

Biome Australia Ltd

ABN: 57 628 988 625 – Company Report – July 3rd 2023

Biome Capital Structure

Ordinary shares on issue	162,453,001
Shares in Escrow	39,359,545
Total shares	201,812,546
Current Share Price	7.3 cents
Market Capitalisation	\$14.7m
Unlisted Options*	11,187,145
Total shares and options	212,999,691

*Includes 2,500,000 12c options and 2,500,000 20c options held by Canary Capital Pty Ltd expiring 31/03/2026.

Major Shareholders

Blair Norfolk	7.11%
Douglas Loh	6.27%
Raymond Demaio P/L	5.41%
Richard Tegoni	3.62%
Qintet Pharma Partners P/L	2.25%

Board of Directors

Mr Ilario Faenza – Non-Exec Chairman

Mr Blair Norfolk – Managing Director

Ms Dominique Fisher – Non-Exec Director

Key Achievements To date

- Achieved LTI sales targets of \$4.0m in FY 2022 and \$7.0m in FY 2023
- Grown pharmacy distribution points to more than 3,000 in Australia
- The practitioner market has grown from zero to 30% of sales in 24 months

DCF Valuation of \$0.66 share²

Introduction

Biome Australia (ASX: BIO) is focused on becoming a global leader in the complementary medicine industry, **offering clinically-proven condition-specific probiotic products backed by double blinded placebo controlled clinical research programs that demonstrate their efficacy.**

Activated Probiotics®, Biome's flagship range of novel live-biotherapeutics (probiotics), was created in partnership with world leading organizations in microbiome research. The products use unique encapsulation delivery technologies that improve their stability and efficacy.

Biome is a certified B Corporation, a designation that a business is meeting high standards of verified performance, accountability and transparency.

The Potential of Probiotics

Probiotics are microorganisms that have been found to be beneficial to health when taken as a supplement. Within the gut, probiotics that we take and the microorganisms that live in our body perform many different biological actions that can influence our health. They can help to improve digestive health by inhibiting the growth of pathogens and supporting the balance of gut microorganisms; they can also improve the function of other body systems beyond the digestive tract such as the immune system or the central nervous system. They achieve these effects through many different mechanisms, such as producing biologically active molecules which can be absorbed like nutrients and travel through the body. Different probiotic supplements will offer different health benefits depending on the probiotic strains being used and the biological actions they can perform.

The global market for probiotic products was valued at US\$47.6 billion in 2021¹. Biome's Activated Probiotics® range includes 14 evidence-based probiotics, each targeting a different aspect of human health with clinically-tested probiotic strains. They are shelf-stable and make use of Microbac™ technology to ensure up to 5x more effective delivery.

¹<https://internationalprobiotics.org/market-trends-the-microbiome/>

²See page 13

A Clear Business Strategy

Underpinning the Biome offering to both health professionals and consumers is the significant level of clinical research undertaken to demonstrate efficacy of the Activated Probiotics product range. The ability to offer clinically proven condition-specific probiotic products places Biome as a leading-edge provider of quality probiotics. In addition to this, Biome can extract and maintain a price premium over competitors via its sales strategy of:

- Selling via qualified health practitioners in pharmacies and private practice
- Locating products at script-in counter (enabling companion selling with prescriptions)
- Providing extensive education to in-store pharmacy staff and health professionals
- Limiting exposure to discounting, transactional based chains

The success of this strategy has been validated by a substantial increase in sales during the past two years of 78% (2022 vs 2021) and 70% (2023 vs 2022 as at 15th June 2023).

Scalable Business Model

Biome has demonstrated in the last two years it has a highly scalable business model. Since the IPO, the number of distribution points has increased by more than 50% to over 3,000 in Australia and New Zealand. With 370 high-volume service-based pharmacies, Priceline Pharmacy was a recent major distribution agreement signing, with sales beginning in the 2nd quarter of 2023. While the growth in distribution points has been impressive the same store pharmacy sales growth has been exceptional. Terry White Chemmart (TWCM) has recorded a 59% growth in same store sales in the first half of 2023. Activated Probiotics is now the number one growth brand in TWCM and number two for total revenue in the category.

While the focus since the IPO has been on expanding the ANZ business, significant opportunities exist in the United Kingdom and the rest of Europe. Biome has commenced distribution in the United Kingdom and is in the process of increasing marketing spend and recruiting and training additional sales and education staff. The high margin, shelf stable (non-refrigerated), long life (2+ years) product is ideal and cost effective for distribution and sales in overseas countries.

Since listing on the ASX, Biome has maintained an exceptional rate of sales growth whilst increasing gross margin which has not yet been rewarded by the stock market. Biome recently announced that FY 2023 sales have surpassed \$7m for the 2023 financial year (ASX announcement 15th June, 2023). This represents an increase of over 70% compared to the previous financial year. Full year 2022 sales revenue was also a very impressive at 78% above 2021. In the recently released Q3 2023 sales update revenue was 99% above the previous corresponding period.

Sales Growth

Biome uses a unique training and education driven model to drive sales in the pharmacy and practitioner channels.

- The Biome sales team comprises of health qualified Practitioner Education Consultants and Territory Managers
- Practitioner Education Consultants undertake high level product detailing and training in community pharmacies and with independent health practitioners
- High quality training and education develops stronger trust and relationships with health practitioners
- Biome's support leads to active recommendations of Biome Australia probiotics

Sales Growth (Continued)

- Digital educational content and assets effectively support the national sales team in servicing practitioner markets
- Health Clinics are provided to key accounts to gain trust and deliver the knowledge required to drive rapid sales growth

How the Sales Training and Education Model Works

The Biome sales team work with Activated Probiotics in pharmacy on a disciplined process of:

1. Introduction (month 1)
2. Initial education (month 3)
3. Deep dive education (month 5)
4. Key account business development plans (month 7)
5. Incentives and growth (months 9-12)

Over a 9-12 month period with 5-8 calls (visits) on a key account, Biome develops an account from selling 0-5 units per month at introduction to up to 25 units per month after the deep dive education phase then to 50+ monthly units following the completion of their business development plan. For accounts over 50 units, they work to maintain and continue to build sales with monthly incentives based on growth. This initiative typically achieves strong growth - in some cases, up to 900 monthly units or \$100k+ revenue p.a. from an account. This model cannot be easily replicated by other brands as it is achieved through a meticulous level of service and educational support. The education built into Biome's business development prominently features clinical trial data relating directly to the Activated Probiotics range of products and high quality practitioner-level education around how probiotics work. The company also works with dispensary teams in the pharmacy channel to implement co-prescribing programs so that their products are recommended alongside specific pharmaceutical interventions where no drug interactions exist.

