FMX101 4% Minocycline Foam for the Treatment of Acne Vulgaris: Safety and Patient Satisfaction From the Open-Label Extension of 2 Phase 3 Studies

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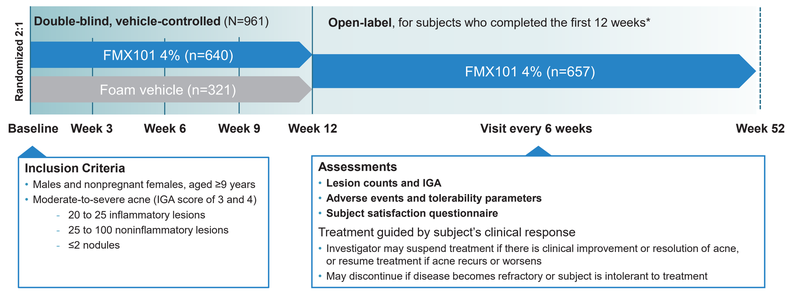
Introduction

- Acne vulgaris (AV) is a chronic inflammatory disease that affects approximately 85% of adolescents and that can also present in pre- and post-adolescents[1]
- FMX101, minocycline foam 4%, is a novel, stable foam formulation of minocycline that has been previously demonstrated in a Phase 2 study to be an effective and well-tolerated treatment for moderate-to-severe acne[2]
- Two identical Phase 3, randomized, double-blind studies were conducted to evaluate the efficacy and safety of the topical administration of FMX101 4% in the treatment of moderate-to-severe acne vulgaris[3]
  - The 2 studies consisted of a 12-week double-blind phase followed by a 9-month open-label phase
- During the 12-week double-blind phase, FMX101 4% appeared to be effective, safe, and well tolerated for the treatment of moderate-to-severe acne[3]
- This report presents data from the 40-week open-label safety extension phase

Methods

- Two Phase 3 randomized, double-blind, vehicle-controlled trials (Study 04 and Study 05) evaluated the safety and efficacy of FMX101 4% in the treatment of moderate-to-severe AV (**Figure 1**)
  - Subjects were randomized 2:1 to receive either FMX101 4% or a foam vehicle
  - Foam was applied once daily for 12 weeks

Figure 1. Study Design

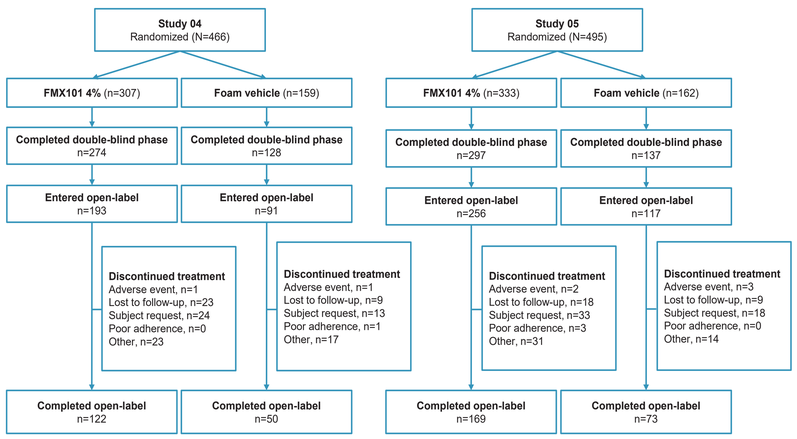


*Subjects with ≥1-grade IGA improvement. IGA=Investigator's Global Assessment.

Results

- 961 subjects (Study 04: N=466; Study 05: N=495) were enrolled in the studies
  - At the end of Week 12, 657 subjects (Study 04: N=284; Study 05: N=373) were rolled over into the open-label phase
- Subject disposition is shown in **Figure 2**

