Aptorum Group Ltd.

(NASDAQ/Euronext Paris: APM)

April 28, 2020
Recent Price: $3.40

Market Data

Fiscal Year	December
Industry	Biotechnology
Market Cap	$103.3M
Shares Outstanding	30.4M
Float	9.3M
Insider Ownership[4]	69.0%
Avg. Volume (90-day)	31,865
Staff, Consultants	70+
Key Target Markets	US, China, EU
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http://ir.aptorumgroup.com	

As of April 28, 2020

Financial Snapshot

Cash, Equity and Shareholder (USD)

Pre-IPO 2016-2018 capital raised	$37m
IPO Dec 2018 capital raised	$12m
Feb 2020 Secondary Offering	$10m
March 15, 2020 Cash + Credit Facility	$20M+

As of March 15, 2020

Financials (USD)

Revenue (ttm)	$0.5M
Cash (mrq)	$5.3M
Total Assets (mrq)	$24.0M
Long-Term Debt (mrq)	$6.4M
Total Equity (mrq)	$14.9M

As of December 31, 2019

aptorumgroup.com

Company Overview

Aptorum Group Limited (NASDAQ: APM) is a biopharmaceutical company dedicated to developing and commercializing novel therapeutics to tackle unmet medical needs. Aptorum's current drug pipeline includes indications in orphan diseases, infectious diseases, and metabolic diseases. In 2020, the company plans to advance two candidates (SACT-1 and ALS-4) to clinical trials, targeting Neuroblastoma and infections caused by *Staphylococcus aureus*, including Methicillin-resistant *Staphylococcus aureus* (MRSA). Aptorum's Smart-ACT® platform is designed to advance an average of three drug candidates for orphan diseases to clinical trials every 12-18 months. Further, the company is in the process of launching a dietary supplement made with extracted Chinese yam powder containing a bioactive ingredient "DOI" for women undergoing menopause and experiencing menopausal symptoms such as osteoporosis. Targeting a global woman's health supplement market that is expected to reach $5.7 billion in 2025[1], Aptorum is expected to generate positive revenue in the next 12 months with this product.

Project Portfolio Highlights

Projects	Candidate / Modality	Indication	Computational Discovery	*In Vitro* Validation	Existing Ph/II Clinical Safety Data[1]	*In Vivo* Validation	IND Preparation & Submission	Ph/II/III w/ Limited Population[2]
SACT's Series								
SACT-1	Repurposed Drug Molecule	Neuroblastoma						
SACT-2	Repurposed Drug Molecule	To be disclosed						
SACT-3	Repurposed Drug Molecule	To be disclosed						
SACT-COV19	Repurposed Drug Molecule	Coronavirus Disease 2019 (COVID-19)						

Projects	Candidate / Modality	Indication	Development Stage						
			Target Identification & Selection	Lead Discovery	Lead Optimization	IND-Enabling	Phase 1	Phase 2	Phase 3
Acticule's Series									
ALS-4	Small molecule	Treatment of bacterial infections caused by Staphylococcus aureus including MRSA							
ALS-1	Small molecule	Treatment of viral infections caused by influenza virus A							
ALS-2	Small molecule	Treatment of bacterial infections caused by Staphylococcus aureus including MRSA							
ALS-3	Small molecule	Reviving existing antibiotics to overcome drug resistance							
Claves' Series									
CLS-1	Macromolecule	Treatment of Obesity							
CLS-2	To be disclosed	To be disclosed							
CLS-3	To be disclosed	To be disclosed							
Nativus' Series									
NLS-1	Small molecule	Treatment of Endometriosis							
Scipio's Series									
SPLS-1	83b-1 Novel Quinoline Derivative	Treatment of Liver Cancer							
Videns' Series									
VLS-2	MITA	Treatment of Alzheimer's & Parkinson's Disease							
VLS-4	Imaging Agent for MRI Diagnosis	Diagnosis of Alzheimer's Disease							

