NEW ZEALAND DATA SHEET

1. PRODUCT NAME

Tafamidis Meglumine Te Arai 20 mg soft capsules

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each soft capsule contains 20 mg of micronized tafamidis meglumine equivalent to 12.2 mg tafamidis.

Excipient with known effect

Each soft capsule contains approximately 50 mg of sorbitol (E 420).

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Soft capsule.

Yellow to pale yellow, oblong (approximately 21 mm) soft capsule, imprinted with “LP678” in red. Capsule contains white to pink colored suspension.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Tafamidis Meglumine Te Arai is indicated for the treatment of transthyretin amyloidosis in adult patients with stage 1 symptomatic polyneuropathy (ATTR-PN) to delay peripheral neurologic impairment.

Tafamidis Meglumine Te Arai is indicated for the treatment of cardiomyopathy caused by wild-type or hereditary transthyretin-mediated amyloidosis (ATTR-CM) in adults.

4.2 Dose and method of administration

Treatment should be initiated under the supervision of a physician knowledgeable in the management of patients with transthyretin amyloid polyneuropathy (ATTR-PN) and transthyretin amyloid cardiomyopathy (ATTR-CM).

When there is a suspicion in patients presenting with specific medical history or signs of heart failure or cardiomyopathy, etiologic diagnosis must be done by a physician knowledgeable in the management of amyloidosis or cardiomyopathy to confirm ATTR-CM and exclude AL amyloidosis before starting tafamidis, using appropriate assessment tools such as: bone scintigraphy and blood/urine assessment, and/or histological assessment by biopsy, and transthyretin (TTR) genotyping to characterise as wild-type or hereditary.

Posology

ATTR-PN - The recommended dose of tafamidis meglumine is 20 mg (one 20 mg capsule) orally once daily.

ATTR-CM - The recommended dose of tafamidis meglumine is 80 mg (four 20 mg capsules) orally once daily

Tafamidis and tafamidis meglumine are not interchangeable on a per mg basis.

If vomiting occurs after dosing, and the intact tafamidis meglumine capsule is identified, then an additional dose of tafamidis meglumine should be administered if possible. If no capsule is identified, then no additional dose is necessary, with resumption of dosing the next day as usual.

Special populations

Elderly

No dosage adjustment is required for elderly patients (≥ 65 years) (see section 5.2).

Hepatic and renal impairment

No dosage adjustment is required for patients with renal or mild and moderate hepatic impairment. Limited data are available in patients with severe renal impairment (creatinine clearance less than or equal to 30 mL/min). Tafamidis meglumine has not been studied in patients with severe hepatic impairment and caution is recommended (see section 5.2).

Paediatric population

There is no relevant use of tafamidis in the paediatric population.

Method of administration

Oral use.

The soft capsules should be swallowed whole and not crushed or cut. Tafamidis meglumine may be taken with or without food.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for use

Women of childbearing potential

Women of childbearing potential should use appropriate contraception when taking tafamidis meglumine and continue to use appropriate contraception for 1 month after stopping treatment with tafamidis meglumine (see section 4.6).

Cardiomyopathy severity

Tafamidis meglumine should be started as early as possible in the disease course when the clinical benefit on disease progression could be more evident. Conversely, when amyloid-related cardiac damage is more advanced, such as in NYHA Class III, the decision to start or maintain treatment should be taken at the discretion of a physician knowledgeable in the management of patients with amyloidosis or cardiomyopathy (see section 5.1). There are limited clinical data in patients with NYHA Class IV.

Organ transplant patients

Tafamidis meglumine should be added to the standard of care for the treatment of patients with transthyretin amyloidosis. Physicians should monitor patients and continue to assess the need for other therapy, including the need for organ transplantation, as part of this standard of care. As there are no data available regarding the use of tafamidis meglumine post-organ transplantation, tafamidis meglumine should be discontinued in patients who undergo organ transplantation.

Effects on laboratory tests

Increase in liver function tests and decrease in thyroxine may occur (see section 4.5 and 4.8).

Excipients with known effect

This medicinal product contains approximately 50 mg sorbitol in each capsule. Sorbitol is a source of fructose.

The additive effect of concomitantly administered products containing sorbitol (or fructose) and dietary intake of sorbitol (or fructose) should be taken into account.