Figure 2. Subject Disposition



- Baseline demographics and disease characteristics are shown in **Table 1**

Table 1. Baseline Demographics and Disease Characteristics

	Study 04				Study 05			
	FMX101 4%		Vehicle		FMX101 4%		Vehicle	
	Double-blind	Entering open-label	Double-blind	Entering open-label	Double-blind	Entering open-label	Double-blind	Entering open-label
Demographics								
Mean age (range), years	20.5 (11-52)	20.2 (11-52)	20.0 (10-57)	20.5 (10-57)	20.5 (10-55)	20 (10-55)	20.8 (11-54)	19.5 (11-47)
Male/Female, %	45.3 / 54.7	46.6 / 53.4	38.4 / 61.6	39.6 / 60.4	40.8 / 59.2	43.4 / 56.6	42.6 / 57.4	47.9 / 52.1
Ethnicity (white, black, other), %	62.5, 28.0, 9.5	67.4, 20.7, 11.9	62.9, 25.2, 11.9	72.5, 16.5, 11.0	73.0, 21.9, 5.1	76.2, 19.9, 3.9	76.5, 18.5, 5.0	76.9, 17.9, 5.2
Inflammatory lesions, n								
Mean (range)	32.2 (20-50)	32.6 (20-50)	31.6 (20-76)	31.4 (20-50)	31.6 (20-69)	31.9 (20-50)	32.3 (20-50)	32.4 (20-50)
Noninflammatory lesions, n								
Mean (range)	49.5 (25-100)	50.6 (26-100)	46.5 (25-98)	48.0 (25-98)	50.0 (25-100)	49.8 (25-102)	50.9 (26-104)	50.4 (26-99)
IGA score, n (%)								
3 – Moderate	255 (83.1)	156 (80.8)	137 (86.2)	82 (90.1)	296 (88.9)	228 (89.1)	148 (91.4)	107 (91.5)
4 – Severe	52 (16.9)	37 (19.2)	22 (13.8)	9 (9.9)	37 (11.1)	28 (10.9)	14 (8.6)	10 (8.5)

- Across the 2 studies, the percentage of subjects reporting treatment-emergent adverse events (TEAEs) was 21.8% and 30.9% for FMX101 4%, vs 25.3% and 35.0% for vehicle (**Table 2**)
  - Few treatment-related TEAEs were reported; all except 1 (headache) have resolved at data cut
    - No serious treatment-related TEAEs were reported
  - 3 subjects receiving FMX101 4% discontinued treatment in Study 04 (worsening of acne) and Study 05 (right zygomatic area edema, stomachache)
  - No serious TEAEs leading to study discontinuation were reported in either study
- The most common TEAEs in ≥1% of subjects were nasopharyngitis, influenza, increased blood creatine phosphokinase level, and headache (**Table 3**)
- >95% of subjects had no or mild signs and symptoms at the Week 52 assessment of facial local tolerability (**Table 4**)
  - No severe signs and symptoms for facial local tolerability assessment were reported

Table 2. Summary of All Adverse Events in Subjects Entering Open-Label Phase

	Study 04		Study 05	
	DB-FMX101 4% (n=193)	DB-Vehicle (n=91)	DB-FMX101 4% (n=256)	DB-Vehicle (n=117)
Subjects with any TEAE, n (%)	42 (21.8)	23 (25.3)	79 (30.9)	41 (35.0)
Number of TEAEs	84	48	139	68
Subjects with severe TEAE, n (%)	2 (1.0)	0	1 (0.4)	0
Number of severe TEAEs	2[a]	0	1[b]	0
Subjects with any treatment-related[c] TEAE, n (%)	3 (1.6)	2 (2.2)	6 (2.3)	2 (1.7)
Number of treatment-related TEAEs	5[d]	2[e]	8[f]	3[g]
Subjects with any TEAE leading to study discontinuation, n (%)	1 (0.5)	1 (1.1)	2 (0.8)	3 (2.6)
Number of any TEAEs leading to study discontinuation	1[h]	1[h]	2[i]	3[j]
Subjects with any serious TEAE leading to study discontinuation, n (%)	0	0	0	0
Number of serious TEAEs leading to study discontinuation	0	0	0	0

[a]Pneumonia and increased blood creatine phosphokinase. [b]Fatigue. [c]Possible or probable relationship. [d]Application-site acne, increased alanine aminotransferase, increased aspartate aminotransferase, increased gamma-glutamyl transferase, and headache. [e]Application-site acne and headache. [f]Seborrheic dermatitis, lymphadenopathy, pharyngeal erythema, application-site edema, headache, sunburn, migraine. [g]Application-site discoloration and application-site dermatitis. [h]Application-site acne. [i]Application-site edema and abdominal pain upper. [j]Flank pain, abdominal pain upper, and application-site dermatitis.

