Supreme Court of California,
In Bank.

John MOORE, Plaintiff and Appellant,
v.
The REGENTS OF THE UNIVERSITY OF CALIFORNIA et al., Defendants and Respondents.

No. S006987.

July 9, 1990.
Rehearing Denied Aug. 30, 1990.

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I. INTRODUCTION

PANELLI, Justice.

We granted review in this case to determine whether plaintiff has stated a cause of action against his physician and other defendants for using his cells ***125** in potentially lucrative medical research without his permission. Plaintiff alleges that his physician failed to disclose preexisting research and economic interests in the cells before obtaining consent to the medical procedures by which they were extracted. The superior court sustained all defendants' demurrers to the third amended complaint, and the Court of Appeal reversed. We hold that the complaint states a cause of action for breach of the physician's disclosure obligations, but not for conversion.

II. FACTS

Our only task in reviewing a ruling on a demurrer is to determine whether the complaint states a cause of action. Accordingly, we assume that the complaint's properly pleaded material allegations are true and give the complaint a reasonable interpretation by reading it as a whole and all its parts in their context. (*Phillips v. Desert Hospital Dist.* (1989) 49 Cal.3d 699, 702, 263 Cal.Rptr. 119, 780

P.2d 349; *Blank v. Kirwan* (1985) 39 Cal.3d 311, 318, 216 Cal.Rptr. 718, 703 P.2d 58; *Tameny v. Atlantic Richfield Co.* (1980) 27 Cal.3d 167, 170, 164 Cal.Rptr. 839, 610 P.2d 1330.) We do not, however, assume the truth of contentions, deductions, or conclusions of fact or law. (*Daar v. Yellow Cab Co.* (1967) 67 Cal.2d 695, 713, 63 Cal.Rptr. 724, 433 P.2d 732.) For these purposes we briefly summarize the pertinent factual allegations of the 50-page complaint .

The plaintiff is John Moore (Moore), who underwent treatment for hairy-cell leukemia at the Medical Center of the University of California at Los Angeles (UCLA Medical Center). The five defendants are: (1) Dr. David W. Golde (Golde), a physician who attended Moore at UCLA Medical Center; (2) the Regents of the University of California (Regents), who own and operate the university; (3) Shirley G. Quan, a researcher employed by the Regents; (4) Genetics Institute, Inc. (Genetics Institute); and (5) Sandoz Pharmaceuticals Corporation and related entities (collectively Sandoz).

Moore first visited UCLA Medical Center on October 5, 1976, shortly after he learned that he had hairy-cell leukemia. After hospitalizing Moore and "withdr [awing] extensive amounts of blood, bone marrow aspirate, and other bodily substances," Golde [FN1] confirmed that diagnosis. At this time all defendants, including Golde, were aware that "certain blood products and blood components were of great value in a number of commercial and scientific efforts" and that access to a patient whose blood contained these substances would provide "competitive, commercial, and scientific advantages."

FN1. The complaint often uses the plural "defendants" instead of referring to particular defendants. This practice sometimes results in obvious errors, such as the allegation that "*defendants* saw and examined [Moore] on or about October 5, 1976 and then hospitalized [him]...." (Emphasis added.) Genetics Institute and Sandoz, for example, are not physicians, and the complaint specifically alleges that neither entity became involved until years later. To avoid absurdity in summarizing the complaint's allegations, we have relied on the context in attempting to discern which defendants Moore actually means. (See, e.g., *Blank v. Kirwan*, supra, 39 Cal.3d at p. 318, 216 Cal.Rptr. 718, 703 P.2d 58 ["we give the complaint a reasonable interpretation, reading it as a whole and its parts in their context"].)

On October 8, 1976, Golde recommended that Moore's spleen be removed. Golde informed Moore "that he had reason to fear for his life, and that the proposed splenectomy operation ... was necessary to slow down the progress of his disease." Based upon Golde's representations, Moore signed a written consent form authorizing the splenectomy.

Before the operation, Golde and Quan "formed the intent and made arrangements to obtain portions of [Moore's] spleen following its removal" and to take them to a separate research unit. Golde gave written instructions to this effect on October 18 and 19, 1976. These research activities "were not intended to have ... any relation to [Moore's] medical ... care." However, neither Golde nor Quan informed Moore of their plans to conduct this research or requested his permission. Surgeons at UCLA Medical Center, whom the complaint does not name as defendants, removed Moore's spleen on October 20, 1976.

Moore returned to the UCLA Medical Center several times between November 1976 and September 1983. He did so at Golde's direction and based upon representations

"that such visits were necessary and required for his health and well-being, and based upon the trust inherent in and by virtue of the physician-patient relationship...." On each of these visits Golde withdrew additional samples of "blood, blood serum, skin, bone marrow aspirate, and sperm." On each occasion Moore travelled to the UCLA Medical Center from his home in Seattle because he had been told that the procedures were to be performed only there and only under Golde's direction.

"In fact, [however,] throughout the period of time that [Moore] was under [Golde's] care and treatment, ... the defendants were actively involved in a number of activities which they concealed from [Moore]...." Specifically, defendants were conducting research on Moore's cells and planned to "benefit financially and competitively ... [by exploiting the cells] and [their] exclusive access to [the cells] by virtue of [Golde's] on-going physician- patient relationship...."

Sometime before August 1979, Golde established a cell line from Moore's T-lymphocytes. [FN2] On January 30, 1981, the Regents applied for a patent on the cell line, listing Golde and Quan as inventors. "[B]y virtue of an established policy ..., [the] Regents, Golde, and Quan would share in any royalties or profits ... arising out of [the] patent." The patent issued on March 20, 1984, naming Golde and Quan as the inventors of the cell line and the Regents as the assignee of the patent. (U.S. Patent No. 4,438,032 (Mar. 20, 1984).)

FN2. A T-lymphocyte is a type of white blood cell. T-lymphocytes produce lymphokines, or proteins that regulate the immune system. Some lymphokines have potential therapeutic value. If the genetic material responsible for producing a particular lymphokine can be identified, it can sometimes be used to manufacture large quantities of the lymphokine through the techniques of recombinant DNA. (See generally U.S. Congress, Office of Technology Assessment, New Developments in Biotechnology: Ownership of Human Tissues and Cells (1987) at pp. 31-46 (hereafter OTA Report); see also fn. 29, post.)
While the genetic code for lymphokines does not vary from individual to individual, it can nevertheless be quite difficult to locate the gene responsible for a particular lymphokine. Because T-lymphocytes produce many different lymphokines, the relevant gene is often like a needle in a haystack. (OTA Rep., *supra,* p. 42.) Moore's T-lymphocytes were interesting to the defendants because they overproduced certain lymphokines, thus making the corresponding genetic material easier to identify. (In published research papers, defendants and other researchers have shown that the overproduction was caused by a virus, and that normal T-lymphocytes infected by the virus will also overproduce. See footnote 30, post.)
Cells taken directly from the body (primary cells) are not very useful for these purposes. Primary cells typically reproduce a few times and then die. One can, however, sometimes continue to use cells for an extended period of time by developing them into a "cell line," a culture capable of reproducing indefinitely. This is not, however, always an easy task. "Long-term growth of human cells and tissues is difficult, often an art," and the probability of succeeding with any given cell sample is low, except for a few types of cells not involved in this case. (OTA Rep., supra, at p. 5.)

The Regent's patent also covers various methods for using the cell line to produce lymphokines. [FN3] Moore admits in his complaint that "the true clinical potential of each of the lymphokines ... [is] difficult to predict, [but] ... competing commercial firms in these relevant fields have published reports in biotechnology

industry periodicals predicting a potential market of approximately $3.01 Billion Dollars by the year 1990 for a whole range of [such lymphokines]...."

FN3. See footnote 2, ante.

With the Regents' assistance, Golde negotiated agreements for commercial development of the cell line and products to be derived from it. Under an agreement with Genetics Institute, Golde "became a paid consultant" and "acquired the rights to 75,000 shares of common stock." Genetics Institute also agreed to pay Golde and the Regents "at least $330,000 over three years, including a pro-rata share of [Golde's] salary and fringe benefits, in exchange for ... exclusive access to the materials and research performed" on the cell line and products derived from it. On June 4, 1982, Sandoz "was added to the agreement," and compensation payable to Golde and the Regents was increased by $110,000. "[T]hroughout this period, ... Quan spent as much as 70 [percent] of her time working for [the] Regents on research" related to the cell line.

Based upon these allegations, Moore attempted to state 13 causes of action. [FN4] Each defendant demurred to each purported cause of action. The superior court, however, expressly considered the validity of only the first cause of action, conversion. [FN5] Reasoning that the remaining causes of action incorporated the earlier, defective allegations, the superior court sustained a general demurrer to the entire complaint with leave to amend. In a subsequent proceeding, the superior court sustained Genetics Institute's and Sandoz's demurrers without leave to amend on the grounds that Moore had not stated a cause of action for conversion and that the complaint's allegations about the entities' secondary liability were too conclusory. In accordance with its earlier ruling that the defective allegations about conversion rendered the entire complaint insufficient, the superior court took the remaining demurrers off its calendar.

FN4. (1) "Conversion"; (2) "lack of informed consent"; (3) "breach of fiduciary duty"; (4) "fraud and deceit"; (5) "unjust enrichment"; (6) "quasi-contract"; (7) "bad faith breach of the implied covenant of good faith and fair dealing"; (8) "intentional infliction of emotional distress"; (9) "negligent misrepresentation"; (10) "intentional interference with prospective advantageous economic relationships"; (11) "slander of title"; (12) "accounting"; and (13) "declaratory relief."

FN5. The superior court did not reach (a) any defendant's general demurrer to the causes of action numbered 2 through 13; (b) any defendant's demurrer on the ground of the statute of limitations; (c) Golde's, Quan's, and the Regents' demurrers on the grounds of governmental immunity; or (d) Genetics Institute's and Sandoz's numerous demurrers for uncertainty.

With one justice dissenting, the Court of Appeal reversed, holding that the complaint did state a cause of action for conversion. The Court of Appeal agreed with the superior court that the allegations against Genetics Institute and Sandoz were insufficient, but directed the superior court to give Moore leave to amend. The Court of Appeal also directed the superior court to decide "the remaining causes of action, which [had] never been expressly ruled upon."

III. DISCUSSION

A. Breach of Fiduciary Duty and Lack of Informed Consent

Moore repeatedly alleges that Golde failed to disclose the extent of his research and economic interests in Moore's cells [FN6] before obtaining consent to the medical procedures by which the cells were extracted. These allegations, in our view, state a cause of action against Golde for invading a legally protected interest of his patient. This cause of action can properly be characterized either as the breach of a fiduciary duty to disclose facts material to the patient's consent or, alternatively, as the performance of medical procedures without first having obtained the patient's informed consent.

FN6. In this opinion we use the inclusive term "cells" to describe all of the cells taken from Moore's body, including blood cells, bone marrow, spleen, etc.

[1] Our analysis begins with three well-established principles. First, "a person of adult years and in sound mind has the right, in the exercise of control over his own body, to determine whether or not to submit to lawful medical treatment." (*Cobbs v. Grant* (1972) 8 Cal.3d 229, 242 [104 Cal.Rptr. 505, 502 P.2d 1]; cf. *Schloendorff v. Society of New York Hospital* (1914) 211 N.Y. 125 [105 N.E. 92, 93].) Second, "the patient's consent to treatment, to be effective, must be an informed consent." (*Cobbs v. Grant*, supra, 8 Cal.3d at p. 242, 104 Cal.Rptr. 505, 502 P.2d 1.) Third, in soliciting the patient's consent, a physician has a fiduciary duty to disclose all information material to the patient's decision. (Id., at pp. 242, 246, 104 Cal.Rptr. 505, 502 P.2d 1; see also *Stafford v. Schultz* (1954) 42 Cal.2d 767, 777, 270 P.2d 1; *Nelson v. Gaunt* (1981) 125 Cal.App.3d 623, 635, 178 Cal.Rptr. 167; *Berkey v. Anderson* (1969) 1 Cal.App.3d 790, 805, 82 Cal.Rptr. 67; *Bowman v. McPheeters* (1947) 77 Cal.App.2d 795, 800, 176 P.2d 745.)

[2] These principles lead to the following conclusions: (1) a physician must disclose personal interests unrelated to the patient's health, whether research or economic, that may affect the physician's professional judgment; and (2) a physician's failure to disclose such interests may give rise to a cause of action for performing medical procedures without informed consent or breach of fiduciary duty.

To be sure, questions about the validity of a patient's consent to a procedure typically arise when the patient alleges that the physician failed to disclose medical risks, as in malpractice cases, and not when the patient alleges that the physician had a personal interest, as in this case. The concept of informed consent, however, is broad enough to encompass the latter. "The scope of the physician's communication to the patient ... must be measured by the patient's need, and that need is whatever information is material to the decision." (*Cobbs v. Grant*, supra, 8 Cal.3d at p. 245, 104 Cal.Rptr. 505, 502 P.2d 1.)

Indeed, the law already recognizes that a reasonable patient would want to know whether a physician has an economic interest that might affect the physician's professional judgment. As the Court of Appeal has said, "[c]ertainly a sick patient deserves to be free of any reasonable suspicion that his doctor's judgment is influenced by a profit motive." (*Magan Medical Clinic v. Cal. State Bd. of Medical Examiners* (1967) 249 Cal.App.2d 124, 132, 57 Cal.Rptr. 256.) The desire to protect patients from possible conflicts of interest has also motivated legislative enactments. Among these is Business and Professions Code section 654.2. Under that

section, a physician may not charge a patient on behalf of, or refer a patient to, any organization in which the physician has a "significant beneficial interest, unless [the physician] first discloses in writing to the patient, that there is such an interest and advises the patient that the patient may choose any organization for the purposes of obtaining the services ordered or requested by [the physician]." (Bus. & Prof.Code, § 654.2, subd. (a). See also Bus. & Prof.Code, § 654.1 [referrals to clinical laboratories].) Similarly, under Health and Safety Code section 24173, a physician who plans to conduct a medical experiment on a patient must, among other things, inform the patient of "[t]he name of the sponsor or funding source, if any, ... and the organization, if any, under whose general aegis the experiment is being conducted." [FN7] (Health & Saf.Code, § 24173, subd. (c)(9).)

FN7. Health and Safety Code section 24173 is part of the Protection of Human Subjects in Medical Experimentation Act. (See Health & Saf.Code, § 24170 et seq.) The act provides maximum damages of $1,000 for negligent violations, $5,000 for willful violations, and $10,000 for willful violations which "expose[ ] a subject to a known substantial risk of serious injury...." (Health & Saf.Code, § 24176.) Because the lower courts did not reach the issue, we need not determine whether the alleged research on Moore's cells would amount to a violation.

It is important to note that no law prohibits a physician from conducting research in the same area in which he practices. Progress in medicine often depends upon physicians, such as those practicing at the university hospital where Moore received treatment, who conduct research while caring for their patients.

Yet a physician who treats a patient in whom he also has a research interest has potentially conflicting loyalties. This is because medical treatment decisions are made on the basis of proportionality--weighing the benefits *to the patient* against the risks *to the patient.* As another court has said, "the determination as to whether the burdens of treatment are worth enduring for any individual patient depends upon the facts unique in each case," and "the patient's interests and desires are the key ingredients of the decision-making process." (*Barber v. Superior Court* (1983) 147 Cal.App.3d 1006, 1018-1019, 195 Cal.Rptr. 484.) A physician who adds his own research interests to this balance may be tempted to order a scientifically useful procedure or test that offers marginal, or no, benefits to the patient. [FN8] The possibility that an interest extraneous to the patient's health has affected the physician's judgment is something that a reasonable patient would want to know in deciding whether to consent to a proposed course of treatment. It is material to the patient's decision and, thus, a prerequisite to informed consent. (See *Cobbs v. Grant*, supra, 8 Cal.3d at p. 245, 104 Cal.Rptr. 505, 502 P.2d 1.)

FN8. This is, in fact, precisely what Moore has alleged with respect to the postoperative withdrawals of blood and other substances.

Golde argues that the scientific use of cells that have already been removed cannot possibly affect the patient's medical interests. The argument is correct in one instance but not in another. If a physician has no plans to conduct research on a patient's cells at the time he recommends the medical procedure by which they are taken, then the patient's medical interests have not been impaired. In that

instance the argument is correct. On the other hand, a physician who does have a preexisting research interest might, consciously or unconsciously, take that into consideration in recommending the procedure. In that instance the argument is incorrect: the physician's extraneous motivation may affect his judgment and is, thus, material to the patient's consent.

We acknowledge that there is a competing consideration. To require disclosure of research and economic interests may corrupt the patient's own judgment by distracting him from the requirements of his health. [FN9] But California law does not grant physicians unlimited discretion to decide what to disclose. Instead, "it is the prerogative of the patient, not the physician, to determine for himself the direction in which he believes his interests lie." (*Cobbs v. Grant*, supra, 8 Cal.3d at p. 242, 104 Cal.Rptr. 505, 502 P.2d 1.) "Unlimited discretion in the physician is irreconcilable with the basic right of the patient to make the ultimate informed decision...." (Id., at p. 243, 104 Cal.Rptr. 505, 502 P.2d 1.)

FN9. A related problem may arise with excessive disclosure of the risks of medical treatment. As we recognized in *Cobbs v. Grant*, supra, disclosure of risks in some cases can "so seriously upset the patient" as to affect the patient's ability to weigh "dispassionately ... the risks of refusing to undergo the recommended treatment." (*Cobbs v. Grant*, supra, 8 Cal.3d at p. 246, 104 Cal.Rptr. 505, 502 P.2d 1.) Under those circumstances, "[a] disclosure need not be made beyond that required within the medical community...." (Ibid.)
However, we made that statement in the context of a physician-patient relationship unaffected by possible conflicts of interest. *Cobbs v. Grant*, supra, permits a physician acting solely in the patient's best interests to consider whether excessive disclosure will harm the patient. Disclosure of possible conflicts of interest raises different considerations. To illustrate, a physician who orders a procedure partly to further a research interest unrelated to the patient's health should not be able to avoid disclosure with the argument that the patient might object to participation in research. In some cases, however, a physician's research interest might play such an insignificant role in the decision to recommend a medically indicated procedure that disclosure should not be required because the interest is not material. By analogy, we have not required disclosure of "remote" risks (*Cobbs v. Grant*, supra, 8 Cal.3d at p. 245, 104 Cal.Rptr. 505, 502 P.2d 1) that "are not central to the decision to administer or reject [a] procedure." (*Truman v. Thomas* (1980) 27 Cal.3d 285, 293, 165 Cal.Rptr. 308, 611 P.2d 902.)

Accordingly, we hold that a physician who is seeking a patient's consent for a medical procedure must, in order to satisfy his fiduciary duty [FN10] and to obtain the patient's informed consent, disclose personal interests unrelated to the patient's health, whether research or economic, that may affect his medical judgment.

FN10. In some respects the term "fiduciary" is too broad. In this context the term "fiduciary" signifies only that a physician must disclose all facts material to the patient's decision. A physician is not the patient's financial adviser. As we have already discussed, the reason why a physician must disclose possible conflicts is not because he has a duty to protect his patient's financial interests, but because certain personal interests may affect professional judgment.

1. Dr. Golde

We turn now to the allegations of Moore's third amended complaint to determine whether he has stated such a cause of action. We first discuss the adequacy of Moore's allegations against Golde, based upon the physician's disclosures prior to the splenectomy.

[3] Moore alleges that, prior to the surgical removal of his spleen, Golde "formed the intent and made arrangements to obtain portions of his spleen following its removal from [Moore] in connection with [his] desire to have regular and continuous access to, and possession of, [Moore's] unique and rare Blood and Bodily Substances." Moore was never informed prior to the splenectomy of Golde's "prior formed intent" to obtain a portion of his spleen. In our view, these allegations adequately show that Golde had an undisclosed research interest in Moore's cells at the time he sought Moore's consent to the splenectomy. Accordingly, Moore has stated a cause of action for breach of fiduciary duty, or lack of informed consent, based upon the disclosures accompanying that medical procedure.