The content of sorbitol in medicinal products for oral use may affect the bioavailability of other medicinal products for oral use administered concomitantly.

4.5 Interaction with other medicines and other forms of interaction

In a clinical study in healthy volunteers, 20 mg tafamidis meglumine did not induce or inhibit the cytochrome P450 enzyme CYP3A4.

In vitro tafamidis inhibits the efflux transporter BCRP (breast cancer resistant protein) with IC50=1.16 µM and may cause drug-drug interactions at clinically relevant concentrations with substrates of this transporter (e.g. methotrexate, rosuvastatin, imatinib). In a clinical study in healthy participants, the exposure of the BCRP substrate rosuvastatin increased approximately 2-fold following multiple doses of 61 mg tafamidis daily dosing.

Likewise, tafamidis inhibits the uptake transporters OAT1 and OAT3 (organic anion transporters) with IC50=2.9 µM and IC50=2.36 µM, respectively, and may cause drug-drug interactions at clinically relevant concentrations with substrates of these transporters (e.g. non-steroidal anti-inflammatory drugs, bumetanide, furosemide, lamivudine, methotrexate, oseltamivir, tenofovir, ganciclovir, adefovir, cidofovir, zidovudine, zalcitabine). Based on *in vitro* data, the maximal predicted changes in AUC of OAT1 and OAT3 substrates were determined to be less than 1.25 for the tafamidis meglumine 20 mg dose, therefore, inhibition of OAT1 or OAT3 transporters by tafamidis is not expected to result in clinically significant interactions.

No interaction studies have been performed evaluating the effect of other medicinal products on tafamidis meglumine.

Laboratory test abnormality

Tafamidis may decrease serum concentrations of total thyroxine, without an accompanying change in free thyroxine (T4) or thyroid stimulating hormone (TSH). This observation in total thyroxine values may likely be the result of reduced thyroxine binding to or displacement from transthyretin (TTR) due to the high binding affinity tafamidis has to the TTR thyroxine receptor. No corresponding clinical findings consistent with thyroid dysfunction have been observed.

4.6 Fertility, pregnancy and lactation

Women of childbearing potential

Contraceptive measures should be used by women of childbearing potential during treatment with tafamidis meglumine, and for one month after stopping treatment, due to the prolonged half-life.

Pregnancy

There are no data on the use of tafamidis meglumine in pregnant women. Studies in animals have shown developmental toxicity (see section 5.3). Tafamidis meglumine is not recommended during pregnancy and in women of childbearing potential not using contraception.

Breast-feeding

Available data in animals have shown excretion of tafamidis in milk. A risk to the newborns/infants cannot be excluded. Tafamidis meglumine should not be used during breast-feeding.

Fertility

No impairment of fertility has been observed in nonclinical studies (see section 5.3).

4.7 Effects on ability to drive and use machines

On the basis of the pharmacodynamic and pharmacokinetic profile, tafamidis meglumine is believed to have no or negligible influence on the ability to drive or use machines.

4.8 Undesirable effects

Summary of the safety profile – ATTR-PN

The overall clinical data reflect exposure of 127 patients with ATTR-PN to 20 mg of tafamidis meglumine administered daily for an average of 538 days (ranging from 15 to 994 days). The adverse reactions were generally mild or moderate in severity.

Tabulated list of adverse reactions

Adverse reactions are listed below by MedDRA System Organ Class (SOC) and frequency categories using the standard convention: Very common (≥ 1/10), Common (≥ 1/100 to < 1/10), and Uncommon (≥ 1/1,000 to < 1/100). Within the frequency group, adverse reactions are presented in order of decreasing seriousness. Adverse reactions reported from the clinical programme in the tabular listing below reflect the rates at which they occurred in the Phase 3, double-blind, placebo-controlled study (Fx-005).

System Organ Class	**Very common**
Infections and Infestations	Urinary tract infection
Gastrointestinal disorders	Diarrhoea Upper abdominal pain

Summary of the safety profile – ATTR-CM

The safety data reflect exposure of 176 patients with ATTR-CM to 80 mg (administered as 4 x 20 mg) of tafamidis meglumine administered daily in a 30-month placebo-controlled trial in patients diagnosed with ATTR-CM (see section 5.1).

The frequency of adverse events in patients treated with 80 mg tafamidis meglumine was generally similar and comparable to placebo.

