

9 January 2012

Phylogica

Year End	Revenue (A\$m)	PBT* (A\$m)	EPS* (A\$)	DPS (A\$)	P/E (x)	Yield (%)
06/10	0.6	(4.1)	(0.18)	0.0	N/A	N/A
06/11	2.4	(3.5)	(0.12)	0.0	N/A	N/A
06/12e	5.2	(0.9)	(0.02)	0.0	N/A	N/A
06/13e	5.7	(0.6)	(0.00)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding intangibles amortisation and exceptional items.

Investment summary: January Janssen deal

Phylogica's fourth drug discovery partnership, a collaboration and option agreement with Janssen Biotech, is its first multi-target product. This partnership is focused on identifying new cell-penetrating Phylomer peptides and may be expanded to cover up to 11 products. Phylogica will receive an undisclosed upfront and committed funding for the first 18 months of the partnership; further commercial terms for downstream progress are under discussion. These cash inflows, in addition to the recent Pfizer milestone and A\$2m equity raise, will bolster Phylogica's financial position and contribute to its aim of achieving cash sustainability in 2012/2013.

New multi-product collaboration with Janssen Biotech

This deal gives Janssen Biotech (a unit of Johnson & Johnson) access to Phylogica's Phylomer libraries and screening capabilities. Its economic terms are undisclosed but it could be more lucrative than earlier deals due to its multi-product nature. It is the first of three new alliances targeted for FY12 (ending June 2012), and provides further large pharma validation for Phylogica's drug discovery technology and approach.

Progress with existing partners

Achieving milestones under its partnerships is key to Phylogica reaching near-term sustainability and building longer-term value; US\$235m+ could become due. The first stages of the Pfizer and Roche collaborations completed in 2011 (triggering undisclosed milestones); the MedImmune research plan is in its final stages.

Financials: December equity raise of A\$2.15m

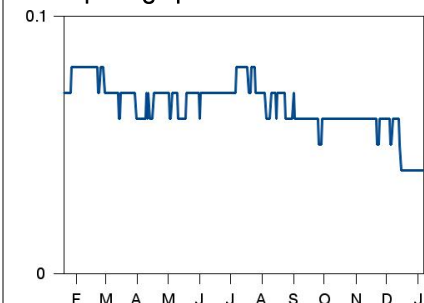
Proceeds of the A\$2.15m (gross) equity issuance (40.5m new shares at A\$0.05) will be used to improve infrastructure, support operations and invest in in-house projects.

Valuation: Base case c A\$30m, potential of A\$50m

Our A\$30m base-case valuation (peer group EV/sales) does not capture the full value of potential milestones/deals. Peers are larger and more mature but follow a similar business model; Phylogica has higher growth prospects, therefore delivery on existing and new deals (milestone receipt) could boost its valuation to A\$50m.

Price **A\$0.04**
Market Cap **A\$16m**

Share price graph



Share details

Code **PYC**
Listing **ASX**
Sector **Pharmaceuticals, Biotechnology & Life Sciences**
Shares in issue **445.9m**

Price

52 week High **A\$0.07** Low **A\$0.04**

Balance Sheet at 30 September 2011

Debt/Equity (%) **N/A**
NAV per share (A\$) **N/A**
Net cash (A\$m) **3.3**

Business

Phylogica is an Australian drug discovery company, with a proprietary technology platform based on naturally-derived Phylomer peptides. Its business model centres on drug discovery collaborations with large pharma: Roche, MedImmune, Pfizer and Janssen are partners.

Valuation

	2011	2012e	2013e
P/E relative	N/A	N/A	N/A
P/CF	N/A	N/A	N/A
EV/Sales	N/A	N/A	N/A
ROE	N/A	N/A	N/A

Revenues by geography

UK	Europe	US	Other
0%	0%	0%	100%

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Update: Building partnering momentum

Phylogica's strategy is to become a preferred drug discovery partner for large pharma. Its latest deal with Janssen Biotech, a unit of Johnson & Johnson, is the company's fourth large pharma drug discovery collaboration and is the broadest in scope. Phylogica's investment case rests on its ability to monetise its proprietary peptide drug discovery platform by achieving milestones under its existing collaborations, and securing additional deals. Increasing the number of partners should rapidly grow its top and bottom line, helping Phylogica achieve its 2012/2013 aim of cash sustainability. This is because (a) partners pay an upfront fee for access to its Phylomer¹ libraries and screening capabilities, and they fully fund in-house discovery and lead optimisation work on a cost-plus basis; and (b) the discovery process is highly automated, so there is capacity to work on multiple projects in parallel. Longer-term shareholder value should be built through downstream milestones and royalties under licensing deals covering the Phylomer drug candidates generated.

