Primed for success

- Island Pharmaceuticals (ILA) is a drug development company, focusing on repurposing drugs for viral illnesses. ILA's strategy offers lower development costs, faster timelines and lower risk in comparison to the development of 'first in human' drugs.
- ILA's first program is dengue fever. The selection is tactical, leveraging the advantages of its drug repurposing strategy.
    - Data from preclinical studies and ~45 clinical trials of its drug, fenretinide, in cancer and other diseases, support the start of the clinical trial program at Phase 2 rather than the customary Phase 1.
    - Data from the trials reported minimal adverse effects, significantly reducing safety risk.
    - ILA's decision to target dengue fever has enabled access to US Army clinical data and its Dengue Human Infection Model (DHIM) challenge trial program. The collaboration presents a well credentialled 'partner' while reducing trial risk, timelines and costs.
    - Dengue Fever is a Food and Drug Administration (FDA) designated Neglected Tropical Disease. If ISLA-101 receives FDA priority review and meets a number of other eligibility criteria, it will be eligible for an FDA Priority Review Voucher (PRV). ILA may sell the PRV. Current values are ~US$100m.
    - Confirmation of fenretinide's efficacy and safety in dengue fever is likely to see the drug trialled in other mosquito borne flaviviruses, including Zika and Yellow River Fever.
- Management and the Board members offer significant experience within the sector.

Valuation, Risks, Sensitivities

MST valuation is based on the average market 'cap' of a cohort of ASX listed biotechs in Phase 2 trial with no efficacy data. We apply a 25% probability of approval (15% for the general cohort) to reflect Isla-101's safety profile and infectious disease target. The net effect including the discounted ~US$100m PRV presents a 12 month forward A$112m valuation. It is subject to usual upside/downside risks and sensitivities of drug development including clinical trial patient recruitment, timing and costs, regulatory approval and market entry, pricing, market penetration and sales, competitor drugs and potential royalties/licensing payments.

ISLAND PHARMACEUTICALS

Antiviral therapeutics

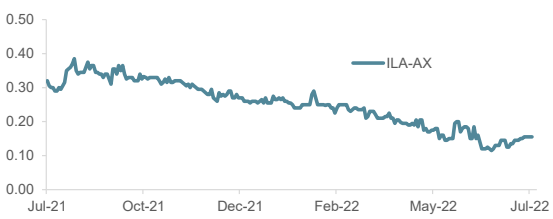
ASX listed Island Pharmaceuticals (ILA.AX) is a drug research company, focused on repurposing drugs to prevent and/or treat viral illnesses. Repurposed drugs potentially offer shorter, lower cost routes to market and a higher probability of approval.

ILA's lead program in dengue infection is planned to start Phase 2a trials in FY23. There are no approved treatments. ILA's drug, repurposed fenretinide, offers application in a number of other viral related illnesses. ILA's agreements with three Australian drug compound research facilities aim to build a strong pipeline of drugs for other indications.

Ticker Code	ILA.AX
Market Capitalisation	A$12.6m
Share Price	A$0.16
Valuation	A$0.83(dil)

Potential Milestones	
H1FY23	-Open IND in Phase 2a PEACH Trial
H1FY23	-1st Subject enrolled in Trial
2FY23	- Phase 2a Topline Results
H1FY23	-End of Phase 2a FDA meeting

Share Price Performance Chart



Rosemary Cummins
rosemary.cummins@mstaccess.com.au

Financial Summary

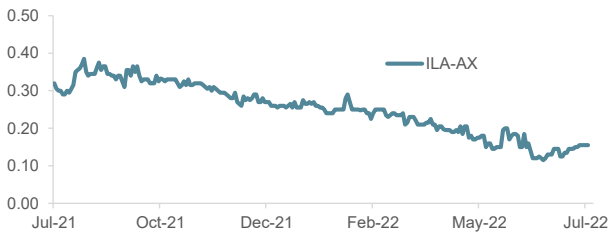
Island Pharmaceuticals Limited — ILA-AX

Year end 30 June

MARKET DATA

Share Price	**A$**	**0.16**
52 week low / high	A$	0.12 - 0.385
Valuation (12 month forward)	**A$**	1.38
Market capitalisation	**A$m**	**12.6**
Shares on issue	m	81.3
Options	m	14.4
Other equity	m	40.0
Potential Shares on issue (diluted)	m	135.7

12 month performance



INVESTMENT FUNDAMENTALS		FY21	FY22E	FY23E	FY24E
EPS Reported (undiluted)	¢	(11.4)	(1.6)	(4.5)	(3.7)
EPS Underlying (undiluted)	**¢**	**(11.4)**	**(1.6)**	**(4.5)**	**(3.7)**
Underlying EPS growth	%	n/m	n/m	n/m	n/m
P/E Reported (undiluted)	**x**	**n/m**	**n/m**	**n/m**	**n/m**
P/E at Valuation	x	n/m	n/m	n/m	n/m
Dividend	**¢**	**-**	**-**	**-**	**-**
Payout ratio	%	0%	0%	0%	0%
Yield	**%**	**-**	**-**	**-**	**-**

KEY RATIOS (A$)		FY21	FY22E	FY23E	FY24E
Forecast year end shares	m	81	81	81	81
Market cap (Y/E / Spot)	**$m**	**12.6**	**12.6**	**12.6**	**12.6**
Net debt /(cash)	$m	(6.5)	(5.0)	(11.4)	(8.4)
Enterprise value	**$m**	**6.1**	**7.6**	**1.2**	**4.2**
EV/Sales	x	n/a	n/a	n/a	n/a
EV/EBITDA	**x**	**(2.9)**	**(5.7)**	**(0.3)**	**(1.4)**
EV/EBIT	x	(2.9)	(5.7)	(0.3)	(1.4)
Net debt / Enterpprise Value	x	(1.1)	(0.7)	(9.4)	(2.0)
Gearing (net debt / EBITDA)	**x**	**3.0**	**3.8**	**3.1**	**2.8**
Operating cash flow per share	$	(0.0)	(0.0)	(0.0)	(0.0)
Price to operating cash flow	**x**	**(14.6)**	**(8.3)**	**(3.5)**	**(4.2)**
Free cash flow	**$m**	**(0.9)**	**(1.5)**	**(3.6)**	**(3.0)**
Free cash flow per share	$	(0.01)	(0.02)	(0.04)	(0.04)
Price to free cash flow	**x**	**(14.6)**	**(8.3)**	**(3.5)**	**(4.2)**
Free cash flow yield	**%**	**-6.9%**	**-12.1%**	**-28.9%**	**-23.8%**
Book value / share	$	0.08	0.06	0.14	0.10
Price to book (NAV)	**x**	**2.0**	**2.5**	**1.1**	**1.5**
NTA / share	$	0.08	0.06	0.14	0.10
Price to NTA	**x**	**2.0**	**2.5**	**1.1**	**1.5**
EBITDA margin	%	n/m	n/m	n/m	n/m
ROE (Average Equity)	%	n/m	n/m	n/m	n/m
ROA (EBIT)	%	n/m	n/m	n/m	n/m
Interest cover (EBIT / net interest)	x	n/m	n/m	n/m	n/m

PROFIT AND LOSS (A$)		FY21	FY22E	FY23E	FY24E
Revenue & Other Income	$m	-	-	-	-
COGS	$m	-	-	-	-
Gross margin	**$m**	**-**	**-**	**-**	**-**
R&D	$m	(0.0)	(0.6)	(2.7)	(2.0)
General & Admin	$m	(2.1)	(0.8)	(1.0)	(1.0)
Other	$m	0.0	0.1	0.0	0.0
EBITDA	**$m**	**(2.1)**	**(1.3)**	**(3.6)**	**(3.0)**
D&A	$m	-	-	-	-
EBIT	**$m**	**(2.1)**	**(1.3)**	**(3.6)**	**(3.0)**
Interest	$m	-	-	-	-
Non-operating income	$m	-	-	-	-
Pre-tax Profit	**$m**	**(2.1)**	**(1.3)**	**(3.6)**	**(3.0)**
Tax	$m	-	-	-	-
Minorities	$m	-	-	-	-
Underlying NPAT	**$m**	**(2.1)**	**(1.3)**	**(3.6)**	**(3.0)**

