

Histologic investigations (Fig 2) revealed a discretely preserved epithelial tissue, with a structure that is still recognizable on the tangential sections (Fig 2, A, D, G). In particular, the epithelial layers are hyperkeratotic, partly consisting of the easily detachable epithelia of the stratum corneum and, to a lesser extent, epithelia of the deeper, more cohesive layers of the stratum granulosum and spinosum, which are still possible to distinguish, especially because of the hematoxylin-eosin stain (the shadow of the nuclei). From the histochemical investigations, the epithelial tissue was found to be positive for cytokeratins and negative for vimentin (Fig 2, B, H, I).

In the literature, the preservation status of natural or embalmed mummified bodies has often been discussed.⁵ In this respect, however, historic petrified specimens have never been analyzed. This first study demonstrates that petrification guaranteed good tissue preservation, maintaining the skin's histologic, histochemical, metachromatic, and antigenic characteristics. Positivity for cytokeratin alone and negativity for vimentin demonstrate the reliability of immunohistochemical results, which often in paleopathology show false positives. With a good level of skin preservation, histologic investigations can be carried out on fragments of skin affected by lesions and used to diagnose the dermatologic pathology, possibly smallpox or pellagra, that the person once had.

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Improving Wikipedia skin disease content



To the Editor: Medical articles on Wikipedia receive 10 million daily views,^{1,2} and Wikipedia's top 500 skin-related articles received more than 16 million views during August 2018 alone.³ An editing partnership between the evidence-based medicine organization Cochrane (www.cochrane.org) and Wikipedia was initiated in 2014. Cochrane Review Groups, Centers, and Fields engage with Wikipedia to recruit and train editors and share high-quality Cochrane Review evidence in Wikipedia articles. This research letter evaluates the most-viewed dermatologic articles on Wikipedia and describes the impact that trainees and dermatologists volunteering for the Cochrane Skin Wikipedia Initiative can have by enhancing the content of Wikipedia articles.

Five trainees were recruited to improve applicable Wikipedia articles as part of the Cochrane Skin Wikipedia Initiative. The trainees learned Wikipedia editing and received an introduction to sharing medical evidence on Wikipedia, mentorship from an experienced Wikipedia medical editor, and an up-to-date list of 85 skin-related Cochrane systematic reviews to improve existing Wikipedia articles. The project was supervised by a board-certified dermatologist. Wikipedia statistics were cross-sectionally evaluated and descriptive data on dermatologic articles were recorded.^{1,4} The project was waived from institutional review board review.

Each change made to medical Wikipedia articles results in the notification of many editors, including physicians with WikiProject Medicine, a group of

volunteers who collaborate on improving Wikipedia's medical content. Some changes may trigger additional oversight by reviewers and could lead to reversal of changes to an article. There is a permanent record of changes and the editors who made them. However, despite rigorous oversight, the open source nature of Wikipedia is a potential limitation on accuracy.

Over a 4-month period, the trainees improved 40 skin-specific English language articles on Wikipedia (Table I).⁵ Articles were improved by adding paraphrased conclusions and background information (8530 words in total) from 60 Cochrane reviews. The 40 edited Wikipedia articles received more than 10 million views within an 8-month time frame.⁵ The 5 top-viewed articles were those on psoriasis, leprosy, cellulitis, melanoma, and molluscum contagiosum (Table I). The quality of the Wikipedia articles, according to Wikipedia's rating scale, ranged from S (start) class to GA (good article).

Wikipedia is a valuable resource providing health-related information to the lay public, students, policymakers, and journalists.² Criticisms of Wikipedia include concerns over the quality of the shared content. It is important to ensure that Wikipedia's content is evidence based, unbiased, and up-to-date. We have shown that a small Wikipedia editing initiative (ie, 5 students over 4 months) has the potential to share evidence-based information with many people (ie, 10 million Wikipedia article views in 8 months). The Cochrane Skin Wikipedia initiative provides an opportunity for dermatologists to actively contribute to evidence-based, informative articles. Contributing to Wikipedia takes less time and resources than authoring a full review, while still creating high-quality, accessible material that reaches a wide audience.

Future directions of the initiative include recruiting more trainees, improving skin-related Wikipedia content in other languages, and making further improvements to increase article quality ratings. For more information about how to participate, please visit https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Medicine/Cochrane/How.

