Rule 2.7, 3.10.3, 3.10.4, 3.10.5

Appendix 3B

New issue announcement, application for quotation of additional securities and agreement

Information or documents not available now must be given to ASX as soon as available. Information and documents given to ASX become ASX's property and may be made public.

Introduced 1/7/96. Origin: Appendix 5. Amended 1/7/98, 1/9/99, 1/7/2000, 30/9/2001, 11/3/2002, 1/1/2003, 24/10/2005.

Name of entity		
MESOBLAST LIMITED		
ABN		
68 109 431 870		

We (the entity) give ASX the following information.

Part 1 - All issues

You must complete the relevant sections (attach sheets if there is not enough space).

⁺Class of ⁺securities issued or to be issued

Ordinary Shares and Unlisted Options

Number of *securities issued or to be issued (if known) or maximum number which may be issued 90,813,950 Fully Paid Ordinary Shares; 3,961,000 Fully Paid Ordinary Shares; 861,000 Fully Paid Ordinary Shares; 3,775,993 Unlisted options over ordinary shares

Principal terms of the *securities (eg, if options, exercise price and expiry date; if partly paid *securities, the amount outstanding and due dates for payment; if *convertible securities, the conversion price and dates for conversion)

25,838,998 Fully Paid Ordinary Shares; 38,677,310 Fully Paid Ordinary Shares subject to 3 months voluntary escrow;

31,119,642 Fully Paid Ordinary Shares subject to 12 months voluntary escrow; 3,775,993 Unlisted options over ordinary

3,775,993 Unlisted options over ordinary shares (see exhibit A for terms)

⁺ See chapter 19 for defined terms.

4 Do the *securities rank equally in all respects from the date of allotment with an existing *class of quoted *securities?

If the additional securities do not rank equally, please state:

- the date from which they do
- the extent to which they participate for the next dividend, (in the case of a trust, distribution) or interest payment
- the extent to which they do not rank equally, other than in relation to the next dividend, distribution or interest payment

5 Issue price or consideration

Yes for Ordinary Shares

Ordinary Shares:

90,813,950 shares and 3,775,993 options to ordinary shares issued in exchange for the cancellation of shares in Angioblast Systems, Inc. following completion of the merger of Mesoblast Limited with Angioblast Systems, Inc. as approved by Mesoblast Limited shareholders on 22 September 2010;

- 3,961,000 @ \$1.70 per share;
- 256,000 @ \$1.00 per share;
- 100,000 @ \$1.20 per share;
- 90,000 @ \$1.58 per share;
- 15,000 @ \$1.96 per share;
- 400,000 @ \$2.13 per share

Appendix 3B Page 2 1/1/2003

⁺ See chapter 19 for defined terms.

6 Purpose of the issue (If issued as consideration for the acquisition of assets, clearly identify those assets)

3,961,000 Ordinary shares issued to Institutional Investor as approved by shareholders on 22nd September 2010;

861,000 Ordinary shares issued upon the exercise of options;

90,813,950 shares and 3,775,993 options to ordinary shares issued in exchange for the cancellation of shares in Angioblast Systems, Inc. following completion of the merger of Mesoblast Limited with Angioblast Systems, Inc. as approved by Mesoblast Limited shareholders on 22 September 2010;

7 Dates of entering *securities into uncertificated holdings or despatch of certificates

90,813,950 on 22 December 2010; 3,961,000 on 24 December 2010; 320,000 on 9th December 2010; 115,000 on 10th December 2010; 380,000 on 17th December 2010; 16,000 on 21st December 2010; 3,775,993 23rd December 2010

8 Number and *class of all *securities quoted on ASX (including the securities in clause 2 if applicable)

Number	+Class
253,776,506	Ordinary Shares

9 Number and *class of all *securities not quoted on ASX (including the securities in clause 2 if applicable)

Number	+Class
10,242,993	Unlisted Options

Dividend policy (in the case of a trust, distribution policy) on the increased capital (interests)

⁺ See chapter 19 for defined terms.

Part 2 - Bonus issue or pro rata issue

11	Is security holder approval required?	N/A
12	Is the issue renounceable or non-renounceable?	N/A
13	Ratio in which the *securities will be offered	N/A
14	⁺ Class of ⁺ securities to which the offer relates	N/A
15	⁺ Record date to determine entitlements	N/A
16	Will holdings on different registers (or subregisters) be aggregated for calculating entitlements?	N/A
17	Policy for deciding entitlements in relation to fractions	N/A
18	Names of countries in which the entity has *security holders who will not be sent new issue documents Note: Security holders must be told how their entitlements are to be dealt with. Cross reference: rule 7.7.	N/A
19	Closing date for receipt of acceptances or renunciations	N/A
20	<u> </u>	N/A
21	Amount of any underwriting fee or commission	N/A
22	Names of any brokers to the issue	N/A
23	Fee or commission payable to the broker to the issue	N/A

Appendix 3B Page 4 1/1/2003

⁺ See chapter 19 for defined terms.