BALANCE SHEET (A$)		FY21	FY22E	FY23E	FY24E
Cash	$m	6.5	5.0	11.4	8.4
Receivables	$m	0.1	0.0	0.0	0.0
Inventory	$m	-	-	-	-
PPE	$m	-	-	-	-
Other	$m	0.1	0.1	0.1	0.1
Total Assets	**$m**	**6.6**	**5.1**	**11.5**	**8.5**
Creditors	$m	0.2	0.1	0.1	0.1
Borrowings	$m	-	-	-	-
Other	$m	0.0	0.0	0.0	0.0
Total Liabilities	**$m**	**0.2**	**0.1**	**0.1**	**0.1**
Shareholder's equity	**$m**	**6.4**	**5.0**	**11.4**	**8.4**

CASH FLOW (A$)		FY21	FY22E	FY23E	FY24E
Receipts from customers	$m	-	-	-	-
Payments to suppliers and employees	$m	(0.9)	(1.5)	(3.6)	(3.0)
R&D rebate	$m	-	-	-	-
Milestones	$m	-	-	-	-
Interest	$m	-	-	-	-
Tax	$m	-	-	-	-
Other	$m	0.1	-	-	-
Operating cash flow	**$m**	**(0.9)**	**(1.5)**	**(3.6)**	**(3.0)**
Capex	$m	-	-	-	-
Acquisitions	$m	-	-	-	-
Other	$m	-	-	-	-
Investing cash flow	**$m**	**-**	**-**	**-**	**-**
Borrowings	$m	0.0	-	-	-
Equity	$m	7.3	-	10.0	-
Dividend	$m	-	-	-	-
Financing cash flow	**$m**	**7.3**	**-**	**10.0**	**-**
Change in Cash / FX	$m	6.4	(1.5)	6.4	(3.0)
Year end cash	**$m**	**6.5**	**5.0**	**11.4**	**8.4**

Investment Thesis

The investment thesis for ILA is built around its drug repurposing strategy. Its strategy offers reduced time, risk and cost. Its first target, fenretinide in dengue fever, highlights the advantages of its strategy.

Repurposed drugs offer:

1. Lower risk: ILA.AX is preparing for Phase 2a trial. According to the National Institutes of Health (NIH), 80 to 90% of research projects fail before they reach clinical trials. This risk has been obviated for fenretinide. At the clinical stage, a first-in-human drug still faces significant efficacy and safety risks. Fenretinide offers data from 45+ clinical trials that support its safety in cancer and other nonviral diseases. Safety accounts for some 30-45% of clinical trial failures. As of yet, there are no clinical data to indicate its efficacy in viral illnesses. However, preclinical studies present a different mechanism of action in viral illnesses and the early support of the drug's efficacy.
2. Less time & lower costs: ILA.AX's repurposing strategy also offers advantages from timeline and development costs perspectives. In contrast to the 10-15years of development and US$1-2bn cost for a new drug[1], repurposing an existing drug and mitigating the safety risk, can save up to 5-7 years in average drug development time[2,3]. From a funding position, there is an average investment of US$300m[4].
3. Review of drug approvals demonstrates that drugs targeting infectious diseases carry a higher probability of approval. The average for all conditions is ~8% which is in contrast to ~13% for infectious diseases[5].

ILA's fenretinide offers additional advantages:

4. Preclinical studies support ISLA-101's mechanism of action in a number of related viruses including Yellow fever, West Nile and Japanese encephalitis and Chikungunya. ILA's strategy for dengue can be leveraged in these diseases, offering the same advantages; faster timelines and cost efficiencies.
5. The use of ISLA-101 in new indications has allowed for new patent filings that should offer market protection to 2034.
6. From a competitive perspective, there are no approved treatments for its first target, dengue fever. Dengvaxia®, a preventative vaccine, carries a number of serious adverse effects that have significantly restricted its use. Noting the clinical need and potential commercial reward see a number of treatment and preventative candidate therapies in development.
7. The wide geographic and populous area endemic to dengue fever offers large markets – acknowledging the socioeconomic factors present a trade-off of price and market uptake. Environmental factors are contributing to an expansion of dengue fever prevalent areas. Encroachment into developed countries may bring change to the current market dynamics. Outbreaks of Zika Virus in the southern US were recorded in 2018/19. In 2022, deaths from the Japanese Encephalitis Virus outbreak occurred in Australia in areas not previously associated with the disease.
8. The credibility of ILA's approach is further supported by a retinue of noteworthy partners, US National Cancer Institute (NCI) and the US Army and Camargo Pharmaceutical Services. The ILA Board offers a depth of scientific and commercial expertise.

Potential Milestones

H1 FY2023

- File Investigational New Drug (IND), open IND
- Enrol first subject in Phase 2a PEACH trial

H2 FY2023

- Topline results from PEACH trial
- End of Phase 2 meeting with FDA

Repurposing anti-viral drugs → lower risk & shorter timeframes

New beginnings

ILA is developing its drug, ISLA-101, for the treatment and/or prevention of mosquito borne viruses. Dengue fever is the first target. ISLA-101 is repurposed fenretinide, (*N*-(4-hydroxyphenyl retinamide). Fenretinide was initially developed for treating cancer. However clinical trials in a number of cancers and other diseases failed to demonstrate efficacy. Its potential as an anti-viral drug was discovered by high throughput screening (HTS) of a library of small molecules by Monash University. Further studies by Monash have shown activity against all four strains of dengue virus as well as other flaviviruses such as Zika virus, West Nile virus and Yellow Fever virus. Activity in the Chikungunya virus has also been demonstrated.

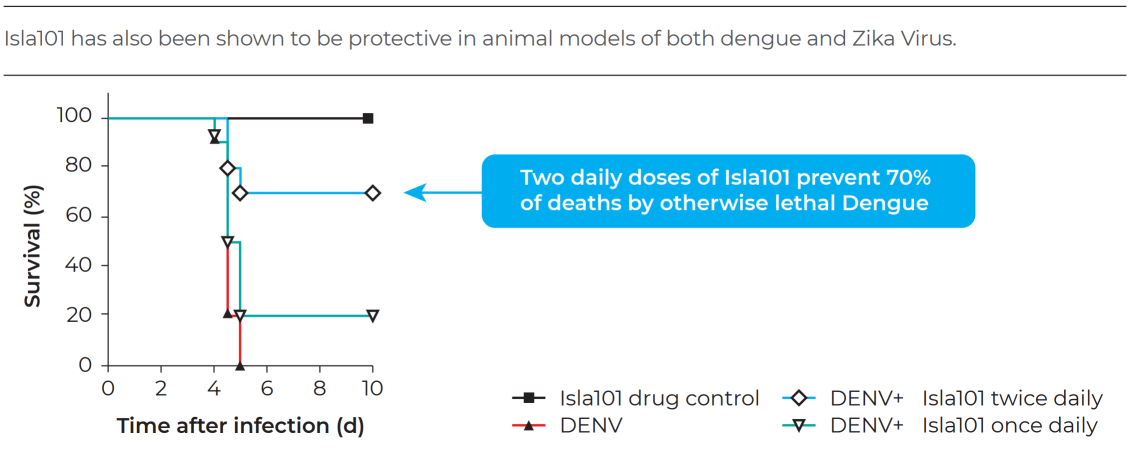
Advantages of repurposed drugs

As a repurposed drug, ISLA-101, offers more data than novel drugs at the same stage. The data form two tranches: the first tranche is the clinical trials conducted in cancer and other diseases with the second tranche of data from pre-clinical work undertaken by Monash University and ILA in viral illnesses. Fenretinide has been examined in over 45 trials in diseases including treatment and prevention of a number of cancers[6,7], macular degeneration[8] and Stargardt disease[9]. A study of fenretinide in children with neuroblastoma[10] reported reversible minimal adverse reactions (*e.g.*, rash, nausea, elevated transaminase levels) in high dosing levels. Long-term safety data are provided through a five-year Phase 3 clinical trial to investigate fenretinide in the prevention of recurrent breast cancer[11].

The Phase 1 and 2 trials, which have enrolled thousands of patients, reported adverse effects which were both minimal and reversible. The trials bring additional confidence. The data to support the undertaking of these trials have been reviewed and approved by several international regulators. The data can form part of ILA's regulatory submissions.