[4] We next discuss the adequacy of Golde's alleged disclosures regarding the postoperative takings of blood and other samples. In this context, Moore alleges that Golde "expressly, affirmatively and impliedly represented ... that these withdrawals of his Blood and Bodily Substances were necessary and required for his health and well-being." However, Moore also alleges that Golde actively concealed his economic interest in Moore's cells during this time period. "[D]uring each of these visits ..., and even when [Moore] inquired as to whether there was any possible or potential commercial or financial value or significance of his Blood and Bodily Substances, or whether the defendants had discovered anything ... which was or might be ... related to any scientific activity resulting in commercial or financial benefits ..., the defendants repeatedly and affirmatively represented to [Moore] that there was no commercial or financial value to his Blood and Bodily Substances ... and in fact actively discouraged such inquiries."

Moore admits in his complaint that defendants disclosed they "were engaged in strictly academic and purely scientific medical research...." However, Golde's representation that he had no financial interest in this research became false, based upon the allegations, at least by May 1979, when he "began to investigate and initiate the procedures ... for [obtaining] a patent" on the cell line developed from Moore's cells.

In these allegations, Moore plainly asserts that Golde concealed an economic interest in the postoperative procedures. Therefore, applying the principles already discussed, the allegations state a cause of action for breach of fiduciary duty or lack of informed consent.

We thus disagree with the superior court's ruling that Moore had not stated a cause of action because essential allegations were lacking. We discuss each such allegation. First, in the superior court's view, Moore needed but failed to allege that defendants knew his cells had potential commercial value *on October 5, 1976* (the time blood tests were first performed at UCLA Medical Center) and had *at that time* already formed the intent to exploit the cells. We agree with the superior court that the absence of such allegations precludes Moore from stating a cause of action based upon the procedures undertaken on October 5, 1976. But, as already discussed, Moore clearly alleges that Golde had developed a research interest in his cells by October 20, 1976, when the splenectomy was performed. Thus, Moore can

state a cause of action based upon Golde's alleged failure to disclose that interest before the splenectomy.

The superior court also held that the lack of essential allegations prevented Moore from stating a cause of action based on the splenectomy. According to the superior court, Moore failed to allege that the operation lacked a therapeutic purpose or that the procedure was totally unrelated to therapeutic purposes. In our view, however, neither allegation is essential. Even if the splenectomy had a therapeutic purpose, [FN11] it does not follow that Golde had no duty to disclose his additional research and economic interests. As we have already discussed, the existence of a motivation for a medical procedure unrelated to the patient's health is a potential conflict of interest and a fact material to the patient's decision.

FN11. The record shows that the splenectomy did have a therapeutic purpose. The Regents' patent application, which the superior court and the Court of Appeal both accepted as part of the record, shows that Moore had a grossly enlarged spleen and that its excision improved his condition.

2. The Remaining Defendants

The Regents, Quan, Genetics Institute, and Sandoz are not physicians. In contrast to Golde, none of these defendants stood in a fiduciary relationship with Moore or had the duty to obtain Moore's informed consent to medical procedures. If any of these defendants is to be liable for breach of fiduciary duty or performing medical procedures without informed consent, it can only be on account of Golde's acts and on the basis of a recognized theory of secondary liability, such as respondeat superior. The procedural posture of this case, however, makes it unnecessary for us to address the sufficiency of Moore's secondary-liability allegations.

As already mentioned, the superior court addressed only the purported cause of action for conversion. Because the superior court found that Moore had not stated such a cause of action, it had no occasion to address the sufficiency of Moore's allegation that the Regents and Quan were acting as Golde's "agent[s]" and "joint venturer[s]." [FN12] In a later proceeding, however, the superior court did find that the same allegations were too conclusory to state a cause of action against Genetics Institute and Sandoz.

FN12. Moore's secondary-liability allegations are egregious examples of generic boilerplate: "each of the defendants was the agent, joint venturer and employee of each of the other remaining defendants, and is jointly liable for the acts of every other defendant and in doing the things hereinafter alleged, each was acting within the course and scope of said agency, employment, partnership and joint venture with the advance knowledge, acquiescence or subsequent ratification of each and every remaining defendant, and that each defendant joined together with every other defendant ... had a fiduciary duty to the plaintiff, and each acted in concert with every other defendant in violating their [sic] duties to plaintiff."
Nowhere in the third amended complaint does Moore specifically allege that any defendant other than Golde knew that Moore had not received adequate disclosures.

The Court of Appeal did not hold, explicitly or implicitly, that Moore's secondary-

liability allegations were sufficient as against any defendant. The court did hold that Moore had stated a cause of action against the Regents and Quan. However, the court did not reach that conclusion on the basis of secondary liability. Instead, drawing no distinctions between the defendants, the court held simply that each defendant was primarily liable for conversion. [FN13] Because no court has yet addressed the Regents' and Quan's secondary liability and because the superior court will need to consider other issues on remand, there is no need to address these issues at this time. [FN14]

FN13. As discussed below, we reject the conclusion that Moore can state a cause of action for conversion against any defendant.

FN14. Thus, we express no opinion on whether Moore has stated, or can state, a cause of action against the Regents for Golde's alleged torts under the doctrine of respondeat superior.

With respect to Genetics Institute and Sandoz, the situation is slightly different. The Court of Appeal mentioned Moore's secondary-liability allegations against these defendants but expressed no opinion asto their sufficiency. Instead, as to these defendants the court merely reversed the superior court's order "for failure to grant leave to amend." Our affirmance of this part of the Court of Appeal's decision will leave Moore free to attempt, once again, to allege that Genetics Institute and Sandoz are secondarily liable for Golde's torts.

B. Conversion

Moore also attempts to characterize the invasion of his rights as a conversion--a tort that protects against interference with possessory and ownership interests in personal property. He theorizes that he continued to own his cells following their removal from his body, at least for the purpose of directing their use, and that he never consented to their use in potentially lucrative medical research. Thus, to complete Moore's argument, defendants' unauthorized use of his cells constitutes a conversion. As a result of the alleged conversion, Moore claims a proprietary interest in each of the products that any of the defendants might ever create from his cells or the patented cell line.

No court, however, has ever in a reported decision imposed conversion liability for the use of human cells in medical research. [FN15] While that fact does not end our inquiry, it raises a flag of caution. In effect, what Moore is asking us to do is to impose a tort duty on scientists to investigate the consensual pedigree of each human cell sample used in research. [FN16] To impose such a duty, which would affect medical research of importance to all of society, implicates policy concerns far removed from the traditional, two- party ownership disputes in which the law of conversion arose. [FN17] Invoking a tort theory originally used to determine whether the loser or the finder of a horse had the better title, Moore claims ownership of the results of socially important medical research, including the genetic code for chemicals that regulate the functions of every human being's immune system. [FN18]

FN15. The absence of such authority cannot simply be attributed to recent developments in technology. The first human tumor cell line, which still is widely used in research, was isolated in 1951. (OTA Rep., supra, at p. 34.)

FN16. Imposing liability for conversion is equivalent to the imposition of such a duty, since only through investigation would users of cells be able to avoid liability. " 'A tort, whether intentional or negligent, involves a violation of a *legal duty,* imposed by statute, contract or otherwise, owed by the defendant to the person injured. Without such a duty, any injury is "damnum absque injuria"--injury without wrong. [Citations.]' " *(Nally v. Grace Community Church* (1988) 47 Cal.3d 278, 292, 253 Cal.Rptr. 97, 763 P.2d 948, quoting 5 Witkin, Summary of Cal.Law (9th ed. 1988) Torts, § 6, p. 61, italics in original.)

FN17. Conversion arose out of the common law action of trover. "We probably do not have the earliest examples of its use, but they were almost certainly cases in which the finder of lost goods did not return them, but used them himself, or disposed of them to someone else.... By 1554 the allegations of the complaint had become more or less standardized: that the plaintiff was possessed of certain goods, that he casually lost them, that the defendant found them, and that the defendant did not return them, but instead 'converted them to his own use.' From that phrase in the pleading came the name of the tort." (Prosser & Keeton, Torts (5th ed. 1984) § 15, p. 89.)

FN18. Moore alleges, for example, that "genetic sequences ... are his tangible personal property...." We are not, however, bound by that conclusion of law. (*Daar v. Yellow Cab Co.*, supra, 67 Cal.2d at p. 713, 63 Cal.Rptr. 724, 433 P.2d 732.) Moreover, as already mentioned, the genetic code for lymphokines does not vary from individual to individual. (See fns. 2, ante, and 30, post.)

We have recognized that, when the proposed application of a very general theory of liability in a new context raises important policy concerns, it is especially important to face those concerns and address them openly. (Cf. *Nally v. Grace Community Church*, supra, 47 Cal.3d 278, 291-300, 253 Cal.Rptr. 97, 763 P.2d 948 [declining to expand negligence law to encompass theory of "clergyman malpractice"]; *Foley v. Interactive Data Corp.* (1988) 47 Cal.3d 654, 694- 700, 254 Cal.Rptr. 211, 765 P.2d 373 [declining to apply tort remedies for breach of the covenant of good faith in the employment context]; *Brown v. Superior Court* (1988) 44 Cal.3d 1049, 1061-1066, 245 Cal.Rptr. 412, 751 P.2d 470 [declining to apply strict products liability to pharmaceutical manufacturers].) Moreover, we should be hesitant to "impose [new tort duties] when to do so would involve complex policy decisions" *(Nally v. Grace Community Church*, supra, 47 Cal.3d at p. 299, 253 Cal.Rptr. 97, 763 P.2d 948), especially when such decisions are more appropriately the subject of legislative deliberation and resolution. (See *Foley v. Interactive Data Corp.*, supra, 47 Cal.3d at p. 694 & fn. 31, 254 Cal.Rptr. 211, 765 P.2d 373.) This certainly is not to say that the applicability of common law torts is limited to the historical or factual contexts of existing cases. But on occasions when we have opened or sanctioned new areas of tort liability, we "have noted that the 'wrongs and injuries involved were both comprehensible and assessable within the existing judicial framework.' " *(Nally v. Grace Community Church*, supra, 47 Cal.3d at p. 298, 253 Cal.Rptr. 97, 763 P.2d 948, quoting *Peter W. v. San Francisco Unified Sch. Dist.* (1976) 60 Cal.App.3d 814, 824, 131 Cal.Rptr. 854.)

Accordingly, we first consider whether the tort of conversion clearly gives Moore a cause of action under existing law. We do not believe it does. Because of the novelty of Moore's claim to own the biological materials at issue, to apply the

theory of conversion in this context would frankly have to be recognized as an extension of the theory. Therefore, we consider next whether it is advisable to extend the tort to this context.

1. Moore's Claim Under Existing Law

[5] "To establish a conversion, plaintiff must establish an actual interference with his *ownership* or *right of possession*.... Where plaintiff neither has title to the property alleged to have been converted, nor possession thereof, he cannot maintain an action for conversion." [FN19] (*Del E. Webb Corp. v. Structural Materials Co.* (1981) 123 Cal.App.3d 593, 610-611, 176 Cal.Rptr. 824, emphasis added. See also *General Motors A. Corp. v. Dallas* (1926) 198 Cal. 365, 370, 245 P. 184.)

FN19. While it ordinarily suffices to allege ownership generally (5 Witkin, Cal.Procedure (3d ed. 1985) Pleading, § 654, p. 103), it is well established that a complaint's contentions or conclusions of law do not bind us. (*Daar v. Yellow Cab Co.*, supra, 67 Cal.2d at p. 713, 63 Cal.Rptr. 724, 433 P.2d 732.) Moore's novel allegation that he "owns" the biological materials involved in this case is both a contention and a conclusion of law.

Since Moore clearly did not expect to retain possession of his cells following their removal, [FN20] to sue for their conversion he must have retained an ownership interest in them. But there are several reasons to doubt that he did retain any such interest. First, no reported judicial decision supports Moore's claim, either directly or by close analogy. Second, California statutory law drastically limits any continuing interest of a patient in excised cells. Third, the subject matters of the Regents' patent--the patented cell line and the products derived from it--cannot be Moore's property.

FN20. In his complaint, Moore does not seek possession of his cells or claim the right to possess them. This is consistent with Health and Safety Code section 7054.4, which provides that "human tissues ... following conclusion of scientific use shall be disposed of by interment, incineration, or any other method determined by the state department [of health services] to protect the public health and safety."

Neither the Court of Appeal's opinion, the parties' briefs, nor our research discloses a case holding that a person retains a sufficient interest in excised cells to support a cause of action for conversion. We do not find this surprising, since the laws governing such things as human tissues, [FN21] transplantable organs, [FN22] blood, [FN23] fetuses, [FN24] pituitary glands, [FN25] corneal tissue, [FN26] and dead bodies [FN27] deal with human biological materials as objects sui generis, regulating their disposition to achieve policy goals rather than abandoning them to the general law of personal property. It is these specialized statutes, not the law of conversion, to which courts ordinarily should and do look for guidance on the disposition of human biological materials.

FN21. See Health and Safety Code section 7054.4 (fn. 20, ante).

FN22. See the Uniform Anatomical Gift Act, Health and Safety Code section 7150

et seq. The act permits a competent adult to "give all or part of [his] body" for certain designated purposes, including "transplantation, therapy, medical or dental education, research, or advancement of medical or dental science." (Health & Saf.Code, § § 7151, 7153.) The act does not, however, permit the donor to receive "valuable consideration" for the transfer. (Health & Saf.Code, § 7155.)

FN23. See Health & Safety Code section 1601 et seq., which regulates the procurement, processing, and distribution of human blood. Health and Safety Code section 1606 declares that "[t]he procurement, processing, distribution, or use of whole blood, plasma, blood products, and blood derivatives for the purpose of injecting or transfusing the same ... is declared to be, for all purposes whatsoever, the rendition of a service ... and shall not be construed to be, and is declared not to be, a sale ... for any purpose or purposes whatsoever."

FN24. See Health and Safety Code section 7054.3: "Notwithstanding any other provision of law, a recognizable dead human fetus of less than 20 weeks uterogestation not disposed of by interment shall be disposed of by incineration."

FN25. See Government Code section 27491.46: "The coroner [following an autopsy] shall have the right to retain pituitary glands solely for transmission to a university, for use in research or the advancement of medical science" (id., subd. (a)) or "for use in manufacturing a hormone necessary for the physical growth of persons who are, or may become, hypopituitary dwarfs ..." (id., subd. (b)).

FN26. See Government Code section 27491.47: "The coroner may, in the course of an autopsy [and subject to specified conditions], remove ... corneal eye tissue from a body ..." (id., subd. (a)) for "transplant, therapeutic, or scientific purposes" (id., subd. (a)(5)).

FN27. See Health and Safety Code section 7000 et seq. While the code does not purport to grant property rights in dead bodies, it does give the surviving spouse, or other relatives, "[t]he right to control the disposition of the remains of a deceased person, unless other directions have been given by the decedent...." (Health & Saf.Code, § 7100.)

Lacking direct authority for importing the law of conversion into this context, Moore relies, as did the Court of Appeal, primarily on decisions addressing privacy rights. [FN28] One line of cases involves un wanted publicity. (*Lugosi v. Universal Pictures* (1979) 25 Cal.3d 813, 160 Cal.Rptr. 323, 603 P.2d 425; *Motschenbacher v. R.J. Reynolds Tobacco Company* (9th Cir.1974) 498 F.2d 821 [interpreting Cal. law].) These opinions hold that every person has a proprietary interest in his own likeness and that unauthorized, business use of a likeness is redressible as a tort. But in neither opinion did the authoring court expressly base its holding on property law. (*Lugosi v. Universal Pictures*, supra, 25 Cal.3d at pp. 819, 823-826, 160 Cal.Rptr. 323, 603 P.2d 425; *Motschenbacher v. R.J. Reynolds Tobacco Company*, supra, 498 F.2d at pp. 825-826.) Each court stated,

following Prosser, that it was "pointless" to debate the proper characterization of the proprietary interest in a likeness. (*Motschenbacher v. R.J. Reynolds Tobacco Company*, supra, 498 F.2d at p. 825, quoting Prosser, Law of Torts (4th ed. 1971) at p. 807; *Lugosi v. Universal Pictures*, supra, 25 Cal.3d at pp. 819, 824, 160 Cal.Rptr. 323, 603 P.2d 425.) For purposes of determining whether the tort of conversion lies, however, the characterization of the right in question is far from pointless. Only property can be converted.

FN28. No party has cited a decision supporting Moore's argument that excised cells are "a species of tangible personal property capable of being converted." On this point the Court of Appeal cited only *Venner v. State* (1976) 30 Md.App. 599, 354 A.2d 483 (hereafter *Venner*), which dealt with the seizure of a criminal defendant's feces from a hospital bedpan by police officers searching for narcotics. The court held that the defendant had abandoned his excrement for purposes of the Fourth Amendment. (354 A.2d at pp. 498-499.)
In dictum, the *Venner* court observed that "[i]t is not unknown for a person to assert a continuing right of ownership, dominion, or control, for good reason or for no reason, over such things as excrement, fluid waste, secretions, hair, fingernails, toenails, blood, and organs or other parts of the body...." (354 A.2d at p. 498.) This slender reed, alone, supported the Court ofAppeal's conclusion in the case before us that "it cannot be said that a person has no property right in materials which were once part of his body." However, because *Venner* involved a criminal- procedure dispute over the suppression of evidence, and not a civil dispute over who was entitled to the economic benefit of property, the opinion is grounded in markedly different policies and has little relevance to the case before us.

Not only are the wrongful-publicity cases irrelevant to the issue of conversion, but the analogy to them seriously misconceives the nature of the genetic materials and research involved in this case. Moore, adopting the analogy originally advanced by the Court of Appeal, argues that "[i]f the courts have found a sufficient proprietary interest in one's persona, how could one not have a right in one's own genetic material, something far more profoundly the essence of one's human uniqueness than a name or a face?" However, as the defendants' patent makes clear--and the complaint, too, if read with an understanding of the scientific terms which it has borrowed from the patent--the goal and result of defendants' efforts has been to manufacture lymphokines. [FN29] Lymphokines, unlike a name or a face, have the same molecular structure in every human being and the same, important functions in every human being's immune system. Moreover, the particular genetic material which is responsible for the natural production of lymphokines, and which defendants use to manufacture lymphokines in the laboratory, is also the same in every person; it is no more unique to Moore than the number of vertebrae in the spine or the chemical formula of hemoglobin. [FN30]

FN29. Inside the cell, a gene produces a lymphokine (see fn. 2, ante) by attracting protein molecules, which bond to form a strand of "messenger RNA" (mRNA) in the mirror image of the gene. The mRNA strand then detaches from the gene and attracts other protein molecules, which bond to form the lymphokine that the original gene encoded. (OTA Rep., *supra*, at pp. 38-44.) In the laboratory, scientists sometimes use genes to manufacture lymphokines by cutting a gene from the chromosome and grafting it onto the chromosome of a bacterium. The resulting chromosome is an example of "recombinant DNA," or

DNA composed of genetic material from more than one individual or species. As the bacterium lives and reproduces, the engrafted gene continues to produce the lymphokine that the gene encodes. (OTA Rep., *supra,* at pp. 41-44, 158.) It can be extremely difficult to identify the gene that carries the code for a particular lymphokine. "Since the amount of DNA in a human cell is enormous compared to the amount present in an individual gene, the search for any single gene within a cell is like searching for needle in a haystack." (OTA Rep., *supra,* at p. 42.) As the Regents' patent application explains, the significance of a cell that overproduces mRNA is to make the difficult search for a particular gene unnecessary. (U.S. Patent No. 4,438,032 (Mar. 20, 1984) at col. 2.) If one has an adequate source of mRNA--the gene's mirror image--it can be used to make a copy, or clone, of the original gene. The cloned gene can then be used in recombinant DNA, as already described, for large-scale production of lymphokines. (Id., at col. 3.)

FN30. By definition, a gene responsible for producing a protein found in more than one individual will be the same in each. It is precisely because everyone needs the same basic proteins that proteins produced by one person's cells may have therapeutic value for another person. (See generally OTA Rep., *supra,* at pp. 38-40.) Thus, the proteins that defendants hope to manufacture--lymphokines such as interferon--are in no way a "likeness" of Moore.

