Table SI. Novel and upcoming trials for the treatment of hypotrichosis using bimatoprost

Type of hypotrichosis	Authors (ref.)	Study design	Enrolment criteria	Participants enrolled (completed)	Duration	Groups	Conclusion
None	Wester et al. (20)	Randomized, double-blinded, self-controlled	Healthy subjects without glaucoma, etc.	19 (15)	6 weeks	Bimatoprost 0.03% or normal saline with Gonak gel	Bimatoprost in gel suspension increased eyelash length
None	Yoelin et al. (21)	Prospective, open-label	Healthy subjects without glaucoma, etc.	29 (28)	12 weeks	Bimatoprost 0.03% solution	All subjects had greater length, thickness and darkness of eyelashes with mild adverse events
None	Woodward et al. (22)	Prospective, double-blinded, randomized controlled	Adult subjects without glaucoma	52 (52)	6 months	Group 1: bimatoprost 0.03% gel Group 2: placebo	Eyelash length increased by 0.77 mm in bimatoprost group vs. −0.12 mm in control group without remarkable adverse effects
Eyelash hypotrichosis	Smith et al. (23)	Multicentre, randomied, double-masked, vehicle-controlled, parallel-group	Adults with GEA score of 1 or 2	278 (278)	5 months	Group 1: bimatoprost 0.03% solution Group 2: vehicle	Bimatoprost treated group had significantly higher increases in GEA score and eyelash length, thickness and darkness with a good safety profile
Eyelash hypotrichosis	Kwon et al. (24)	Prospective, non-comparative, open-label	Korean adult females with GEA score of 1 or 2	62 (47)	40 weeks	Group 1: bimatoprost 0.03% solution for 36 weeks; Group 2: bimatoprost 0.03% solution for 20 weeks and stopped for the following 20 weeks	Bimatoprost 0.03% safely enhanced eyelashes in Asian females (77.4%), maintained with ongoing treatment. Cessation of treatment was associated with progressive loss of effects
Eyelash hypotrichosis	Yoelin et al. (25)	Non-interventional, multicentre, retrospective, cross-sectional	Adults using bimatoprost for ≥12 months	585 (585)	12-30.7 months	Bimatoprost 0.03% solution	92.5% patients were satisfied with long-term treatment of their eyelashes and only 0.7% experienced chart-documented adverse events
Eyelash hypotrichosis	Borchert M et al. (33)	Multicentre, randomized, double-masked, parallel-group	Children aged 5–17 years	71 (70)	5 months	Group 1: bimatoprost 0.03% solution; Group 2: vehicle	Bimatoprost was effective and well tolerated in healthy adolescents but not in those with CTIH and AA
Thinning of eyebrows	Elias et al. (47)	Case report	Thinning of eyebrows	2 (2)	12 /16 weeks	Bimatoprost 0.03% solution	Marked thickening, lengthening, and darkening of eyebrows
Thinning of eyebrows	Suwanchatchai et al. (27)	Randomized, double-blinded, split-face comparative	Patients without AA, sebaceous dermatitis, eye diseases	30 (27)	16 weeks	Group 1: topical bimatoprost 0.03% solution Group: topical minoxidil 3%	Bimatoprost was equally efficacious as minoxidil in enhancement of eyebrows and caused less contact dermatitis
Eyebrow hypotrichosis	Schweiger et al. (48)	Case report	Eyebrow hypotrichosis	1 (1)	8 months	Topical bimatoprost solution	Increased eyebrow density, length and darker colour was noted
Eyebrow hypotrichosis	Beer et al. (49)	Randomized, double-blinded, vehicle-controlled	Mild or moderate eyebrow hypotrichosis females	20 (20)	9 months	Group 1: bimatoprost 0.03% solution Group 2: vehicle 5 months+ bimatoprost 0.03% solution 4 months Group 3: vehicle	Bimatoprost 0.03% solution noticeably improved the fullness and thickness of eyebrows without side-effects
Eyebrow hypotrichosis	Vergilis-Kalner (50)	Randomized, single-blinded, self-controlled	Female adults with symmetrical loss of eyebrows	10 (10)	6 weeks	Group 1: bimatoprost 0.03% solution Group 2: vehicle	All subjects showed significant eyebrow re-growth using bimatoprost without adverse effects
Eyelash IH and CTIH	Harii et al. (51)	Multicentre, double-masked, randomized, parallel-group	IH: Japanese adults with GEA score of 1 or 2 CTIH: 4–24 weeks after last chemotherapy	173 IHs (172), 36 CTIHs (36)	5 months	Group 1: bimatoprost 0.03% solution Group 2: vehicle	Bimatoprost treated group had higher GEA score improvement rate (77.3 vs. 17.6% in IHs, 88.9 vs. 27.8% in CTIHs). Bimatoprost was effective in producing longer, thicker, darker eyelashes with a good safety profile
Eyelash IH and CTIH	Glaser et al. (28)	Multicentre, double-masked, randomized, parallel-group	IH: adults with GEA score of 1 or 2 CTIH: 4–16 weeks after last chemotherapy with inadequate eyelashes	238 IHs (213), 130 CTIHs (121)	1 year	Bimatoprost 0.03% solution or vehicle for two 6-month treatment periods (TP1, TP2) 3 groups for IH: 1 bimatoprost (TP1, 2); 2 bimatoprost (TP1), vehicle (TP2); 3 vehicle (TP1) and bimatoprost (TP2) 2 groups for CTIH: 1 bimatoprost (TP1, 2); 2 vehicle (TP1) and bimatoprost (TP2)	Bimatoprost 0.03% solution was effective and well tolerated for IH and CTIH
Eyelash AA	Roseborough et al. (32)	Randomized, investigator masked, self-bilateral comparison	>50% bilateral eyelash loss for ≥6 months	11 (11)	16 weeks	Group 1: topical latanoprost; Group 2: topical bimatoprost	No appreciable eyelash re-growth
Eyelash AA	Ochoa (52)	Open-label, self-controlled, prospective	>50% bilateral eyelash loss for ≥6 months	11 (7)	16 weeks	Instil bimatoprost solution to one eye, other eye untreated as control	No appreciable eyelash re-growth