In terms of viral illnesses, data from in-vitro, in-vivo animal and human cellular models of dengue, have shown ISLA-101 activity against all four strains of dengue virus as well as other flaviviruses such as Zika virus, and West Nile virus. ILA has also completed a number of confirmatory studies on Yellow fever, however, the data has not been published to date. Studies on the Chikungunya virus were also supportive. In dengue fever and Zika animal models, ISLA-101 was shown to be protective. In addition, increasing concentrations of ISLA-101 prevented death in otherwise lethal dengue fever infections. Studies from Monash University and Harvard University also demonstrated protective activity in animal models of dengue infection and Zika infection.

Figure 1 – Animal model data support the effect in dengue and Zika virus



Source: Johanna E. Fraser et al. (2014)[12]

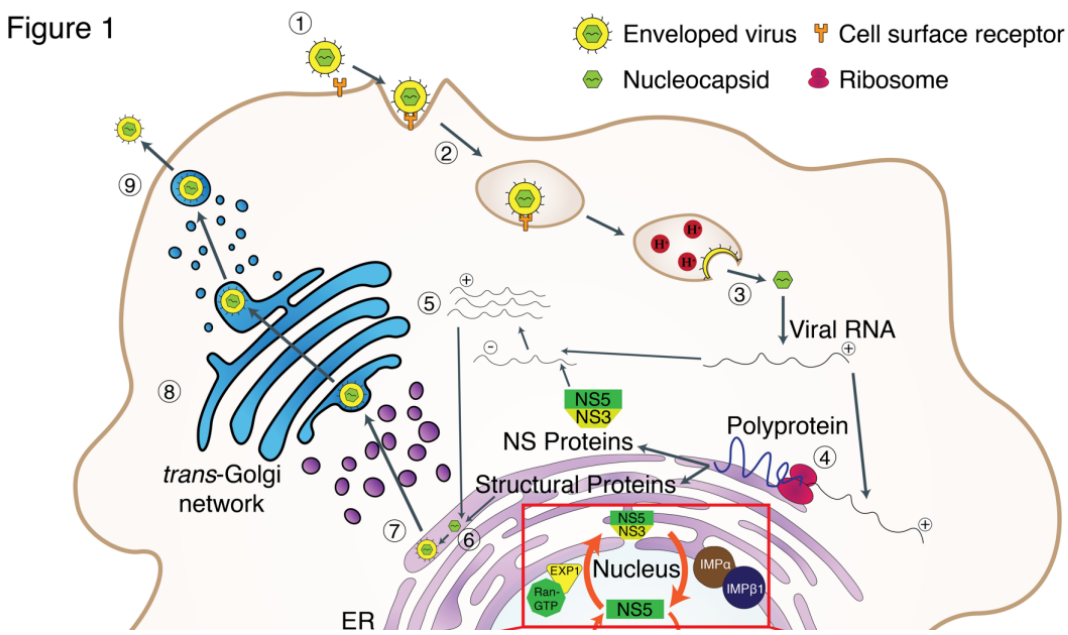
Monash University has filed a portfolio of patents relating to fenretinide for both the treatment and prevention of infections from these viruses. The intellectual property was subsequently licensed to US-based Isla Pharmaceuticals (ISLA US). ISLA US was acquired by Island Pharmaceuticals (ILA) as part of its Initial Public Offering (IPO) in 2021. ILA is

the licensee to the rights of the underlying technology which have issued Australian, US and Brazilian patents. Further patent applications are pending in these countries, in Singapore and other countries where mosquito borne diseases are prevalent.

Method of Action (MOA)

Viruses cannot replicate on their own. The dengue fever virus genome is a single strand of RNA. In common with most RNA viruses, it must penetrate and enter the host cell's cytoplasm for replication. There, it utilises the host cell's own 'machinery and metabolism' to produce multiple copies of itself which are then released to go on to infect other host cells.

Figure 2 – Mechanism of Action



Source: Jans & Martin (2018)[13], Carocci et al. (2015)[14], Pitts et al. (2017) [15]

Studies have demonstrated ISLA-101 prevents the virus from utilising the host cell's replication mechanisms through binding of the NS5 viral protein. Indirect evidence of ISLA-101 antiviral activity has been shown through a significant reduction in the steady-state abundance of the dengue viral genomic RNA.

Clinical Trial Program

Head Start - Straight to Phase 2

A clinical trial program usually comprises three stages; Phase 1 to investigate the safety and confirm dosing, Phase 2 for ongoing safety monitoring and first signs of efficacy. The larger Phase 3 trial aims to confirm both safety and efficacy. Preclinical studies and some 45 clinical trials of fenretinide in cancer and other diseases bring a wealth of published data. As these earlier trials reported strong safety data in humans, ILA is not required to undertake a Phase 1 clinical trial. It will initiate its program with a Phase 2a trial.

The design of ILA's clinical program has a number of novel features, offering further advantages in terms of reducing time, cost and risk. The data include a previously approved Investigational New Drug (IND) application, which will be used for ILA's Phase 2a trial. In addition, ILA has been granted access to data that was donated to the US National Cancer Institute by Johnson and Johnson (J&J) when it ceased its cancer development program of fenretinide.

Phase 2a trial

ILA plans to undertake its Phase 2a Prophylactic Examination of an Antiviral in a dengue CHallenge model, (PEACH) trial in FY23. It is a randomized, double-blind, placebo-controlled trial to assess ISLA-101 in a prophylactic or preventative role in dengue infection. The trial will entail up to 16 18-45 year old healthy subjects being infected with an attenuated (weakened) dengue virus. The patients will comprise four cohorts to examine different dosing levels. Within each cohort, three participants will receive ISLA-101 while one candidate will be dosed with a placebo drug. Treatment of oral ISLA-101 will be twice daily over 23 days with monitoring by regular blood tests extending to Day 90. The primary endpoint will assess the prophylactic effect of ISLA-101 on fever, clinical symptoms and laboratory markers of viremia. Secondary endpoints will include safety and characterise the clinical, immunologic and virologic responses following ISLA-101 after the dengue challenge. All intellectual property developed through the trial process will belong to ILA.

Well credentialled Phase 2 partners bring benefits

Randomised placebo-controlled clinical trials usually comprise diagnosed patients who are assigned to either a treatment group to receive the investigational drug or to a placebo group where the 'therapy' has no clinical effect. Clinical trials for preventative therapies such as seasonal flu are administered to healthy individuals. The trial candidates, both treated and placebo, are usually monitored for a set time period to see if the targeted disease naturally develops within the cohort. Assessment of the drug's efficacy is determined by the percent reduction in the frequency of the illness within the active drug cohort versus that of the 'placebo' cohort.

Clinical trials for preventative therapies for infective diseases such as dengue fever present challenges. The regions in which the virus is prevalent generally lack the facilities to conduct well-controlled trials. In the areas with appropriate clinical facilities, the incidence of the diseases is generally relatively low or effectively non-existent, thereby reducing the probability of contracting the disease. In addition, for dengue fever there is the possibility of a haemorrhagic fever upon second infection, potentially presenting confounding co-pathologies.

Challenge trials have been developed to answer these hurdles. Participants are intentionally exposed to an attenuated strain of the disease organism while under close monitoring of appropriate health facilities. The deliberate exposure to disease pathogens in challenge trials for COVID vaccine programs led to criticism in the UK and other countries. In MST's view, the design of ILA's challenge trial and it's the pedigree of its partnering organisations bring a number of advantages and will answer possible criticism.

i) US Army and SUNY Upstate Medical University

One of ILA's key partners for the Phase 2a trial is the US Army. It presents with the highest of credentials. In 2015, the US Army Medical Research and Materiel Command (USAMRMC) created its Dengue Human Infection Model (DHIM) in partnership with US State University New York (SUNY) Upstate Medical University. The US Army's experience spans some 45 exposure cycles with volunteers dating back to 1943. The partnership brings a wealth of experience and in MST's view, should de-risk the potential of any adverse opinion regarding challenge trials.