	-	
24	Amount of any handling fee payable to brokers who lodge acceptances or renunciations on behalf of *security holders	N/A
25	If the issue is contingent on *security holders' approval, the date of the meeting	N/A
26	Date entitlement and acceptance form and prospectus or Product Disclosure Statement will be sent to persons entitled	N/A
27	If the entity has issued options, and the terms entitle option holders to participate on exercise, the date on which notices will be sent to option holders	N/A
28	Date rights trading will begin (if applicable)	N/A
29	Date rights trading will end (if applicable)	N/A
30	How do *security holders sell their entitlements <i>in full</i> through a broker?	N/A
31	How do *security holders sell part of their entitlements through a broker and accept for the balance?	N/A
32	How do *security holders dispose of their entitlements (except by sale through a broker)?	N/A
33	+Despatch date	N/A

Part 3 - Quotation of securities

 $You \ need \ only \ complete \ this \ section \ if \ you \ are \ applying \ for \ quotation \ of \ securities$

⁺ See chapter 19 for defined terms.

34	Type (tick o	of securities one)	
(a)	$\overline{\checkmark}$	Securities described in Part 1	
(b)		All other securities Example: restricted securities at the end of the escrowed period, partly paid securities that become fully paid, employee incentive share securities when restriction ends, securities issued on expiry or conversion of convertible securities	
Entities that have ticked box 34(a)			
Additional securities forming a new class of securities			
Tick to docume		e you are providing the information or	
35		If the *securities are *equity securities, the names of the 20 largest holders of the additional *securities, and the number and percentage of additional *securities held by those holders	
36		If the +securities are +equity securities, a distribution schedule of the additional +securities setting out the number of holders in the categories 1 - 1,000 1,001 - 5,000 5,001 - 10,000 10,001 - 100,000 100,001 and over	
37		A copy of any trust deed for the additional *securities	

Appendix 3B Page 6 1/1/2003

⁺ See chapter 19 for defined terms.

Entitie	es that have ticked box 34(b)		
38	Number of securities for which ⁺ quotation is sought		
39	Class of *securities for which quotation is sought		
40	Do the *securities rank equally in all respects from the date of allotment with an existing *class of quoted *securities? If the additional securities do not rank equally, please state: • the date from which they do • the extent to which they participate for the next dividend, (in the case of a trust, distribution) or interest payment • the extent to which they do not rank equally, other than in relation to the next dividend, distribution or interest payment		
41	Reason for request for quotation now Example: In the case of restricted securities, end of restriction period (if issued upon conversion of another security, clearly identify that other security)		
42	Number and *class of all *securities quoted on ASX (including the securities in clause 38)	Number	+Class

⁺ See chapter 19 for defined terms.

Quotation agreement

- [†]Quotation of our additional [†]securities is in ASX's absolute discretion. ASX may quote the [†]securities on any conditions it decides.
- 2 We warrant the following to ASX.
 - The issue of the *securities to be quoted complies with the law and is not for an illegal purpose.
 - There is no reason why those *securities should not be granted *quotation.
 - An offer of the *securities for sale within 12 months after their issue will not require disclosure under section 707(3) or section 1012C(6) of the Corporations Act.

Note: An entity may need to obtain appropriate warranties from subscribers for the securities in order to be able to give this warranty

- Section 724 or section 1016E of the Corporations Act does not apply to any applications received by us in relation to any *securities to be quoted and that no-one has any right to return any *securities to be quoted under sections 737, 738 or 1016F of the Corporations Act at the time that we request that the *securities be quoted.
- If we are a trust, we warrant that no person has the right to return the *securities to be quoted under section 1019B of the Corporations Act at the time that we request that the *securities be quoted.
- We will indemnify ASX to the fullest extent permitted by law in respect of any claim, action or expense arising from or connected with any breach of the warranties in this agreement.
- We give ASX the information and documents required by this form. If any information or document not available now, will give it to ASX before 'quotation of the 'securities begins. We acknowledge that ASX is relying on the information and documents. We warrant that they are (will be) true and complete.

Sign here: Date: 23rd December 2010

Company Secretary

Print name: Kevin Hollingsworth

Appendix 3B Page 8 1/1/2003

⁺ See chapter 19 for defined terms.

APPENDIX A

Principal terms of the *securities (eg, if options, exercise price and expiry date; if partly paid *securities, the amount outstanding and due dates for payment; if *convertible securities, the conversion price and dates for conversion) – per question 3:

Unlisted Options:

Expiry Date	Exercise Price	Number of Options Granted
30/11/2012	nil	159,822
7/12/2014	US\$0.47	835,478
7/07/2015	US\$0.05	287,903
25/04/2017	US\$0.44	347,848
2/05/2017	US\$0.44	127,956
26/10/2018	US\$0.31	434,865
26/10/2019	US\$0.34	749,953
7/12/2011	AU\$1.20	277,389
7/06/2012	AU\$3.44	277,389
7/12/2012	AU\$3.78	277,390
TOTAL		3,775,993

⁺ See chapter 19 for defined terms.