The data below pertains to a comparison between the average units sold per month for the 3-month period to May 2023 vs Prior Corresponding Period (PCP 3-month period to May 2022) and the annualised sales run rate based on the last 3 months sales to May 2023 at an average price of \$22.22

Examples of Sales Growth Achieved

Victoria

A Priceline Pharmacy (inner Melbourne)

Average sales per month - 0 units (3-M to May 22) to 364 units (3-M to May 23), an increase of 364 units: \$96,968 p.a.

New South Wales

A Blooms The Chemist Pharmacy (south east)

Average monthly sales - 36 units (3-M to May 22) to 113 units (3-M to May 23), an increase of 77 units: \$20,531 p.a.

Queensland

Malouf Pharmacies Merthyr Village

Average monthly sales - 0 units (3-M to May 22) to 273 units (3-M to May 23), an increase of 273 units: \$72,727 p.a.

Western Australia

A Pharmacy 777 (Central Perth)

Average monthly sales - 32 units (3-M to May 22) to 347 units (3-M to May 23), an increase of 315 units: \$83,903 p.a.

Distribution Network

Biome currently has over 3,000 distribution points in pharmacies and independent health practitioners across Australia. The company has a distribution agreement with Terry White Chemmart, Priceline Pharmacy and the leading pharmacy distributors Symbion (EBOS) and API (Wesfarmers Health).



New Product Launches

Biome has three new product launches scheduled for H1, FY24. These products are anticipated to drive further sales growth for the company in 2024 and beyond.



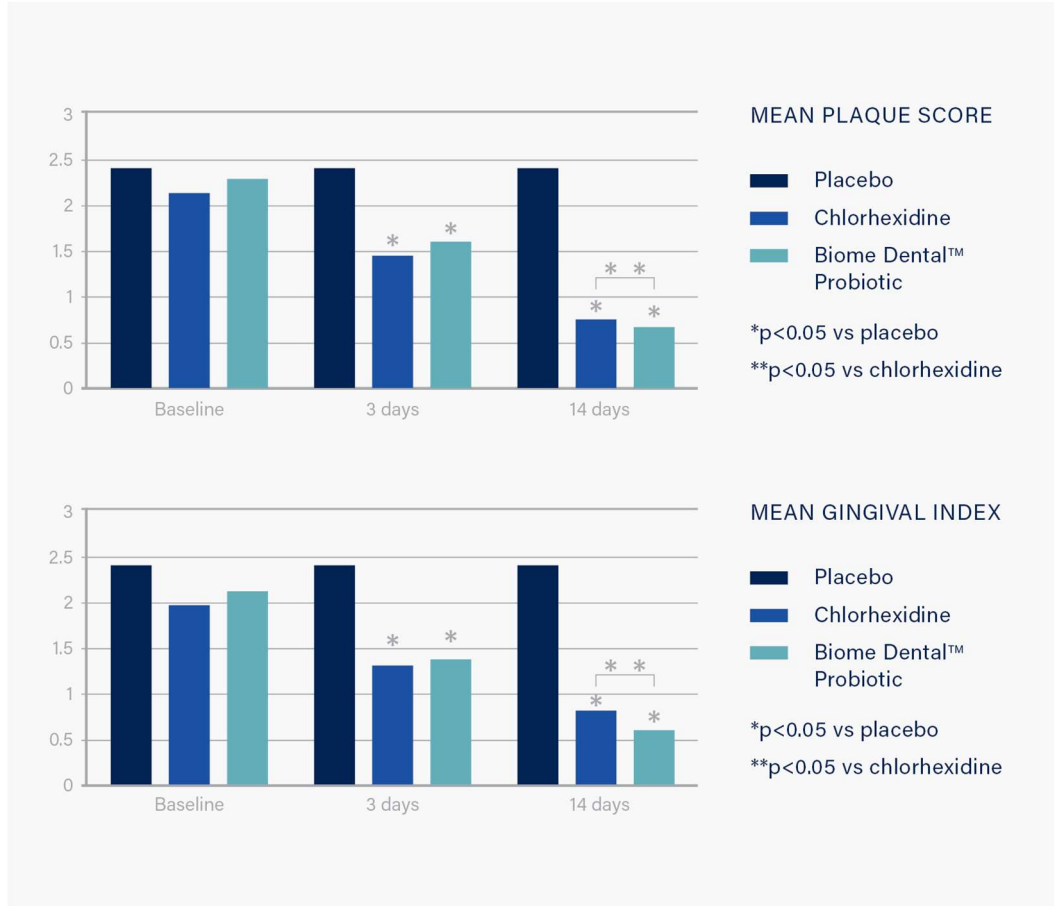
Biome Dental™

A clinically-trialled formulation designed to help support dental health and a healthy oral microbiome. The global periodontal disease treatment market was valued at USD 7.6 billion in 2021 and is expected to grow to USD 12.2 billion by the end of 2031 at a CAGR of 4.8%.

The probiotic formulation in Biome Dental was compared to placebo and chlorhexidine mouthwash (standard treatment) in 60 healthy children. A significant decrease of plaque score and gingival index was seen on day

three compared to placebo; after 14 days of intake, these results persisted ($p < 0.05$). At day 14, plaque score and gingival index were significantly better for Biome Dental compared to chlorhexidine ($p < 0.05$).

Biome Dental™ Clinical Trial Results



Sharma, P., Datta, G., Gandhi, K., & Kumar, D. (2019).

A comparative evaluation of efficacy of proBiometric and chlorhexidine mouthrinses on gingival health and plaque accumulation in 6-9 year old children.