ILA US has also entered into a Cooperative Research and Development Agreement (CRADA) with the US Army Medical Materiel Development Activity (USAMMDA), a subordinate laboratory of the USAMRMC. USAMMDA is responsible for the development of new therapies and medical support equipment to 'ensure provision of the highest quality medical care to the Department of Defence (DOD) and maximize survival of medical casualties on the battlefield'. Many US troops serve in dengue fever infested regions. Under the CRADA, ILA gains access to the attenuated dengue virus and supporting data. SUNY will conduct the trial.

The DHIM sees young, healthy participants deliberately exposed to the dengue virus. The candidates are monitored and assessed to determine the safety and efficacy of the treatment in preventing dengue fever. The trials are conducted within the framework of FDA regulations to minimise risk and ensure well-informed consent. To date, no significant issues have emerged.

Under the CRADA agreement, ILA has been permitted to access data from a number of previous dengue fever trial subjects. Data from trial participants of these earlier trials will form part of the PEACH trial submission for its control arm. The ability to include the existing data will reduce the total number of subjects for the trial. The data include the USAMMDA's Investigational New Drug (IND) filing with the FDA. The agreement offers cost and time savings. The Phase 1 data from a challenge study conducted by the Walter Reed and SUNY Upstate forms the basis of the control data for the PEACH study. The trial endpoints will include fever, viremia, clinical symptoms and other markers.

ii) ICON Government and Public Health Solutions (ICON GPHS)

ILA has also undertaken a Services Agreement with ICON Government and Public Health Solutions (ICON GPHS) Clinical Research Organisation to leverage its DHIM clinical trials expertise. It will manage the data and Chemistry Manufacturing and Controls (CMC). ICON presents high credentials through its association with multiple agencies in the US Government, multinational public health organizations, and global Non-Government Organisations (NGOs). ICON is a preferred Biomedical Advanced Research and Development Authority (BARDA) partner. The group conducted the Pfizer/BioNTech COVID-19 vaccine Phase 3 trial of 44,000 participants.

iii) Camargo Pharmaceutical Services LLC

ILA has entered into an agreement under which Camargo has agreed to develop the regulatory strategy and program. It included nonclinical, clinical, clinical pharmacology and biopharmaceutics data for the Pre-Investigational New Drug (IND) meeting with the FDA.

iv) Sofgen Pharmaceuticals

ILA has appointed Sofgen Pharmaceuticals for the manufacture of ISLA-101 clinical material for the upcoming Phase 2a PEACH clinical trial in dengue infected subjects. Sofgen, a softgel manufacturer in Florida is owned by Procaps Group, S.A. (NASDAQ: PROC). ILA plans to submit an Investigational New Drug Application (IND) to the FDA in October 2022 with the trial to commence in November 2022.

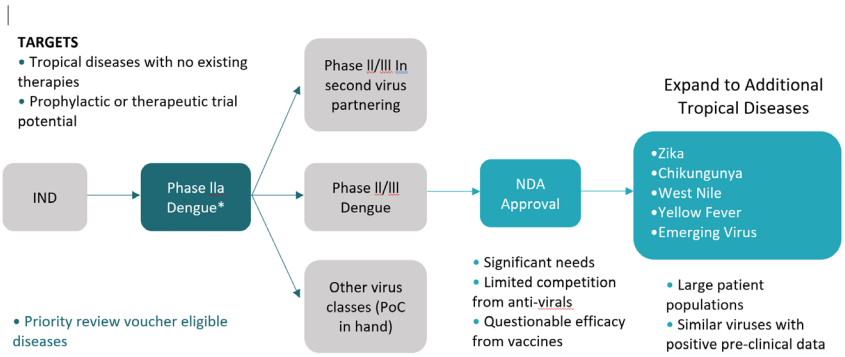
v) Olon Pharmaceuticals

Olon Pharmaceuticals brings expertise in the supply of Active Pharmaceutical Ingredients (API) for retinoids, antineoplastic, cardiovascular and metabolic diseases compounds, antibiotics and antivirals. It presents a fully cGMP-compliant environment following ICH Q7 compliance.

In summary, ILA management has leveraged the expertise and experience of groups who have in-depth experience in dengue fever. The DHIM brings a highly credentialled partner and offers significant time and cost savings. There are varying commercial arrangements. ILA will meet the US Defence's costs of the dengue virus and testing for the trial. There is no cost for the NCI and CRADA data. Monash University has rights to the standard industry royalty streams from revenues that may eventuate, which MST estimates to be in the low single digits. The agreements with ICON and Camargo are at the usual commercial terms.

Ongoing Trial Program

Figure 3 – Planned Clinical Development Program



Source: Island Pharmaceuticals Prospectus 2021

Expedited path forward?

ILA has undertaken a pre-IND meeting with the FDA whereby the FDA agreed with ILA's proposal to engage with the DHIM in a Phase II clinical plan. An IND application to commence a Phase 2a trial will be filed with the FDA.

The results of the Phase 2a are planned for H2FY23. The results will shape the ongoing trial program. Usually, a Phase 2b trial would follow which would include a larger cohort to confirm the trends seen in Phase 2a. As discussed, earlier clinical trials mitigate much of the safety risk. Clear signs of efficacy in the Phase 2a trial may support progression directly to a Phase 3 trial. ISLA-101 may offer both preventative and therapeutic roles. The planned Phase 2a trial is targeting prevention. A following program to confirm a treatment role is planned.

Commercial opportunity

Multiple targets

ILA's first target is dengue fever. The virus belongs to the family of flavivirus that is found primarily in ticks and mosquitoes. The Aedes aegypti mosquito acts as a vector or carrier, transmitting the disease between people or from animals to humans. Flavivirus illnesses can present across a wide spectrum - from mild febrile episodes to severe and life-threatening diseases with haemorrhagic fever, shock syndrome, encephalitis, paralysis, congenital defects, hepatitis and hepatic failure and death.

There is no approved therapy, only symptomatic relief and support as indicated. There are four serotypes DENV-1, DENV-2, DENV-3 and DENV-4. Data to date supports that ISLA-101 is effective against all dengue serotypes. It is also believed to offer a role in other flaviviruses including Yellow fever virus, West Nile fever virus, Japanese encephalitis and Zika. It also potentially offers a role in other viral infections including Chikungunya and Hepatitis C infection.

Dengue – a large growing market

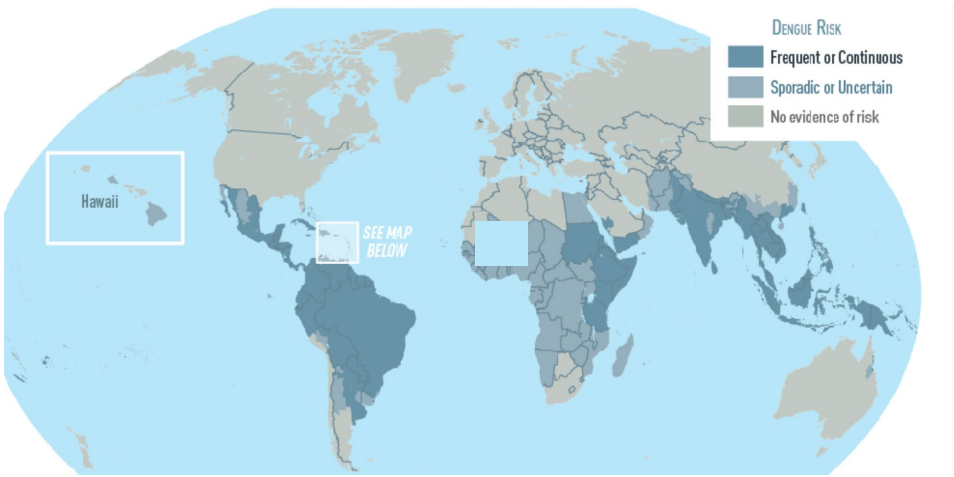
It is difficult to determine the true incidence of dengue fever. The vast majority of cases are asymptomatic or mild and self-managed, and hence the actual numbers are under-reported. Many cases are also misdiagnosed as other febrile illnesses. One modelling estimate indicates 390 million dengue virus infections per year, of which 96 million show

clinical symptoms[13]. Another study on the prevalence of dengue estimates that 3.9 billion people are at risk of infection with dengue viruses with an estimated 40,000 deaths every year[16].