Table SI. Contd.

Type of hypotrichosis	Authors (ref.)	Study design	Enrolment criteria	Participants enrolled (completed)	Duration	Groups	Conclusion
Eyelash AA	Zaheri et al. (29)	Case report, self-controlled	Resistant to topical corticosteroids	1 (1)	14 weeks	Topical bimatoprost	Satisfactory eyelash re-growth
Eyelash AA	Vila (30)	Retrospective, non-blinded	AA universalis	41 (37)	1 year	Bimatoprost 0.03% solution	43.24% patients had total or moderate re-growth
Scalp AA	Zaher et al. (53)	Randomized, single-blinded, intra-patient patch comparison	Scalp AA with ≤25% hair loss	30 (30)	3 months	Group 1: 0.1% mometasone furoate cream Group 2: topical bimatoprost 0.03% solution	Topical bimatoprost showed better results in percentage of responded patches (83.3% vs. 56.7%), rapidity of response, percentage of hair re-growth and absence of side-effects
Paediatric AA	Li et al. (54)	Case report	Steroid-resistant multifocal AA	1 (1)	7 months	Topical bimatoprost 0.03% ophthalmic drops	Complete re-growth of all AA patches
AGA	Emer et al. (34)	Case report	Female AGA	1 (1)	4 months	Injected bimatoprost 0.03% solution	No significant improvement of hair density or darkening
AGA	Allergan*	Phase 2 Randomized, parallel assignment, double-blinded	Adult males with mild to moderate baldness	307 (266)	6 months	Group 1: bimatoprost formulation A Group 2: bimatoprost formulation B Group 3: bimatoprost formulation C Group 4: vehicle solution Group 5: minoxidil 5%	No results published. The study aimed to investigate safety and efficacy in males with AGA
AGA	Allergan*	Phase 2 randomized, parallel assignment, double-blinded	Adult females with mild to moderate baldness	306 (257)	6 months	Group 1: bimatoprost formulation A Group 2: bimatoprost formulation B Group 3: bimatoprost formulation C Group 4: vehicle solution Group 5: minoxidil 5%	No results published. The study aimed to investigate safety and efficacy in females with AGA
AGA	Duke University*	Phase 2 randomized, double-blinded, crossover assignment	Adult males with Hamilton-Norwood patterns of baldness IIIV, IV, V, or VA	9 (9)	34 weeks	Group 1: bimatoprost then placebo Group 2: placebo then bimatoprost	Hair density appeared increased with bimatoprost treatment, however, there was no statistical analysis due to small numbers of participants
AGA	Allergan*	Phase 1 single-centre, multiple-dose, self-controlled	Adult males	11	14 days	Group 1: bimatoprost 1% formulation A Group 2: bimatoprost 1% formulation B	Not published. Local pharmacokinetics and tolerability study

AA: alopecia areata; AGA: androgenetic alopecia; CTIH: chemotherapy-induced hypotrichosis; GEA: global eyelash assessment; IH: idiopathic hypotrichosis. *Clinical trials registered at https://clinicaltrials.gov.