Economic terms of the Janssen partnership are undisclosed; however, we assume that it may be more lucrative than prior deals due to its multi-product nature. Under this collaboration there is potential to develop up to 11 Phylomer-based drug candidates addressing different intracellular disease targets (protein-protein interactions). This deal also provides further large pharma validation for Phylogica's technology and its approach to drug discovery, which is especially important as the company's value will be determined by its ability to continue to regularly sign up new partners, and achieve milestones under its existing collaborations (summarised in Exhibit 1). Existing partnerships have generated c A\$5m in revenue to date; potential future milestone receipts are contingent on continued development success and ultimately commercialisation. Phylogica is eligible for up to c US\$232m of milestones from the Pfizer and MedImmune collaborations alone; economics from the Janssen and Roche deals are undisclosed, but milestones may be similar in magnitude (or greater). Exhibit 2 illustrates a typical deal structure; we highlight that the magnitude of milestones increases with development progress and should be larger overall under multiple-target deals.

Exhibit 1: Phylogica's partnerships

Company	Programme	Notes
Janssen Biotech (J&J)	Discovery of cell penetrating peptides	Signed Jan 2012. Terms include undisclosed technology access fee plus research funding for 18 months. Deal structured as an option to license (commercial terms on further research funding, license fees, milestones and sales royalties under ongoing discussion) with ability to expand the scope of the collaboration to cover a further 10 Phylomer drug candidates.
Pfizer	Discovery of novel peptide vaccines in major undisclosed disease area	Signed Dec 2010. Terms include upfront technology access payment of US\$0.5m, deal structured as an option to license with potential commercial license, discovery, preclinical, clinical and other milestone payments of up to US\$134m, plus royalties on worldwide sales. First stage of collaboration complete: undisclosed milestone received Dec 2011. Several peptides to be further evaluated as candidate antigens.
MedImmune (AstraZeneca)	Discovery of novel antibiotics against hospital-acquired infections (<i>Pseudomonas</i>)	Signed Aug 2010. Terms include US\$0.75m upfront payment, US\$0.75m in committed funding, development and commercialisation milestones of up to US\$98m, plus royalties on worldwide sales. US\$1.5m received to date. Nov 2011 progress update confirmed the joint research plan is in the final stage.
Roche	Discovery of new cell penetrating peptides (CNS disease)	Signed Dec 2009 (extended May 2011). Undisclosed terms: reimbursement payment of US\$65k received Jan 2011. First stage of collaboration complete (identification and validation of novel cell-penetrating peptides targeting intracellular disease pathways); review of milestone achievements in progress (undisclosed milestone due). Extended agreement includes option to license a specific Phylomer peptide with demonstrated cell penetration activity for delivery across the blood-brain barrier for CNS (neurological) diseases.

Source: Edison Investment Research

¹ Phylomers are structurally diverse natural protein fragments sourced from genomes of extremeophile bacteria.

Exhibit 2: Typical deal structure

Stage	Economics
Discovery and lead optimisation	Upfront payment (per target) and committed research funding. Aggregate receivable within first year in the low single-digit million US dollars (eg MedImmune paid US\$1.5m in nine months). The first three deals were target restricted; Phylogica continues to seek additional multi-target or multi-product deals (potentially associated with larger upfront payments).
Delivery of drug candidates	Completion of the first stage of the collaboration (ie delivery of optimised Phylomer drug candidates to the partner) may trigger a modest milestone (eg as with the Pfizer deal, where the payment was undisclosed). The collaboration then progresses into a licensing arrangement.
Preclinical and clinical development	Partner undertakes/responsible for further development, regulatory filing and commercialisation. Phylogica is eligible for success-related development/regulatory milestones (totalling high double-digit million US dollars) and a low single-digit royalty on net sales. We assume milestone triggers include early-stage preclinical progress (<i>in vivo</i> safety and efficacy data, IND filing) as well as conventional clinical and regulatory progress.