The following adverse events were reported more often in patients treated with tafamidis meglumine 80 mg compared to placebo: flatulence [8 patients (4.5%) versus 3 patients (1.7%)] and liver function test increased [6 patients (3.4%) versus 2 patients (1.1%)]. A causal relationship has not been established.

Tabulated list of adverse reactions

Adverse reactions are listed below by MedDRA System Organ Class (SOC) and frequency categories using the standard convention: Very common (≥ 1/10), Common (≥ 1/100 to < 1/10), and Uncommon (≥ 1/1,000 to < 1/100). Within the frequency group, adverse reactions are presented in order of decreasing seriousness. Adverse reactions listed in the table below are from cumulative clinical data in ATTR-CM participants.

System Organ Class	**Common**
Gastrointestinal disorders	Diarrhoea
Skin and subcutaneous tissue disorders	Rash Pruritus

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Healthcare professionals are asked to report any suspected adverse reactions https://pophealth.my.site.com/carmreportnz/s/}

4.9 Overdose

Symptoms

There is minimal clinical experience with overdose. During clinical trials, two patients diagnosed with transthyretin amyloid cardiomyopathy (ATTR-CM) accidentally ingested a single tafamidis meglumine dose of 160 mg without the occurrence of any associated adverse events. The highest dose of tafamidis meglumine given to healthy volunteers in a clinical trial was 480 mg as a single dose. There was one reported treatment-related adverse event of mild hordeolum at this dose.

Management

In case of overdose, standard supportive measures should be instituted as required.

For risk assessment and advice on the management of overdose please contact the National Poisons Centre on 0800 POISON (0800 764766).

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Other nervous system drugs, ATC code N07XX08

Mechanism of action

Tafamidis is a selective stabiliser of TTR. Tafamidis binds to TTR at the thyroxine binding sites, stabilising the tetramer and slowing dissociation into monomers, the rate-limiting step in the amyloidogenic process.

Pharmacodynamic effects

Transthyretin amyloidosis is a severely debilitating condition induced by the accumulation of various insoluble fibrillar proteins, or amyloid, within the tissues in amounts sufficient to impair normal function. The dissociation of the transthyretin tetramer to monomers is the rate-limiting step in the pathogenesis of transthyretin amyloidosis. The folded monomers undergo partial denaturation to produce alternatively folded monomeric amyloidogenic intermediates. These intermediates then misassemble into soluble oligomers, profilaments, filaments, and amyloid fibrils. Tafamidis binds with negative cooperativity to the two thyroxine binding sites on the native tetrameric form of transthyretin preventing dissociation into monomers. The inhibition of TTR tetramer dissociation forms the rationale for the use of tafamidis to slow disease progression in stage 1 ATTR-PN or ATTR-CM patients.

A TTR stabilisation assay was utilised as a pharmacodynamic marker and assessed the stability of the TTR tetramer.

Tafamidis stabilised the tetramers of 14 TTR variants tested clinically after once-daily dosing with tafamidis. Tafamidis also stabilised the TTR tetramer for 25 variants tested *ex vivo*, thus demonstrating TTR stabilisation of 40 amyloidogenic TTR genotypes.

Clinical efficacy and safety – ATTR-PN

The pivotal study of tafamidis meglumine in stage 1 ATTR-PN patients was an 18-month, multicentre, randomised, double-blind, placebo-controlled study. The study evaluated the safety and efficacy of once-daily 20 mg tafamidis meglumine in 128 patients with ATTR-PN with the

Val30Met mutation and primarily stage 1 disease; 126 of the 128 patients did not routinely require assistance with ambulation. The primary outcome measures were the Neuropathy Impairment Score of the Lower Limb (NIS-LL – a physician assessment of the neurologic exam of the lower limbs) and the Norfolk Quality of Life - Diabetic Neuropathy (Norfolk QOL-DN – a patient reported outcome, total quality of life score [TQOL]). Other outcome measures included composite scores of large nerve fibre (nerve conduction, vibration threshold and heart rate response to deep breathing - HRDB) and small nerve fibre function (heat pain and cooling threshold and HRDB) and nutritional assessments utilizing the modified body mass index (mBMI – BMI multiplied by serum albumin in g/L). Eighty-six of the 91 patients completing the 18 month treatment period subsequently enrolled in an open-label extension study, where they all received once daily 20 mg tafamidis meglumine for an additional 12 months.