Because all normal persons possess the genes responsible for production of lymphokines, it is sometimes possible to make normal cells into overproducers. (See OTA Rep., *supra,* at p. 55.) According to a research paper to which defendants contributed, Moore's cells overproduced lymphokines because they were infected by a virus, HTLV-II (human T-cell leukemia virus type II). (Chen, Quan & Golde, *Human T-cell Leukemia Virus Type II Transforms Normal Human Lymphocytes* (Nov.1983) 80 Proceedings Nat. Acad. Sci. USA, p. 7006.) The same virus has been shown to transform normal T-lymphocytes into overproducers like Moore's. (Ibid.)

Another privacy case offered by analogy to support Moore's claim establishes only that patients have a right to refuse medical treatment. (*Bouvia v. Superior Court* (1986) 179 Cal.App.3d 1127, 225 Cal.Rptr. 297.) In this context the court in *Bouvia* wrote that " '[e]very human being of adult years and sound mind has a right to determine what shall be done with his own body....' " (Id., at p. 1139, 225 Cal.Rptr. 297, quoting from *Schloendorff v. Society of New York Hospital*, supra, 211 N.Y. 125, 105 N.E. at p. 93.) [FN31] Relying on this language to support the proposition that a patient has a continuing right to control the use of excised cells, the Court of Appeal in this case concluded that "[a] patient must have the ultimate power to control what becomes of his or her tissues. To hold otherwise would open the door to a massive invasion of human privacy and dignity in the name of medical progress." Yet one may earnestly wish to protect privacy and dignity without accepting the extremely problematic conclusion that interference with those interests amounts to a conversion of personal property. Nor is it necessary to force the round pegs of "privacy" and "dignity" into the square hole of "property" in order to protect the patient, since the fiduciary-duty and informed-consent theories protect these interests directly by requiring full disclosure.

FN31. *Schloendorff v. Society of New York Hospital*, supra, is often cited as the first opinion recognizing the concept of informed consent.

The next consideration that makes Moore's claim of ownership problematic is California statutory law, which drastically limits a patient's control over excised cells. Pursuant to Health and Safety Code section 7054.4, "[n]otwithstanding any other provision of law, recognizable anatomical parts, human tissues, anatomical human remains, or infectious waste following conclusion of scientific use shall be disposed of by interment, incineration, or any other method determined by the state department [of health services] to protect the public health and safety." [FN32] Clearly the Legislature did not specifically intend this statute to resolve the question of whether a patient is entitled to compensation for the nonconsensual use of excised cells. A primary object of the statute is to ensure the safe handling of potentially hazardous biological waste materials. [FN33] Yet one cannot escape the conclusion that the statute's practical effect is to limit, drastically, a patient's control over excised cells. By restricting how excised cells may be used and requiring their eventual destruction, the statute eliminates so many of the rights ordinarily attached to property that one cannot simply assume that what is left amounts to "property" or "ownership" for purposes of conversion law.

FN32. Although section 7054.4 occurs in a division of the Health and Safety Code entitled "Dead Bodies," only the term "human remains" refers solely to cadavers. This is because section 7001 so defines it. (Health & Saf.Code, § 7001.) The additional terms "recognizable anatomical parts" and "human tissues" are not expressly defined and must be given their ordinary meanings, which are not limited to dead bodies. Surgically removed organs, such as a spleen, are both "recognizable anatomical parts" and "human tissues." Virus-infected cells, such as Moore's T-lymphocytes, fit reasonably within the statute's definition of "infectious waste." (See fn. 33, post.) The broad terms used in section 7054.4, a relatively recent addition to the 1939 division on dead bodies (added by Stats.1971, ch. 377, § 2, p. 744, and amended by Stats.1972, ch. 883, § 4, p. 1562), reflect legislative consideration of modern needs to provide for the disposal of materials in addition to dead bodies, including used hypodermic needles and other "infectious waste" materials generated in hospitals.

FN33. The policy of keeping biological materials in safe hands has substantial relevance to this case. The catalog of the American Type Culture Collection, an organization that distributes cell lines to researchers, gives this warning about the cell line derived from Moore's T- lymphocytes: Because "[t]he cells ... contain a replication competent genome of Human T Cell Leukemia Virus II (HTLV-II) [i.e., genetic material capable of reproducing the virus] ..., they must be handled as potentially biohazardous material under P-II [level II] containment." (American Type Culture Collection, *Catalogue of Cell Lines and Hybridomas* (6th ed. 1988) p. 176.) Level II containment is a standard established by the National Institutes of Health and the Center for Disease Control for handling hazardous biological materials. The level II standard requires, among other things, the use of a biological safety cabinet when the cell line is manipulated, and the autoclaving (sterilization by heat) and disposal of contaminated materials. (Id., at p. xi.)

It may be that some limited right to control the use of excised cells does survive the operation of this statute. There is, for example, no need to read the statute to permit "scientific use" contrary to the patient's expressed wish. [FN34] A fully informed patient may always withhold consent to treatment by a physician whose

research plans the patient does not approve. That right, however, as already discussed, is protected by the fiduciary-duty and informed-consent theories.

FN34. The dissent argues that the term "scientific use" in Health and Safety Code section 7054.4 excludes "commercial exploitation"; in effect, according to the dissent, the statute says "scientific use" but means "not-for-profit scientific use." (Dis. opn. of Mosk, J., post, at pp. 175-176 of 271 Cal.Rptr., at pp. 508-509 of 793 P.2d.) There is, however, no reason to believe that the Legislature intended to make such a distinction. Nor is the distinction likely to be meaningful or practical in this context--"a relationship of unparalled intimacy between universities and biotechnology companies...." (Dis. opn. of Mosk, J., post, at p. 181, fn. 15, of 271 Cal.Rptr., at p. 514, fn. 15 of 793 P.2d.) Unless research necessarily ceases to be "scientific" when directed to the development of marketable products, a proposition we cannot accept, the distinction between academic and commercial "use" of human tissues has no logical bearing on the statute, which permits *all* "scientific use." Shedding no light on the Legislature's intent, philosophical issues about "scientists bec[oming] entrepreneurs" (dis. opn. of Mosk, J., post, at p. 181 of 271 Cal.Rptr., at p. 514 of 793 P.2d) are best debated in another forum.

Finally, the subject matter of the Regents' patent--the patented cell line and the products derived from it--cannot be Moore's property. This is because the patented cell line is both factually and legally distinct from the cells taken from Moore's body. [FN35] Federal law permits the patenting of organisms that represent the product of "human ingenuity," but not naturally occurring organisms. (*Diamond v. Chakrabarty* (1980) 447 U.S. 303, 309-310, 100 S.Ct. 2204, 2208, 65 L.Ed.2d 144.) [FN36] Human cell lines are patentable because "[l]ong-term adaptation and growth of human tissues and cells in culture is difficult--often considered an art ...," and the probability of success is low. (OTA Rep., supra, at p. 33; see fn. 2, ante.) It is this *inventive effort* that patent law rewards, not the discovery of naturally occurring raw materials. Thus, Moore's allegations that he owns the cell line and the products derived from it are inconsistent with the patent, which constitutes an authoritative determination that the cell line is the product of invention. [FN37] Since such allegations are nothing more than arguments or conclusions of law, they of course do not bind us. (*Daar v. Yellow Cab Co.*, supra, 67 Cal.2d at p. 713, 63 Cal.Rptr. 724, 433 P.2d 732.)

FN35. The distinction between primary cells (cells taken directly from the body) and patented cell lines is not purely a legal one. Cells change while being developed into a cell line and continue to change over time. (OTA Rep., *supra,* p. 34.) "[I]t is clear that most established cell lines ... are not completely normal. Besides [an] enhanced growth potential relative to primary cells, they frequently have highly abnormal chromosome numbers...." (2 Watson et al., *Molecular Biology of the Gene* (4th ed. 1987) p. 967; see also OTA Rep., *supra,* p. 36.)
The cell line in this case, for example, after many replications began to generate defective and rearranged forms of the HTLV-II virus. A published research paper to which defendants contributed suggests that "the defective forms of virus were probably generated during the passage [or replication] of the cells rather than being present in the original tumor cells of the patient." Possibly because of these changes in the virus, the cell line has developed new abilities to grow in different media. (Chen, McLaughlin,

Gasson, Clark & Golde, *Molecular Characterization of Genome of a Novel Human T-cell Leukaemia Virus,* Nature (Oct. 6, 1983) vol. 305, p. 505.)
We find it interesting that Justice Mosk, in his dissent, would object to our "summar[y] of the salient conclusions" (*People v. Guerra* (1984) 37 Cal.3d 385, 412, 208 Cal.Rptr. 162, 690 P.2d 635 [opn. by Mosk, J.]) of relevant scientific literature in setting forth the technological background of this case. (Dis. opn. of Mosk, J., post, at p. 188 of 271 Cal.Rptr., at p. 521 of 793 P.2d.) This court has previously cited scientific literature to show, for example, that reports of hypnotic recall "form[ed] a scientifically inadequate basis for drawing conclusions about the memory processes of the large majority of the population" (*People v. Shirley* (1982) 31 Cal.3d 18, 59, 181 Cal.Rptr. 243, 723 P.2d 1354 [opn. by Mosk, J.]), and that eyewitness testimony can be unreliable (*People v. McDonald* (1984) 37 Cal.3d 351, 365-367, 208 Cal.Rptr. 236, 690 P.2d 709 [opn. by Mosk, J.]).

FN36. In *Diamond v. Chakrabarty,* supra, the United States Supreme Court held that a genetically engineered bacterium was patentable as a "new and useful ... manufacture, or composition of matter" under 35 United States Code section 101. (447 U.S. at pp. 308-310, 100 S.Ct. at p. 2207.)

FN37. To avoid this conclusion, the dissent endorses a proposal to expand Congress' definition of "joint inventor" (35 U.S.C. § 116) to include the human source of biological materials used in research. (Dis. opn. of Mosk, J., post, at pp. 178-179 of 271 Cal.Rptr., at pp. 511- 512 of 793 P.2d.) Because exclusive power to effect change in the law of patents lies with Congress and the federal courts (U.S. Const., art. I, § 8, cl. 8; 28 U.S.C. § § 1295, 1338), the dissent's criticism of the law's present state has no legitimate bearing on our disposition of this case.

2. Should Conversion Liability Be Extended?

[6] As we have discussed, Moore's novel claim to own the biological materials at issue in this case is problematic, at best. Accordingly, his attempt to apply the theory of conversion within this context must frankly be recognized as a request to extend that theory. While we do not purport to hold that excised cells can never be property for any purpose whatsoever, the novelty of Moore's claim demands express consideration of the policies to be served by extending liability (cf. *Nally v. Grace Community Church,* supra, 47 Cal.3d at pp. 291-300, 253 Cal.Rptr. 97, 763 P.2d 948; *Foley v. Interactive Data Corp.,* supra, 47 Cal.3d at pp. 694-700, 254 Cal.Rptr. 211, 765 P.2d 373; *Brown v. Superior Court,* supra, 44 Cal.3d at pp. 1061-1066, 245 Cal.Rptr. 412, 751 P.2d 470) rather than blind deference to a complaint alleging as a legal conclusion the existence of a cause of action.

There are three reasons why it is inappropriate to impose liability for conversion based upon the allegations of Moore's complaint. First, a fair balancing of the relevant policy considerations counsels against extending the tort. Second, problems in this area are better suited to legislative resolution. Third, the tort of conversion is not necessary to protect patients' rights. For these reasons, we conclude that the use of excised human cells in medical research does not amount to a conversion.

Of the relevant policy considerations, two are of overriding importance. The first is protection of a competent patient's right to make autonomous medical

decisions. That right, as already discussed, is grounded in well-recognized and long-standing principles of fiduciary duty and informed consent. (See, e.g., *Cobbs v. Grant*, supra, 8 Cal.3d at pp. 242-246, 104 Cal.Rptr. 505, 502 P.2d 1; *Bowman v. McPheeters*, supra, 77 Cal.App.2d at p. 800, 176 P.2d 745.) This policy weighs in favor of providing a remedy to patients when physicians act with undisclosed motives that may affect their professional judgment. The second important policy consideration is that we not threaten with disabling civil liability innocent parties who are engaged in socially useful activities, such as researchers who have no reason to believe that their use of a particular cell sample is, or may be, against a donor's wishes.

To reach an appropriate balance of these policy considerations is extremely important. In its report to Congress (see fn. 2, ante), the Office of Technology Assessment emphasized that "[u]ncertainty about how courts will resolve disputes between specimen sources and specimen users could be detrimental to both academic researchers and the infant biotechnology industry, particularly when the rights are asserted long after the specimen was obtained. The assertion of rights by sources would affect not only the researcher who obtained the original specimen, but perhaps other researchers as well.

"Biological materials are routinely distributed to other researchers for experimental purposes, and scientists who obtain cell lines or other specimen-derived products, such as gene clones, from the original researcher could also be sued under certain legal theories [such as conversion]. Furthermore, the uncertainty could affect product developments as well as research. Since inventions containing human tissues and cells may be patented and licensed for commercial use, companies are unlikely to invest heavily in developing, manufacturing, or marketing a product when uncertainty about clear title exists." (OTA Rep., supra, at p. 27.)

Indeed, so significant is the potential obstacle to research stemming from uncertainty about legal title to biological materials that the Office of Technology Assessment reached this striking conclusion: "[R]egardless of the merit of claims by the different interested parties, resolving the current uncertainty may be more important to the future of biotechnology than resolving it in any particular way." (OTA Rep., *supra*, at p. 27.)

We need not, however, make an arbitrary choice between liability and nonliability. Instead, an examination of the relevant policy considerations suggests an appropriate balance: Liability based upon existing disclosure obligations, rather than an unprecedented extension of the conversion theory, protects patients' rights of privacy and autonomy without unnecessarily hindering research.

To be sure, the threat of liability for conversion might help to enforce patients' rights indirectly. This is because physicians might be able to avoid liability by obtaining patients' consent, in the broadest possible terms, to any conceivable subsequent research use of excised cells. Unfortunately, to extend the conversion theory would utterly sacrifice the other goal of protecting innocent parties. Since conversion is a strict liability tort, [FN38] it would impose liability on all those into whose hands the cells come, whether or not the particular defendant participated in, or knew of, the inadequate disclosures that violated the patient's right to make an informed decision. In contrast to the conversion theory, the fiduciary-duty and informed-consent theories protect the patient directly, without punishing innocent parties or creating disincentives to the conduct of socially beneficial research.

FN38. " 'The foundation for the action for conversion rests neither in the knowledge nor the intent of the defendant.... [Instead,] "the tort consists in the breach of what may be called an absolute duty; the act itself ... is unlawful and redressible as a tort." ' [Citation.]" (*Byer v. Canadian Bank of Commerce* (1937) 8 Cal.2d 297, 300, 65 P.2d 67, quoting *Poggi v. Scott* (1914) 167 Cal. 372, 375, 139 P. 815. See also *City of Los Angeles v. Superior Court* (1978) 85 Cal.App.3d 143, 149, 149 Cal.Rptr. 320 ["[c]onversion is a species of strict liability in which questions of good faith, lack of knowledge and motive are ordinarily immaterial."].)

Research on human cells plays a critical role in medical research. This is so because researchers are increasingly able to isolate naturally occurring, medically useful biological substances and to produce useful quantities of such substances through genetic engineering. These efforts are beginning to bear fruit. Products developed through biotechnology that have already been approved for marketing in this country include treatments and tests for leukemia, cancer, diabetes, dwarfism, hepatitis-B, kidney transplant rejection, emphysema, osteoporosis, ulcers, anemia, infertility, and gynecological tumors, to name but a few. (Note, *Source Compensation for Tissues and Cells Used in Biotechnical Research: Why a Source Shouldn't Share in the Profits* (1989) 64 Notre Dame L.Rev. 628 & fn. 1 (hereafter Note, Source Compensation); see also OTA Rep., supra, at pp. 58-59.)

The extension of conversion law into this area will hinder research by restricting access to the necessary raw materials. Thousands of human cell lines already exist in tissue repositories, such as the American Type Culture Collection and those operated by the National Institutes of Health and the American Cancer Society. These repositories respond to tens of thousands of requests for samples annually. Since the patent office requires the holders of patents on cell lines to make samples available to anyone, many patent holders place their cell lines in repositories to avoid the administrative burden of responding to requests. (OTA Rep., supra, at p. 53.) At present, human cell lines are routinely copied and distributed to other researchers for experimental purposes, usually free of charge. [FN39] This exchange of scientific materials, which still is relatively free and efficient, will surely be compromised if each cell sample becomes the potential subject matter of a lawsuit. (OTA Rep., supra, at p. 52.) [FN40]

FN39. "Under the current system of tissue banks, many firms have access to the tissue so the probability of efficient use of those tissues increases..... Presently, researchers need only ask for tissue samples, and their requests are usually granted by their own research facility, other research facilities, or tissue banks." (Note, Source Compensation, supra, 64 Notre Dame L.Rev. at p. 635. See also OTA Rep., supra, at p. 52.)

FN40. As if to argue that liability for conversion could not make researchers' predicament any worse than it already is, the dissent asserts that the exchange of cell lines among researchers is increasingly restricted by contract. (Dis. opn. of Mosk, J., post, at p. 180 of 271 Cal.Rptr., at p. 513 of 793 P.2d.) However, as the Office of Technology Assessment explained in its report, this caution is "*a result of concerns over patent and ownership rights*," including "[u]ncertainty about how courts will resolve disputes between specimen sources and specimen users...." (OTA Rep., supra, at pp. 27, 52, italics added.) Obviously, the extension of liability for conversion can

only exacerbate the problem.

Moreover, the dissent's factual premise that biological materials no longer pass freely among researchers is greatly overstated. In the most important research contexts the distribution of biological materials is still essentially unrestricted. The Office of Technology Assessment found that "[i]nformal transfers are common among researchers and universities around the country." (OTA Rep., supra, p. 52.) In addition, tissue repositories provide cell lines and tissue samples to any qualified researcher, either without cost or for a nominal fee. (OTA Rep., supra, p. 53.) The availability of patent protection for cell lines actually *increases* the availability of research materials, since the Patent Office requires patent holders to make patented microorganisms available to researchers immediately after a patent issues. (See generally *In re Lundak* (Fed.Cir.1985) 773 F.2d 1216, 1220-1222.) Generally available cell lines are of substantial importance not just to academic research, but to commercial research as well. Indeed, some biotechnology companies "do not use any original human tissue in research, concentrating their efforts on established cell lines instead. These companies obtain and manipulate generally available cell lines, resulting in new, unique, or improved cell lines." (OTA Rep., supra, p. 55.)

To expand liability by extending conversion law into this area would have a broad impact. The House Committee on Science and Technology of the United States Congress found that "49 percent of the researchers at medical institutions surveyed used human tissues or cells in their research." Many receive grants from the National Institute of Health for this work. (OTA Rep., supra, at p. 52.) In addition, "there are nearly 350 commercial biotechnology firms in the United States actively engaged in biotechnology research and commercial product development and approximately 25 to 30 percent appear to be engaged in research to develop a human therapeutic or diagnostic reagent.... Most, but not all, of the human therapeutic products are derived from human tissues and cells, or human cell lines or cloned genes." (Id., at p. 56.)

In deciding whether to create new tort duties we have in the past considered the impact that expanded liability would have on activities that are important to society, such as research. For example, in *Brown v. Superior Court*, supra, 44 Cal.3d 1049, 245 Cal.Rptr. 412, 751 P.2d 470, the fear that strict product liability would frustrate pharmaceutical research led us to hold that a drug manufacturer's liability should not be measured by those standards. We wrote that, "[i]f drug manufacturers were subject to strict liability, they might be reluctant to undertake research programs to develop some pharmaceuticals that would prove beneficial or to distribute others that are available to be marketed, because of the fear of large adverse monetary judgments." (Id., at p. 1063, 245 Cal.Rptr. 412, 751 P.2d 470.)

