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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* FRANK MARTIN PHILLIPS

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Appeal 2011-002743  
Application 10/946,299  
Technology Center 1600

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Before ERIC GRIMES, LORA M. GREEN, and ULRIKE W. JENKS,  
*Administrative Patent Judges.*

GRIMES, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a method of treating an intervertebral disc, which have been rejected for anticipation and obviousness. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

The Specification discloses a method of treating a damaged intervertebral disc in which “[l]ive, articular chondrocyte cells are harvested from a non-critical location of a patient, cultured, and transplanted while still viable into an affected intervertebral disc” (Spec. 3, ¶ 10).

Claims 1-7 are on appeal. Claim 1 is representative and reads as follows:

1. A method of treating a damaged intervertebral disc of a patient, comprising:
  - identifying a location of a plurality of non-critical articular chondrocyte cells within the patient;
  - harvesting a portion of the plurality of non-critical articular chondrocyte cells; and
  - transplanting the portion of the plurality of non-critical articular chondrocyte cells that are isolated and absent their extra-cellular matrix into the damaged intervertebral disc.

I.

*Issue*

The Examiner has rejected claims 1 and 2 under 35 U.S.C. § 102(a) as anticipated by Rahmat<sup>1</sup> (Answer 4). The Examiner finds that claim 1 encompasses Rahmat's method of harvesting costal cartilage, culturing autologous chondrocytes, and injecting them into the discs of sheep, because the Specification states that articular chondrocyte cells can be harvested from the "costal area" (*id.* at 4-5).

Appellant contends that "'articular' implies a mobile joint. . . . Costal cartilage is non-articular." (Appeal Br. 7.) Appellant contends that, although the Specification uses "[t]he term 'costal area' . . . as an example of non-critical area that the articular chondrocyte cells may be harvested from[,] . . . the term 'costal area' is simply defining an area to look for 'non-critical articular chondrocyte cells,' and not defining a type of cell or that costal cartilage is articular" (Reply Br. 8).

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<sup>1</sup> Rahmat et al., *Autologous Chondrocyte Implantation in an Ovine Model of Disc Degeneration*, 86-B Issued Supp. 1 J. BONE JOINT SURG. 88 (2004).

The issue with respect to this rejection is: Does a preponderance of the evidence of record support the Examiner's conclusion that a person of ordinary skill in the art would interpret "non-critical articular chondrocyte cells" to encompass cells derived from costal cartilage?

*Findings of Fact*

1. Rahmat discloses a study testing whether "transplantation of autologous chondrocytes prevents degeneration of the intervertebral disc following outer annular injury in an ovine model" (Rahmat 88, left col.).

2. Rahmat discloses that incisions were made in the discs of sheep and "[c]ostal cartilage was harvested from the left twelfth rib of all animals. Tissue was cultured." (*Id.*)

3. Rahmat discloses that "[s]ix weeks later autologous cultured chondrocytes were injected into the lower two alternate discs of all animals" (*id.*).

4. Rahmat states that its results "show[ ] that cultured autologous chondrocytes can remain viable long term in vivo. These preliminary results suggest that these transplanted chondrocytes have the ability to retard and possibly prevent disc degeneration." (*Id.* at 88, middle col.)

5. The Specification states that

[u]nlike known approaches that require autologous nucleus pulposus chondrocyte like cells obtained by aspiration or biopsy of discs of a patient, articular chondrocyte[ ] cells may be harvested from non-critical areas of a patient. Such non-critical areas may include costal area, knees, or talus area. Guidelines for tissue procurement including surgical technique of removal are well described in the literature.

(Spec. 4, ¶ 15.)

*Principles of Law*

“[D]uring examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification.” *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000).

[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant. After evidence or argument is submitted by the applicant in response, patentability is determined on the totality of the record, by a preponderance of evidence with due consideration to persuasiveness of argument.

*In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

*Analysis*

We conclude that the Examiner has met the initial burden of presenting a *prima facie* case that claim 1 is unpatentable based on Rahmat. Rahmat describes a method in which a location of chondrocyte cells is identified (costal cartilage), a plurality of chondrocyte cells is harvested (in the form of costal cartilage), and a portion of cultured (i.e., isolated) chondrocyte cells is transplanted into a damaged intervertebral disc.