While the actual number is difficult to gauge, there is evidence of a significant increase in recent decades. Before 1970, only nine countries had experienced severe dengue epidemics. The disease is now endemic in more than 100 countries in the World Health Organisation (WHO) regions of Africa, the Americas, the Eastern Mediterranean, South-East Asia and the Western Pacific. Pacific regions are the most seriously affected, with Asia representing ~70% of the global burden of disease. In the US, the Aedes aegypti mosquito which is responsible for the spread of dengue is found in most areas of the southern and eastern regions of the US and in Puerto Rico, the US Virgin Islands, Samoa and Guam.

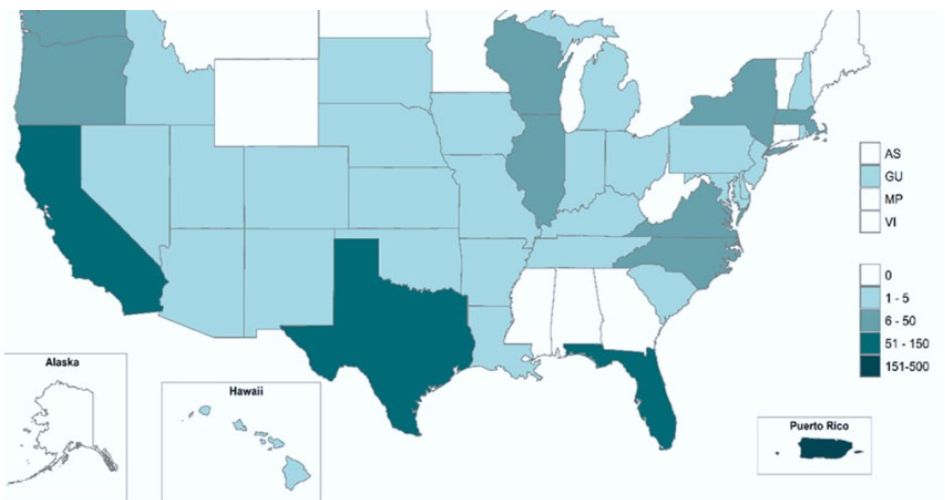
Local transmission of the virus was reported for the first time in France and Croatia in 2010[17]. The largest number of dengue cases to be reported globally was in 2019. All recognised 'dengue' regions were affected, with dengue transmission recorded in Afghanistan for the first time. The American region alone reported 3.1 million cases, with more than 25,000 classified as severe. The increasing dengue burden is driven by several factors including increased urbanization, world population growth, increased international trade and travel, and changes in human behaviour that increase mosquito breeding sites (e.g., discarded tires and plastic containers). Vector control through mosquito eradication programs have been largely unsuccessful at reducing transmission.

Figure 4 – Global incidence of Dengue Fever



Source: The Centers for Disease Control and Prevention (CDC)

Figure 5 – US Incidence of Dengue Fever



Source: The Centers for Disease Control and Prevention (CDC)

Potential ISLA-101 Markets – large and in need

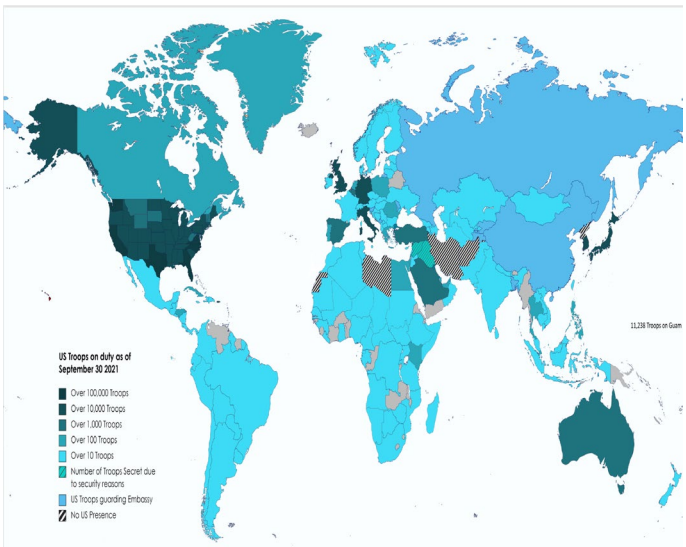
There are a number of addressable markets. ILA plans to initially target;

i) Country governments and local municipalities within the tropical dengue fever zones
ii) Insurance companies: local health and travel insurance
iii) Travellers: Both business and holiday/relocation
iv) Government and Non-Government: armed forces entities,
v) Not-for-Profit Organisations such as Bill Gates Foundation, NGO workers, WHO and other

The US army represents a significant opportunity. The military of the United States is deployed in most countries around the world, with between 150,000 to 200,000 of its active-duty personnel stationed outside the United States. The adverse impact of dengue virus infections on US military operations has been recognised since the Spanish-American War. It continues to erode mission capabilities and result in lost duty days. A recent study tested pre- and post-deployment serum samples of 1,000 U.S. military personnel from a single deployment to a dengue-endemic region. The results represented an infection incidence of 1.5%. The data identified that deploying a military population with a relatively high background rate of dengue seropositivity carried the risk of worsening clinical attack rates with each deployment[18,19].

The priority of the US army to protect troops stationed in dengue fever areas is perhaps illustrated by its DHIM related clinical trial testing facilities. In MST's view, it signals a commitment to finding an answer to what is deemed a significant problem.

Figure 6 – Map of US Armed Forces Deployment



Source: Wikipedia

Dengue Fever offers an additional advantage

As a tropical disease for which there is no treatment, dengue fever is an FDA-designated Neglected Tropical Disease. As such if fenretinide is first approved in dengue fever by the FDA and it receives a Priority Review, ILA will qualify for a Priority Review Voucher (PRV). PRVs are awarded to pharmaceutical companies for the development and approval of drugs in nominated diseases. The voucher can be used for future drugs that do not meet the qualifying criteria. The voucher can be sold and commonly traded at prices of ~US$100m. The PRV brings an expedited review of six months by the FDA rather than the customary PDUFA date of ten months.

Potential Competition

The unmet need attracts research from both small biotechs to large pharma with some 20 companies developing therapies for dengue fever. The approaches include both vaccines and small molecule drugs.

Current Therapies

Symptomatic relief

Management of dengue fever is based on the management of the presenting symptoms. The lack of approved drugs does not reflect a lack of interest. The clinicatrials.gov website notes some 224 studies on dengue fever. ILA plans to develop ISLA-101 for both treatment and preventative applications.

Vaccination

In other diseases, vaccines have proven to be effective therapies for managing widespread infectious diseases such Yellow fever. There is one approved preventative Dengue vaccine. Sanofi Pasteur's Dengvaxia®, first approved in 2015, has been approved by regulatory authorities in ~20 countries. However, despite the clear need, it hasn't seen wide uptake.

For the greatest safety and efficacy, tetravalent vaccines are designed to stimulate balanced protective immunity to all four serotypes, DENV-1, DENV-2, DENV-3, and DENV-4. However, this has been difficult to achieve. Dengvaxia® demonstrated that unbalanced replication of one vaccine component over others can lead to low efficacy and vaccine-enhanced severe disease. Following its approval, it was discovered that the efficacy of the vaccine varied by dengue serotype, age at vaccination and serostatus prior to vaccination. While high efficacy (up to 93.7%) was reported in individuals who were seropositive prior to vaccination, a study has shown that the vaccine increases the risk of developing severe illness among seronegative recipients. Therefore, the World Health Organization (WHO) has recommended a 'pre-vaccination screening strategy' for Dengvaxia®, in which only seropositive individuals are to be vaccinated.

The adverse effects have seen the approval of Dengvaxia® restricted to use for 9-45-year people of age (9-18 years of age in the United States), who have had at least one documented dengue virus infection previously. Dengvaxia® is registered with the Therapeutic Goods Administration (TGA) in Australia but is not currently marketed in Australia. It is available only via the Special Access Scheme (SAS), on a case-by-case basis, through specific application to the TGA. Not surprisingly, sales of Dengvaxia have been muted, with €55m in 2016 falling to €3 million in 2017.