As in *Brown,* the theory of liability that Moore urges us to endorse threatens to destroy the economic incentive to conduct important medical research. If the use of cells in research is a conversion, then with every cell sample a researcher purchases a ticket in a litigation lottery. Because liability for conversion is predicated on a continuing ownership interest, "companies are unlikely to invest heavily in developing, manufacturing, or marketing a product when uncertainty about clear title exists." (OTA Rep., supra, at p. 27.) [FN41] In our view, borrowing again from *Brown,* "[i]t is not unreasonable to conclude in these circumstances that the imposition of a harsher test for liability would not further the public interest in the development and availability of these important products." (*Brown v. Superior Court*, supra, 44 Cal.3d at p. 1065, 245 Cal.Rptr. 412, 751 P.2d 470.) [FN42]

FN41. In his concurring and dissenting opinion, Justice Broussard suggests that we could extend conversion liability without threatening research by requiring the plaintiff to allege, in addition to the elements of conversion, that fraud by the physician invalidated the plaintiff's consent. (Conc. and dis. opn. of Broussard, J., post, at pp. 170-171 of 271 Cal.Rptr., at pp. 503-504 of 793 P.2d.) There is, however, no need to create a new cause of action. As we have already explained, the allegation that a physician concealed material facts supports a cause of action for breach of fiduciary duty under existing law.
Nor would it significantly ameliorate the threat to research to limit conversion liability to cases in which the patient's consent was invalid. One cannot know with certainty whether a consent is valid until a lawsuit has been filed and resolved. Moreover, since liability for conversion is based on a finding that the plaintiff has a continuing ownership interest, the threat of a lawsuit against anyone in the chain of title would place the ownership of research materials in doubt.

FN42. In order to make conversion liability seem less of a threat to research, the dissent argues that researchers could avoid liability by using only cell lines accompanied by documentation of the source's consent. (Dis. opn. of Mosk, J., post, at pp. 181, 182 of 271 Cal.Rptr., at pp. 514, 515 of 793 P.2d.) But consent forms do not come with guarantees of validity. As medical malpractice litigation shows, challenges to the validity and sufficiency of consent are not uncommon. Moreover, it is sheer fantasy to hope that waivers might be obtained for the thousands of cell lines and tissue samples presently in cell repositories and, for that reason, already in wide use among researchers. The cell line derived from Moore's T-lymphocytes, for example, has been available since 1984 to any researcher from the American Type Culture Collection. (American Type Culture Collection, *Catalogue of Cell Lines and Hybridomas,* supra, at p. 176.) Other cell lines have been in wide use since as early as 1951. (OTA Rep., supra, at p. 34.)

Indeed, this is a far more compelling case for limiting the expansion of tort liability than *Brown.* In *Brown,* eliminating strict liability made it more difficult for plaintiffs to recover actual damages for serious physical injuries resulting from their mothers' prenatal use of the drug diethylstilbestrol (DES). (*Brown v. Superior Court*, supra, 44 Cal.3d at pp. 1054-1055, 245 Cal.Rptr. 412, 751 P.2d 470.) In this case, by comparison, limiting the expansion of liability under a conversion theory will only make it more difficult for Moore to recover a highly theoretical windfall. Any injury to his right to make an informed decision remains actionable through the fiduciary-duty and informed-consent theories.

If the scientific users of human cells are to be held liable for failing to investigate the consensual pedigree of their raw materials, we believe the Legislature should make that decision. Complex policy choices affecting all society are involved, and "[l]egislatures, in making such policy decisions, have the ability to gather empirical evidence, solicit the advice of experts, and hold hearings at which all interested parties present evidence and express their views...." (*Foley v. Interactive Data Corp.*, supra, 47 Cal.3d at p. 694, fn. 31, 254 Cal.Rptr. 211, 765 P.2d 373.) Legislative competence to act in this area is demonstrated by the existing statutes governing the use and disposition of human biological materials. [FN43] Legislative interest is demonstrated by the extensive

study recently commissioned by the United States Congress. (OTA Rep., supra.) Commentators are also recommending legislative solutions. (See Danforth, *Cells, Sales, and Royalties: The Patient's Right to a Portion of the Profits* (1988) 6 Yale L. & Pol'y Rev. 179, 198-201; Note, Source Compensation, supra, 64 Notre Dame L.Rev. at pp. 643- 645.)

FN43. See footnotes 21 through 27, ante.

Finally, there is no pressing need to impose a judicially created rule of strict liability,, since enforcement of physicians' disclosure obligations will protect patients against the very type of harm with which Moore was threatened. So long as a physician discloses research and economic interests that may affect his judgment, the patient is protected from conflicts of interest. Aware of any conflicts, the patient can make an informed decision to consent to treatment, or to withhold consent and look elsewhere for medical assistance. As already discussed, enforcement of physicians' disclosure obligations protects patients directly, without hindering the socially useful activities of innocent researchers.

For these reasons, we hold that the allegations of Moore's third amended complaint state a cause of action for breach of fiduciary duty or lack of informed consent, but not conversion. [FN44]

FN44. Our disposition of this case makes it unnecessary to decide Sandoz's contention that, even if Moore's cells were personal property, the Regents took them pursuant to their statutory power of eminent domain. Under Education Code section 92040, "[t]he Regents ... may acquire by eminent domain any property necessary to carry out any of the powers or functions of the University of California." One of the university's functions is to be "the primary state-supported academic agency for research." (Ed.Code, § 66500.) We note that Sandoz did not present this argument to the lower courts. Our disposition also makes it unnecessary to consider Golde's contention that federal patent law would preempt a holding that Moore has any property rights in the subject matter of the Regents' patent, including the cell line. Golde bases his argument on the well-established principle that state law may not "give protection of a kind that clashes with the objectives of the federal patent laws." (*Sears, Roebuck & Co. v. Stiffel Co.* (1964) 376 U.S. 225, 231, 84 S.Ct. 784, 789, 11 L.Ed.2d 661; see also *Kewanee Oil Co. v. Bicron Corp.* (1974) 416 U.S. 470, 480, 94 S.Ct. 1879, 1885, 40 L.Ed.2d 315.)

IV. DISPOSITION

The decision of the Court of Appeal is affirmed in part and reversed in part. The case is remanded to the Court of Appeal, which shall direct the superior court to: (1) overrule Golde's demurrers to the causes of action for breach of fiduciary duty and lack of informed consent; (2) sustain, with leave to amend, the demurrers of the Regents, Quan, Sandoz, and Genetics Institute to the purported causes of action for breach of fiduciary duty and lack of informed consent; (3) sustain, without leave to amend, all defendants' demurrers to the purported cause of action for conversion; and (4) hear and determine all defendants' remaining demurrers.

LUCAS, C.J., and EAGLESON and KENNARD, JJ., concur.

ARABIAN, Justice, concurring.

I join in the views cogently expounded by the majority. I write separately to give voice to a concern that I believe informs much of that opinion but finds little or no expression therein. I speak of the moral issue.

Plaintiff has asked us to recognize and enforce a right to sell one's own body tissue *for profit.* He entreats us to regard the human vessel--the single most venerated and protected subject in any civilized society--as equal with the basest commercial commodity. He urges us to commingle the sacred with the profane. He asks much.

My learned colleague, Justice Mosk, in an impressive if ultimately unpersuasive dissent, recognizes the moral dimension of the matter. "Our society," he writes, "acknowledges a profound ethical imperative to respect the human body as the physical and temporal expression of the unique human persona." (Dis. opn. of Mosk, J., post, p. 182 of 271 Cal.Rptr., p. 515 of 793 P.2d.) He concludes, however, that morality militates in favor of recognizing plaintiff's claim for conversion of his body tissue. Why? Essentially, he answers, because of these defendants' moral shortcomings, duplicity and greed. Let them be compelled, he argues, to disgorge a portion of their ill-gotten gains to the uninformed individual whose body was invaded and exploited and without whom such profits would not have been possible.

I share Justice Mosk's sense of outrage, but I cannot follow its path. His eloquent paean to the human spirit illuminates the problem, not the solution. Does it uplift or degrade the "unique human persona" to treat human tissue as a fungible article of commerce? Would it advance or impede the human condition, spiritually or scientifically, by delivering the majestic force of the law behind plaintiff's claim? I do not know the answers to these troubling questions, nor am I willing--like Justice Mosk--to treat them simply as issues of "tort" law, susceptible of *judicial* resolution.

It is true, that this court has not often been deterred from deciding difficult legal issues simply because they require a choice between competing social or economic policies. (*Foley v. Interactive Data Corp.* (1988) 47 Cal.3d 654, 719-723, 254 Cal.Rptr. 211, 765 P.2d 373 (conc. and dis. opn. of Kaufman, J.).) The difference here, however, lies in the nature of the conflicting moral, philosophical and even religious values at stake, and in the profound implications of the position urged. The ramifications of recognizing and enforcing a property interest in body tissues are not known, but are greatly feared--the effect on human dignity of a marketplace in human body parts, the impact on research and development of competitive bidding for such materials, and the exposure of researchers to potentially limitless and uncharted tort liability. (See Danforth, *Cells, Sales, & Royalties: The Patient's Right to a Portion of the Profits* (1988) 6 Yale L. & Pol'y Rev. 179, 195; Note, *Source Compensation for Tissues and Cells Used in Biotechnical Research: Why a Source Shouldn't Share in the Profits* (1989) 64 Notre Dame L.Rev. 628, 634.)

Whether, as plaintiff urges, his cells should be treated as property susceptible to conversion is not, in my view, ours to decide. The question implicates choices which not only reflect, but which ultimately define our essence. A mark of wisdom for us as expositors of the law is the recognition that we cannot cure every ill, mediate every dispute, resolve every conundrum. Sometimes, as Justice Brandeis said,

"the most important thing we do, is not doing." [FN1]

FN1. Bickel, The Least Dangerous Branch (1962) page 71.

Where then shall a complete resolution be found? Clearly the Legislature, as the majority opinion suggests, is the proper deliberative forum. Indeed, a legislative response creating a licensing scheme, which establishes a fixed rate of profit sharing between researcher and subject, has already been suggested. *(Danforth,* supra, 6 Yale L. & Pol'y Rev.at pp. 198- 201.) Such an arrangement would not only avoid the moral and philosophical objections to a free market operation in body tissue, but would also address stated concerns by eliminating the inherently coercive effect of a waiver system and by compensating donors regardless of temporal circumstances.

The majority view is not unmindful of the seeming injustice in a result that denies plaintiff a claim for conversion of his body tissue, yet permits defendants to retain the fruits thereof. As we have explained, the reason for our holding is essentially two fold: First, plaintiff in this matter is not without a remedy; he remains free to pursue defendants on a breach-of- fiduciary-duty theory, as well as, perhaps, other tort claims not before us. Second, a judicial pronouncement, while supple, is not without its limitations. Courts cannot and should not seek to fashion a remedy for every "heartache and the thousand natural shocks that flesh is heir to." [FN2] Sometimes, the discretion of forbearance *is* the better part of responsive valor. This is such an occasion.

FN2. Shakespeare, *Hamlet,* Act III, Scene 1.

BROUSSARD, Justice, concurring and dissenting.

Given the novel scientific setting in which this case arises and the considerable interest this litigation has engendered within the medical research community and the public generally, it is easy to lose sight of the fact that the specific allegations on which the complaint in this case rests are quite unusual, setting this matter apart from the great majority of instances in which donated organs or cells provide the raw materials for the advancement of medical science and the development of new and beneficial medical products. Ordinarily,, when a patient consents to the use of a body part for scientific purposes, the potential value of the excised organ or cell is discovered only through subsequent experimentation or research, often months or years after the removal of the organ. In this case, however, the complaint alleges that plaintiff's doctor recognized the peculiar research and commercial value of plaintiff's cells *before* their removal from plaintiff's body. Despite this knowledge, the doctor allegedly failed to disclose these facts or his interest in the cells to plaintiff, either before plaintiff's initial surgery or throughout the ensuing seven-year period during which the doctor continued to obtain additional cells from plaintiff's body in the course of periodic medical examinations.

The majority opinion, of course, is not oblivious to the significance of these unusual allegations. It relies on those allegations in concluding that the complaint states a cause of action for breach of fiduciary duty. I concur fully in that holding.

When it turns to the conversion cause of action, however, the majority opinion fails to maintain its focus on the specific allegations before us. Concerned that the imposition of liability for conversion will impede medical research by innocent scientists who use the resources of existing cell repositories--a factual setting not presented here--the majority opinion rests its holding, that a conversion action cannot be maintained, largely on the proposition that a patient generally possesses no right in a body part that has already been removed from his body. Here, however, plaintiff has alleged that defendants interfered with his legal rights before his body part was removed. Although a patient may not retain any legal interest in a body part after its removal when he has properly consented to its removal and use for scientific purposes, it is clear under California law that before a body part is removed it is the patient, rather than his doctor or hospital, who possesses the right to determine the use to which the body part will be put after removal. If, as alleged in this case, plaintiff's doctor improperly interfered with plaintiff's right to control the use of a body part by wrongfully withholding material information from him before its removal, under traditional common law principles plaintiff may maintain a conversion action to recover the economic value of the right to control the use of his body part. Accordingly, I dissent from the majority opinion insofar as it rejects plaintiff's conversion cause of action.

I

To begin with, I concur fully in the majority's conclusion that the facts alleged in the complaint state a cause of action for breach of fiduciary duty against Dr. Golde. As the majority persuasively explains, because a physician's research activities and related commercial ventures may potentially affect his or her professional judgment, a physician has an obligation to disclose such personal interests to his patient. In this case, the complaint clearly alleges that Dr. Golde failed to fulfill this duty.

With respect to the additional defendants--the Regents of the University of California (hereafter Regents), Shirley G. Quan, Genetics Institute, Inc. (hereafter Genetics Institute) and Sandoz Pharmaceuticals Corporation (hereafter Sandoz)--I cannot fully join in the majority's conclusion. Although I agree that the trial court erred in sustaining these defendants' demurrers to the breach of fiduciary duty cause of action without leave to amend, in my view the majority's ruling with respect to these defendants is more equivocal than is warranted. (See maj. opn., *ante,* pp. 153-154 of 271 Cal.Rptr., pp. 486-487 of 793 P.2d.) As the majority recognizes, the breach of fiduciary duty alleged in the complaint encompasses postoperative conduct--for example, the periodic withdrawal of blood, blood serum, bone marrow aspirate and sperm samples from plaintiff, requiring plaintiff to travel from Seattle to the Medical Center of the University of California at Los Angeles (hereafter UCLA Medical Center)--which continued until September 1983. By that date, according to the complaint, all of the defendants, including Genetics Institute and Sandoz, were already involved in the commercial venture. Despite the "boilerplate" nature of some of the agency allegations in the complaint (see maj. opn., *ante,* p. 153, fn. 12 of 271 Cal.Rptr., p. 486, fn. 12 of 793 P.2d), the complaint's allegations, viewed in their entirety, [FN1] charge sufficient complicity on the part of all defendants in the allegedly improper postoperative conduct to survive a demurrer. If, after discovery, it becomes clear that the additional defendants bear no responsibility for either the original or continuing breach of fiduciary duty, those defendants can, of course, move for summary judgment on this count. At the present pleading stage, however, it is premature to absolve any of the defendants of liability for breach of fiduciary duty.

FN1. In addition to the very general agency allegations quoted by the majority, the complaint also alleges (1) that "Golde, both in his capacity as a physician and in his separate capacity as a researcher engaged in commercial activities, was an employee, officer and/or agent of ... [t]he Regents," (2) that "at all times after on or about 1980, continuing through the present, ... Golde, both in his capacity as a physician in the physician-patient relationship with plaintiff, and as a researcher and investor engaged in the commercial exploitation of the products extracted from plaintiff, was an employee, officer, investor, advisor, consultant and/or agent of ... Genetics Institute [and] ... Sandoz," and (3) that "[i]n these applicable capacities, ... Golde acted with the knowledge and support of ... [t]he Regents, ... Genetics Institute, [and] Sandoz ..., which knew or should have known of ... the means by which ... Golde had obtained access to, and continued to have access to, plaintiff's [b]lood and [b]odily [s]ubstances, and through their actions and compensation of ... Golde, ratified or approved ... Golde's activities in this regard."

I disagree, however, with the suggestion in the dissenting opinion that defendants will be able to avoid all liability under the breach-of-fiduciary- duty theory simply by showing that plaintiff would have proceeded with the surgical removal of his diseased spleen even if defendants had disclosed their research and commercial interest in his cells. (See dis. opn., *post,* pp. 186-187 of 271 Cal.Rptr., pp. 519-520 of 793 P.2d.) In the first place, because the alleged breach of fiduciary duty encompasses the postoperative conduct of defendants as well as the presurgical failure to disclose, plaintiff will clearly be entitled to recover under a breach-of-fiduciary-duty theory by establishing that he would not have consented to some or all of the extensive postoperative medical procedures if he had been fully aware of defendants' research and economic interests and motivations. Second, and more generally, in this context--unlike in the traditional "informed consent" context of *Cobbs v. Grant* (1972) 8 Cal.3d 229, 104 Cal.Rptr. 505, 502 P.2d 1--a plaintiff should not be required to establish that he would not have proceeded with the medical treatment in question if his physician had made full disclosure, but only that the doctor's wrongful failure to disclose information proximately caused the plaintiff some type of compensable damage. The majority does not attempt to identify in advance of trial the various kinds of damage or injury for which plaintiff may properly recover in his breach-of-fiduciary-duty action, and that may be understandable. Nonetheless, it is worth noting that, in appropriate circumstances, punitive as well as compensatory damages would clearly be recoverable in such an action. Accordingly, the dissent underestimates the potential efficacy of the breach- of-fiduciary-duty cause of action in dismissing the action as a "paper tiger." (Dis. opn., *post,* p. 187 of 271 Cal.Rptr., p. 520 of 793 P.2d.)

II

With respect to the conversion cause of action, I dissent from the majority's conclusion that the facts alleged in this case do not state a cause of action for conversion.

If this were a typical case in which a patient consented to the use of his removed organ for general research purposes and the patient's doctor had no prior knowledge of the scientific or commercial value of the patient's organ or cells, I would agree that the patient could not maintain a conversion action. In that common scenario, the patient has abandoned any interest in the removed organ and is not entitled to

demand compensation if it should later be discovered that the organ or cells have some unanticipated value. I cannot agree, however, with the majority that a patient may *never* maintain a conversion action for the unauthorized use of his excised organ or cells, even against a party who knew of the value of the organ or cells before they were removed and breached a duty to disclose that value to the patient. Because plaintiff alleges that defendants wrongfully interfered with his right to determine, prior to the removal of his body parts, how those parts would be used after removal, I conclude that the complaint states a cause of action under traditional, common law conversion principles.

In analyzing the conversion issue, the majority properly begins with the established requirements of a common law conversion action, explaining that a plaintiff is required to demonstrate an actual interference with his "ownership or right of possession" in the property in question. (Maj. opn., *ante,* p. 155 of 271 Cal.Rptr., p. 488 of 793 P.2d.) Although the majority opinion, at several points, appears to suggest that a removed body part, by its nature, may never constitute "property" for purposes of a conversion action (see maj. opn., *ante,* pp. 156, 157, 158 of 271 Cal.Rptr., pp. 489, 490, 491 of 793 P.2d), there is no reason to think that the majority opinion actually intends to embrace such a broad or dubious proposition. If, for example, another medical center or drug company had stolen all of the cells in question from the UCLA Medical Center laboratory and had used them for its own benefit, there would be no question but that a cause of action for conversion would properly lie against the thief, and the majority opinion does not suggest otherwise. Thus, the majority's analysis cannot rest on the broad proposition that a removed body part is not property, but rather rests on the proposition that *a patient* retains no ownership interest in a body part once the body part has been removed from his or her body.

