08/488080	5604110	18.02.14	yes	---

*includes: Austria (A: y, R: ---), Belgium (A: y, R: ---), France(A: y, R: ---), Germany (A: y, R: ---), Greece (A: y, R: ---), Italy (A: y, R: ---), Luxembourg (A: y, R: ---), Netherlands (A: y, R: ---), Spain (A: y, R: ---), Sweden (A: y, R: ---), Switzerland (A: y, R: ---), United Kingdom (A: y, R: ---)

¹ ex PCT

² ex GB

13.09.99

PATENT
REEL: 012295 FRAME: 0661

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 19 (BC 46)

Subject Matter: Test strip device for use in e.g. pregnancy testing, employing inhibitors to delay assay reaction until analyte reaches indicator zone

Title: Binding Assay Device

Origin: Boots-Celltech Diagnostics Limited invention

Registered Owner: Celltech Therapeutics Limited

Beneficial Owner: Alusuisse Holdings AG

Priority Application Date: 29th April 1987(GB 8710098); 29th April 1987 (GB 8710099)

Earliest Publication Date/No: 3rd November 1988 (WO88/08536)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ *Europe	28.04.88	88903880.8	0312565	28.04.08		
¹ Japan	28.04.88	503699/88	2599192	28.04.08	yes	---
¹ USA (cont III)	03.11.93	08/144870	5641639	24.06.14	yes	yes
¹ USA (cont IV)	06.06.95	08/466035	5861265	29.01.16	yes	yes

*includes: Austria (A: y, R: ---), Belgium (A: y, R: ---), France (A: y, R: ---), Germany (A: y, R: ---), Italy (A: y, R: ---), Luxembourg (A: y, R: ---), Netherlands (A: y, R: ---), Sweden (A: y, R: ---), Switzerland (A: y, R: ---), United Kingdom (A: y, R: ---)

¹ ex PCT

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 20 (BC 47)

Subject Matter: Fluorescent metal antibody conjugates

Title: Binding Assay and Assay Reagent

Origin: City University invention

Registered Owner: Celltech Limited

Beneficial Owner: Alusuisse Holdings AG /City University

Priority Application Date: 23rd January 1986 (GB 8601646)

Earliest Publication Date/No: 30th July 1987 (WO87/04523)

<u>Territory</u>	<u>Application Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ *Europe	23.01.87	87900857.1	0255534	23.01.07	yes	---
¹ Japan	23.01.87	500894/87	2115637		yes	---
¹ USA (cont. II)	08.08.94	08/287588	5585279	17.12.13	---	---
¹ USA (cont. III)	23.05.95	08/447847	5811526	17.12.13	yes	---
¹ USA (cont. IV)	29.05.98	09/086384			yes	

*includes: Austria (A: y, R: ---), Belgium (A: y, R: ---), France (A: y, R: ---), Germany (A: y, R: ---), Italy (A: y, R: ---), Luxembourg (A: y, R: ---), Netherlands (A: y, R: ---), Sweden (A: y, R: ---), Switzerland (A: y, R: ---), United Kingdom (A: y, R: ---)

¹ ex PCT

PATENT PORTFOLIO

LONZA Ref. No. L.B.P. 21 (PA 385)

Subject Matter: Expression vectors containing murine Ig γ 2A locus-specific DNA sequences for homologous recombination targeting

Title: Homologous Recombination Antibody Expression System for Murine Cells

Registered Owner: Merck & Co. Inc.

Registered Owner: Merck & Co. Inc.

Beneficial Owner: Alusuisse Holdings AG

Inventors: Hollis, Gregory Franklin
Mark, George E.

Priority Application Date: 23rd December 1993 (US 08/173800)

Earliest Publication Date/No. 29th June 1995 (WO95/17516)

<u>Territory</u>	<u>Appl. Date</u>	<u>Application No.</u>	<u>Patent No.</u>	<u>Expiry Date</u>	<u>Assigned</u>	<u>Recorded</u>
¹ Australia	22.12.94	12786/95	691857	22.12.2014		
¹ Canada	22.12.94	2177959				
¹ Czech Republic	22.12.94	PV1859-96				
¹ *Europe	22.12.94	9590389.2				
¹ Finland	22.12.94	962268				
¹ Hungary	22.12.94	P9601467				
¹ Japan	22.12.94	517301/95				
¹ New Zealand	22.12.94	277532		abandoned		
¹ South Korea	22.12.94	703360/96				
¹ United Kingdom	22.12.94	9613135.4		abandoned		
USA	23.12.94	08/173800		prosecution by Merck		

*includes: Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Monaco, Netherlands, Portugal, Spain, Sweden, Switzerland, United Kingdom

¹ ex PCT

43 00 00

RECORDED: 07/23/2001

PATENT
REEL: 012295 FRAME: 0664