

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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L'ORÉAL USA, INC.  
Petitioner,

v.

UNIVERSITY OF MASSACHUSETTS  
Patent Owner.

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Case IPR2018-00779  
Patent 6,645,513 B1

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Before CHRISTOPHER G. PAULRAJ, ROBERT A. POLLOCK, and  
DAVID COTTA, *Administrative Patent Judges*.

COTTA, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
35 U.S.C. § 314(a)

## I. INTRODUCTION

L'Oréal USA, Inc. ("Petitioner" or "L'Oréal") filed a petition requesting an *inter partes* review of claims 1–7 and 9 of U.S. Patent No. 6,645,513 B2 (Ex. 1002, "the '513 patent"). Paper 2 ("Pet."). The University of Massachusetts ("Patent Owner" or "UMass") filed a Preliminary Response to the Petition. Paper 8 (Prelim. Resp.).

Institution of an *inter partes* review is authorized by statute when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314; *see* 37 C.F.R. §§ 42.4, 42.108. Upon considering the Petition, the Preliminary Response, and the cited evidence, we conclude that Petitioner has not satisfied its burden under 35 U.S.C. § 314(a) to show that there is a reasonable likelihood that it would prevail with respect to at least one of the challenged claims.

### A. *Related Proceedings*

Petitioner and Patent Owner identify the following district court proceeding as relating to the '513 patent: *University of Massachusetts Medical School and Carmel Laboratories, LLC v. L'Oréal S.A. and L'Oréal USA, Inc.*, No. 1:17-cv-00868 (D. Del.). Pet. 3–4; Paper 5, 2. Petitioner and Patent Owner identify the following *inter partes* review proceeding as related to the '513 patent: IPR2018-00778, which challenges the patentability of U.S. Patent No. 6,423,327 ("the '327 patent"). *Id.* The '327 patent is the parent of the '513 patent. *Id.*

*B. The '513 Patent (Ex. 1002)*

The '513 patent issued Nov. 11, 2003, identifying James G. Dobson, Jr. and Michael F. Ethier as co-inventors. Ex. 1002. The patent discloses “methods and compositions for enhancing the condition of skin.” *Id.* at 1:45–46.

The '513 patent teaches that “[s]kin includes a surface layer, known as the epidermis, and a deeper connective tissue layer, known as the dermis.” *Id.* at 1:25–26. “The dermis is composed of a variety of cell types, including fibroblasts.” *Id.* at 1:29–30. “As skin ages, or is exposed to UV light and other environmental insults, changes in the underlying dermis can lead to the functional and morphological changes associated with damaged skin.” *Id.* at 1:32–36. According to the '513 patent, “[d]ecreases in the abundance and function of products of the fibroblasts, which include collagen and proteoglycans, are believed to play major roles in wrinkled and damaged skin.” *Id.* at 1:36–39.

The '513 patent discloses that the inventors “discovered that adenosine stimulates DNA synthesis, increases protein synthesis, and increases cell size in cultures of human skin fibroblasts.” *Id.* at 1:42–44. Based on this discovery, the inventors provide methods for “enhancing the condition of non-diseased skin” which comprise “topically administering a therapeutically effective amount of adenosine or an adenosine analog to a region of non-diseased skin of the mammal containing dermal cell.” *Id.* at 1:45–65. The methods require that “[t]he adenosine is added so that it does not cause proliferation of the dermal cell.” *Id.* at 64–65. “The therapeutically effective amount of adenosine used in [these] methods is

preferably  $10^{-3}$  M to  $10^{-7}$  M, more preferably  $10^{-3}$  M to  $10^{-6}$  M, and most preferably about  $10^{-4}$  M.” *Id.* at 2:20–24.

*C. Challenged Claims*

Petitioner challenges claims 1–7 and 9 of the ’513 patent. Claim 1, the only independent claim, is reproduced below:

1. A method for enhancing the condition of unbroken skin of a mammal by reducing one or more of wrinkling, roughness, dryness, or laxity of the skin, without increasing dermal cell proliferation, the method comprising topically applying to the skin a composition comprising a concentration of adenosine in an amount effective to enhance the condition of the skin without increasing dermal cell proliferation, wherein the adenosine concentration applied to the dermal cells is  $10^{-3}$  M to  $10^{-7}$  M.

Ex. 1001, 10:17–27.

*D. The Asserted Grounds of Unpatentability*

Petitioner challenges the patentability of claims 1–7 and 9 of the ’513 patent on the following grounds (Pet. 6):

Ground	References	Basis	Claims Challenged
1	JP ’153 <sup>1</sup>	§ 102(b)	1–7, and 9
2	JP ’153	§ 103(a)	4
3	JP ’153 and DE ’107 <sup>2</sup>	§ 103(a)	1–7 and 9

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<sup>1</sup> Murayama, JP H9-157153 A, published June 17, 1997 (“JP ’153”). JP ’153 was originally published in Japanese. Ex, 1005. All citations herein are to Exhibit 1006, the English translation of JP ’153 provided by the Petitioner.

<sup>2</sup> Schönrock et al., DE 195 45 107 A1, published June 5, 1997 (“DE ’107”). DE ’107 was originally published in German. Ex. 1003. All citations herein are to Exhibit 1004, the English translation of DE ’107 provided by the Petitioner.

Petitioner submits the Declarations of Dr. R. Randall Wickett (Ex. 1010) and Dr. S. Jamal Mustafa (Ex. 1011) in support of institution of *inter partes* review.

## II. ANALYSIS

### A. *Person of Ordinary Skill in the Art*

Factual indicators of the level of ordinary skill in the art include “the various prior art approaches employed, the types of problems encountered in the art, the rapidity with which innovations are made, the sophistication of the technology involved, and the educational background of those actively working in the field.” *Jacobson Bros., Inc. v. U.S.*, 512 F.2d 1065, 1071 (Ct. Cl. 1975); *see also Orthopedic Equip. Co., Inc. v. U.S.*, 702 F.2d 1005, 1011 (Fed. Cir. 1983) (quoting with approval *Jacobson Bros.*).

Petitioner contends that the person of ordinary skill “would have a Bachelor[‘s] degree in Biochemistry or Chemistry with some academic exposure to, or industry courses or research in, topical delivery of drugs or cosmetic ingredients.” Pet. 13. At this stage in the proceeding, Patent Owner does not challenge Petitioner’s definition. Accordingly, for purposes of this Decision, we accept Petitioner’s definition, which is supported by Dr. Wickett’s declaration (Ex. 1010, ¶ 28) and is consistent with the level of skill reflected in the asserted prior art references. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art itself can reflect the appropriate level of ordinary skill in the art).

Moreover, we have reviewed the credentials for Drs. Wickett and Mustafa (Exs. 1010 and 1011) and, at this stage in the proceeding, we consider Drs. Wickett and Mustafa to be qualified to provide opinions on the

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