Source: Edison Investment Research

Management has guided towards completing an additional two new deals by end-FY12, and is confident in meeting this guidance due to improved visibility on, and momentum with, the ongoing deal negotiations with several potential large pharma collaborators. This confidence is further supported by industry-wide interest in peptides; in particular those that are cell penetrating and thus can address intractable intracellular disease targets.² In anticipation of executing additional deals, Phylogica raised A\$2m of new capital in December, which should strengthen its negotiating position as it enables the company to invest further in infrastructure (and employees) to support future business capacity and its discovery platform.

Phylogica's revenue and sustainability are reliant on milestones. Milestones of A\$2.4m were received from existing partners in FY11, with another A\$1.3m in receipts during H112 (to December 2011). 2012 could be transformative for Phylogica. New deal delivery and ongoing progress under existing deals in 2012 and 2013 could rapidly grow revenues and crystallise the value in Phylogica as well as diversifying its risk profile by reducing reliance on any single deal.

Sensitivities

Phylogica's partnership-based business model means it will have a leveraged position in multiple pharma-funded drug development programmes. Thus Phylogica's risk profile is lower than other drug discovery/development companies as its partners bear the financial and development risks, while it retains economic upside from successful development and commercialisation of Phylomer programmes. However, Phylogica's investment case and funding is contingent on the ongoing success of (or extensions to) existing collaborations and the ability to secure new collaborations. Other sensitivities relate to clinical validation of Phylomers, IP and the risk that the Phylomer platform may be superseded by new technologies.

Valuation

Based on updated FY12 revenue guidance of c A\$5m, Phylogica is currently trading at 2.3x EV/sales^{FY12} vs an average 4.5x peer group EV/sales^{FY12} multiple, suggesting a base-case valuation of c \$30m. Phylogica is following a similar business model to significantly larger and more mature listed drug discovery peers³; however, it has higher near-term growth prospects (to FY13).

² The issues in peptide drug discovery, the relative benefits of Phylomers vs small molecules, large biologics and other peptides are explored in our Outlook note '[Hidden depths](#)', published 6 July 2011.

³ These are AMRI, [Evolva](#), [Evotec](#), Galapagos, [Morphosys](#), Vivalis and Wuxi AppTec.

There is considerable upside potential to the Edison base case as this does not:

- 1) include anything like the full value of the potential US\$235m+ in milestones that may be payable under existing collaborations, or significant economics from prospective deals; or
- 2) capture the near-term revenue growth potential, assuming success in R&D and business development. The magnitude of milestone receipts under each deal should increase as development progresses and, if new multiple-target deals are secured, these new deals are also expected to be larger as milestones etc will apply per target.

Delivery on existing deals and new alliances (management continues to expect to have six deals in total by end-FY12, ie to secure two additional deals by June) could boost the valuation to A\$50m. This is based on hypothetical FY13 revenues of A\$10m (ie assuming Phylogica also delivers 100% revenue growth between FY12 and FY13) and is consistent with an average 4.4x peer group EV/sales^{FY13} multiple. However, as this valuation is contingent on continued development success under existing deals and the delivery of new collaborations, we have applied a 50-60% risk weighting to hypothetical FY13 revenue, generating risk-weighted revenue of A\$5.425m (as shown in Exhibit 3), which also corresponds to a A\$30m base case. Under this method, execution of additional deals should increase confidence in attaining the hypothetical revenues, decreasing the risk weighting (reflecting likelihood of receipt) and unlocking further value.

Financials

In conjunction with the Janssen collaboration announcement, Phylogica provided FY12 financial guidance. Management expects 100% revenue growth vs FY11, with a 'modest' increase in costs. Q2 results have not yet been released, although the company has confirmed that c A\$1.3m in aggregate milestones/committed funding has been received from partners (payments are booked as received) for the period ending December 2011. Management continues to aim to become cash-flow sustainable in 2012/13 and cash generative in subsequent years. However, this is contingent on securing additional discovery collaborations with upfront payments, and receipt of milestones linked to continued progress under existing deals.

Our FY12 revenue forecast comprises A\$3.75m from existing collaborators (including Janssen) and A\$1.55m from new collaborators (however, a 50-75% risk weighting has been applied to these revenues to reflect our assumptions of likelihood of receipt). Clarity on deal flow and milestone receipts will prompt us to revise revenue forecasts. We continue to expect operating costs for FY12 and FY13 to fall in the A\$6-7m range, primarily consisting of contract research cost and employee expenses (we have raised our forecasts slightly to c A\$2.5m and c A\$1.4m pa respectively). Taking into account these minor updates, and the A\$2m equity raise (40.5m new shares at A\$0.05, with two free listed options issued with every three new shares), we now forecast end-June 2012 cash of A\$5.9m, vs £3.3m as reported at end-September 2011.