Two other live-attenuated tetravalent DENV vaccines are in clinical development, TV003 by the National Institute of Allergy and Infectious Diseases and TAK-003 by Takeda Pharmaceuticals (TAK). Takeda Pharmaceuticals' Phase 3 trial recruited ~20,000 with some 6 years of clinical monitoring. TAK-003 is currently undergoing regulatory review for the prevention of dengue disease in children and adults in the European Union and select dengue-endemic countries.

The question remains as to whether these new vaccines will provide protection to individuals who have not been exposed to the dengue fever virus without the risk of sensitizing them to symptomatic or severe disease from subsequent natural dengue infections. ILA-101 while targeting a preventative indication presents with a different mechanism of action. It does not aim to 'prime' the immune system, but rather prevents the virus from engaging with the host cells' DNA to replicate. Studies to date have not seen engagement with the immune system.

New Novel Therapies

Figure 7 – List of New Novel Therapies in Development

Drug/Research approach	Company	Phase
anti-RNA virus therapeutics	Kino Pharma	Discovery
viral budding inhibitors	Biotron Ltd	Discovery
ABX220	Abivax	Discovery
Infectious diseases therapeutics program	Plex Pharmaceuticals	Preclinical
CDX DENV	Codagenix	Preclinical
AT-752	Atea Pharmaceuticals	Phase I
PepGNP-Dengue	Emergex Vaccines	Phase I
VIS513	Visterra	Phase I
JNJ-64281802	Janssen	Phase II
TV003	Merck & Co	Phase III
V 503	Takeda	Phase III
TAK-003	Takeda	Preregistration
AV-1	AbViro	Phase I
Dengushield	Serum Institute of India	Phase I

Source: MST Financial

Some of the more advanced trials include;

- Emergex Vaccines Holding Limited has completed its Phase 1 naNO-Dengue vaccine trial, with results expected later this year.

- Takeda Pharmaceutical Company Limited continues its trial program for its dengue vaccine candidate (TAK-003). It demonstrated continued protection against dengue illness and hospitalization, regardless of an individual's previous dengue exposure. There have been no important safety risks identified three years after vaccination in the ongoing pivotal Phase 3 clinical trial namely - Tetravalent Immunization against Dengue Efficacy Study (TIDES). TIDES has enrolled more than 20,000 healthy children and adolescents ages four to 16 years in dengue-endemic countries in Latin America and Asia.

- Atea Pharmaceuticals, Inc. has initiated Phase 2 Dengue Fever Study and Human Challenge Trial (DEFEND-2; Dengue Fever END). The trial will enrol up to 60 patients with the primary objective of the study being to evaluate antiviral activity. In addition to the DEFEND-2 study, Atea has initiated a dengue human challenge trial. This trial, which is being conducted exclusively in the United States, is designed to evaluate the effect of AT-752 in healthy volunteers who are challenged with an attenuated DENV-1 virus strain after receiving AT-752 or a placebo. Results from the human challenge trial and initial results from the DEFEND-2 study are expected in H2CY22.

- Johnson & Johnson (NYSE: JNJ) Janssen's JNJ-64281802 is undertaking a Phase 2a clinical trial. The results of its Phase 1, a first-in-human clinical study showed the antiviral to be safe and well-tolerated in humans. Its randomised double-blinded placebo-controlled Phase 2a trial plans to enrol 1850 participants. Its primary purpose is to prevent Dengue Fever infection. Its planned primary start date is August 2022 with a planned completion date of May 2025. The primary outcome measure will be the number of participants with laboratory-confirmed Dengue Fever infection.

Potential Commercial Performance

As discussed, ISLA-101 presents with potential application as both a therapeutic and prophylactic. To date, there is no efficacy data, thereby creating challenges with estimating the potential pricing and the potential number of 'patients'. ILA's planned market includes armed forces, local populations and travellers to endemic areas. Acceptable pricing points are likely to vary between the different markets.

As discussed, despite the extensive research, there is no specific treatment available for any flavivirus infections. To explore the market potential of ISLA-101, MST's review includes a number of therapies in related markets and the fundamentals of the total flavivirus market. Within the flavivirus family, there are five approved therapies for Yellow Fever, Japanese encephalitis, dengue, tick-borne encephalitis virus and Kyasanur Forest Disease Virus.

Japanese Encephalitis (JE)

Valneva Austria GmbH (Valneva SE (VLA.PA; NASDAQ: VALN)/Interquel's vaccine to protect travellers against Japanese Encephalitis (JE) is licensed in > 30 countries worldwide, including the US. IXIARO is available on the market in Europe with the approval for all people aged 3 years and above. Its use in the EU has recently been extended to include children aged 2 months and above who travel to, or live in, endemic areas. Valneva SE reported revenues of €48.5 million in 2020 and €45.1m in 2021.

In March 2022, Valneva also reported positive results from its Phase 3 prophylactic vaccine for Chikungunya disease. Valneva's Chikungunya vaccine program was awarded Breakthrough Therapy Designation by the FDA in July 2021. This followed the FDA Fast Track designation and the European Medicines Agency (EMA)'s PRIME designations, which the Company received in December 2018 and in October 2020, respectively. The sponsor of the first Chikungunya vaccine approved in the U.S. will be eligible to receive a PRV. As discussed, as a designated 'neglected tropical disease' if ILA is the first approved in dengue fever it will be eligible for a PRV, carrying a value of ~US$100m.

Tick-borne encephalitis (TBE) vaccine

Tick is endemic to focal areas in Europe and Asia, extending from eastern France to northern Japan and from northern Russia to Albania. In Europe, there are between 8,000-15,000 cases of the central nervous system disease reported each year. It is also found in the north-east US. Pfizer Inc's (NYSE: PFE) TICOVAC™ (tick-borne encephalitis (TBE) vaccine) was approved by the FDA in August 2021 to prevent TBE in individuals 1 year of age and older. The vaccine has been approved for many years in endemic areas ex-US. In CY20, PFE generated US$27m in sales. The approval for the US market looks to add to CY20 sales revenues.

Kyasanur Forest disease virus (KFDV)

KFDV is a tick-borne flavivirus endemic in India which is known to cause severe haemorrhagic and encephalitic disease in humans. In recent years, KFDV has spread beyond its original endemic zone raising public health concerns. Currently, there is no treatment available for KFDV but a vaccine with limited efficacy is used in India. Sales are not material.

In MST's view, ISLA-101 promises a significantly wider market than the vaccines approved to date. The therapies approved to date are preventative vaccines, often requiring one dose per lifetime. ISLA-101 is being trialled at two doses per day as a preventative therapy. Its initial markets will focus on international travellers and workers, and those overseas who are posting for defence forces are likely to attract a pricing premium to the current prophylactic vaccines.

Malaria market provides potential insight

The malaria market may provide some insight into the potential impact of effective therapy in a prevalent disease. The World Health Organization in conjunction with the World Bank, UNICEF and UNDP initiated the 'Roll Back Malaria' program in 1998 to stimulate increased interest and financial investment in malaria control. The initiative contributed to the development of highly effective malaria control tools such as long-lasting insecticide-treated nets (LLINs), rapid diagnostic tests, and artemisinin-based combination therapies (ACTs).

Figure 8 – Map of Malaria Impacted Regions over Time

Source: Roser & Ritchie (2019)[20]

The impact of effective therapies is clearly illustrated through the reduction of malaria-infected areas over time since the introduction of effective therapies. The map presents stark contrasts to the dengue fever geographic spread. By way of describing the malaria market dynamics, MST notes that in 2021, Novartis recorded 1 billion courses of antimalarial treatment from 1999. In terms of Malaria Treatment Market Size, Insight Partners forecast US$ 1.5bn revenues in 2019 will grow to US$ 2.1bn by 2027.

Patent Portfolio

Monash University on confirmation of fenretinide activity against arboviruses, established a patent portfolio based on the Method of Viral Inhibition. The patent family is derived from PCT/AU2014/050017, filed in the name of Monash University and claims priority from Australian provisional patent application no 2013901525 filed on 16 April 2013. The invention related to methods of treating and preventing viral infections caused by flaviviruses, such as dengue virus, Yellow fever virus, West Nile virus and Japanese encephalitis virus or infections caused by Chikungunya virus. The patents cover both treatment and prevention of flavivirus infection or infection with the Chikungunya virus. The application describes various retinoic acid analogues, pharmaceutical ingredients, dosage forms, and dosing schedules.