The majority opinion fails to recognize, however, that, in light of the allegations of the present complaint, the pertinent inquiry is not whether a patient generally retains an ownership interest in a body part after its removal from his body, but rather whether a patient has a right to determine, before a body part is removed, the use to which the part will be put after removal. Although the majority opinion suggests that there are "reasons to doubt" that a patient retains "any" ownership interest in his organs orcells after removal (maj. opn., *ante,* p. 155 of 271 Cal.Rptr., p. 488 of 793 P.2d), the opinion fails to identify any statutory provision or common law authority that indicates that a patient does not generally have the right, before a body part is removed, to choose among the permissible uses to which the part may be put after removal. On the contrary, the most closely related statutory scheme--the Uniform Anatomical Gift Act (Health & Saf.Code, § 7150 et seq.) [FN2]--makes it quite clear that a patient does have this right.

FN2. Unless otherwise noted, all section references are to the Health and Safety Code.

The Uniform Anatomical Gift Act is a comprehensive statutory scheme that was initially adopted in California in 1970 and most recently revised in 1988. Although that legislation, by its terms, applies only to a donation of all or part of a human body which is "to take effect upon or after [the] death [of the donor]" (§ 7150.1, subd. (a))--and thus is not directly applicable to the present case which involves a living donor--the act is nonetheless instructive with regard to this state's general policy concerning an individual's authority to control the use of a donated body part. The act, which authorizes an anatomical gift to be made, inter alia, to "[a] hospital [or a] physician [,] ... for transplantation, therapy, medical or dental

education, research or advancement of medical or dental science" (§ 7153, subd. (a)(1)), expressly provides that such a gift "may be made to a designated donee or without designating a donee" (§ 7153, subd. (b)) and also that the donor may make such a gift "for any of the purposes [specified in the statute or may] limit an anatomical gift to one or more of those purposes...." (§ 7150.5, subd. (a).) Thus, the act clearly recognizes that it is the donor of the body part, rather than the hospital or physician who receives the part, who has the authority to designate, within the parameters of the statutorily authorized uses, the particular use to which the part may be put.

Although, as noted, the Uniform Anatomical Gift Act applies only to anatomical gifts that take effect on or after the death of the donor, the general principle of "donor control" which the act embodies is clearly not limited to that setting. In the transplantation context, for example, it is common for a living donor to designate the specific donee--often a relative--who is to receive a donated organ. If a hospital, after removing an organ from such a donor, decided on its own to give the organ to a different donee, no one would deny that the hospital had violated the legal right of the donor by its unauthorized use of the donated organ. Accordingly, it is clear under California law that a patient has the right, prior to the removal of an organ, to control the use to which the organ will be put after removal.

It is also clear, under traditional common law principles, that this right of a patient to control the future use of his organ is protected by the law of conversion. As a general matter, the tort of conversion protects an individual not only against improper interference with the right ofpossession of his property but also against unauthorized use of his property or improper interference with his right to control the use of his property. Sections 227 and 228 of the Restatement Second of Torts specifically provide in this regard that "[o]ne who uses a chattel in a manner which is a serious violation of the right of another to control its use is subject to liability to the other for conversion" and that "[o]ne who is authorized to make a particular use of a chattel, and uses it in a manner exceeding the authorization, is subject to liability for conversion to another whose right to control the use of the chattel is thereby seriously violated." California cases have also long recognized that "unauthorized use" of property can give rise to a conversion action. (See *Hollywood M.P. Equipment Co. v. Furer* (1940) 16 Cal.2d 184, 189, 105 P.2d 299. See generally 5 Witkin, Summary of Cal. Law (9th ed. 1988) Torts, § 622, p. 716.)

The application of these principles to the present case is evident. If defendants had informed plaintiff, prior to removal, of the possible uses to which his body part could be put and plaintiff had authorized one particular use, it is clear under the foregoing authorities that defendants would be liable for conversion if they disregarded plaintiff's decision and used the body part in an unauthorized manner for their own economic benefit. Although in this case defendants did not disregard a specific directive from plaintiff with regard to the future use of his body part, the complaint alleges that, before the body part was removed, defendants intentionally withheld material information that they were under an obligation to disclose to plaintiff and that was necessary for his exercise of control over the body part; the complaint also alleges that defendants withheld such information in order to appropriate the control over the future use of such body part for their own economic benefit. If these allegations are true, defendants clearly improperly interfered with plaintiff's right in his body part at a time when he had the authority to determine the future use of such part, thereby misappropriating plaintiff's right of control for their own advantage. Under these circumstances, the complaint fully satisfies the established requirements of a conversion cause of

action.

As already noted, the majority maintains that there are a number of "reasons to doubt" that a patient retains any legally protectible interest in his organs after removal (maj. opn., *ante,* p. 156 of 271 Cal.Rptr., p. 489 of 793 P.2d), but none of these reasons withstands scrutiny. The majority first relies on the fact that "no reported judicial decision supports Moore's claim, either directly or by close analogy." (Maj. opn., *ante,* p. 156 of 271 Cal.Rptr., p. 489 of 793 P.2d.) By the same token, however, there is no reported judicial decision that rejects such a claim. This is simply a case of first impression. And while the majority goes on to emphasize that it is the "specialized statutes" dealing with human biological materials to which the court should look for guidance in determining whether a patient has any legal rights with respect to an organ after removal (maj. opn., *ante,* p. 156 of 271 Cal.Rptr., p. 489 of 793 P.2d), the majority fails to recognize that the Uniform Anatomical Gift Act, as we have seen, expressly confirms a patient's right to designate, prior to removal, the use to which a body part will be put. (See *ante,* pp. 168-169 of 271 Cal.Rptr., pp. 501-502 of 793 P.2d.)

The majority next relies on the provisions of section 7054.4, [FN3] a statute that addresses the potential health hazards posed by the improper disposal of human body parts, reasoning that this statute "drastically limits a patient's control over excised cells." (Maj. opn., *ante,* p. 158 of 271 Cal.Rptr., p. 491 of 793 P.2d.) While I agree with the majority that section 7054.4 should reasonably be interpreted to apply to body parts removed from a living patient as well as from dead bodies, the statute nonetheless provides absolutely no support for the majority's conclusion. Although section 7054.4 limits a patient's control over an excised body part in the sense that it prohibits him from taking the removed part to his home and keeping it on his mantel, the statute certainly does not suggest that a patient does not have the right to choose among the legally permissible uses of his organ. Similarly, there is nothing in section 7054.4 which indicates that a doctor or medical facility that removes a patient's organ possesses any greater right than the patient himself to choose the further use to which the removed organ will be put. Since the majority does not suggest that the provisions of section 7054.4 should be interpreted to prohibit the research or commercial activities at issue in this case--and I agree that the statute cannot reasonably be interpreted to prohibit such use--I cannot understand how section 7054.4 provides any assistance to the majority's argument.

> FN3. Section 7054.4 provides: "Notwithstanding any other provision of law, recognizable anatomical parts, human tissues, anatomical human remains, or infectious waste following conclusion of scientific use shall be disposed of by interment, incineration, or any other method determined by the state department [of health services] to protect the public health and safety."

Finally, the majority maintains that plaintiff's conversion action is not viable because "the subject matter of the Regents' patent--the patented cell line and the products derived from it--cannot be Moore's property." (Maj. opn., *ante,* p. 159 of 271 Cal.Rptr., p. 492 of 793 P.2d.) Even if this is an accurate statement of federal patent law, it does not explain why plaintiff may not maintain a conversion action for defendants' unauthorized use of his own body parts, blood, blood serum, bone marrow, and sperm. Although the damages which plaintiff may recover in a conversion action may not include the value of the patent and the derivative products, the fact that plaintiff may not be entitled to all of the damages which his complaint seeks does not justify denying his right to maintain any conversion

action at all. Similarly, although the question whether plaintiff's cells are "unique" may well affect the amount of damages plaintiff will be able to recover in a conversion action, the question of uniqueness has no proper bearing on plaintiff's basic right to maintain a conversion action; ordinary property, as well as unique property, is, of course, protected against conversion.

Thus, unlike the majority, I conclude that under established common law principles the facts alleged in the complaint state a cause of action for conversion. [FN4]

FN4. The majority opinion inaccurately characterizes this opinion as proposing the creation of "a new cause of action" that would "extend conversion liability" by requiring the allegation of a new element of fraud in addition to the traditional elements of a conversion cause of action. (See maj. opn., *ante,* p. 163, fn. 41 of 271 Cal.Rptr., p. 496, fn. 41 of 793 P.2d.) As explained above, my position is that the facts alleged in the present complaint state a cause of action for conversion under traditional, well-established common law principles. Contrary to the implication of the majority's assertion, it requires no extension of existing common law principles to recognize that a conversion action will lie where the facts alleged in a complaint demonstrate that the defendant obtained the plaintiff's consent by fraud. (See generally 5 Witkin, Summary of Cal.Law (9th ed. 1988) Torts, § 621, p. 715; Rest.2d Torts, § § 221, 229.) In reality, it is the majority opinion that departs from established common law principles by fashioning a novel exception that shields the defendants in this case from the ordinary reach of conversion liability.

III

Although the majority opinion does not acknowledge that plaintiff's conversion action is supported by existing common law principles, its reasoning suggests that the majority would, in any event, conclude that considerations of public policy support a judicially crafted limitation on a patient's right to sue anyone involved in medical research activities for conversion of a patient's excised organs or cells. (Maj. opn., *ante,* pp. 160-163 of 271 Cal.Rptr., pp. 493-496 of 793 P.2d.) For a number of reasons, I cannot agree that this court should carve out such a broad immunity from general conversion principles.

One of the majority's principal policy concerns is that "[t]he extension of conversion law into this area will hinder research by restricting access to the necessary raw materials"--the thousands of cell lines and tissues already in cell and tissue repositories. (Maj. opn., *ante,* p. 161 of 271 Cal.Rptr., p. 494 of 793 P.2d.) The majority suggests that the "exchange of scientific materials, which still is relatively free and efficient, will surely be compromised if each cell sample becomes the potential subject matter of a lawsuit." (Maj. opn., *ante,* p. 162 of 271 Cal.Rptr., p. 495 of 793 P.2d.)

This policy argument is flawed in a number of respects. First, the majority's stated concern does not provide any justification for barring plaintiff from bringing a conversion action against a party who does not obtain organs or cells from a cell bank but who directly interferes with or misappropriates a patient's right to control the use of his organs or cells. Although the majority opinion suggests that the availability of a breach-of- fiduciary-duty cause of action obviates any need for a conversion action against this category of defendants (see maj. opn., *ante,* pp. 163-164 of 271 Cal.Rptr., pp. 496-497 of 793 P.2d), the

existence of a breach-of- fiduciary-duty cause of action does not provide a complete answer. Even if in this case plaintiff may obtain the same remedy against such defendants under a breach-of-fiduciary-duty theory as he could under a conversion cause of action, in other factual settings an unlawful interference with a patient's right to control the use of his body part may occur in the absence of a breach of fiduciary duty. For example, if a patient donated his removed cells to a medical center, reserving the right to approve or disapprove the research projects for which the cells would be used, and if another medical center or a drug manufacturer stole the cells after removal and used them in an unauthorized manner for its own economic gain, no breach-of-fiduciary-duty cause of action would be available and a conversion action would be necessary to vindicate the patient's rights. Under the majority's holding, however, the patient would have no right to bring a conversion action, even against such a thief. As this hypothetical illustrates, even if there were compelling policy reasons to limit the potential liability of innocent researchers who use cells obtained from an existing cell bank, those policy considerations would not justify the majority's broad abrogation of *all* conversion liability for the unauthorized use of body parts.

Second, even with respect to those persons who are not involved in the initial conversion, the majority's policy arguments are less than compelling. To begin with, the majority's fear that the availability of a conversion remedy will restrict access to existing cell lines is unrealistic. In the vast majority of instances the tissues and cells in existing repositories will *not* represent a potential source of liability because they will have come from patients who consented to their organ's use for scientific purposes under circumstances in which such consent was not tainted by a failure to disclose the known valuable nature of the cells. Because potential liability under a conversion theory will exist in only the exceedingly rare instance in which a doctor knowingly concealed from the patient the value of his body part or the patient's specific directive with regard to the use of the body part was disregarded, there is no reason to think that application of settled conversion law will have any negative effect on the primary conduct of medical researchers who use tissue and cell banks.

Furthermore, even in the rare instance--like the present case--in which a conversion action might be successfully pursued, the potential liability is not likely "to destroy the economic incentive to conduct important medical research," as the majority asserts. (Maj. opn., *ante,* p. 162 of 271 Cal.Rptr., p. 495 of 793 P.2d.) If, as the majority suggests, the great bulk of the value of a cell line patent and derivative products is attributable to the efforts of medical researchers and drug companies, rather than to the "raw materials" taken from a patient (maj. opn., *ante,* pp. 159-160of 271 Cal.Rptr., pp. 492-493 of 793 P.2d), the patient's damages will be correspondingly limited, and innocent medical researchers and drug manufacturers will retain the considerable economic benefits resulting from their own work. Under established conversion law, a "subsequent innocent converter" does not forfeit the proceeds of his own creative efforts, but rather "is entitled to the benefit of any work or labor that he has expended on the [property]...." (1 Harper et al., The Law of Torts (2d ed. 1986) § 2.34, p. 234. See generally Rest.2d Torts, § 927, coms. f, g.)

Finally, the majority's analysis of the relevant policy considerations tellingly omits a most pertinent consideration. In identifying the interests of the patient that are implicated by the decision whether to recognize a conversion cause of action, the opinion speaks only of the "patient's right to make autonomous medical decisions" (maj. opn., *ante,* p. 160 of 271 Cal.Rptr., p. 493 of 793 P.2d) and fails even to mention the patient's interest in obtaining the economic value, if any, that may adhere in the subsequent use of his own body parts. Although such economic

value may constitute a fortuitous "windfall" to the patient (maj. opn., *ante,* p. 163 of 271 Cal.Rptr., p. 496 of 793 P.2d), the fortuitous nature of the economic value does not justify the creation of a novel exception from conversion liability which sanctions the intentional misappropriation of that value from the patient.

This last point reveals perhaps the most serious flaw in the majority's public policy analysis in this case. It is certainly arguable that, as a matter of policy or morality, it would be wiser to prohibit any private individual or entity from profiting from the fortuitous value that adheres in a part of a human body, and instead to require all valuable excised body parts to be deposited in a public repository which would make such materials freely available to all scientists for the betterment of society as a whole. The Legislature, if it wished, could create such a system, as it has done with respect to organs that are donated for transplantation. (See § 7155, subd. (a); Pen.Code, § 367f. See also 42 U.S.C. § 274e.) To date, however, the Legislature has not adopted such a system for organs that are to be used for research or commercial purposes, [FN5] and the majority opinion, despite some oblique suggestions to the contrary (see maj. opn., *ante,* pp. 161-162 of 271 Cal.Rptr., pp. 494-495 of 793 P.2d), emphatically does not do so by its holding in this case. Justice Arabian's concurring opinion suggests that the majority's conclusion is informed by the precept that it is immoral to sell human body parts for profit. (See conc. opn., *ante,* pp. 165-166 of 271 Cal.Rptr., pp. 498-499 of 793 P.2d.) But the majority's rejection of plaintiff's conversion cause of action does *not* mean that body parts may not be bought or sold for research or commercial purposes or that *no* private individual or entity may benefit economically from the fortuitous value of plaintiff's diseased cells. Far from elevating these biological materials above the marketplace, the majority's holding simply bars *plaintiff,* the source of the cells, from obtaining the benefit of the cells' value, but permits *defendants,* who allegedly obtained the cells from plaintiff by improper means, to retain and exploit the full economic value of their ill- gotten gains free of their ordinary common law liability for conversion.

FN5. As the dissent points out (dis. opn., *post,* pp. 184-185 of 271 Cal.Rptr., pp. 517-518 of 793 P.2d), although the Uniform Anatomical Gift Act expressly authorizes the gift of body parts for the purposes of "transplantation, therapy, medical or dental education, research, or advancement of medical or dental science" (§ 7153, subd. (a)(1)), the provision of the act that is specifically concerned with the purchase or sale of a body part for valuable consideration only prohibits a person from knowingly purchasing or selling a body part "for transplantation [or] therapy" (§ 7155, subd. (a)), and does not extend its prohibition to purchases or sales of body parts for the other purposes authorized by the statute, i.e., for research, education, or the advancement of medical science.
A comment to the section of the model Uniform Anatomical Gift Act on which section 7155 was based explains the basis for the prohibition on sale of body parts for transplantation or therapy: " 'Altruism and a desire to benefit other members of the community are important moral reasons which motivate many to donate. Any perception on the part of the public that transplantation unfairly benefits those outside the community, those who are wealthy enough to afford transplantation, or that it is undertaken primarily with an eye toward profit rather than therapy will severely imperil the moral foundations, and thus the efficacy of the system.' " (8A, West's U.Laws Annot. (1990 pocket pt.) Anatomical Gift Act (1987) § 10, p. 25.) The drafters of the provision apparently concluded that this rationale did not warrant extending the prohibition on purchase or sale to the sale of body parts that are to be used for any of the statutorily authorized purposes other than transplantation or

therapy.
Given the current provisions of the Uniform Anatomical Gift Act, there is no basis to conclude that there is a general public policy in this state prohibiting hospitals or medical centers from giving, or prohibiting patients from receiving, valuable consideration for body parts which are to be used for medical research or the advancement of medical science.

Because I conclude that plaintiff's complaint states a cause of action for conversion under traditional common law principles, I dissent from the majority opinion insofar as it rejects such a claim.

MOSK, Justice, dissenting.

I dissent.

Contrary to the principal holding of the Court of Appeal, the majority conclude that the complaint does not--in fact cannot--state a cause of action for conversion. I disagree with this conclusion for all the reasons stated by the Court of Appeal, and for additional reasons that I shall explain. For convenience I shall discuss the six premises of the majority's conclusion in the order in which they appear.

1.

The majority first take the position that Moore has no cause of action for conversion under existing law because he retained no "ownership interest" in his cells after they were removed from his body. (Maj. opn., *ante,* p. 156 of 271 Cal.Rptr., p. 489 of 793 P.2d.) To state a conversion cause of action a plaintiff must allege his "ownership or right to possession of the property at the time of the conversion" (*Baldwin v. Marina City Properties, Inc.* (1978) 79 Cal.App.3d 393, 410, 145 Cal.Rptr. 406). Here the complaint defines Moore's "Blood and Bodily Substances" to include inter alia his blood, his bodily tissues, his cells, and the cell lines derived therefrom. [FN1] Moore thereafter alleges that "he is the owner of his Blood and Bodily Substances and of the by-products produced therefrom...." And he further alleges that such blood and bodily substances "are his tangible personal property, and the activities of the defendants as set forth herein constitute a substantial interference with plaintiff's possession or right thereto, as well as defendants' wrongful exercise of dominion over plaintiff's personal property rights in his Blood and Bodily Substances."

FN1. A cell line is a cell culture that is capable of continuous and indefinite growth in vitro. (U.S. Congress, Office of Technology Assessment, New Developments in Biotechnology: Ownership of Human Tissues and Cells (1987) p. 33 (hereafter OTA Report).)

The majority impliedly hold these allegations insufficient as a matter of law, finding three "reasons to doubt" that Moore retained a sufficient ownership interest in his cells, after their excision, to support a conversion cause of action. (Maj. opn., *ante,* p. 156 of 271 Cal.Rptr., p. 489 of 793 P.2d.) In my view the majority's three reasons, taken singly or together, are inadequate to the task.

The majority's first reason is that "no reported judicial decision supports Moore's claim, either directly or by close analogy." (Maj. opn., *ante,* p. 156 of 271

Cal.Rptr., p. 489 of 793 P.2d.) Neither, however, is there any reported decision rejecting such a claim. The issue is as new as its source--the recent explosive growth in the commercialization of biotechnology.