Appellant argues, however, that the autologous chondrocyte cells described by Rahmat are not “non-critical articular chondrocyte cells,” as required by claim 1, because Rahmat’s cells are derived from costal cartilage, while articular chondrocytes must come from articular cartilage, which is only found in mobile joints (Appeal Br. 7).

This argument is not persuasive. It is true that, “in proceedings before the PTO, . . . claim language should be read in light of the specification as it

would be interpreted by one of ordinary skill in the art.” *In re Sneed*, 710 F.2d 1544, 1548 (Fed. Cir. 1983). Thus, it is possible that a person of ordinary skill in the art would interpret the term “articular chondrocytes” to require cells derived from articular cartilage rather than costal cartilage.

However, Appellant has provided no extrinsic evidence of how the Specification would be interpreted by one of ordinary skill in the art. Our interpretation of the Specification therefore must be based on the words of the Specification itself: “articular chondrocyte[ ] cells may be harvested from non-critical areas of a patient. Such non-critical areas may include costal area, knees, or talus area.” (FF 5.)

We must presume that the Specification uses words according to their ordinary meaning and that it was drafted according to the ordinary rules of English grammar. In the context of the Specification’s usage, “such” means “of the character, quality, or extent previously indicated or implied.”<sup>2</sup> Thus, the Specification’s statement that “articular chondrocyte[ ] cells may be harvested from non-critical areas of a patient,” immediately followed by its statement that “[s]uch non-critical areas may include costal area,” in its ordinary meaning would be understood to mean that non-critical areas from which articular chondrocyte cells may be harvested include the costal area.

Appellant has not pointed to persuasive evidence to support his argument that the Specification’s use of “the term ‘costal area’ is simply defining an area to look for ‘non-critical articular chondrocyte cells,’” (Reply Br. 8), rather than stating that such cells can actually be found in

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<sup>2</sup> See [www.merriam-webster.com/dictionary/such](http://www.merriam-webster.com/dictionary/such), accessed Feb. 8, 2013.

costal cartilage. Appellant has not, for example, pointed to any source of articulating cartilage that is found in the costal area.

In summary, Appellant has not provided persuasive evidence to show that a person of ordinary skill in the art would interpret the Specification's paragraph 15 to have anything other than its ordinary meaning, which is that non-critical articular chondrocyte cells can be harvested from the costal area. Nor has Appellant provided evidence that a person of ordinary skill in the art would have interpreted the "costal area" to exclude costal cartilage.

### *Conclusion of Law*

Based on the evidence of record, we conclude that a preponderance of the evidence supports the Examiner's conclusion that a person of ordinary skill in the art would interpret "non-critical articular chondrocyte cells" to encompass cells derived from costal cartilage.

## II.

The Examiner has rejected claims 3-7 under 35 U.S.C. § 103(a) as obvious based on Rahmat in view of either Luyten<sup>3</sup> (claims 3-5), Ganey<sup>4</sup> (claim 6) or Peterson<sup>5</sup> (claim 7) (Answer 5-8). The Examiner finds that Rahmat discloses the method of claim 1 and concludes that the other cited references would have made obvious the additional limitations of dependent

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<sup>3</sup> Luyten et al., US 2002/0147329 A1, Oct. 10, 2002.

<sup>4</sup> Ganey et al., *Disc Chondrocyte Transplantation in a Canine Model: A Treatment for Degenerated or Damaged Intervertebral Disc*, 28 SPINE 2609-2620 (2003).

<sup>5</sup> Peterson, *Technique of Autologous Chondrocyte Transplantation*, 1 TECHNIQUES IN KNEE SURGERY 2-12 (2002).

claims 3-7 (*id.*). We adopt the Examiner's findings regarding the scope and content of the prior art, and the Examiner's conclusion that the dependent claims would have been obvious based on the cited references.

Appellant argues that none of Luyten, Ganey, or Peterson disclose the limitations that are missing from Rahmat (Appeal Br. 8-9). These arguments are not persuasive because, for the reasons discussed above, we conclude that claim 1 reads on the method disclosed by Rahmat.

#### SUMMARY

We affirm all of the rejections of record.

#### TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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