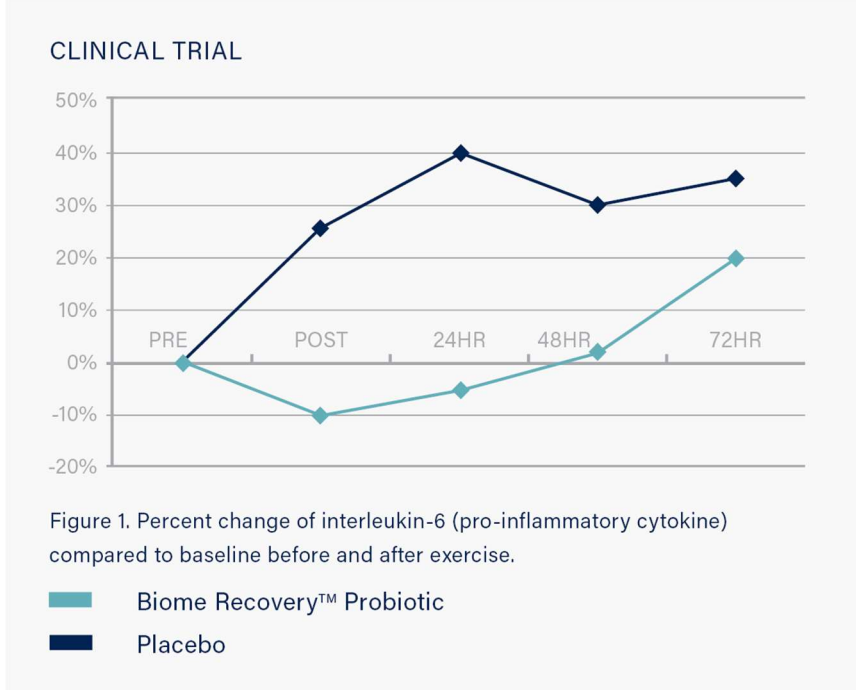
International Journal of Applied Dental Sciences, 5(1), 156–162.

Biome Recovery™

A clinically-trialled formulation designed to help reduce muscle inflammation and recovery time following exercise. The Australian sports supplement category was worth AUD 1.4 billion in 2021. APAC is currently the fastest-growing region in the global sports nutrition market, with an expected 9.8% CAGR to 2028.

A double-blind, randomised, placebo-controlled trial investigated the effect of the probiotic formulation in Biome Recovery™ on physical performance and levels of inflammation following muscle-damaging exercise in healthy men. After three weeks of supplementation, Biome’s probiotic helped to reduce the negative effect of muscle damage on performance, improved range of motion following muscle-damaging exercises and lowered levels of the pro-inflammatory cytokine interleukin-6 at baseline and up to 48 hours post-exercise.

Biome Recovery Clinical Trial Results



Jäger, R., Purpura, M., Stone, J. D., Turner, S. M., Anzalone, A. J., Eimerbrink, M. J., Pane, M., Amoruso, A., Rowlands, D. S., & Oliver, J. M. (2016).

ProBiometric *Streptococcus thermophilus* FP4 and *Bifidobacterium breve* BR03 supplementation attenuates performance and range-of-motion decrements following muscle damaging exercise.

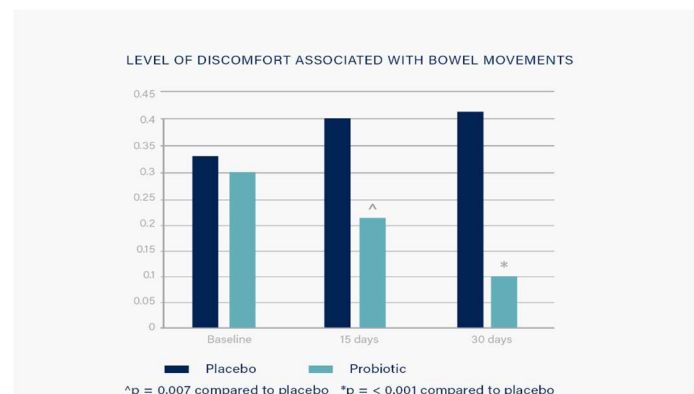
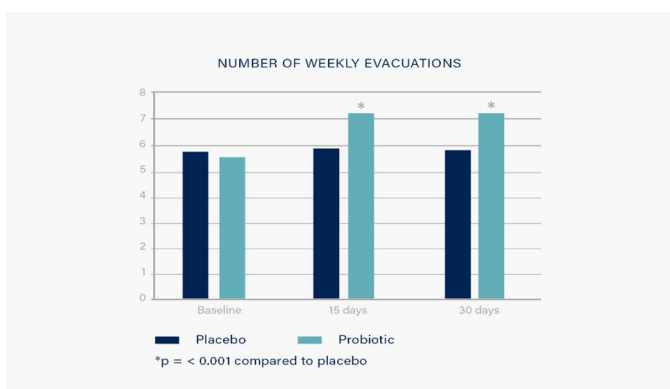
Nutrients, 8(10), 1–11.

Biome Lax™

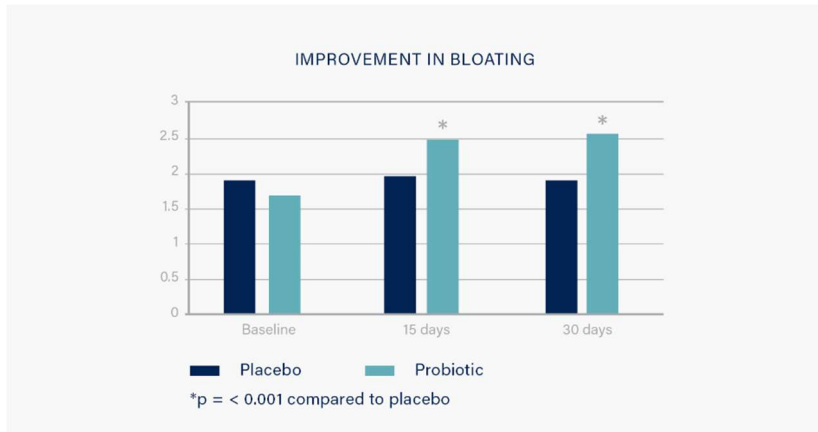
A clinically-trialled formulation to help promote bowel regularity and reduce bloating. The global constipation treatment market size was valued at USD 17.04 billion in 2020 and is projected to reach USD 29.04 billion by 2028, growing at a CAGR of 6.77% from 2021 to 2028.