The majority next cite several statutes regulating aspects of the commerce in or disposition of certain parts of the human body, and conclude in effect that in the present case we should also "look for guidance" to the Legislature rather than to the law of conversion. (*Id.* at p. 156 of 271 Cal.Rptr., at p. 489 of 793 P.2d.) Surely this argument is out of place in an opinion of the highest court of this state. As the majority acknowledge, the law of conversion is a creature of the common law. " 'The inherent capacity of the common law for growth and change is its most significant feature. Its development has been determined by the social needs of the community which it serves. It is constantly expanding and developing in keeping with advancing civilization and the new conditions and progress of society, and adapting itself to the gradual change of trade, commerce, arts, inventions, and the needs of the country.' [Citation.] [¶] In short, as the United States Supreme Court has aptly said, 'This flexibility and capacity for growth and adaptation is the peculiar boast and excellence of the common law.' [Citation.] ... Although the Legislature may of course speak to the subject, in the common law system the primary instruments of this evolution are the courts, adjudicating on a regular basis the rich variety of individual cases brought before them." (*Rodriguez v. Bethlehem Steel Corp.* (1974) 12 Cal.3d 382, 394, 115 Cal.Rptr. 765, 525 P.2d 669.)

Especially is this true in the field of torts. I need not review the many instances in which this court has broken fresh ground by announcing new rules of tort law: time and again when a new rule was needed we did not stay our hand merely because the matter was one of first impression. [FN2] For example, in *Sindell v. Abbott Laboratories* (1980) 26 Cal.3d 588, 163 Cal.Rptr. 132, 607 P.2d 924, we adopted a "market share" theory of liability for injury resulting from administration of a prescription drug and suffered by a plaintiff who without fault cannot trace the particular manufacturer of the drug that caused the harm. Like the opinion in the case at bar, the dissent in *Sindell* objected that market share liability was "a wholly new theory" and an "unprecedented extension of liability" (*id.* at pp. 614, 615, 163 Cal.Rptr. 132, 607 P.2d 924), and urged that in view of the economic, social, and medical effects of this new rule the decision to adopt it should rest with the Legislature (*id.* at p. 621, 163 Cal.Rptr. 132, 607 P.2d 924). We nevertheless declared the new rule for sound policy reasons, explaining that "In our contemporary complex industrialized society, advances in science and technology create fungible goods which may harm consumers and which cannot be traced to any specific producer. The response of the courts can be either to adhere rigidly to prior doctrine, denying recovery to those injured by such products, or to fashion remedies to meet these changing needs." (*Id.* at p. 610, 163 Cal.Rptr. 132, 607 P.2d 924.) We took the latter course. [FN3]

FN2. See, e.g., the cases collected in *Rodriguez v. Bethlehem Steel Corp., supra*, 12 Cal.3d at pages 394-396, 115 Cal.Rptr. 765, 525 P.2d 669.

FN3. Other jurisdictions have followed us, most recently New York's highest court. (*Hymowitz v. Eli Lilly and Co.* (1989) 73 N.Y.2d 487, 541 N.Y.S.2d 941, 948-949, 539 N.E.2d 1069, 1076-1078.)

The case at bar, of course, does not involve a drug-induced injury. Yet it does present a claim arising, like Sindell's, from "advances in science and technology"

that could not have been foreseen when traditional tort doctrine here, the law of conversion--was formulated. My point is that if the cause of action for conversion is otherwise an appropriate remedy on these facts, we should not refrain from fashioning it simply because another court has not yet so held or because the Legislature has not yet addressed the question. We need not wait on either event, because neither is a precondition to an exercise of our long-standing "power to insure the just and rational development of the common law in our state" (*Rodriguez v. Bethlehem Steel Corp., supra*, 12 Cal.3d 382, 394, 115 Cal.Rptr. 765, 525 P.2d 669). [FN4]

FN4. The majority cite three cases declining to apply other tort doctrines in different factual contexts, but in each we based our decision mainly on traditional reasons of policy. (*Nally v. Grace Community Church* (1988) 47 Cal.3d 278, 294-300, 253 Cal.Rptr. 97, 763 P.2d 948; *Foley v. Interactive Data Corp.* (1988) 47 Cal.3d 654, 696-700, 254 Cal.Rptr. 211, 765 P.2d 373; *Brown v. Superior Court* (1988) 44 Cal.3d 1049, 1061-1065, 245 Cal.Rptr. 412, 751 P.2d 470.) As will appear (pt. 4, *post*), in my view the single policy reason offered by the majority for rejecting a conversion cause of action here is unpersuasive and is outweighed by policy reasons to the contrary.

2.

The majority's second reason for doubting that Moore retained an ownership interest in his cells after their excision is that "California statutory law ... drastically limits a patient's control over excised cells." (Maj. opn., *ante*, p. 158 of 271 Cal.Rptr., p. 491 of 793 P.2d.) For this proposition the majority rely on Health and Safety Code section 7054.4 (hereafter section 7054.4), set forth in the margin. [FN5] The majority concede that the statute was not meant to directly resolve the question whether a person in Moore's position has a cause of action for conversion, but reason that it indirectly resolves the question by limiting the patient's control over the fate of his excised cells: "By restricting how excised cells may be used and requiring their eventual destruction, the statute eliminates so many of the rights ordinarily attached to property that one cannot simply assume that what is left amounts to 'property' or 'ownership' for purposes of conversion law." (Maj. opn., *ante*, pp. 158-159 of 271 Cal.Rptr., pp. 491-492 of 793 P.2d.) As will appear, I do not believe section 7054.4 supports the just quoted conclusion of the majority.

FN5. Section 7054.4 provides:
"Notwithstanding any other provision of law, recognizable anatomical parts, human tissues, anatomical human remains, or infectious waste following conclusion of scientific use shall be disposed by interment, incineration, or any other method determined by the state department [of health services] to protect the public health and safety. "As used in this section, 'infectious waste' means any material or article which has been, or may have been, exposed to contagious or infectious disease."

First, in my view the statute does not authorize the principal use that defendants claim the right to make of Moore's tissue, i.e., its commercial exploitation. In construing section 7054.4, of course, "we look first to the words of the statute themselves" (*Long Beach Police Officers Assn. v. City of Long Beach* (1988) 46 Cal.3d 736, 741, 250 Cal.Rptr. 869, 759 P.2d 504), and give those words their usual and

ordinary meaning (*California Teachers Assn. v. San Diego Community College Dist.* (1981) 28 Cal.3d 692, 698, 170 Cal.Rptr. 817, 621 P.2d 856).

By its terms, section 7054.4 permits only "scientific use" of excised body parts and tissue before they must be destroyed. We must therefore determine the usual and ordinary meaning of that phrase. I would agree that "scientific use" at least includes routine postoperative examination of excised tissue conducted by a pathologist for diagnostic or prognostic reasons (e.g., to verify preoperative diagnosis or to assist in determining postoperative treatment). I might further agree that "scientific use" could be extended to include purely scientific study of the tissue by a disinterested researcher for the purpose of advancing medical knowledge--provided of course that the patient gave timely and informed consent to that use. It would stretch the English language beyond recognition, however, to say that commercial exploitation of the kind and degree alleged here is also a usual and ordinary meaning of the phrase "scientific use."

The majority dismiss this difficulty by asserting that I read the statute to define "scientific use" as "not-for-profit scientific use," and by finding "no reason to believe that the Legislature intended to make such a distinction." (Maj. opn., *ante,* p. 159, fn. 34 of 271 Cal.Rptr., p. 492, fn. 34 of 793 P.2d.) The objection misses my point. I do not stress the concept of profit, but the concept of *science:* the distinction I draw is not between nonprofit scientific use and scientific use that happens to lead to a marketable by-product; it is between a truly *scientific* use and the blatant*commercial* exploitation of Moore's tissue that the present complaint alleges. Under those allegations, defendants Dr. David W. Golde and Shirley G. Quan were not only scientists, they were also full-fledged entrepreneurs: the complaint repeatedly declares that they appropriated Moore's tissue in order "to further defendants' independent research and commercial activities and promote their economic, financial and competitive interests." The complaint also alleges that defendant Regents of the University of California (hereafter Regents) actively assisted the individual defendants in applying for patent rights and in negotiating with bioengineering and pharmaceutical companies to exploit the commercial potential of Moore's tissue. Finally, the complaint alleges in detail the contractual arrangements between the foregoing defendants and defendants Genetics Institute, Inc., and Sandoz Pharmaceuticals Corporation, giving the latter companies exclusive rights to exploit that commercial potential while providing substantial financial benefits to the individual defendants in the form of cash, stock options, consulting fees, and fringe benefits. To exclude such traditionally commercial activities from the phrase "scientific use," as I do here, does not give it a restrictive definition; rather, it gives the phrase its usual and ordinary meaning, as settled law requires.

Secondly, even if section 7054.4 does permit defendants' commercial exploitation of Moore's tissue under the guise of "scientific use," it does not follow that--as the majority conclude--the statute "eliminates so many of the rights ordinarily attached to property" that what remains does not amount to "property" or "ownership" for purposes of the law of conversion. (Maj. opn., *ante,* p. 159 of 271 Cal.Rptr., p. 492 of 793 P.2d.)

The concepts of property and ownership in our law are extremely broad. (See Civ.Code, § § 654, 655.) A leading decision of this court approved the following definition: " 'The term "property" is sufficiently comprehensive to include every species of estate, real and personal, and everything which one person can own and transfer to another. It extends to every species of right and interest capable of being enjoyed as such upon which it is practicable to place a money value.' " (*Yuba River Power Co. v. Nevada Irr. Dist.* (1929) 207 Cal. 521, 523, 279 P. 128.)

Being broad, the concept of property is also abstract: rather than referring directly to a material object such as a parcel of land or the tractor that cultivates it, the concept of property is often said to refer to a "bundle of rights" that may be exercised with respect to that object--principally the rights to possess the property, to use the property, to exclude others from theproperty, and to dispose of the property by sale or by gift. "Ownership is not a single concrete entity but a bundle of rights and privileges as well as of obligations." (*Union Oil Co. v. State Bd. of Equal.* (1963) 60 Cal.2d 441, 447, 34 Cal.Rptr. 872, 386 P.2d 496.) But the same bundle of rights does not attach to all forms of property. For a variety of policy reasons, the law limits or even forbids the exercise of certain rights over certain forms of property. For example, both law and contract may limit the right of an owner of real property to use his parcel as he sees fit. [FN6] Owners of various forms of personal property may likewise be subject to restrictions on the time, place, and manner of their use. [FN7] Limitations on the disposition of real property, while less common, may also be imposed. [FN8] Finally, some types of personal property may be sold but not given away, [FN9] while others may be given away but not sold, [FN10] and still others may neither be given away nor sold. [FN11]

FN6. Zoning or nuisance laws, or covenants running with the land or equitable servitudes, or condominium declarations, may prohibit certain uses of the parcel or regulate the number, size, location, etc., of buildings an owner may erect on it. Even if rental of the property is a permitted use, rent control laws may limit the benefits of that use. Other uses may, on the contrary, be compelled: e.g., if the property is a lease to extract minerals, the lease may be forfeited by law or contract if the lessee does not exploit the resource. Historic preservation laws may prohibit an owner from demolishing a building on the property, or even from altering its appearance. And endangered species laws may limit an owner's right to develop the land from its natural state.

FN7. Public health and safety laws restrict in various ways the manufacture, distribution, purchase, sale, and use of such property as food, drugs, cosmetics, tobacco, alcoholic beverages, firearms, flammable or explosive materials, and waste products. Other laws regulate the operation of private and commercial motor vehicles, aircraft, and vessels.

FN8. Provisions in a condominium declaration may give the homeowners association a right of first refusal over a proposed sale by a member. Provisions in a commercial lease may require the lessor's consent to an assignment of the lease.

FN9. A person contemplating bankruptcy may sell his property at its "reasonably equivalent value," but he may not make a gift of the same property. (See 11 U.S.C. § 548(a).)

FN10. A sportsman may give away wild fish or game that he has caught or killed pursuant to his license, but he may not sell it. (Fish & Game Code, § § 3039, 7121.)
The transfer of human organs and blood is a special case that I discuss below

(pt. 5).

FN11. E.g., a license to practice a profession, or a prescription drug in the hands of the person for whom it is prescribed.

In each of the foregoing instances, the limitation or prohibition diminishes the bundle of rights that would otherwise attach to the property, yet what remains is still deemed in law to be a protectible property interest. "Since property or title is a complex bundle of rights, duties, powers and immunities, the pruning away of some or a great many of these elements does not entirely destroy the title...." (*People v. Walker* (1939) 33 Cal.App.2d 18, 20, 90 P.2d 854 [even the possessor of contraband has certain property rights in it against anyone other than the state].) The same rule applies to Moore's interest in his own body tissue: even if we assume that section 7054.4 limited the use and disposition of his excised tissue in the manner claimed by the majority, Moore nevertheless retained valuable rights in that tissue. Above all, at the time of its excision he at least had *the right to do with his own tissue whatever the defendants did with it:* i.e., he could have contracted with researchers and pharmaceutical companies to develop and exploit the vast commercial potential of his tissue and its products. Defendants certainly believe that *their* right to do the foregoing is not barred by section 7054.4 and is a significant property right, as they have demonstrated by their deliberate concealment from Moore of the true value of his tissue, their efforts to obtain a patent on the Mo cell line, their contractual agreements to exploit this material, their exclusion of Moore from any participation in the profits, and their vigorous defense of this lawsuit. The Court of Appeal summed up the point by observing that "Defendants' position that plaintiff cannot own his tissue, but that they can, is fraught with irony." It is also legally untenable. As noted above, the majority cite no case holding that an individual's right to develop and exploit the commercial potential of his own tissue is *not* a right of sufficient worth or dignity to be deemed a protectible property interest. In the absence of such authority--or of legislation to the same effect--the right falls within the traditionally broad concept of property in our law.

3.

The majority's third and last reason for their conclusion that Moore has no cause of action for conversion under existing law is that "the subject matter of the Regents' patent--the patented cell line and the products derived from it--cannot be Moore's property." (Maj. opn., *ante,* p. 159 of 271 Cal.Rptr., p. 492 of 793 P.2d.) The majority then offer a dual explanation: "This is because the patented cell line is *factually* and *legally* distinct from the cells taken from Moore's body." (*Ibid.,* italics added.) Neither branch of the explanation withstands analysis.

First, in support of their statement that the Mo cell line is "factually distinct" from Moore's cells, the majority assert that "Cells change while being developed into a cell line and continue to change over time," and in particular may acquire an abnormal number of chromosomes. (Maj. opn., *ante,* p. 159, fn. 35 of 271 Cal.Rptr., p. 492, fn. 35 of 793 P.2d.) No one disputes these assertions, but they are nonetheless irrelevant. For present purposes no distinction can be drawn between Moore's cells and the Mo cell line. It appears that the principal reason for establishing a cell line is not to "improve" the quality of the parent cells but simply to extend their life indefinitely, in order to permit long-term study and/or exploitation of the qualities already present in such cells. The complaint alleges that Moore's cells naturally produced certain valuable proteins in larger than

normal quantities; indeed, that was why defendants were eager to culture them in the first place. Defendants do not claim that the cells of the Mo cell line are in any degree more productive of such proteins than were Moore's own cells. Even if the cells of the Mo cell line in fact have an abnormal number of chromosomes, at the present stage of this case we do not know if that fact has any bearing whatever on their capacity to produce proteins; yet it is in the commercial exploitation of that capacity-- not simply in their number of chromosomes--that Moore seeks to assert an interest. For all that appears, therefore, the emphasized fact is a distinction without a difference.

Second, the majority assert in effect that Moore cannot have an ownership interest in the Mo cell line because defendants patented it. [FN12] The majority's point wholly fails to meet Moore's claim that he is entitled to compensation for defendants' unauthorized use of his bodily tissues *before* defendants patented the Mo cell line: defendants undertook such use immediately after the splenectomy on October 20, 1976, and continued to extract and use Moore's cells and tissue at least until September 20, 1983; the patent, however, did not issue until March 20, 1984, more than seven years after the unauthorized use began. Whatever the legal consequences of that event, it did not operate retroactively to immunize defendants from accountability for conduct occurring long before the patent was granted.

> FN12. The majority also assert that the patent constitutes an "authoritative" determination that the Mo cell line is a patentable invention. (Maj. opn., *ante,* p. 160 of 271 Cal.Rptr., p. 493 of 793 P.2d.) But to the extent that "authoritative" implies "conclusive," it is a misstatement of patent law. When granted by the United States Patent Office, a patent has only "prima facie validity": it is presumed valid, but the defendant in an infringement action may undertake to "establish that the patent is invalid on any one of a number of possible grounds, such as lack of novelty, lack of invention, lack of utility, etc." (Amdur, Patent Fundamentals (1959) p. 86, fn. 7.)

Nor did the issuance of the patent in 1984 necessarily have the drastic effect that the majority contend. To be sure, the patent granted defendants the exclusive right to make, use, or sell the invention for a period of 17 years. (35 U.S.C. § 154.) But Moore does not assert any such right for himself. Rather, he seeks to show that he is entitled, in fairness and equity, to some share in the profits that defendants have made and will make from their commercial exploitation of the Mo cell line. I do not question that the cell line is primarily the product of defendants' inventive effort. Yet likewise no one can question Moore's crucial contribution to the invention--an invention named, ironically, after him: but for the cells of Moore's body taken by defendants, *there would have been no Mo cell line.* Thus the complaint alleges that Moore's "Blood and Bodily Substances were absolutely essential to defendants' research and commercial activities with regard to his cells, cell lines, [and] the Mo cell-line, ... and that defendants could not have applied for and had issued to them the Mo cell-line patent and other patents described herein without obtaining and culturing specimens of plaintiff's Blood and Bodily Substances." Defendants admit this allegation by their demurrers, as well they should: for all their expertise, defendants do not claim they could have extracted the Mo cell line out of thin air.

Nevertheless the majority conclude that the patent somehow cut off all Moore's rights--past, present, and future--to share in the proceeds of defendants' commercial exploitation of the cell line derived from his own body tissue. The majority cite no authority for this unfair result, and I cannot believe it is

compelled by the general law of patents: a patent is not a license to defraud. [FN13] Perhaps the answer lies in an analogy to the concept of "joint inventor." I am aware that "patients and research subjects who contribute cells to research will not be considered inventors." (OTA Rep., *supra,* at p. 71.) Nor is such a person strictly speaking a "joint inventor" within the meaning of the term in federal law. (35 U.S.C. § 116.) But he does fall within the spirit of that law: "The joint invention provision guarantees that all who contribute in a substantial way to a product's development benefit from the reward that the product brings. Thus, the protection of joint inventors encourages scientists to cooperate with each other and ensures that each contributor is rewarded fairly.

> FN13. For example, it is hornbook law that "In patent [infringement] suits where equitable relief is sought, the defense of unclean hands may be interposed. The patent owner may have forced licensees under his patent to adopt illegal licensing provisions, or he may have committed any one of a large number of acts constituting fraud or fraudulent behavior. While only the United States government can bring suit to cancel a patent on the grounds of fraud, it is a valid defense in an infringement action that the patent was fraudulently issued to the patentee." (Seidel, What the General Practitioner Should Know About Patent Law and Practice (ALI 1956) p. 118.)

"Although a patient who donates cells does not fit squarely within the definition of a joint inventor, the policy reasons that inform joint inventor patents should also apply to cell donors. Neither John Moore nor any other patient whose cells become the basis for a patentable cell line qualifies as a 'joint inventor' because he or she did not further the development of the product in any intellectual or conceptual sense. Nor does the status of patients as sole owners of a component part make them deserving of joint inventorship status. What the patients did do, knowingly or unknowingly, is collaborate with the researchers by donating their body tissue.... By providing the researchers with unique raw materials, without which the resulting product could not exist, the donors become necessary contributors to the product. Concededly, the patent is not granted for the cell as it is found in nature, but for the modified biogenetic product. However, the uniqueness of the product that gives rise to its patentability stems from the uniqueness of the original cell. *A patient's claim to share in the profits flowing from a patent would be analogous to that of an inventor whose collaboration was essential to the success of a resulting product. The patient was not a coequal, but was a necessary contributor to the cell line.*" (Danforth, *Cells, Sales, & Royalties: The Patient's Right to a Portion of the Profits* (1988) 6 Yale L. & Pol'y Rev. 179, 197, fns. omitted, italics added (hereafter Danforth).)