Monash University and Deed of Novation Monash University licensed the patent family to 60P Australia Pty Ltd (ACN 167 060 219). Subsequently, Isla, Monash University and 60P Australia Pty Ltd executed a Deed of Novation, Termination and Amendment such that Isla replaced 60P Australia Pty Ltd as the licensee.

Patent applications are pending in Australia, the United States, Canada, Brazil and Singapore. Patents have been granted in Australia, US and Brazil. A US patent for ISLA-101, entitled, “Method of Viral Inhibition” was issued on 18 May 2021 under US Patent No US 11,007,160 and has an expiration date of 16 April 2034.

Figure 9 – Patent Portfolio

Region	Official number	Status
Australia	2014253607	Granted
Australia	2019213440	Granted
Australia	2021205039	Pending
Brazil	BR 112015026243-0	Granted
Brazil	BR 12 2020 008439 1	Pending
Canada	2945825	Allowed
USA	11,007,160	Granted
USA	17/233,887	Pending
Singapore	10201708272S	Granted
Singapore	10202011533P	Pending

Source: Island Pharmaceuticals

Depth of Pipeline

As discussed, ILA is undertaking an extensive program to explore fenretinide as a repurposed drug in a number of mosquito borne viral diseases. It is also exploring alternative formulations of fenretinide, including long-acting oral and intravenous formulations for severe dengue infections.

ILA plans to utilise its novel drug development approach, repurposing small molecule drugs with known clinical histories in other anti-viral drugs. It will further its research collaborations with Monash Biomedical Discovery Institute University, Griffiths University and Compounds Australia. ILA aims to utilise these partnerships to identify new small molecules with potential active application in viral disease. Other libraries including international facilities will also be explored.

Potential Milestones

H1 FY2023

- File IND
- Institutional Review Board (IRB) approval
- IND opened
- Enrol first subject in PEACH trial
- Dose first subject in PEACH trial

H2 FY2023

- Complete PEACH trial
- Trial read out
- End of Phase 2 meeting with FDA
- Identify new lead molecules through research collaborations

Valuation, Risks, Sensitivities

In MST's view, the stage of ILA's drug development presents difficulty in employing valuation approaches such as Discounted Cash Flow (DCF) and earnings multiples. ILA is preparing for its Phase 2a trial to commence in H1FY23. The

ongoing trial program has not been confirmed. Strong results may support progression directly into the Phase 3 trial, bypassing the more traditional Phase 2b trial. As of yet, there is no data to guide key DCF inputs such as timelines and costs for the ongoing trial program, drug pricing, market penetration, licensing deal terms or other possible marketing arrangements. There are no approved Dengue Fever therapies (excepting Dengvaxia® vaccine) which would give some indication of potential commercial parameters.

MST's valuation is based on a comparison to ASX listed biotechs in Phase 2 /preparing for Phase 2 trial. In keeping with ILA.AX, the companies have been selected as they are Phase 2 ready or are in trial and have no efficacy data. (Noting ACW completed a Phase 2 trial which failed to meet its efficacy endpoints).

Figure 10 – ASX Listed Biotechs Currently in Phase 2/Preparing for Phase 2

Company	ASX Ticker	Market Cap ($m)	Current Phase
Adalta Ltd (1AD)	1AD	14.8	Completed Phase I and now looking to start Phase II
Regeneus Ltd	RGS	18	Completed Phase I and now looking to start Phase II
Immuron Ltd	IMC	20	Completed Phase I and now looking to start Phase II (Two human placebo controlled cli
Amplia Therapeutics Ltd	ATX	20.4	Completed Phase Phase I trial and received clearance for Phase 2 trial
Alterity Therapeutics Ltd	ATH	38.5	Alterity Therapeutics Doses First Patient in ATH434 Phase 2 Clinical Trial in
Dimerix Ltd	DXB	45	Just completed Phase II and beginning phase III
Biotron Ltd	BIT	50.5	Phase II study has begun
Cynata therapeutics	CYP	53	Completed Phase I and now looking to start Phase II
Noxopharm	NOX	73	Have drugs that are both phase 1 and phase 2
Bionomics	BNO	81	Beginning Phase II
Actinogen Medical Ltd	ACW	86	Actinogen announces designs for Phase 2 trials in Alzheimer's Disease and Depression
Recce Pharmaceuticals	RCE	142	The Phase I trial is evaluating the safety and pharmacokinetics of R327 in 7-10 healthy su per dose, across eight sequential dosing cohorts.

Source: ASX website, company websites

MST base valuation of $46m is calculated as the average of the market capitalisation of the cohort ranging from ~$15m to $86m. As the trial program progresses and safety and efficacy are confirmed, the valuation increases. Industry reviews have shown that safety and toxicity account for 30~45% of clinical trial failures[21]. In terms of the comparison to its peers in Phase 2 trials, ILA stands out in one key aspect. ILA offers a 'unique' position within the cohort from a safety perspective. The comparable companies offer safety data from their Phase 1 trials only (excepting ACW with Phase 2 data as well). As a repurposed drug, ILA-101 offers the very supportive safety data of 45 clinical trials, including Phase 2 and Phase 3 trials.

MST applies a weighting to reflect its safety profile.

1. Safety data

Figure 11 – Probability and Approval of Clinical Trials

All Diseases	Phase 1	Phase 2	Phase 3	NDA to Approval	Approval Rate from Phase 2
Overall Probability of Positive Trial	52%	29%	58%	91%	**15.1%**
Failure Rate	48%	71%	42%	9%	
Safety Risk Contribution to Trial Failure	100%	25%	17%		
Efficacy Risk Contribution to Trial Failure		75%	83%		
Safety Risk Impact		18%	7%		
Efficacy Risk Impact		53%	35%		
Overall Probability without Safety Risk Iimpact (Efficacy only)		47%	65%	91%	**27.5%**

Source: Clinical Development Succes Rates and Contributing Factors 2011-2020[22]

Research has shown that safety issues accounts for ~25% of Phase 2 trial failures and ~ 17% of Phase 3 failures. We adjust the probability of approval for ILA's phase 2 and 3 trials to reflect its extensive safety data set[22]. With the impact

of trial failure due to safety is eliminated, the probability of trial success in Phase 2 and 3 increase to 47% and 65% respctively. The overall success rate from Phase 2 rises from 15.1% to 27.5%.

2. Infectious Disease

Figure 12 – Probability and Approval of Clinical Trials involving Infections Diseases

Infectious Disease	Phase 1	Phase 2	Phase 3	NDA to Approval	Approval Rate from Phase 2
Overall Probability of Positive Trial	52%	29%	58%	91%	**15.1%**
Overall Probability of Infectious Diseases	58%	38%	64%	93%	**22.8%**

Source: Clinical Development Succes Rates and Contributing Factors 2011-2020[22]

Research has demonstrated that the probability of approval also varies according to the disease type. ILA.AX offers a further advantage. Data show that infectious diseases offer a higher rate of approval than the industry average. The review shows a number of more difficult targets such as cancer and neurological trials within the cohort in which data shows average approval rates from Phase 2 of 10.8% and 12.3% respectively. Again, ILA in targeting infectious diseases, offers a higher probability of approval, with a 23% probability of approval from Phase 2.