In a double-blind, randomised, placebo-controlled study across 5 years in over 300 subjects, the product formulation in Biome Lax™ was found to significantly improve the frequency of bowel movements, consistency of stool, ease of evacuation, sensation of complete emptying and abdominal bloating compared to placebo ($p < 0.001$) after 30 days.

Biome Lax™ Clinical Trial Results



Biome Lax™ Clinical Trial Results (Continued)



Drago, L., Cioffi, L., Giuliano, M., Pane, M., Amoruso, A., Schiavetti, I., Reid, G., Ciprandi, G., & PROPAM Study Group. (2022).

The ProBiometrics in Pediatric Asthma Management (PROPAM) Study in the Primary Care Setting: A Randomized, Controlled, Double-Blind Trial with *Ligilactobacillus salivarius* LS01 and *Bifidobacterium breve* B632

Journal of Immunology Research, 2022, 1–7.

High Barriers to Entry

The most significant barrier to entry and point of difference underpinning the Biome offering is the high level of clinical research undertaken which confirms stability and efficacy of the probiotic products. Biome’s flagship range of novel live-biotherapeutics (probiotics), Activated Probiotics, have been created in partnership with world leading organisations in microbiome research and are, in many cases, the first mover with clinically proven probiotics to support patients with conditions such as asthma, osteoporosis prevention, mental health and dermatological conditions. Ongoing clinical trials will ensure that this strategic advantage is maintained. In addition to the proven efficacy Biome’s products are:

- Fridge free, shelf stable
- Vegan
- One a day formulation
- Have long use by dates of 2 years

Biome is also a certified B Corporation, a designation that a business is meeting high standards of verified performance, accountability and transparency. Biome also holds extensive Trademark registrations for the Activated Probiotics range.


Biome owns the formulations of 6 of its Activated Probiotics products, including all of the top 4 selling lines and has exclusive distribution licenses for 5 years on many of its other key lines. Where Biome does not own a product formulation, its strategy is to engage in clinical research to leverage local IP in its branded product. Between Biomes ownership of product formulations and long-term exclusivity, Canary believes Biome has significant protection on its Activated Probiotic product range from other market competitors.

The company’s unique strategy of training and full-service approach with pharmacists, complementary medicine practitioners and other medical professionals develops relationships which are strong and difficult to replicate.

This creates a strong barrier against other brands entering the market and existing brands copying Biome's unique strategy.

Extensive Product Range

Biome currently has a range of 14 probiotic products on the market covering a broad range of conditions, all of which are backed by clinical trials.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">DIGESTIVE HEALTH</p>		<p>Biome Daily™</p> <p>To help enhance immune system function and promote healthy digestion</p>		<p>Biome IBS™</p> <p>To relieve the symptoms of medically diagnosed IBS</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">WOMEN'S HEALTH</p>		<p>Biome Her</p> <p>To help maintain a healthy vaginal microbiome</p>		<p>Biome Prenatal+™</p> <p>To support a healthy pregnancy</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PAEDIATRIC DIGESTIVE & IMMUNE HEALTH</p>		<p>Biome Osteo™</p> <p>To help promote bone health in adults</p>		<p>Biome Iron+™</p> <p>To help increase absorption of dietary iron</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">IMMUNITY & ALLERGIES</p>		<p>Biome Daily Kids™</p> <p>To help reduce the occurrence & duration of common colds</p>		<p>Biome Baby™</p> <p>To help support digestive and immune health in infants</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">DERMATOLOGY</p>		<p>Biome Breathe™</p> <p>To stimulate a healthy immune system response in children</p>			
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">MENTAL HEALTH</p>		<p>Biome Eczema™</p> <p>To help reduce the symptoms of mild eczema</p>		<p>Biome Acne™</p> <p>To help relieve the symptoms of acne</p>	
		<p>Biome Lift™</p> <p>To support healthy mood balance and enhance sleep quality</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">ANTIBIOTIC SUPPORT</p>		<p>Biome Advanced™ 30/10Caps</p> <p>To help restore the balance of beneficial gut bacteria after antibiotic use</p>

Commercial in confidence




Clinical Research

Biome Australia is focusing on becoming a global leader in the complementary medicine industry, offering clinically-proven, condition-specific probiotic products.

Biome is supporting novel clinical research to cement and extend the evidence base of its probiotic products. Current ongoing clinical trials are being conducted by Biome's academic research partners La Trobe University and Federation University. Expanding the evidence base of Biome's products is key to increasing health professional trust in product efficacy. This strengthens one of Biome's key strategies, which is to promote the recommendation of its products alongside prescription medications for specific health concerns in order to

improve patient outcomes. This level of research also solidifies Biome’s competitive advantage and will support commercial growth opportunities for the business.

Current Clinical Pipeline

 <p>BIOME LIFT</p> <p>Assessing the efficacy of the <i>Biome Lift™ Probiotic</i> compared to a placebo in reducing the severity of symptoms in patients with subthreshold depression.</p> <p>Endpoints</p> <ul style="list-style-type: none"> • Measures of anxiety, stress and mood • Effects on biomarkers of inflammatory, immune, and stress responses • The gut microbiota composition and function (via fecal samples assessing microbiota genome and functional predictions of gut microbiota) • Body composition markers • Gastrointestinal symptoms <p>Trial completed Data analysis underway and final results expected in Q4 FY23.</p>	 <p>BIOME KIDS</p> <p>Analysing the influence of probiotic use on absenteeism and immune health among children aged 2-5 years attending childcare centres.</p> <p>Assessment criteria and outcomes:</p> <ul style="list-style-type: none"> • The duration of symptoms of common infections (gastrointestinal and respiratory infections, etc) • The number of children with different varieties of infectious diseases (gastrointestinal infections; respiratory infections; hand foot and mouth disease etc) • Use of antibiotics or other medication related to infectious diseases • Changes in mood and behaviour (secondary outcome) <p>Recruitment completed Trial expected to be completed in Q3 FY23, with results in Q2 FY24</p>	 <p>BIOME OSTEO</p> <p>Examining the effect of 12-month supplementation with Biome Osteo on bone metabolism as well as bone mineral density.</p> <p>Endpoints:</p> <ul style="list-style-type: none"> • DXA measurements • Blood indices e.g. vitamin D, P1NP (collagen deposition, marker for bone formation) and CTx (marker for bone rate turnover) • Gut microbiota composition • Body composition <p>Recruitment underway Preliminary results are expected in Q3 FY24 and final results in Q4 FY24</p>
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Financial Modelling