Following 18 months of treatment, more tafamidis meglumine-treated patients were NIS-LL Responders (change of less than 2 points on NIS-LL) Outcomes for the pre-specified analyses of the primary endpoints are provided in the following table:

Tafamidis versus Placebo: NIS-LL and TQOL at Month 18 (Study Fx-005)		
	Placebo	**Tafamidis**
Pre-specified ITT Analysis	N=61	N=64
NIS-LL Responders (% Patients)	29.5%	
Difference (Tafamidis minus Placebo) 95% CI of Difference (p-value)	15.8% -0.9%, 32.5% (0.068)	
TQOL Change from Baseline LSMean (SE)	7.2 (2.36)	2.0 (2.31)
Difference in LSMeans (SE) 95% CI of Difference (p-value)	-5.2 (3.31) -11.8, 1.3 (0.116)	
Pre-specified Efficacy Evaluable Analysis	**N=42**	**N=45**
NIS-LL Responders (% Patients)	38.1%	60.0%
Difference (Tafamidis minus Placebo) 95% CI of Difference (p-value)	21.9% 1.4%, 42.4% (0.041)	
TQOL Change from Baseline LSMean (SE)	8.9 (3.08)	0.1 (2.98)
Difference in LSMeans (SE) 95% CI of Difference (p-value)	-8.8 (4.32) -17.4, -0.2 (0.045)	

In the pre-specified ITT NIS-LL Responder analysis, patients who discontinued prior to the 18-month time point due to liver transplantation were categorized as non-responders. The pre-specified Efficacy Evaluable analysis used observed data for those patients who completed the 18 month treatment per protocol.

The secondary endpoints demonstrated that tafamidis meglumine treatment resulted in less deterioration of neurologic function and improved nutritional status (mBMI) compared with placebo, as shown in the following table.

Secondary Endpoints Changes from Baseline to Month 18 LSMean (Standard Error) (Intent-to-Treat Population) (Study Fx-005)				
	Placebo N=61	**Tafamidis N=64**	**P-value**	**Tafamidis % change relative to Placebo**
NIS-LL change from BL LSMean (SE)	5.8 (0.96)	2.8 (0.95)	0.027	-52%
Large Fibre change from BL LSMean (SE)	3.2 (0.63)	1.5 (0.62)	0.066	-53%
Small Fibre change from BL LSMean (SE)	1.6 (0.32)	0.3 (0.31)	0.005	-81%
mBMI change from BL LSMean (SE)	-33.8 (11.8)	39.3 (11.5)	<0.0001	NA

mBMI was derived as the product of serum albumin and Body Mass Index.
Based on repeated measures analysis of variance with change from baseline as the dependent variable, an unstructured covariance matrix, treatment, month and treatment-by-month as fixed effects, and subject as a random effect in the model.
NA=not applicable.

In the open-label extension study, the rate of change in the NIS-LL during the 12 months of treatment was similar to that observed in those patients randomised and treated with tafamidis in the previous double blind 18 month period.

The effects of tafamidis have been assessed in patients with non-Val30Met ATTR-PN in a supportive open-label study in 21 patients and a post-marketing observational study in 39 patients. Based on the results of these studies, the mechanism of action of tafamidis and the results on TTR stabilisation, tafamidis meglumine is expected to be beneficial in patients with stage 1 ATTR-PN due to mutations other than Val30Met.

Clinical efficacy and safety – ATTR-CM

Efficacy was demonstrated in a multicentre, international, double-blind, placebo-controlled, randomised 3-arm study in 441 patients with wild-type or hereditary ATTR-CM.
Patients were randomised to either tafamidis meglumine 20 mg (n=88) or 80 mg [administered as four 20 mg tafamidis meglumine capsules] (n=176) or matching placebo (n=177) once daily, in addition to standard of care (e.g. diuretics) for 30 months. Treatment assignment was stratified by the presence or absence of a variant TTR genotype as well as by baseline severity of disease (NYHA Class). Table 1 describes the patient demographics and baseline characteristics.