3. Tropical Disease Priority Review Voucher (PRV)

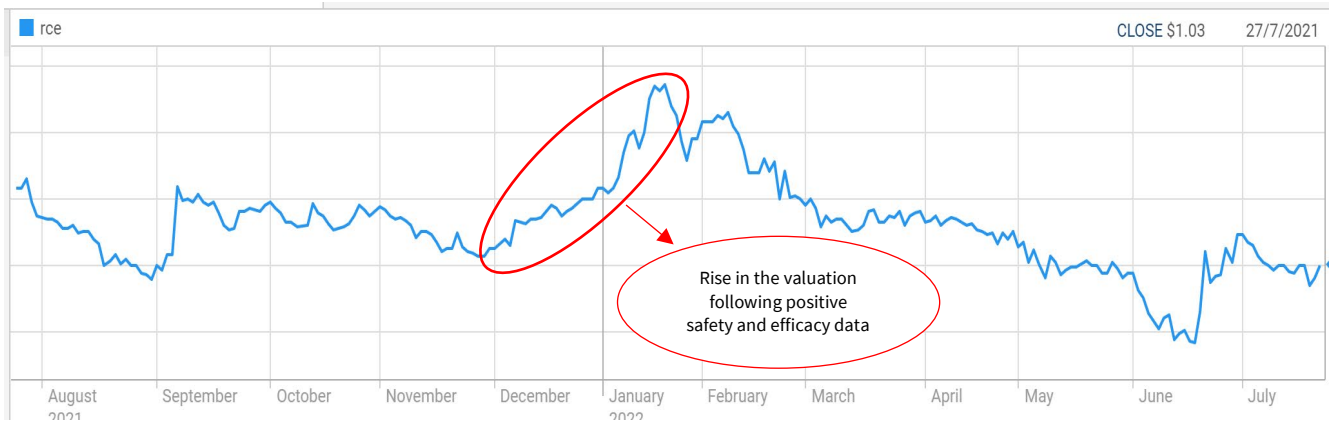
In the selection of Dengue Fever as the first target indication, ILA has opened the potential to be awarded a Priority Review Voucher (PRV). The program aims to encourage drug development in selected tropical diseases. The drug or biological product must be for the prevention or treatment of a "tropical disease", as per the FDA list and meet certain other criteria relating to the drug composition such as the sponsor company must not have submitted an application for marketing approval in other jurisdictions. To qualify, ILA must receive its first approval in the US. A PRV allows for a priority review by the FDA for marketing approval. PRVs can be sold, with the current price being ~US$100m.

Valuation

The average of the two adjusted probabilities of approval (27.5% and 22.8%) is ~25% which compares to 15% for all trial data from Phase 2. The higher probability is applied to the average market capitalisation of the Phase 2 cohort of A$46m which results in a valuation of $76m. In addition, ILA has the potential for a PRV. If we attribute the same probability of approval of 25%, it presents a value of US$25m (A$35) with a total valuation of A$112m. With a market capitalisation of A$13m in the current market dynamics, MST sees the valuation as a 12month forward target supported by positive Phase2a trial data. The trial will include efficacy data. In MST's view, if positive, the market will recognise the valuation potential. The valuation is subject to the upside/downside risks and sensitivities of drug development including clinical trial patient recruitment, timing and costs, regulatory approval and market entry, pricing, market penetration and sales, competitor drugs and potential royalties/licensing payments.

We note Recce Pharmaceuticals (RCE.AX) is developing anti-infective therapies. In December 2021, the company released first-hand observations of efficacy in its Phase1/2 'proof of concept' trial of its drug R237. R237 is being trialed as a topical broad-spectrum antibiotic for superficial burn wound infections. It reported positive safety and efficacy data. A review of its share market performance highlights the potential of clinical trial news to drive the share price. Over late 2021/early 2022 Phase 2a and Phase 1 trial data saw a significant uptick in the company's valuation. Full data is yet to be released.

Figure 13 – RCE Rise in Valuation following Positive Data



Source: ASX website

Board of Directors

Dr Paul MacLeman

Dr MacLeman is well known in the Australian healthcare/biotechnology sector. His 25 years plus experience across the life sciences sector includes both pharmaceutical development/manufacturing and the financial aspects of capital raising, technology commercialisation and sales & marketing globally. His roles include Chairman, Director as well as a senior executive in early-stage Venture Capital funded start-ups to ASX, NASDAQ, CSE listed entities and a number of NFP and government advisory groups and TSX listed companies.

His current responsibilities include Executive Chairman of Island Pharmaceuticals Inc, Chairman of AdAlta Limited (1AD:ASX), Chairman of SuperTrans Medical Limited and non-executive director of Upkara Asia Pacific Pty Ltd. Dr MacLeman chairs the Industry Review Committee for the Pharmaceutical Manufacturing National Training Package for the AISC.

Dr David Foster

Dr Foster is an Executive Director with 20+ years of experience in pharmaceutical, biotherapeutic and diagnostic companies. His extensive expertise in intellectual property includes IP counsel at Medarex, a mid-sized biotherapeutics company, acquired by Bristol-Myers Squibb. He is a Board member of bionorthTx, (a US regional life science trade association) and a number of private biotechnology companies.

Dr Anna Lavelle

Dr Lavelle has served for over 25 years in Non-Executive Director and Executive Director roles on the boards of not-for-profit, government and for-profit entities. Her experience is in healthcare delivery, technology development and government policy. Dr Lavelle is also serving on several boards including Medicines Australia Ltd, Independent Chair, Avatar Brokers Pty Ltd, Non-Executive Director Hemideina Pty Ltd, and Non-Executive Director Cyban Pty Ltd.

Dr David Brookes

Dr D Brookes is currently a member of ASX listed Factor Therapeutics Ltd (Chair), TALi Digital Ltd and Anatara Lifesciences Ltd with experience in the health and biotechnology industries for over 20 years. He was Chairman of Genomics Solutions company, RHS Ltd, which was acquired by PerkinElmer Inc (NYSE: PKI) in June 2018.

Mr Albert Hansen

Mr Hansen is currently President of KESA Partners, Inc. a family investment office focused on seed investing in life science-related startups. Mr. Hansen serves as President of one of KESA's portfolio companies, Clearlight Biotechnologies, Inc. He is a former Chairman and interim CEO of Questcor Pharmaceuticals, Inc (later acquired for US$5 billion), a former Chairman and interim CEO of Cedarburg Pharmaceuticals Inc. (acquired for US$40 million) and former Chairman of Molecular Medicine Corporation (acquired for US$24 million). Mr. Hansen has a B.A. from Princeton

University and an M.B.A. (with distinction) from the Wharton School, University of Pennsylvania. Mr. Hansen is a substantial shareholder of Island Pharmaceuticals.

Scientific Advisory Board

Dr Leigh Farrell

Leigh has over 30 years of experience in the biotechnology and pharmaceutical industry and is Head of Health Security Systems Australia, a Division of DMTC Ltd, is a non-executive director of Pro Medicus Ltd, Ena Respiratory Pty Ltd and Axelia Oncology ty Ltd, and is a member of the Walter and Eliza Hall Institute of Medical Research Board Commercialisation Committee and a member of the Independent Advisory Council of Medicines Australia.
Leigh's past appointments include: Senior Vice President, Commercial at Certara USA, Inc; Chairman & COO of d3 Medicine, LLC; Vice President of Business Development at Biota Pharmaceuticals Ltd, Research Manager Johnson & Johnson Research and CEO of Gene Shears Pty Ltd.

Professor Stephen Thomas, MD

Professor Stephen Thomas, MD has an international leadership role as Lead Principal Investigator for Pfizer/BioNTech global Phase III COVID-19 vaccine trial now being deployed globally. Prof. Thomas is a world-renowned virologist and vaccinologist and has authored numerous papers and articles on dengue fever, Zika and many other infectious diseases. He spent twenty years in the U.S. Army Medical Corps serving at the Walter Reed Army Institute of Research (WRAIR.) Chief, Division of Infectious Diseases, New York Upstate Medical University; Professor of Medicine, Professor of Microbiology & Immunology, and Infectious Diseases physician-scientist from the State University of New York (SUNY), Upstate Medical University; Chief, Division of Infectious Diseases and Director, Institute for Global Health and Translational Science (IGHTS.)

Dr Amy Patrick

Amy Patrick is a scientific consultant with deep expertise in antiviral drug discovery, development and viral resistance with broad knowledge of emerging virus epidemics and translational medicine. Her previous roles include Vice President, Research at Adamas Pharmaceuticals, Vice President, Biological Sciences at Genelabs Technologies, Head of the Antiviral Biology Therapeutic Area at Pfizer, Inc. and Research Scientist at Bristol-Myers Squibb Company. Dr. Patick has also served as President of the International Society of Antiviral Research. Dr. Patick was a postdoctoral fellow in immunology at the Mayo Clinic/Foundation in Rochester, MN and received her PhD in Medical Microbiology from the University of Wisconsin, Madison.

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