Historical Financials

Revenue

Biome Australia has experienced impressive growth in revenue with sales in FY2022 reaching \$4.1m, up 78% year on year (yoy) (Chart 1). Revenue growth has been driven by both Australian practitioner revenue which increased by 239% to reach \$1.26m in FY2022 and Australian pharmacy reaching \$2.68m, up 65% yoy. The company's strong growth has continued into FY2023 with total revenue surging to \$7.0m as at 15th June, 2023. This represents an increase of 70% over FY2022.

Gross Margin

The gross margin on sales revenue has been steadily increasing from 51% in FY2021 to 58% in FY2022. As of the end of the March quarter 2023 gross margin has again increased to 59% of sales revenue. The proportion of sales being generated in products with a higher overall sales value and margin (product mix) has increased, which is driving the improved margin performance.

Consistent Strong Sales Growth

Chart 1: BIOME has experienced phenomenal growth in annual revenue...

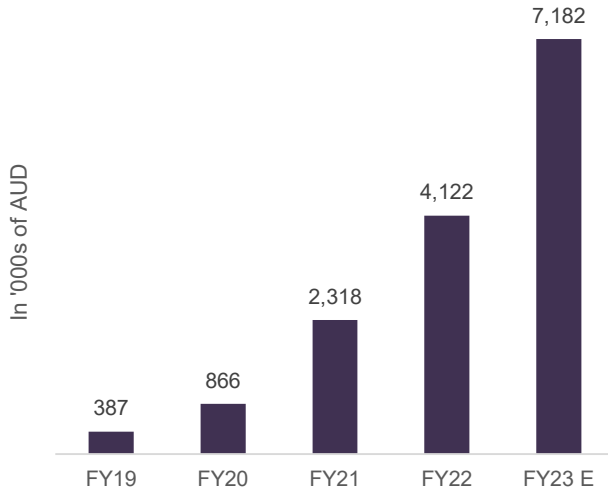
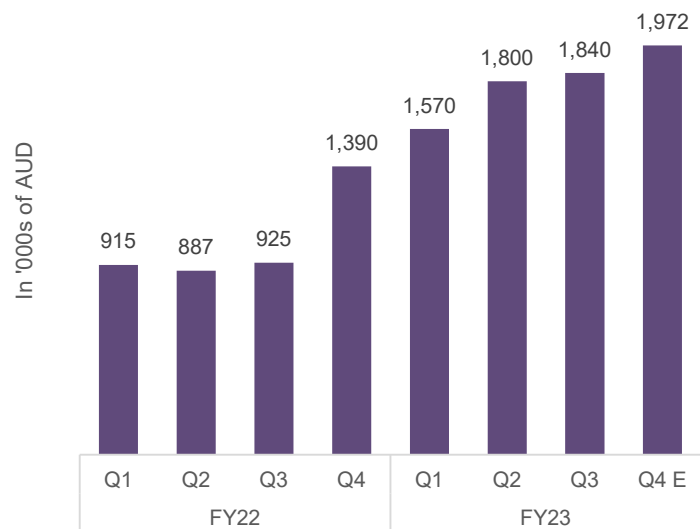


Chart 2: and quarterly revenue



EBITDA | As Biome has grown its revenue, its leverage against operating expenses has increased. Fixed cost centres such as corporate and administrative expenses don't scale linearly with revenue. Consequently, the company's EBITDA margin has improved to -114% of sales in FY2022, from -577% in FY2019. The financial modelling prepared by Canary Capital shows an increasing level of operating leverage is expected to continue in future years resulting in EBITDA turning positive during FY2025.

Free Cash Flow (FCF) | Being at its growth stage, Biome is still cash flow negative with FCF of -\$3.5m in FY2022 and a FCF margin of -85%. FCF has remained negative primarily due to a continued investment in headcount and inventory to support sales growth. We expect the company to become FCF positive during FY2024 as revenue continues to scale.

Financial Position | Biome's balance sheet is in a strong position with no debt and a cash position of \$3.1m as at 31st March, 2023. Based on its latest quarterly cash burn of \$349k, the company has about 10 quarters of runway if it maintains its cash burn rate. The company has recently negotiated a secured debt facility of \$1.2m from Tradeplus24 to fund further increases in inventory associated with sales growth. The facility has an interest rate of 10.8%p.a. on the amount drawn down plus a 1.8% facility fee per year. This facility ensures the company is well funded to continue strong sales growth without needing to raise capital at highly dilutionary levels whilst the share price is close to all time lows.

Discounted Cash Flow Valuation

Revenue | To derive Biome's valuation, a 5 year (FY2024-FY2028) projection has been prepared by Canary Capital. Biome's projected revenue is the aggregated total of estimated revenue for each of its key sales channels being Australian pharmacy, Australian practitioner and Overseas.