Table 1: Patient demographics and baseline characteristics

Characteristic	**Pooled Tafamidis N=264**	**Placebo N=177**
Age — year		
Mean (standard deviation)	74.5 (7.2)	74.1 (6.7)
Median (minimum, maximum)	75 (46, 88)	74 (51, 89)
Sex — number (%)		
Male	241 (91.3)	157 (88.7)
Female	23 (8.7)	20 (11.3)
TTR genotype — number (%)		
ATTRm	63 (23.9)	43 (24.3)
ATTRwt	201 (76.1)	134 (75.7)
NYHA Class — number (%)		
NYHA Class I	24 (9.1)	13 (7.3)
NYHA Class II	162 (61.4)	101 (57.1)
NYHA Class III	78 (29.5)	63 (35.6)

Abbreviations: ATTRm=variant transthyretin amyloid, ATTRwt=wild-type transthyretin amyloid, NYHA=New York Heart Association

The primary analysis used a hierarchical combination applying the method of Finkelstein-Schoenfeld (F-S) to all-cause mortality and frequency of cardiovascular-related hospitalisations, which is defined as the number of times a subject is hospitalised (i.e., admitted to a hospital) for cardiovascular-related morbidity. The method compared each patient to every other patient within each stratum in a pair-wise manner that proceeds in a hierarchical fashion using all-cause mortality followed by frequency of cardiovascular-related hospitalisations when patients cannot be differentiated based on mortality.

This analysis demonstrated a significant reduction (p=0.0006) in all-cause mortality and frequency of cardiovascular-related hospitalisations in the pooled tafamidis 20 mg and 80 mg dose group versus placebo (Table 2).

Table 2: Primary analysis using Finkelstein-Schoenfeld (F-S) Method of all-cause mortality and frequency of cardiovascular-related hospitalisations

Primary analysis	**Pooled Tafamidis N=264**	**Placebo N=177**
Number (%) of subjects alive* at month 30	186 (70.5)	101 (57.1)
Average cardiovascular-related hospitalisations during 30 months (per patient per year) among those alive at month 30†	0.297	0.455
p-value from F-S Method	0.0006	

* Heart transplantation and cardiac mechanical assist device implantation are considered indicators of approaching end stage. As such, these subjects are treated in the analysis as equivalent to death. Therefore, such subjects are not included in the count of "Number of Subjects Alive at Month 30" even if such subjects are alive based on 30 month vital status follow-up assessment.
† Descriptive mean among those who survived the 30 months.

Analysis of the individual components of the primary analysis (all-cause mortality and cardiovascular-related hospitalisation) also demonstrated significant reductions for tafamidis versus placebo.
The hazard ratio from the all-cause mortality Cox-proportional hazard model for pooled tafamidis was 0.698 (95% CI 0.508, 0.958), indicating a 30.2% reduction in the risk of death relative to the placebo group (p=0.0259).

There were significantly fewer cardiovascular-related hospitalisations with tafamidis compared with placebo with a reduction in risk of 32.4% (Table below).

Table 3: Cardiovascular-related hospitalisation frequency

	Pooled Tafamidis N=264	**Placebo N=177**
Total (%) number of subjects with Cardiovascular-related hospitalisations	138 (52.3)	107 (60.5)
Cardiovascular-related hospitalisations per year*	0.4750	0.7025
Pooled tafamidis versus placebo treatment difference (relative risk ratio)*	0.6761	
p-value*	< 0.0001	

Abbreviation: NYHA=New York Heart Association.
* This analysis was based on a Poisson regression model with treatment, TTR genotype (variant and wild-type), New York Heart Association (NYHA) Baseline classification (NYHA Classes I and II combined and NYHA Class III), treatment-by-TTR genotype interaction, and treatment-by-NYHA Baseline classification interaction terms as factors.

The treatment effect of tafamidis on functional capacity and health status was assessed by the 6-Minute Walk Test (6MWT) and the Kansas City Cardiomyopathy Questionnaire-Overall Summary (KCCQ-OS) score (composed of the Total Symptom, Physical Limitation, Quality of Life, and Social Limitation domains), respectively. A significant treatment effect favouring tafamidis was first observed at Month 6 and remained consistent through Month 30 on both the 6MWT distance and KCCQ-OS score (Table 4).