DB=double-blind phase.

Table 3. Common TEAEs in ≥1% of Subjects During the Open-Label Phase (Week 52)

Adverse Events	Study 04 (n=284)	Study 05 (n=373)
Nasopharyngitis	3.5	6.2
Influenza	2.1	1.3
Blood creatine phosphokinase increased	1.8	2.7
Headache	1.4	4.6
Upper respiratory tract infection	1.4	0.8
Cough	1.4	0.5
Urinary tract infection	1.1	0.8
Pharyngitis streptococcal	1.1	0.5
Application-site acne	1.1	-
Pyrexia	1.1	-
Back pain	1.1	0.5
Sinusitis	0.7	2.1
Alanine aminotransferase increased	0.4	1.3
Aspartate aminotransferase increased	0.4	1.1
Gastroenteritis	-	1.1
Abdominal pain	-	1.1

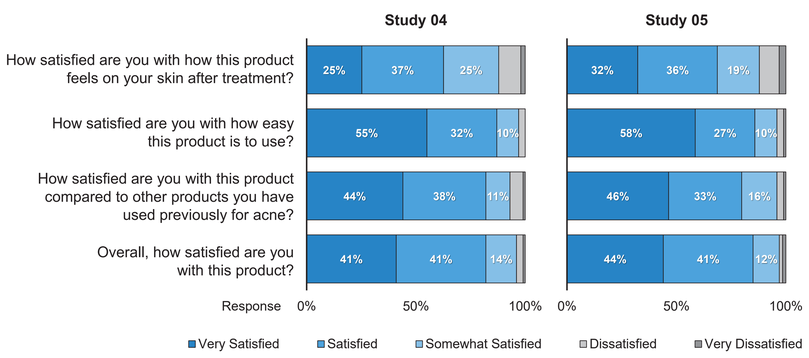
Table 4. Facial Local Tolerability Assessment at Week 52 (Based on Observed Cases)

Tolerability Assessment, n (%)	0=None	1=Mild	2=Moderate
Study 04 - FMX101 4% (n=114)			
Erythema	109 (95.6)	5 (4.4)	0
Dryness	104 (91.2)	10 (8.8)	0
Hyperpigmentation[a]	109 (95.6)	4 (3.5)	1 (0.9)
Skin Peeling	110 (96.5)	4 (3.5)	0
Itching	113 (99.1)	1 (0.9)	0
Study 05 - FMX101 4% (n=148)			
Erythema	130 (87.8)	17 (11.5)	1 (0.7)
Dryness	144 (97.3)	4 (2.7)	0
Hyperpigmentation[a]	133 (89.9)	13 (8.8)	2 (1.3)
Skin Peeling	147 (99.3)	1 (0.7)	0
Itching	147 (99.3)	1 (0.7)	0

[a]Hyperpigmentation was most commonly used to describe localized post-inflammatory darkening of the affected skin.

- There were high rates of subject satisfaction with FMX101 4% (**Figure 3**)
  - Overall, >95% of subjects were satisfied with FMX101 4%
  - The majority of subjects were satisfied with FMX101 4% in comparison with previous acne products (ie, gels and creams), with its ease of use, and with the feel of the product on their skin

Figure 3. Patient Satisfaction Questionnaire Results



Conclusions

- FMX101 4% appeared to be safe and well tolerated, with no serious drug-related adverse events reported
- The most common TEAEs (≥1%) across the 2 studies included nasopharyngitis, influenza, increased blood creatine phosphokinase level, and headache
- Few treatment-related TEAEs were reported, and most resolved by data cut timepoint
- No serious TEAEs leading to study discontinuation were reported in either study
- >95% of subjects had no or mild signs and symptoms at the Week 52 assessment of facial local tolerability
- There was high subject satisfaction with the minocycline foam FMX101 4%

References

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Disclosures

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Dr. Stein Gold is a speaker, a consultant, or an investigator for Celgene, GlaxoSmithKline, Janssen, Kadmon, LEO Pharma, Novartis, Pfizer, Regeneron Pharmaceuticals, Sun Pharma, and Valeant.

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