Australian Pharmacy | To calculate Australian pharmacy revenue, key drivers being active pharmacy accounts and average sales per active pharmacy are forecasted. We expect Biome's Australian pharmacy account numbers to reach 4,230 by FY2028, up 3.3x from 1,276 in FY2022. Of total pharmacy accounts, we anticipate a

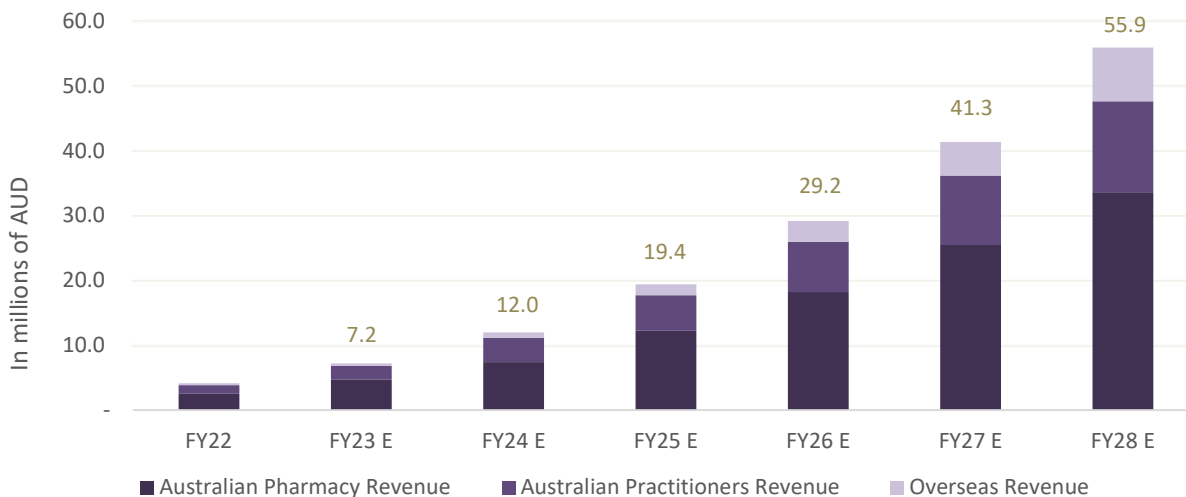
significantly larger percentage of them to be active during the forecast period. An active pharmacy has been defined as one with unit sales greater than 5 units per month in the most recent rolling 6 months. The projected growth in active pharmacies is driven by higher engagement from the sales team based on increased site visits and a recent shift in the sales team’s KPI towards increasing the number of active pharmacies. We also project an increase in average sales per active account driven by a shift in KPI focus towards increasing the sales volume per active account. Forecast growth in number of active pharmacies and average sales per active pharmacy is expected to result in Australian pharmacy revenue of \$4.7m in FY2023 growing to \$7.4m in FY2024. This represents year on year growth of 90% and 56% in FY2023 and FY2024, respectively. In FY2028, the Australian pharmacy distribution channel is forecasted to generate \$33.6m in revenue from revenue implying a 6-year CAGR of 54%.

Australian Practitioner | A similar methodology to that used for Australian pharmacy is used to project Australian practitioner revenue. However, the key revenue drivers for this distribution channel are active practitioner accounts and average sales per active practitioner account. Biome’s total Australian practitioner distribution points are expected to reach 4,320 by FY2028. Similar to Australian pharmacy and driven by identical factors, we expect active practitioners and average sales per active practitioner to grow. As a result, Australian practitioner revenue is expected to reach \$2.0m in FY2023 and \$3.8m FY2024. Australian practitioner revenue is expected to grow at a CAGR of 47% over the forecast period, reaching \$14m by FY2028.

Overseas | While only \$293k was generated in overseas revenue in FY2022, we expect this number to grow significantly as the company continues to invest into its overseas strategy. This investment is expected to include the hiring of key sales personnel to drive sales in primary overseas markets such as the UK. In the later years of the forecast period, we expect Biome to use local partners to expand into the rest of Europe including Germany and Spain, countries which are expected to have significant demand for probiotics. The ramping up of sales and distribution efforts is predicted by Canary to result in overseas revenue growing at a CAGR of 74% from \$293k in FY2022 to \$8.3m in FY2028.

Total Revenue | Biome’s consolidated revenue from all sales channels is predicted to grow by 66% year on year from ~\$7.2m in FY2023 to \$11.9m in FY2024. FY2028 revenue is projected to reach \$55.9m reflecting a CAGR of 54.4% during the forecast period.

Exhibit 3: BIO projected revenue by sales channel



The gross profit margin is expected to increase marginally from 57.9% in FY2022 to 59.0% by FY2028. While an increasing proportional revenue contribution from the practitioner channel is expected to improve gross margin, this will be

offset by the growth of the overseas business which operates at a lower gross margin. The overall effect of this is that gross margin remains relatively flat over the forecast period.

Operating Expenses | As the company scales and realises operating leverage from its fixed cost base, we expect operating expenses as a percentage of revenue to decline from 171% to 31.3% by FY2028. The main driver of the decline is that corporate and administrative expenses as well as sales and marketing expenses (to a lesser extent) are not anticipated to increase proportionally with the growth in revenue.

EBITDA | Based on Canary Capital's modelling we expect Biome's EBITDA for FY2028 to be \$15.5m giving an EBITDA margin of 28% on FY2028 revenue of \$55.9m. The company is expected to reach EBITDA breakeven during FY2025.

Operating Income and Net Operating Profit After Tax (NOPAT) | To derive operating income, EBITDA is adjusted for depreciation and amortisation. Depreciation and amortisation as a % of revenue is expected to remain constant during the forecast period at 3%. Adjusting for depreciation and amortisation results in operating income of \$13.8m in FY2028 up from -\$4.76m in FY2022. After taking into account tax payable on operating income, we expect Biome to generate \$9.69m in NOPAT by FY2028, up from -\$4.76m in FY2022.

Free Cash Flow (FCF) | NOPAT is adjusted for net capital expenditures, inventory investments and changes in Non-Cash Working Capital (excluding inventory) to compute FCF. In FY24, Biome is expected to generate FCF of -\$2.19m. However, in FY28, the company is expected to generate \$8.63m in FCF reflecting a strong FCF margin of 15%.