Table 4: 6MWT and KCCQ-OS and component domain scores

Endpoints	Baseline Mean (SD)		Change from Baseline to Month 30, LS mean (SE)		Treatment difference from placebo LS mean (95% CI)	*p-value*
	Pooled Tafamidis N=264	Placebo N=177	Pooled Tafamidis	Placebo		
6MWT* (metres)	350.55 (121.30)	353.26 (125.98)	-54.87 (5.07)	-130.55 (9.80)	75.68 (57.56, 93.80)	*p*< 0.0001
KCCQ-OS*	67.27 (21.36)	65.90 (21.74)	-7.16 (1.42)	-20.81 (1.97)	13.65 (9.48, 17.83)	*p*< 0.0001

* Higher values indicate better health status.
Abbreviations: 6MWT=6-Minute Walk Test; KCCQ-OS=Kansas City Cardiomyopathy Questionnaire-Overall Summary; LS=least squares; CI=confidence interval.

Results from F-S method represented by win ratio for the combined endpoint and its components (all-cause mortality and frequency of cardiovascular-related hospitalisation) consistently favoured tafamidis versus placebo by dose and across all subgroups (wild-type, variant and NYHA Class I & II, and III) except for cardiovascular-related hospitalisation frequency in NYHA Class III which is higher in the tafamidis treated group compared to placebo (see section 4.2). Analyses of 6MWT and KCCQ-OS also favoured tafamidis relative to placebo within each subgroup.

In applying the F-S method to each dose group individually, tafamidis reduced the combination of all-cause mortality and frequency of cardiovascular-related hospitalisations for both the 80 mg and 20 mg doses compared to placebo (p=0.0030 and p=0.0048, respectively). Results of the primary analysis, 6MWT at Month 30 and KCCQ-OS at Month 30 were statistically significant for both the tafamidis meglumine 80 mg and 20 mg doses versus placebo, with similar results for both doses.

A supra-therapeutic, single, 400 mg oral dose of tafamidis meglumine solution in healthy volunteers demonstrated no prolongation of the QTc interval.

5.2 Pharmacokinetic properties

Absorption

After oral administration of the soft capsule once daily, the maximum peak concentration (C_{max}) is achieved within a median time (t_{max}) of 4 hours after dosing in the fasted state. Concomitant administration of a high fat, high calorie meal altered the rate of absorption, but not the extent of absorption. These results support the administration of tafamidis with or without food.

Distribution

Tafamidis is highly protein bound (> 99%) in plasma. The apparent steady-state volume of distribution is 16 litres.

The extent of tafamidis binding to plasma proteins has been evaluated using animal and human plasma. The affinity of tafamidis for TTR is greater than that for albumin. Therefore, in plasma, tafamidis is likely to bind preferentially to TTR despite the significantly higher concentration of albumin (600 µM) relative to TTR (3.6 µM).

Biotransformation and elimination

There is no explicit evidence of biliary excretion of tafamidis in humans. Based on preclinical data, it is suggested that tafamidis is metabolised by glucuronidation and excreted via the bile. This route of biotransformation is plausible in humans, as approximately 59% of the total administered dose is recovered in faeces, and approximately 22% recovered in urine. Based on population pharmacokinetic results, the apparent oral clearance of tafamidis meglumine is 0.228 L/h and the population mean half-life is approximately 49 hours.

Dose and time linearity

Exposure from once-daily dosing with tafamidis meglumine increased with increasing dose up to 480 mg single dose and multiple doses up to 80 mg/day. In general, increases were proportional or near proportional to dose and tafamidis clearance was stationary over time.

Pharmacokinetic parameters were similar after single and repeated administration of 20 mg tafamidis meglumine, indicating a lack of induction or inhibition of tafamidis metabolism.

Results of once-daily dosing with 15 mg to 60 mg oral solution tafamidis meglumine for 14 days demonstrated that steady-state was achieved by Day 14.

Special populations

Hepatic impairment

Pharmacokinetic data indicated decreased systemic exposure (approximately 40%) and increased total clearance (0.52 L/h versus 0.31 L/h) of tafamidis meglumine in patients with moderate hepatic impairment (Child-Pugh Score of 7-9 inclusive) compared to healthy subjects due to a higher unbound fraction of tafamidis. As patients with moderate hepatic impairment have lower TTR levels than healthy subjects, dosage adjustment is not necessary as the stoichiometry of tafamidis with its target protein TTR would be sufficient for stabilisation of the TTR tetramer. The exposure to tafamidis in patients with severe hepatic impairment is unknown.