Projects	Modality	Target Customer	Formulation	Commercialization
NativusWell® DOI (NLS-2)	Supplement	Women undergoing menopause	Targeted to launch in HK, UK, Europe in 2020 (registration	

Projects	Candidate / Modality	Indication	Development Stage					
			Lab-based Phantom Trial	Animal Trial	IDE Application Approval	Safety/ Feasibility Clinical Study	Pivotal Clinical Study	Process of Obtaining PMA
Signate's Series								
SLS-1	Robotic Catheter Platform for Intra-Operative MRI-Guided Cardiac Catheterization	Heart Rhythm Disorders by Cardiac Electrophysiology Intervention	on-going					

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Value Proposition

Aptorum's three pillars of drug discovery and development target indications with significant market size. The company is building a diverse portfolio of over 15 projects primarily in therapeutics and diagnostics across a wide range of currently unmet disease areas. Aptorum focuses on translating early-stage discovery into proof-of-concept clinical stages and transforming clinical outcomes through licensing, co-development, and commercialization. In addition, the company's proprietary Smart-ACT® platform combines a computational approach and wet lab validation to screen over 2,600 pre-approved small molecule drugs for potential repurposing. This process allows Aptorum to identify candidates that can be repurposed for selected orphan or unmet diseases. This platform's first proof-of-concept asset is SACT-1 for Neuroblastoma, a cancer mostly affecting children that develops from immature nerve cells.

Investment Highlights

- Two candidates targeted to enter clinical phases in H2 2020, subject to regulatory approval of the relevant IND applications:
  - SACT-1 for Phase 1b/2a trials in the treatment of neuroblastoma (global c. $2.6 billion market)[2]
  - ALS-4 for a Phase 1 trial in the treatment of infections caused by Staphylococcus aureus (incl. MRSA) (global c. $2.9 billion market)[3]
- Near-term commercialization of dietary supplement for woman's menopausal health (global c. $4.75 billion supplement market)[1] expected to begin generating revenue in second half of 2020
- Three additional SACT candidates underway
- 15+ therapeutic candidates under development in areas including infectious diseases, metabolic diseases related to gut microbiome, and drug repurposing for orphan diseases; representing an estimated combined multi-billion dollar global market opportunity
- Three pillars of new and repurposed drug discovery and development platform:
  - **Pillar 1: Smart-ACT® (SACT series) – Orphan Diseases Drug Repurposing platform:** Systematic deployment of computational and wet-lab screening of regulatory approved therapeutics against a currently known universe of 7,000+ (and increasing) orphan diseases, including its SACT-1 targeting Neuroblastoma
  - **Pillar 2: Acticule (ALS series) – Infectious Diseases:** Drug development platform targeting deadly viral and bacterial infections including its ALS4, a first-in-class oral non-bactericidal anti-virulence drug intended to treat infection caused by *Staph. aureus* (e.g. MRSA)
  - **Pillar 3: Claves (CLS series) - Microbiota:** Targeting potential therapeutic targets via the modulation of the chemical signaling of gut microbiota.
- Over 70+ staff, clinical advisors and consultants with vast experience in drug development and clinical trials, including US FDA, EMA, and NMPA purposes.

References:

[1] Global Menopausal Hot Flashes Therapy Market $5.7 Billion by 2025, https://www.ihealthcareanalyst.com/global-menopausal-hot-flashes-therapy-market/

[2] Neuroblastoma Market Global Industry Perspective, Comprehensive Analysis, Size, Share, Growth, Trends, and Forecast 2019 – 2023, https://www.medgadget.com/2019/06/neuroblastoma-market-global-industry-perspective-comprehensive-analysis-size-share-growth-trends-and-forecast-2019-2023.html

[3] Methicillin-resistant Staphylococcus Aureus (MRSA) Drugs Market is estimated to reach the value of US$ 3,908.2 Mn by the end of 2025, https://www.openpr.com/news/1901133/methicillin-resistant-staphylococcus-aureus-mrsa-drugs

[4] Does not include options that have vested, but that have not yet been exercised.