Under this reasoning, which I find persuasive, the law of patents would not be a bar to Moore's assertion of an ownership interest in his cells and their products sufficient to warrant his sharing in the proceeds of their commercial exploitation.

4.

Having concluded--mistakenly, in my view--that Moore has no cause of action for conversion under existing law, the majority next consider whether to "extend" the conversion cause of action to this context. Again the majority find three reasons not to do so, and again I respectfully disagree with each.

The majority's first reason is that a balancing of the "relevant policy considerations" counsels against recognizing a conversion cause of action in these

circumstances. (Maj. opn., *ante,* p. 160 of 271 Cal.Rptr., p. 493 of 793 P.2d.) The memo identifies two such policies, but concedes that one of them--"protection of a competent patient's right to make autonomous medical decisions" (*id.* at p. 160 of 271 Cal.Rptr., p. 493 of 793 P.2d)-- would in fact be promoted, even though "indirectly," by recognizing a conversion cause of action. (*Id.* at p. 160 of 271 Cal.Rptr., at p. 493 of 793 P.2d.)

The majority focus instead on a second policy consideration, i.e., their concern "that we not threaten with disabling civil liability innocent parties who are engaged in socially useful activities, such as researchers who have no reason to believe that their use of a particular cell sample is, or may be, against a donor's wishes." (Maj. opn., *ante,* p. 160 of 271 Cal.Rptr., p. 493 of 793 P.2d.) As will appear, in my view this concern is both overstated and outweighed by contrary considerations. [FN14]

> FN14. On this record the majority's solicitude for the protection of "innocent parties" seems ironic. The complaint is replete with factual allegations--which we must accept as true on this appeal--to the effect that defendants repeatedly lied to Moore about their commercial exploitation of his tissue. For example, the complaint contains detailed allegations that defendants falsely told Moore that his numerous postoperative trips from his home in Seattle to the Medical Center of the University of California at Los Angeles between 1976 and 1983 were necessary because his blood and other bodily fluids could be extracted only by them at the latter facility; that defendants falsely told Moore that the purpose of such extractions was to promote his health, when in fact it was solely to promote defendants' ongoing research and commercial activities; and that even when Moore expressly asked if defendants had discovered anything about his blood that might have potential commercial value, defendants falsely told him "they had discovered nothing of any commercial or financial value in his Blood or Bodily Substances, and in fact actively discouraged such inquiries." These are not the acts of "innocent parties."

The majority begin their analysis by stressing the obvious facts that research on human cells plays an increasingly important role in the progress of medicine, and that the manipulation of those cells by the methods of biotechnology has resulted in numerous beneficial products and treatments. Yet it does not necessarily follow that, as the majority claim, application of the law of conversion to this area "will hinder research by restricting access to the necessary raw materials," i.e., to cells, cell cultures, and cell lines. (Maj. opn., *ante,* p. 161 of 271 Cal.Rptr., p. 494 of 793 P.2d.) The majority observe that many researchers obtain their tissue samples, routinely and at little or no cost, from cell-culture repositories. The majority then speculate that "This exchange of scientific materials, which still is relatively free and efficient, will surely be compromised if each cell sample becomes the potential subject matter of a lawsuit." (Maj. opn., *ante,* p. 162 of 271 Cal.Rptr., p. 495 of 793 P.2d.) There are two grounds to doubt that this prophecy will be fulfilled.

To begin with, if the relevant exchange of scientific materials was ever "free and efficient," it is much less so today. Since biological products of genetic engineering became patentable in 1980 (*Diamond v. Chakrabarty* 1980) 447 U.S. 303, 100 S.Ct. 2204, 65 L.Ed.2d 144), human cell lines have been amenable to patent protection and, as the Court of Appeal observed in its opinion below, "The rush to patent for exclusive use has been rampant." Among those who have taken advantage of

this development, of course, are the defendants herein: as we have seen, defendants Golde and Quan obtained a patent on the Mo cell line in 1984 and assigned it to defendant Regents. With such patentability has come a drastic reduction in the formerly free access of researchers to new cell lines and their products: the "novelty" requirement for patentability prohibits public disclosure of the invention at all times up to one year before the filing of the patent application. (35 U.S.C. § 102(b).) Thus defendants herein recited in their patent specification, "At no time has the Mo cell line been available to other than the investigators involved with its initial discovery and only the conditioned medium from the cell line has been made available to a limited number of investigators for collaborative work with the original discoverers of the Mo cell line."

An even greater force for restricting the free exchange of new cell lines and their products has been the rise of the biotechnology industry and the increasing involvement of academic researchers in that industry. [FN15] When scientists became entrepreneurs and negotiated with biotechnological and pharmaceutical companies to develop and exploit the commercial potential of their discoveries--as did defendants in the case at bar--layers of contractual restrictions were added to the protections of the patent law. [FN16]

FN15. Biotechnology itself began as an academic research activity, and the universities remain a major source of expertise in the field. This connection has led to a relationship of unparalleled intimacy between universities and biotechnology companies: "Commercial ventures between universities and the biotechnology industry now include consulting arrangements, licensing of new technology for development, sponsored research projects, research partnerships, industrial associate programs, and the formation of research departments and institutes." (Howard, *Biotechnology, Patients' Rights, and the Moore Case* (1989) 44 Food Drug Cosm.L.J. 331, 338, fn. 65 (hereafter Howard); accord, OTA Rep., *supra,* at pp. 61-62.)

FN16. "Besides patent protection, intangible property rights in human biologics arise through contractual ordering. Before the commercial potential of genetic engineering on human cells became evident, scientists freely transferred cell lines and cell products. As the commercial value of the cell lines developed, originators of cell lines and cell products found written agreements increasingly necessary to protect economic rights in their creations." (Note, *Toward the Right of Commerciality: Recognizing Property Rights in the Commercial Value of Human Tissue* (1986) 34 UCLA L.Rev. 207, 223, fns. omitted (hereafter *Toward the Right of Commerciality*).)

In their turn, the biotechnological and pharmaceutical companies demanded and received exclusive rights in the scientists' discoveries, and frequently placed those discoveries under trade secret protection. Trade secret protection is popular among biotechnology companies because, among other reasons, the invention need not meet the strict standards of patentability and the protection is both quickly acquired and unlimited in duration. (Note, *Patent and Trade Secret Protection in University-Industry Research Relationships in Biotechnology* (1987) 24 Harv.J. on Legis. 191, 218-219.) [FN17] Secrecy as a normal business practice is also taking hold in university research laboratories, often because of industry pressure (*id.* at pp. 204-208): "One of the most serious fears associated with university- industry cooperative research concerns keeping work private and not disclosing it to the researcher's peers. [Citation.] ... Economic arrangements

between industry and universities inhibit open communication between researchers, especially for those who are financially tied to smaller biotechnology firms." (Howard, *supra,* 44 Food Drug Cosm.L.J. at p. 339, fn. 72.)

FN17. In California, trade secret protection for new microorganisms is also expressly granted by the criminal law. (Pen.Code, § 499c, subd. (a)(2).)

Secondly, to the extent that cell cultures and cell lines may still be "freely exchanged," e.g., for purely research purposes, it does not follow that the researcher who obtains such material must necessarily remain ignorant of any limitations on its use: by means of appropriate recordkeeping, the researcher can be assured that the source of the material has consented to his proposed use of it, and hence that such use is not a conversion. To achieve this end the originator of the tissue sample first determines the extent of the source's informed consent to its use--e.g., for research only, or for public but academic use, or for specific or general commercial purposes; he then enters this information in the record of the tissue sample, and the record accompanies the sample into the hands of any researcher who thereafter undertakes to work with it. "Record keeping would not be overly burdensome because researchers generally keep accurate records of tissue sources for other reasons: to trace anomalies to the medical history of the patient, to maintain title for other researchers and for themselves, and to insure reproducibility of the experiment." (*Toward the Right of Commerciality, supra,* 34 UCLA L.Rev. at p. 241.) As the Court of Appeal correctly observed, any claim to the contrary "is dubious in light of the meticulous care and planning necessary in serious modern medical research."

The majority rely on *Brown v. Superior Court, supra,* 44 Cal.3d 1049, 245 Cal.Rptr. 412, 751 P.2d 470 (hereafter *Brown*), but the case is plainly distinguishable. In a unanimous opinion that I authored for the court, we considered inter alia whether pharmaceutical manufacturers should be held strictly liable for injuries caused by "defectively designed" prescription drugs. We declined to so hold for several policy reasons. (*Id.* at pp. 1063-1065, 245 Cal.Rptr. 412, 751 P.2d 470.) One of those reasons was our concern that "the fear of large adverse monetary judgments" might dissuade such manufacturers from developing or distributing potentially beneficial new drugs. (*Id.* at p. 1063, 245 Cal.Rptr. 412, 751 P.2d 470.) The majority now seek to draw an analogy between *Brown* and the case at bar, but the analogy fails because liability exposure in the *Brown* context is qualitatively far greater. As we acknowledged in *Brown,* "unlike other important medical products ... harm to some users from prescription drugs is *unavoidable.*" (*Ibid.,* italics added.) On an industry-wide basis, therefore, the imposition of strict liability for defective prescription drugs would inevitably result in hundreds, if not thousands, of meritorious claims by often seriously harmed plaintiffs, most of them likely to be seeking exemplary as well as compensatory damages. [FN18] Given the innocence and vulnerability of the typical plaintiff in such cases, sympathetic juries might well return substantial verdicts again and again, and the industry's total liability could reach intimidating proportions. Indeed, in *Brown* we chronicled actual instances in which the mere threat of such liability did cause the industry to refuse to supply new prescription drugs. (*Id.* at p. 1064, 245 Cal.Rptr. 412, 751 P.2d 470.)

FN18. *Brown* (44 Cal.3d at p. 1055, 245 Cal.Rptr. 412, 751 P.2d 470) is itself an example of such multiplicity of actions: the case involved at least 69 lawsuits filed in the same court for personal injuries caused by just 1 drug,

and a typical complaint named 170 or more pharmaceutical companies as defendants.

None of the foregoing is true in the case at bar. The majority claim that a conversion cause of action threatens to "destroy the economic incentive" to conduct the type of research here in issue (maj. opn., *ante*, p. 162 of 271 Cal.Rptr., p. 495 of 793 P.2d), but it is difficult to take this hyperbole seriously. First, the majority reason that with every cell sample a researcher "purchases a ticket in a litigation lottery." (*Id.* at p. 162-163 of 271 Cal.Rptr., at p. 495-496 of 793 P.2d.) This is a colorful image, but it does not necessarily reflect reality: as explained above, with proper recordkeeping the researcher acquires not a litigation-lottery ticket but the information he needs precisely in order to avoid litigation. In contrast to *Brown*, therefore, here the harm is by no means "unavoidable." Second, the risk at hand is not of a multiplicity of actions: in *Brown* the harm would be suffered by many members of the public--the users of the end product of the process of developing the new drug--while here it can be suffered by only one person--the original source of the research material that began that process. Third, the harm to the latter will be primarily economic, rather than the potentially grave physical injuries at issue in *Brown*.

In any event, in my view whatever merit the majority's single policy consideration may have is outweighed by two contrary considerations, i.e., policies that are promoted by recognizing that every individual has a legally protectible property interest in his own body and its products. First, our society acknowledges a profound ethical imperative to respect the human body as the physical and temporal expression of the unique human persona. One manifestation of that respect is our prohibition against direct abuse of the body by torture or other forms of cruel or unusual punishment. Another is our prohibition against indirect abuse of the body by its economic exploitation for the sole benefit of another person. The most abhorrent form of such exploitation, of course, was the institution of slavery. Lesser forms, such as indentured servitude or even debtor's prison, have also disappeared. Yet their specter haunts the laboratories and boardrooms of today's biotechnological research-industrial complex. It arises wherever scientists or industrialists claim, as defendants claim here, the right to appropriate and exploit a patient's tissue for their sole economic benefit--the right, in other words, to freely mine or harvest valuable physical properties of the patient's body: "Research with human cells that results in significant economic gain for the researcher and no gain for the patient offends the traditional mores of our society in a manner impossible to quantify. Such research tends to treat the human body as a commodity--a means to a profitable end. The dignity and sanctity with which we regard the human whole, body as well as mind and soul, are absent when we allow researchers to further their own interests without the patient's participation by using a patient's cells as the basis for a marketable product." (Danforth, *supra*, 6 Yale L. & Pol'y Rev. at p. 190, fn. omitted.)

A second policy consideration adds notions of equity to those of ethics. Our society values fundamental fairness in dealings between its members, and condemns the unjust enrichment of any member at the expense of another. This is particularly true when, as here, the parties are not in equal bargaining positions. We are repeatedly told that the commercial products of the biotechnological revolution "hold the promise of tremendous profit." (*Toward the Right of Commerciality*, *supra*, 34 UCLA L.Rev. at p. 211.) [FN19] In the case at bar, for example, the complaint alleges that the market for the kinds of proteins produced by the Mo cell line was predicted to exceed $3 billion by 1990. These profits are currently shared exclusively between the biotechnology industry and the universities

that support that industry. The profits are shared in a wide variety of ways, including "direct entrepreneurial ties to genetic-engineering firms" and "an equity interest in fledgling biotechnology firms" (Howard, *supra,* 44 Food Drug Cosm.L.J. at p. 338). Thus the complaint alleges that because of his development of the Mo cell line defendant Golde became a paid consultant of defendant Genetics Institute and acquired the rights to 75,000 shares of that firm's stock at a cost of 1 cent each; that Genetics Institute further contracted to pay Golde and the Regents at least $330,000 over 3 years, including a pro rata share of Golde's salary and fringe benefits; and that defendant Sandoz Pharmaceuticals Corporation subsequently contracted to increase that compensation by a further $110,000.

> FN19. In a footnote at this point the cited article reports published estimates of the market for biotechnological products, by the end of this decade, ranging from $15 billion to $100 billion. *(Toward the Right of Commerciality, supra,* 34 UCLA L.Rev. at p. 211, fn. 16.)

There is, however, a third party to the biotechnology enterprise--the patient who is the source of the blood or tissue from which all these profits are derived. While he may be a silent partner, his contribution to the venture is absolutely crucial: as pointed out above (pt. 3, *ante*), but for the cells of Moore's body taken by defendants there would have been no Mo cell line at all. [FN20] Yet defendants deny that Moore is entitled to any share whatever in the proceeds of this cell line. This is both inequitable and immoral. As Dr. Thomas H. Murray, a respected professor of ethics and public policy, testified before Congress, "the person [who furnishes the tissue] should be justly compensated.... If biotechnologists fail to make provision for a just sharing of profits with the person whose gift made it possible, the public's sense of justice will be offended and no one will be the winner." (Murray, *Who Owns the Body? On the Ethics of Using Human Tissue for Commercial Purposes* (Jan.-Feb.1986) IRB: A Review of Human Subjects Research, at p. 5.) [FN21]

> FN20. It bears reiterating that "human cells are indispensable to the creation and production of human biologics." *(Toward the Right of Commerciality,* supra, 34 UCLA L.Rev. at p. 209.) In a footnote at this point (*id.* at fn. 6) the article explains: "Many incorrectly believe that biotechnology permits scientists to 'create' life. This simply is not the case. Presently, biotechnology allows only the manipulation, not the creation, of life. Although biotechnologists are able to cut and splice genes, to fuse cells, and even to mix the genetic information of humans with that of bacteria, they must start with a living cell as the raw material."

> FN21. The quoted view of Dr. Murray stands in stark contrast to the majority's disparaging remark that describes Moore's right to share in these profits as "a highly theoretical windfall." (Maj. opn., *ante,* p. 163 of 271 Cal.Rptr., p. 496 of 793 P.2d.)

There will be such equitable sharing if the courts recognize that the patient has a legally protected property interest in his own body and its products: "property rights in one's own tissue would provide a morally acceptable result by giving effect to notions of fairness and preventing unjust enrichment.... [¶] Societal notions of equity and fairness demand recognition of property rights. There are

bountiful benefits, monetary and otherwise, to be derived from human biologics. To deny the person contributing the raw material a fair share of these ample benefits is both unfair and morally wrong." (*Toward the Right of Commerciality, supra,* 34 UCLA L.Rev. at p. 229.) "Recognizing a donor's property rights would prevent unjust enrichment by giving monetary rewards to the donor and researcher proportionate to the value of their respective contributions. Biotechnology depends upon the contributions of both patients and researchers. If not for the patient's contribution of cells with unique attributes, the medical value of the bioengineered cells would be negligible. But for the physician's contribution of knowledge and skill in developing the cell product, the commercial value of the patient's cells would also be negligible. Failing to compensate the patient unjustly enriches the researcher because only the researcher's contribution is recognized." (*Id.* at p. 230.) In short, as the Court of Appeal succinctly put it, "If this science has become science for profit, then we fail to see any justification for excluding the patient from participation in those profits."

5.

The majority's second reason for declining to extend the conversion cause of action to the present context is that "the Legislature should make that decision." (Maj. opn., *ante,* p. 163 of 271 Cal.Rptr., p. 496 of 793 P.2d.) I do not doubt that the Legislature is competent to act on this topic. The fact that the Legislature may intervene if and when it chooses, however, does not in the meanwhile relieve the courts of their duty of enforcing--or if need be, fashioning--an effective judicial remedy for the wrong here alleged. As I observed above (pt. 1, *ante*), if a conversion cause of action is otherwise an appropriate remedy on these facts we should not refrain from recognizing it merely because the Legislature has not yet addressed the question. To do so would be to abdicate pro tanto our responsibility over a body of law--torts--that is particularly a creature of the common law. And such reluctance to act would be especially unfortunate at the present time, when the rapid expansion of biotechnological science and industry makes resolution of these issues an increasingly pressing need.

The inference I draw from the current statutory regulation of human biological materials, moreover, is the opposite of that drawn by the majority. By selective quotation of the statutes (maj. opn., *ante,* p. 156, fns. 22 & 23 of 271 Cal.Rptr., p. 489, fns. 22 & 23 of 793 P.2d) the majority seem to suggest that human organs and blood cannot legally be sold on the open market-- thereby implying that if the Legislature were to act here it would impose a similar ban on monetary compensation for the use of human tissue in biotechnological research and development. But if that is the argument, the premise is unsound: contrary to popular misconception, it is not true that human organs and blood cannot legally be sold.

As to organs, the majority rely on the Uniform Anatomical Gift Act (Health & Saf.Code, § 7150 et seq., hereafter the UAGA) for the proposition that a competent adult may make a post mortem gift of any part of his body but may not receive "valuable consideration" for the transfer. But the prohibition of the UAGA against the sale of a body part is much more limited than the majority recognize: by its terms (Health & Saf.Code, § 7155, subd. (a)) the prohibition applies only to sales for "transplantation" or "therapy." [FN22] Yet a different section of the UAGA authorizes the transfer and receipt of body parts for such additional purposes as "medical or dental education, research, or advancement of medical or dental science." (Health & Saf.Code, § 7153, subd. (a)(1).) No section of the UAGA prohibits anyone from selling body parts for any of those additional purposes; by clear implication, therefore, such sales are legal. [FN23] Indeed, the fact that the UAGA prohibits *no* sales of organs other than sales for "transportation" or

"therapy" raises a further implication that it is also legal for anyone to sell human tissue to a biotechnology company for research and development purposes.

FN22. It also applies to the special case of sales for "reconditioning," which refers to pacemakers. (See, e.g., Health & Saf.Code, § 7153, subd. (a)(4).)

FN23. "By their terms ... the statutes in question forbid only sales for transplantation and therapy. In light of the rather clear authorization for donation for research and education, one could conclude that sales for these non-therapeutic purposes are permitted. Scientists in practice have been buying and selling human tissues for research apparently without interference from these statutes." (Note, "*She's Got Bette Davis['s] Eyes": Assessing the Nonconsensual Removal of Cadaver Organs Under the Takings and Due Process Clauses* (1990) 90 Colum.L.Rev. 528, 544, fn. 75 (hereafter Columbia Note).)