Renal impairment

Tafamidis has not specifically been evaluated in a dedicated study of patients with renal impairment. The influence of creatinine clearance on tafamidis pharmacokinetics was evaluated in a population pharmacokinetic analysis in patients with creatinine clearance greater than 18 mL/min. Pharmacokinetic estimates indicated no difference in apparent oral clearance of tafamidis in patients with creatinine clearance less than 80 mL/min compared to those with creatinine clearance greater than or equal to 80 mL/min. Dosage adjustment in patients with renal impairment is considered not necessary.

Elderly

Based on population pharmacokinetic results, subjects ≥65 years had an average 15% lower estimate of apparent oral clearance at steady-state compared to subjects less than 65 years old. However, the difference in clearance results in <20% increases in mean C_{max} and AUC compared to younger subjects and is not clinically significant.

Pharmacokinetic/pharmacodynamic relationships

In vitro data indicated that tafamidis does not significantly inhibit cytochrome P450 enzymes CYP1A2, CYP3A4, CYP3A5, CYP2B6, CYP2C8, CYP2C9, CYP2C19, and CYP2D6. Tafamidis is not expected to cause clinically relevant drug interaction due to induction of CYP1A2, CYP2B6 or CYP3A4.

In vitro studies suggest that it is unlikely tafamidis will cause drug interactions at clinically relevant concentrations with substrates of UDP glucuronosyltransferase (UGT) systemically. Tafamidis may inhibit intestinal activities of UGT1A1.

Tafamidis showed a low potential to inhibit Multi-Drug Resistant Protein (MDR1) (also known as P-glycoprotein; P-gp) systemically and in the gastrointestinal (GI) tract, organic cation transporter 2 (OCT2), multidrug and toxin extrusion transporter 1 (MATE1) and MATE2K, organic anion transporting polypeptide 1B1 (OATP1B1) and OATP1B3 at clinically relevant concentrations.

5.3 Preclinical safety data

Nonclinical data revealed no special hazard for humans based on conventional studies of safety pharmacology, fertility and early embryonic development, genotoxicity and carcinogenic potential. In repeat-dose toxicity and the carcinogenicity studies, the liver appeared as a target organ for toxicity in the different species tested. Liver effects were seen at exposures approximately ≥2.5-times the human AUC at steady-state at the clinical dose of 20 mg tafamidis meglumine.

In a developmental toxicity study in rabbits, a slight increase in skeletal malformations and variations, abortions in few females, reduced embryo-foetal survival, and reduction in foetal weights were observed at exposures approximately ≥7.2 times the human AUC at steady-state at the clinical dose of 20 mg tafamidis meglumine.

In the rat pre- and postnatal development study with tafamidis, decreased pup survival and reduced pup weights were noted following maternal dose administration during pregnancy and lactation at doses of 15 and 30 mg/kg/day. Decreased pup weights in males were associated with delayed sexual maturation (preputial separation) at 15 mg/kg/day. Impaired performance in a water-maze test for learning and memory was observed at 15 mg/kg/day. The NOAEL for viability and growth in the F1 generation offspring following maternal dose administration during pregnancy and lactation with tafamidis was 5 mg/kg/day (human equivalent dose=0.8 mg/kg/day), a dose approximately 4.6 times the clinical dose of 20 mg tafamidis meglumine.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Capsule shell
Gelatine (E 441)
Glycerol (E 422)
Ferric oxide (E 172)
Sorbitol (E 420)
Titanium dioxide (E 171)
Water purified

Capsule contents
Macrogol 400 (E 1521)
Sorbitan oleate
Polysorbate 80 (E 433)

Printing ink
Shellac
Ethanol
Carmine (E 120)
Propylene glycol (E 1520)
Ammonium hydroxide (E 527) 28%
Simeticone

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

15 months

6.4 Special precautions for storage

This medicinal product should not be stored above 25°C

6.5 Nature and contents of container

OPA/Al/PVC – Paper/PET/Al perforated blisters

Pack size: a pack of 30 x 1 soft capsules.

6.6 Special precautions for disposal

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MEDICINE SCHEDULE

Prescription Only Medicine

8. SPONSOR

Te Arai BioFarma Limited
PO Box 46205,
Herne Bay, Auckland 1147

9. DATE OF FIRST APPROVAL

22 October 2026

10. DATE OF REVISION OF THE TEXT

22 October 2026

SUMMARY TABLE OF CHANGES