In AUD	FY22	FY23 E	FY24 E	FY25 E	FY26 E	FY27 E	FY28 E
Revenue	4,122,425	7,182,397	11,950,741	19,380,999	29,159,413	41,346,860	55,916,073
% Growth (YoY)	78%	74%	66%	62%	50%	42%	35%
EBITDA	(4,680,291)	(2,985,878)	(1,322,494)	1,961,791	6,141,537	11,201,318	15,529,844
% Margin	-114%	-42%	-11%	10%	21%	27%	28%
Free Cash Flow to Firm	(3,520,279)	(5,316,351)	(2,190,530)	366,235	3,366,480	7,169,186	8,629,388
% Margin	-85%	-74%	-18%	2%	12%	17%	15%

Discount Rate | To calculate the discount rate applied to the company's future cashflow, the WACC methodology was used. Since Biome has no debt, its WACC equals its equity cost. To compute Biome's cost of equity, an implied equity risk premium of 4.65% along with the Australia 10-year T-Bond rate of 3.94% were used as inputs. For levered beta, the Australia and New Zealand biotechnology industry average levered beta of 0.88 was used. A cost of equity of 8.03% is thus derived. To adjust for the additional risk associated with the company being a small cap, a small cap premium of 2% was applied to the company's cost of equity to derive a final discount rate of 10.03%.

During the forecast period, the discount rate is assumed to decline as the risk-free rate decreases. This is in line with our expectation that inflation in the medium term will ease leading to the RBA's policy rate and thus treasury yields decreasing. We forecast that the risk-free rate will remain at 3.94% during FY2024 before declining to 3% in FY2025 and finally 2% in FY2026 through to FY2028. The resulting discount rate is 10.03% in FY2023 and FY2024, 9.1% in FY2026 and 8.1% from FY2026 to FY2028.

Terminal Value | To calculate terminal value, a terminal discount rate of 8.1% and a terminal growth rate of 3.5% are assumed. Using the Gordon growth model as well as the terminal year (FY2028) FCF of \$8.63m results in a terminal value of \$194.5m in FY2028. The present value of the terminal value is computed as \$116.6m.

Valuation | Adding the discounted cash flows to the terminal value results in an equity valuation of \$126.2m for Biome. Given total shares outstanding of 201.8 million shares, The company's estimated fair value per share is \$0.66 representing significant upside potential of 816% from its latest closing price of \$0.072.

Comparables

Swisse

Swisse is an Australian health and wellness company that produces vitamins and supplements. China's Health and Happiness bought Australian vitamins group Swisse for \$1.7 billion in late 2015. Swisse had also made gains in the community pharmacy channel and had delivered a strong domestic performance with its largest customer, Chemist Warehouse.

Life-Space

Life-Space is a brand of probiotics that contains up to 15 strains of beneficial bacteria to support a healthy digestive and immune system function for the whole family. Chinese health supplements giant By-Health is buying Melbourne-based probiotics manufacturer Life-Space Group for almost \$700 million, Life-Space said the deal had an enterprise value of \$690 million. Life-Space's revenues have jumped from around \$14 million in 2005 to around \$71 million last year, 2017. Life-Space sells products through the pharmacy in Australia.

Blackmores

Blackmores is set to be bought by Japanese company Kirin for \$1.88 billion in an all-cash transaction. The deal still requires sign-off from regulators and shareholders, but the vitamin company's largest shareholder Marcus Blackmore has backed the takeover, as did the company's board. The Blackmores board said it would declare a fully franked special dividend of \$3.34 per share, subject to the availability of franking credits.

Dec 22 Quarterly Results

Cash generated from the Group's operations before interest and tax was \$18.8m, a decrease of 61.7% or \$30.3m compared with 1H FY22 due to lower earnings before interest and tax, higher inventory levels and a decrease in amounts owing to suppliers at period end, on revenue of \$338million for the Qtr.

Revenue by Region:

ANZ	\$150,760
International	\$93,554
China	\$93,709
Total	\$338,023

Company	Blackmores	Life-Space	Swisse
Takeover	2023	2018	2015
Revenue	\$338mil (4*dec QTR)	\$71mil	
Purchase Price	\$1,880 mill	\$690 mil	\$1,700 mil

Key People

Biome Australia Limited Board

Blair Norfolk – Managing Director

Biome has a highly credentialed and experienced team led by the Managing Director and CEO Blair Norfolk. Blair has over 10 years' experience in the pharmaceutical and natural medicine industries. As the founding Managing Director of Biome, Blair has successfully secured the unique products underpinning the company, facilitated clinical trials, established distribution, recruited staff and led the IPO process. It is Blair's passion, drive and entrepreneurial management style that has established Biome to where it is today.

Blair is a member of the Australian Institute of Company Directors (AICD) and holds a Master of Advanced Marketing from Monash University and a Bachelor of Commerce – Marketing/Accounting from Deakin University.

Ilario Faenza – Chairman

Ilario has over 30 years of corporate and director experience in Australia, United States, New Zealand and the United Kingdom. He has built and worked with more than 30 companies over the past 30 years including roles as Chief Operating Officer, Managing Director, Executive Director, Advisor, Executive Director, Executive Chairman, Non-Executive Director and Non-Executive Chairman. Ilario has also been a Director of multiple ASX-listed companies over the past 22 years. He has chaired the audit and risk committee and served on the remuneration committee for ASX listed Eftel Limited in addition to being a member of the audit and risk committee and Remuneration committee for ASX Listed Tel.Pacific Limited. Ilario also managed the Scheme of Arrangement for People Telecom Limited in relation to its merger with M2 Group Limited.

Dominique Fisher – Non-Executive Director

Dominique couples her experience in tech driven businesses with a strong focus on risk mitigation and financial management. She has worked in a range of sectors in both executive and non-executive roles including: insurance, procurement, publishing, media, wholesale manufacturing, retail, biotech, e-commerce, business mobility software, performing arts, location data, digital and internet services, transport and logistics, artificial intelligence, property development, telecommunications, edtech, postal services, advertising and professional services.

Dominique has combined her executive career with an extensive non-executive career, having served on four ASX listed companies and has been involved in two IPOs (IAG and TGO); numerous private companies including Integrity Life Group, various government and private advisory boards at both state and federal for both major political parties, Geoscape Australia and government agencies including the Sydney Opera House, Australia Post and the Australian Council for the Arts.

Biome Key Management

Douglas Loh – Chief Financial Officer

Douglas holds a Bachelor of Economics (Hons) from the University of Monash, is a CPA and a Member of the Australian Institute of Company Directors. He has over 30 years of advisory, company management, investment management, and market research experience with a focus on smaller companies. He is a founding member of Acorn Capital, Australia's first boutique investment manager specialising in the Australia microcap sector.