With respect to the sale of human blood the matter is much simpler: there is in fact no prohibition against such sales. The majority rely (maj. opn., *ante,* p. 156, fn. 23 of 271 Cal.Rptr., p. 489, fn. 23 of 793 P.2d) on Health and Safety Code section 1606, which provides in relevant part that the procurement and use of blood for transfusion "shall be construed to be, and is declared to be ... the rendition of a service ... and shall not be construed to be, and is declared not to be, a sale...." There is less here, however, than meets the eye: the statute does *not* mean that a person cannot sell his blood or, by implication, that his blood is not his property. "While many jurisdictions have classified the transfer of blood or other human tissue as a service rather than a sale, this position does not conflict with the notion that human tissue is property." (Columbia Note, *supra,* 90 Colum.L.Rev. at p. 544, fn. 76.) The reason is plain: "No State or Federal statute prohibits the sale of blood, plasma, semen, or other replenishing tissues if taken in nonvital amounts. Nevertheless, State laws usually characterize these paid transfers as the provision of services rather than the sale of a commodity.... [¶] The primary legal reason for characterizing these transactions as involving services rather than goods is to avoid liability for contaminated blood products under either general product liability principles or the [Uniform Commercial Code's] implied warranty provisions." (OTA Rep., *supra,* at p. 76, fn. omitted.) The courts have repeatedly recognized that the foregoing is the real purpose of this harmless legal fiction. (See, e.g., *Hyland Therapeutics v. Superior Court* (1985) 175 Cal.App.3d 509, 220 Cal.Rptr. 590; *Cramer v. Queen of Angels Hosp.* (1976) 62 Cal.App.3d 812, 133 Cal.Rptr. 339; *Shepard v. Alexian Brothers Hosp.* (1973) 33 Cal.App.3d 606, 109 Cal.Rptr. 132.) Thus despite the statute relied on by the majority, it is perfectly legal in this state for a person to sell his blood for transfusion or for any other purpose indeed, such sales are commonplace, particularly in the market for plasma. (See OTA Rep., *supra,* at p. 121.)

It follows that the statutes regulating the transfers of human organs and blood do not support the majority's refusal to recognize a conversion cause of action for commercial exploitation of human blood cells without consent. On the contrary, because such statutes treat both organs and blood as property that can legally be sold in a variety of circumstances, they impliedly support Moore's contention that his blood cells are likewise property for which he can and should receive compensation, and hence are protected by the law of conversion.

The majority's final reason for refusing to recognize a conversion cause of action on these facts is that "there is no pressing need" to do so because the complaint also states another cause of action that is assertedly adequate to the task (maj. opn., *ante,* p. 163 of 271 Cal.Rptr., p. 496 of 793 P.2d); that cause of action is "the breach of a fiduciary duty to disclose facts material to the patient's consent or, alternatively, ... the performance of medical procedures without first having obtained the patient's informed consent" (*id.* at p. 150 of 271 Cal.Rptr.,at p. 483 of 793 P.2d). [FN24] Although last, this reason is not the majority's least; in fact, it underlies much of the opinion's discussion of the conversion cause of action, recurring like a leitmotiv throughout that discussion.

FN24. In the interest of brevity I shall refer hereafter to this compound cause of action simply as the "nondisclosure cause of action."

The majority hold that a physician who intends to treat a patient in whom he has either a research interest or an economic interest is under a fiduciary duty to disclose such interest to the patient before treatment; that his failure to do so may give rise to a nondisclosure cause of action; and that the complaint herein states such a cause of action at least against defendant Golde. I agree with that holding as far as it goes.

I disagree, however, with the majority's further conclusion that in the present context a nondisclosure cause of action is an adequate--in fact, a superior--substitute for a conversion cause of action. In my view the nondisclosure cause of action falls short on at least three grounds.

First, the majority reason that "enforcement of physicians' disclosure obligations" will ensure patients' freedom of choice. (Maj. opn., *ante,* p. 164 of 271 Cal.Rptr., p. 497 of 793 P.2d.) The majority do not spell out how those obligations will be "enforced"; but because they arise from judicial decision (the majority opinion herein) rather than from legislative or administrative enactment, we may infer that the obligations will primarily be enforced by the traditional judicial remedy of an action for damages for their breach. Thus the majority's theory apparently is that the threat of such an action will have a prophylactic effect: it will give physician-researchers incentive to disclose any conflicts of interest before treatment, and will thereby protect their patients' right to make an informed decision about what may be done with their body parts.

The remedy is largely illusory. "[A]n action based on the physician's failure to disclose material information sounds in negligence. As a practical matter, however, it may be difficult to recover on this kind of negligence theory because the patient must prove a *causal connection* between his or her injury and the physician's failure to inform." (Martin & Lagod, *Biotechnology and the Commercial Use of Human Cells: Toward an Organic View of Life and Technology* (1989) 5 Santa Clara Computer & High Tech L.J. 211, 222, fn. omitted, italics added.) There are two barriers to recovery. First, "the patient must show that if he or she had been informed of all pertinent information, he or she would have declined to consent to the procedure in question." (*Ibid.*) As we explained in the seminal case of *Cobbs v. Grant* (1972) 8 Cal.3d 229, 245, 104 Cal.Rptr. 505, 502 P.2d 1, "There must be a causal relationship between the physician's failure to inform and the injury to the plaintiff. Such a causal connection arises only if it is established that had revelation been made consent to treatment would not have been given." [FN25]

FN25. This is also the rule elsewhere: a leading case recognized that "as in malpractice actions generally, there must be a causal relationship between the physician's failure to adequately divulge and damage to the patient. [¶] A causal connection exists when, but only when, disclosure of significant risks incidental to treatment would have resulted in a decision against it." (*Canterbury v. Spence* (D.C.Cir.1972) 464 F.2d 772, 790, fns. omitted; accord, 2 Louisell & Williams, Medical Malpractice (1989) Informed Consent, ¶ 22.14, pp. 22-49 to 22-50.)

The second barrier to recovery is still higher, and is erected on the first: it is not even enough for the plaintiff to prove that he personally would have refused consent to the proposed treatment if he had been fully informed; he must also prove that in the same circumstances *no reasonably prudent person* would have given such consent. The purpose of this "objective" standard is evident: "Since at the time of trial the uncommunicated hazard has materialized, it would be surprising if the patient-plaintiff did not claim that had he been informed of the dangers he would have declined treatment. Subjectively he may believe so, with the 20/20 vision of hindsight, but we doubt that justice will be served by placing the physician in jeopardy of the patient's bitterness and disillusionment. Thus an objective test is preferable: i.e., what would a prudent person in the patient's position have decided if adequately informed of all significant perils." (*Cobbs v. Grant, supra,* 8 Cal.3d 229, 245, 104 Cal.Rptr. 505, 502 P.2d 1.) [FN26]

FN26. Again the rule is general: "the vast majority of jurisdictions that have considered the issue apply an objective standard," focusing "on what a *reasonable* patient in the plaintiff's position would have done if adequately informed." (2 Louisell & Williams, *op. cit. supra,* ¶ 22.14, pp. 22-50 to 22-51.)
The rule is also incorporated in a standard jury instruction: failure to disclose before obtaining consent results in liability "if a reasonably prudent person in the patient's position would not have consented to the [treatment] [operation] if he or she had been adequately informed of all the significant perils." (BAJI No. 6.11 (7th ed. 1986 bound vol.).)

Even in an ordinary *Cobbs*-type action it may be difficult for a plaintiff to prove that no reasonably prudent person would have consented to the proposed treatment if the doctor had disclosed the particular risk of physical harm that ultimately caused the injury. (See, e.g., *Morgenroth v. Pacific Medical Center, Inc.* (1976) 54 Cal.App.3d 521, 534, 126 Cal.Rptr. 681 [affirming nonsuit in *Cobbs*-type action on ground, inter alia, of lack of proof that plaintiff would have refused coronary arteriogram if he had been told of risk of stroke].) This is because in many cases the potential benefits of the treatment to the plaintiff clearly outweigh the undisclosed risk of harm. But that imbalance will be even greater in the kind of nondisclosure action that the majority now contemplate: here we deal not with a risk of physical injuries such as a stroke, but with the possibility that the doctor might later use some of the patient's cast-off tissue for scientific research or the development of commercial products. Few if any judges or juries are likely to believe that disclosure of such a possibility of research or development would dissuade a reasonably prudent person from consenting to the treatment. For example, in the case at bar no trier of fact is likely to believe that if defendants had disclosed their plans for using Moore's cells, no reasonably prudent person in Moore's position--i.e., a leukemia patient suffering from a grossly enlarged spleen--would have consented to the routine operation that saved or at least prolonged his

life. Here, as in *Morgenroth (ibid.),* a motion for nonsuit for failure to prove proximate cause will end the matter. In this context, accordingly, the threat of suit on a nondisclosure cause of action is largely a paper tiger.

The second reason why the nondisclosure cause of action is inadequate for the task that the majority assign to it is that it fails to solve half the problem before us: it gives the patient only the right to *refuse* consent, i.e., the right to prohibit the commercialization of his tissue; it does not give him the right to *grant* consent to that commercialization on the condition that he share in its proceeds. "Even though good reasons exist to support informed consent with tissue commercialization, a disclosure requirement is only the first step toward full recognition of a patient's right to participate fully. Informed consent to commercialization, absent a right to share in the profits from such commercial development, would only give patients a veto over their own exploitation. But recognition that the patient [s] [have] an ownership interest in their own tissues would give patients an affirmative right of participation. Then patients would be able to assume the role of equal partners with their physicians in commercial biotechnology research." (Howard, *supra,* 44 Food Drug Cosm. L.J. at p. 344.)

Reversing the words of the old song, the nondisclosure cause of action thus accentuates the negative and eliminates the positive: the patient can say no, but he cannot say yes and expect to share in the proceeds of his contribution. Yet as explained above (pt. 4, *ante*), there are sound reasons of ethics and equity to recognize the patient's right to participate in such benefits. The nondisclosure cause of action does not protect that right; to that extent, it is therefore not an adequate substitute for the conversion remedy, which does protect the right.

Third, the nondisclosure cause of action fails to reach a major class of potential defendants: all those who are outside the strict physician-patient relationship with the plaintiff. Thus the majority concede that here only defendant Golde, the treating physician, can be directly liable to Moore on a nondisclosure cause of action: "The Regents, Quan, Genetics Institute, and Sandoz are not physicians. In contrast to Golde, none of these defendants stood in a fiduciary relationship with Moore or had the duty to obtain Moore's informed consent to medical procedures." (Maj. opn., *ante,* p. 153 of 271 Cal.Rptr., p. 486 of 793 P.2d.) As to these defendants, the majority can offer Moore only a slim hope of recovery: if they are to be liable on a nondisclosure cause of action, say the majority, "it can only be on account of Golde's acts and on the basis of a recognized theory of secondary liability, such as respondeat superior." (*Ibid.*) Although the majority decline to decide the question whether the secondary-liability allegations of the complaint are sufficient, they strongly imply disapproval of those allegations. [FN27] And the majority further note that the trial court has already ruled insufficient the allegations of agency as to the corporate defendants. (Maj. opn., *ante,* p. 154 of 271 Cal.Rptr., p. 487 of 793 P.2d.)

FN27. Quoting a portion of the agency allegations stated in paragraph 4 of the third amended complaint, the majority criticize them as "egregious examples of generic boilerplate." (Maj. opn., *ante,* p. 153, fn. 12 of 271 Cal.Rptr., p. 486, fn. 12 of 793 P.2d.) But if being "boilerplate" were a valid objection, few pleadings would pass muster in this age of Judicial Council compulsory forms, widely used model form books, and drafting programs on law office computers. It is true that the quoted language of the complaint alleges the fact of agency in general terms, but that is the proper form of such an allegation. (5 Witkin, Cal.Procedure (3d ed. 1985) Pleading, § 868, pp. 309-310.) It is also true that the complaint alleges a variety of different

agency relationships that could support secondary liability ("agency, employment, partnership and joint venture"); but such allegations are a modest form of alternative pleading that should be permitted when as here the plaintiff is uncertain as to which one or more of these several forms of agency will be proved at trial. (4 Witkin, *op. cit. supra,* Pleading, § 355, at p. 410.)

In addition, the majority omit to mention paragraph 5 of the third amended complaint, which in my view contains sufficient allegations to the effect that Golde was an agent of the corporate defendants and that such defendants ratified his acts vis-a-vis Moore.

To the extent that a plaintiff such as Moore is unable to plead or prove a satisfactory theory of secondary liability, the nondisclosure cause of action will thus be inadequate to reach a number of parties to the commercial exploitation of his tissue. Such parties include, for example, any physician- researcher who is not personally treating the patient, any other researcher who is not a physician, any employer of the foregoing (or even of the treating physician), and any person or corporation thereafter participating in the commercial exploitation of the tissue. Yet some or all of those parties may well have participated more in, and profited more from, such exploitation than the particular physician with whom the plaintiff happened to have a formal doctor-patient relationship at the time.

In sum, the nondisclosure cause of action (1) is unlikely to be successful in most cases, (2) fails to protect patients' rights to share in the proceeds of the commercial exploitation of their tissue, and (3) may allow the true exploiters to escape liability. It is thus not an adequate substitute, in my view, for the conversion cause of action.

7.

My respect for this court as an institution compels me to make one last point: I dissociate myself completely from the amateur biology lecture that the majority impose on us throughout their opinion. (Maj. opn., *ante,* fns. 2, 29, 30, 33 and 35, and text at pp. 157-158 of 271 Cal.Rptr., at pp. 490-491 of 793 P.2d.) For several reasons, the inclusion of most of that material in an opinion of this court is improper.

First, with the exception of defendants' patent none of the material in question is part of the record on appeal as defined by the California Rules of Court. Because this appeal is taken from a judgment of dismissal entered after the sustaining of general and special demurrers, there is virtually no record other than the pleadings. The case has never been tried, and hence there is no evidence whatever on the obscure medical topics on which the majority presume to instruct us. Instead, all the documents that the majority rely on for their medical explanations appear in an appendix to defendant Golde's opening brief on the merits. Such an appendix, however, is no more a part of the *record* than the brief itself, because the record comprises only the materials before the trial court when it made its ruling. (See Cal.Rules of Court, rules 4 through 5.2.) Nor could Golde have moved to augment the record to include any of these documents, because none was "part of the original superior court file," a prerequisite to such augmentation. (Cal.Rules of Court, rule 12(a).) "As a general rule, documents not before the trial court cannot be included as a part of the record on appeal." *(Doers v. Golden Gate Bridge etc. Dist.* (1979) 23 Cal.3d 180, 184, fn. 1, 151 Cal.Rptr. 837, 588 P.2d 1261.)

Second, most of these documents bear solely or primarily on the majority's

discussion of whether Moore's "genetic material" was or was not "unique" (see maj. opn., *ante,* pp. 157-158 of 271 Cal.Rptr., pp. 490-491 of 793 P.2d), but that entire discussion is legally irrelevant to the present appeal. As Justice Broussard correctly observes in his separate opinion, "the question of uniqueness has no proper bearing on plaintiff's basic right to maintain a conversion action; ordinary property, as well as unique property, is, of course, protected against conversion." (Conc. and dis. opn. of Broussard, J., *ante,* p. 170 of 271 Cal.Rptr., p. 503 of 793 P.2d.)

Third, this nonissue is also a noncontention. The majority claim that "Moore relies ... primarily" on an analogy to certain right-of-privacy decisions (maj. opn., *ante,* p. 156 of 271 Cal.Rptr., p. 489 of 793 P.2d), but this is not accurate. Under our rules, as in appellate practice generally, the parties to an appeal are confined to the contentions raised in their briefs (see Cal.Rules of Court, rule 29.3). In his brief on the merits in this court Moore does not even cite, less still "rely primarily," on the right-of-privacy decisions discussed by the majority, nor does he draw any analogy to the rule of those decisions. It is true that in the course of oral argument before this court, counsel for Moore briefly paraphrased the analogy argument that the majority now attribute to him; but a party may not, of course, raise a new contention for the first time in oral argument.

Fourth, much of the material that the majority rely on in this regard is written in highly technical scientific jargon by and for specialists in the field of contemporary molecular biology. (See, e.g., articles cited in maj. opn., *ante,* fn. 30, 2d par., & fn. 35, 2d par.) As far as I know, no member of this court is trained as a molecular biologist, or even as a physician; without expert testimony in the record, therefore, the majority are not competent to explain these arcane points of medical science any more than a doctor would be competent to explain esoteric questions of the law of negotiable instruments or federal income taxation, or the rule against perpetuities. [FN28] In attempting to expound this science the majority run two serious risks. First, because they have no background in molecular biology the majority may simply misunderstand what they are reading, much as a layman might misunderstand a highly technical article in a professional legal journal. Indeed, I suggest the majority have already fallen into this very trap, since some of their explanations appear either mistaken, confused, or incomplete (e.g., maj. opn., *ante,* fn. 29).

FN28. Contrary to the majority's implication (maj. opn., *ante,* fn. 35, 3d par.), there is nothing inconsistent herewith in three opinions that I authored for the court on the admissibility of certain kinds of testimony. Thus in both *People v. Shirley* (1982) 31 Cal.3d 18, 181 Cal.Rptr. 243, 723 P.2d 1354, and *People v. Guerra* (1984) 37 Cal.3d 385, 208 Cal.Rptr. 162, 690 P.2d 635, we held inadmissible the testimony of a witness who has undergone hypnosis for the purpose of restoring his memory of the events in issue. Although in so doing we had occasion to refer to professional literature in the field of psychology, both cases are distinguishable from the case at bar on several grounds. First, they came to us on records reflecting full trials in which expert witnesses testified at length on the point at issue. Second, we referred to the professional literature not for the truth of the matter asserted but simply to show that it "fully supports the testimony of [the expert witness]" and establishes that the challenged testimony is not generally accepted as reliable by the relevant scientific community and hence is inadmissible under the rule of *People v. Kelly* (1976) 17 Cal.3d 24, 130 Cal.Rptr. 144, 549 P.2d 1240, and *Frye v. United States* (D.C.Cir.1923) 293 F. 1013. (*People v. Shirley, supra,* 31 Cal.3d 18, 66, 181 Cal.Rptr. 243, 723

P.2d 1354.) As we explained in *Shirley*, in such circumstances "our duty is *not* to decide whether hypnotically induced recall of witnesses is reliable as a matter of 'scientific fact,' but simply whether it is generally accepted as reliable by the relevant scientific community." (*Id.* at p. 55, 181 Cal.Rptr. 243, 723 P.2d 1354.) Third, the articles we cited discussed matters of human psychology that were much more accessible to laypersons than the highly technical medical research reports relied on here by the majority.
In the other case of this type (*People v. McDonald* (1984) 37 Cal.3d 351, 208 Cal.Rptr. 236, 690 P.2d 709) we held admissible expert testimony on psychological factors shown by the evidence that may affect the accuracy of an eyewitness identification. Although we cited certain psychological literature, the case is likewise distinguishable. It, too, came to us after a full trial, on a record that included a detailed explanation by the expert witness of his proposed testimony (*id.* at pp. 361-362, 208 Cal.Rptr. 236, 690 P.2d 709). Again we referred to the professional articles primarily as support for that expert testimony (*id.* at pp. 368- 369, 208 Cal.Rptr. 236, 690 P.2d 709). And again the contents of those articles were much more accessible to laypersons than the medical research reports relied on by the majority.

The second risk is that of omission. The majority have access to most of the legal literature published in this country; but even if the majority could understand the medical literature, as a practical matter they have access to virtually none of it. This is demonstrated by the fact that every one of the medical articles now relied on by the majority came into their possession as reprints furnished to this court by one of the parties to this lawsuit-- obviously not an unbiased source. Because the majority are thus not equipped to independently research the medical points they seek to make, they risk presenting only one side of the story; it may well be that other researchers have reached different or even contrary results, reported in publications that defendants, acting in self-interest, have not furnished to the court. I leave it to professionals in molecular biology to say whether the majority's explanations on this topic are both correct and balanced. Because I fear they may be neither, I cannot subscribe to any of them.

I would affirm the decision of the Court of Appeal to direct the trial court to overrule the demurrers to the cause of action for conversion.

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