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Table I. Article titles, page views, and quality ratings of the skin-specific Wikipedia articles improved by the trainees as of February 2019

Topic	Wikipedia article views	Article quality rating
Acne	397,600	GA
Alopecia areata	516,200	B
Atopic dermatitis	274,400	B
Basal cell carcinoma	358,900	C
Bowen's disease	58,600	S
Bullous pemphigoid	97,400	C
Cellulitis	858,300	B
Cutaneous leishmaniasis	35,000	B
Dermatitis	406,500	B
Discoid lupus erythematosus	90,700	S
Erythema nodosum	184,000	C
Guttate psoriasis	48,200	S
Hair removal	126,900	B
Hirsutism	177,700	C
Hives	436,900	B
Infantile hemangioma	36,500	S
Insect sting allergy	5300	C
Irritant diaper dermatitis	49,100	C
Leprosy	1,023,100	B
Lichen planus	263,900	B
Lichen sclerosus	159,000	C
Melanoma	669,000	B
Melasma	166,300	S
Molluscum contagiosum	536,400	B
Mycosis fungoides	120,300	C
Necrotizing fasciitis	425,700	B
Occupational skin disease	2300	S
Pattern hair loss	175,000	B
Pemphigus	82,400	C
Pityriasis rosea	289,300	S
Psoriasis	1,164,100	GA
Psoriatic onychodystrophy	7900	S
Pustulosis palmaris et plantaris	6900	S
Seborrheic dermatitis	289,700	C
Skin cancer	276,300	B
Sporotrichosis	39,100	B
Squamous cell skin cancer	131,100	B
Tinea capitis	78,800	C
Topical steroid	48,900	S
Toxic epidermal necrolysis	144,000	C

Boldface indicates the 5 top viewed articles. The designation good article (GA) is used for an article that is mostly complete, B is used for an article that requires further work, C is used for an article that is substantial but missing important content, and S is used to indicate start class.

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Anti-p200 pemphigoid is the most common pemphigoid disease with serum antibodies against the dermal side by indirect immunofluorescence microscopy on human salt-split skin



To the Editor: Pemphigoid diseases are characterized by autoantibodies (AABs) against structural proteins

of the dermoepidermal junction.¹ Indirect immunofluorescence microscopy on salt-split human skin is widely used as a screening test for serum AABs in the diagnosis of pemphigoid diseases. Binding of AABs to the dermal side of the artificial split is observed in patients with epidermolysis bullosa acquisita (EBA) (AABs against type VII collagen [Col7]), anti-laminin 332 (lam332) mucous membrane pemphigoid (MMP), and anti-p200 pemphigoid (AABs against p200 protein/laminin γ 1 [lam γ 1]).¹ About 15% of pemphigoid sera are dermal binders (ie, they contain AABs that label the dermal side by indirect immunofluorescence microscopy on human salt-split skin).²

The aim of our cross-sectional study was to determine the relative frequency of pemphigoid disease with dermal binding. A total of 141 consecutive sera that were sent to the routine autoimmune laboratory of the Department of Dermatology between January 2011 and July 2017 revealed dermal binding AABs. These sera were subjected to Col7-specific enzyme-linked immunosorbent assay (Euroimmun, Lübeck, Germany); Western blotting with extract of human dermis (containing Col7 and p200) and with the recombinant C-terminus of lam γ 1; and an indirect immunofluorescence test with HEK cells expressing the recombinant NC1-domain of Col7, lam332, and lam γ 1, respectively (Fig 1).³⁻⁵ The study was performed following the principles of the Declaration of Helsinki (12-178). Only sera from senders that send all sera with suspicion of an autoimmune blistering disease to our routine autoimmune laboratory were included, so we estimate that the analyzed cohort mirrors the spectrum of pemphigoid diseases in Central Europe.

Anti-p200/lam γ 1 pemphigoid was identified as the most frequent pemphigoid disease in this cohort, followed by EBA and anti-lam332 MMP. In detail, 115 sera (81.6%) showed reactivity against the p200 protein and/or lam γ 1. Of these 115 sera, 77 (54.6%) reacted against both the p200 protein and lam γ 1; 12 (8.5%) and 13 (9%) had AABs exclusively against lam γ 1 and p200, respectively; 9 revealed additional reactivity against lam332; and 4 revealed additional reactivity against Col7 (Fig 2).

When additional information such as semi-quantitative evaluation of AAB reactivity, clinical information, and direct immunofluorescence results were included, 3 of the 4 sera with dual reactivity against both Col7 and lam γ 1 were classified as EBA and 1 was classified as anti-p200/lam γ 1 pemphigoid. Of the 9 sera with reactivity against both lam332 and lam γ 1/p200, 1 was diagnosed as anti-lam332 MMP and 8 were