A summary of our financial model is presented in Exhibit 3, overleaf.

Exhibit 3: Phylogica financial results and forecasts

Note: We have applied a 50-75% risk weighting to our underlying FY12 and FY13 collaborative payments to reflect our assumptions of likelihood of receipt. The risk-weighted figure is used in the revenue forecasts below.

Year ending 30 June	A\$'000s	2009	2010	2011	2012e	2013e
		IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS						
Revenue		1,275	596	2,359	5,225	5,725
EBITDA		(3,511)	(4,143)	(3,460)	(858)	(590)
Operating profit (before GW and except)		(4,518)	(4,210)	(3,614)	(968)	(700)
Intangible amortisation		0	0	0	0	0
Exceptionals/special Items		0	0	0	0	0
Share-based payment		(78)	(454)	(103)	(50)	(50)
Operating profit		(4,595)	(4,664)	(3,718)	(1,018)	(750)
Net interest		104	92	113	32	57
Profit before tax (norm)		(4,413)	(4,118)	(3,502)	(936)	(643)
Profit before tax (FRS 3)		(4,491)	(4,573)	(3,605)	(986)	(693)
Tax		0	0	0	100	500
Profit after tax (norm)		(4,413)	(4,118)	(3,502)	(836)	(143)
Profit after tax (FRS3)		(4,491)	(4,573)	(3,605)	(886)	(193)
Average number of shares outstanding (m)		163.1	226.1	290.3	425.5	445.9
EPS - normalised (c)		(27.06)	(18.21)	(12.06)	(1.96)	(0.32)
EPS - FRS 3 (c)		(27.5)	(20.2)	(12.4)	(2.1)	(0.4)
Dividend per share (c)		0.0	0.0	0.0	0.0	0.0
EBITDA margin (%)		N/A	N/A	N/A	N/A	N/A
Operating margin (before GW and except) (%)		N/A	N/A	N/A	N/A	N/A
BALANCE SHEET						
Fixed assets		73	165	287	577	1,067
Intangible assets		0	0	0	0	0
Tangible assets		73	165	287	577	1,067
Investment in associates		0	0	0	0	0
Other		0	0	0	0	0
Current assets		3,414	1,405	5,375	6,167	5,025
Stocks		0	0	0	0	0
Debtors		342	124	113	255	279
Cash		3,073	1,281	5,199	5,913	4,746
Other		0	0	62	0	0
Current liabilities		(535)	(1,982)	(1,259)	(1,366)	(1,406)
Creditors		(439)	(604)	(712)	(819)	(860)
Other creditors		(52)	(95)	(547)	(547)	(547)
Short-term borrowings		0	0	0	0	0
Provisions and other current liabilities		0	(1,238)	0	0	0
Deferred government grants		(44)	(45)	0	0	0
Long-term liabilities		(1,041)	(25)	(50)	(45)	(45)
Long-term borrowings		0	0	0	0	0
Deferred taxation		0	0	0	0	0
Other long-term liabilities		(1,041)	(25)	(50)	(45)	(45)
Net assets		1,911	(437)	4,353	5,333	4,640
CASH FLOW						
Operating cash flow		(3,976)	(3,843)	(3,052)	(943)	(623)
Net interest		97	91	109	32	57
Tax		0	123	0	0	0
Capex		(5)	(159)	(193)	(400)	(600)
Purchase of intangibles		0	0	0	0	0
Acquisitions/disposals		80	16	0	0	0
Financing		2,405	1,880	7,054	2,024	0
Dividends		0	0	0	0	0
Other		1,240	100	0	0	0
Net cash flow		(159)	(1,792)	3,918	713	(1,167)
Opening net debt/(cash)		(3,232)	(3,073)	(1,281)	(5,199)	(5,913)
HP finance leases initiated		0	0	0	0	0
Other		0	0	0	(0)	0
Closing net debt/(cash)		(3,073)	(1,281)	(5,199)	(5,913)	(4,746)

Source: Edison Investment Research

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