Douglas' 19-year career at Acorn Capital included roles as Portfolio Manager, CFO, COO and Executive Director of the Company. For more than 10 years, Douglas was responsible for managing the firm's microcap portfolios and growing its funds under management (FUM) to more than \$1.3 billion. In 2013, Douglas became Head of Equities with direct responsibilities for Acorn Capital's new Asian small cap strategy.

Dr. Jaroslav Boublik – Chief Science Officer

Dr. Boublik has conducted research at Prince Henry's Hospital Medical Research Centre, The Shanghai Institute of Biochemistry in China, The Salk Institute, La Jolla USA, and the Baker Medical Research Institute in Melbourne, Australia. He previously held a Fulbright Postdoctoral Fellowship, a Neil Hamilton Fairley Postdoctoral Fellowship, and was an R. Douglas Wright Fellow. Dr Boublik has over 30 peer-reviewed and invited articles in scientific journals and is an inventor on four patents.

Dr. Boublik is a consultant to the nutrition R&D sector and has been a board member of several companies in nutritional medicine and complementary medical research and development. In the USA, between 2008 and 2017, he developed dozens of new products for client companies in nutrition, sports performance, hydration and functional foods. He has also served three years as Lead OHSE Auditor for the CSIRO, Australia's peak scientific and industrial research organization.

Dr. Boublik is an Associate Member, Australian College for Nutritional and Environmental Medicine, member of the Royal Australian Chemical Institute and a Chartered Chemist. He has a Ph.D. in Medicine and a B.Sc. (Hons) Chemistry (Monash University) and is a member of the Monash University and Fulbright Alumni Associations.

Rebecca Edwards – Education Director

Rebecca is a speaker, writer, educator and qualified naturopath (BA, Adv Dip Nat, Dip Nut). She has more than 15 years of experience educating on all aspects of complementary and integrative health, delivering naturopathic education to healthcare practitioners around the world. Rebecca has lectured to undergraduate students in Australia, the UK and the US and is a passionate and inspiring speaker. Rebecca leads the national team of educators of Biome to provide high quality, evidence-based education on the world of the microbiome.

Canary Capital Pty Ltd, its directors and associates own shares and options in Biome Australia Ltd.

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Appendix

Examples of Clinical Research/Publications

Biome Daily

Berggren A, Lazou Ahrén I, Larsson N, Önning G. Randomised, double-blind and placebo-controlled study using new probiotic lactobacilli for strengthening the body immune defence against viral infections. Eur J Nutr [Internet]. 2011 Apr 28;50(3):203–10. Available from: <http://link.springer.com/10.1007/s00394-010-0127-6>

Busch R, Gruenwald J, Dudek S. Randomized, double blind and placebo controlled study using a combination of two probiotic Lactobacilli to alleviate symptoms and frequency of common cold. Food Nutr Sci [Internet]. 2013;04(11):13–20. Available from: <http://www.scirp.org/journal/doi.aspx?DOI=10.4236/fns.2013.411A003>

Biome Breathe

Drago L, Iemoli E, Rodighiero V, Nicola L, De Vecchi E, Piconi S. Effects of Lactobacillus salivarius LS01 (DSM 22775) treatment on adult atopic dermatitis: A randomized placebo-controlled study. Int J Immunopathol Pharmacol. 2011;24(4):1037–48. Available from: <https://journals.sagepub.com/doi/10.1177/039463201102400421>

Biome Lift

Marotta A, Sarno E, Casale A Del, Pane M, Mogna L, Amoruso A, et al. Effects of probiotics on cognitive reactivity, mood, and sleep quality. Front Psychiatry. 2019;10(164):1–11. Available from: <https://www.frontiersin.org/articles/10.3389/fpsy.2019.00164/full>

Biome Osteo

Jansson PA, Curiac D, Lazou Ahrén I, Hansson F, Martinsson Niskanen T, Sjögren K, et al. Probiotic treatment using a mix of three Lactobacillus strains for lumbar spine bone loss in postmenopausal women: a randomised, double-blind, placebo-controlled, multicentre trial. Lancet Rheumatol [Internet]. 2019;1(3):e154–62. Available from: [https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913\(19\)30068-2/fulltext](https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(19)30068-2/fulltext)

Biome Iron

Hoppe M, Önning G, Berggren A, Hulthén L. Probiotic strain Lactobacillus plantarum 299v increases iron absorption from an iron-supplemented fruit drink: A double-isotope cross-over single-blind study in women of reproductive age. Br J Nutr. 2015;114(8):1195–202. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4594053/>

Hoppe M, Önning G, Hulthén L. Freeze-dried Lactobacillus plantarum 299v increases iron absorption in young females - Double isotope sequential single-blind studies in menstruating women. PLoS One. 2017;12(12):1–15. Available from: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0189141>

AXP Recovery Probiotic

Jäger R, Purpura M, Stone JD, Turner SM, Anzalone AJ, Eimerbrink MJ, et al. Probiotic Streptococcus thermophilus FP4 and Bifidobacterium breve BR03 supplementation attenuates performance and range-of-motion decrements following muscle damaging exercise. Nutrients. 2016;8(10):1–11. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5084029/>

Appethyl (Activated Nutrients Professional Range - Slim Down)

Montelius C, Erlandsson D, Vitija E, Stenblom EL, Egecioglu E, Erlanson-Albertsson C. Body weight loss, reduced urge for palatable food and increased release of GLP-1 through daily supplementation with

green-plant membranes for three months in overweight women. Appetite [Internet]. 2014;81:295–304. Available from: <http://dx.doi.org/10.1016/j.appet.2014.06.101>

Stenblom EL, Egecioglu E, Landin-Olsson M, Erlanson-Albertsson C. Consumption of thylakoid-rich spinach extract reduces hunger, increases satiety and reduces cravings for palatable food in overweight women. Appetite [Internet]. 2015;91:209–19. Available from: <http://dx.doi.org/10.1016/j.appet.2015.04.051>

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