Kashrút of Laboratory-Grown Hamburger

**Question:** What is the law concerning the hamburger that has been successfully created in a laboratory? While the lab-grown burger is extremely expensive now, they say that eventually its price will become less than regular meat, and so – in the future – this may really be an issue. Is it Treif because it was taken from a cow that
hasn’t been slaughtered? Is it considered a limb taken from a living animal? Is it Fleischig? Is it forbidden because of Maarit Ayin?

**Answer:**
1. We are not discussing cloning, as in the creation of Dolly the Sheep. Cloning is an artificial process identical to the natural process of taking a cell from one animal and reproducing it. Scientists have considered cloning human beings and this is certainly forbidden for various reasons: A. Horrible things can occur from the abuse of it. B. Hashem wants a person to have two parents, a father and mother, and not one parent. C. Hashem allows us to utilize medicine in order to heal, and not for other purposes (Baba Kamma 85a. Ramban, Torat Ha-Adam, Sha'ar Ha-Sakanah). In any event, such a creation would be a human being in every way.

2. Our case, however, is not a natural process of taking a cell and reproducing it, rather the meat is made by taking stem cells from a cow and growing them into strips of muscle which are then combined to make a burger. Although the end product is meat, it is created in an unnatural manner. This is similar to what is brought in the Gemara in Sanhedrin (59b) that Adam Ha-Rishon was prohibited from eating meat, but it is told that angels roasted meat for him. The Gemara explains that meat which comes from the heavens was not considered meat, i.e. it is meat created in an unnatural manner.

It is also related there that Rabbi Shimon ben Chalafta was once walking and encountered lions. He cried out to Hashem: "The young lions roar after prey and seek their food from G-d" (Tehillim 104:21), and two pieces of meat came down from heaven. He gave one piece to the lions and he brought one to the Beit Midrash, and asked if it was Kosher or Treif. They answered him: An impure thing does not descend from heaven, i.e. since this was "miracle meat" – created in an unnatural way - it is not considered Treif (see also Menachot 69b).

3. This "meat" undergoes many changes to the point that its entire identity is different. This is the same as Gelatin from non-Kosher animals. The bones undergo so many changes that the product is considered an entirely new creation. While some authorities are strict about this issue, the basic Halachah is that Gelatin is Kosher (See Shut Yabia Omer 8:11).

4. The stem cells cannot be seen by the human eye. The Chochmat Adam (Klal 38 Binat Adam #34) explains that Halachah is only based on what we can see with the human eye and not on that we can see with a microscope. There are many such examples in the Halachah: One can breathe, even though there are all sorts of creatures in the air, because these creatures cannot be seen (Aruch Ha-Shulchan Yoreh Deah 84:36); fish whose scales can only be seen by a microscope are not Kosher (Tiferet Yisrael, Avodah Zarah 2:6); worms only seen by a microscope are not considered as existent (Shut Igrot Moshe Yoreh Deah 2:146); and if two letters are touching in a Sefer Torah but their point of contact can only be seen by a microscope,
the Sefer Torah is Kosher (Moadim U-Zmanim 2:124). See my commentary on Kitzur Shulchan Aruch 24:3.

5. In sum: It seems that a lab-grown burger is not Treif, not considered a limb taken from a living animal and is Parve (although it is not vegetarian) based on three reasons: A. It is not created in the regular process as the creation of meat. B. It has undergone many changes to the point that its entire identity is different. C. The stem cells from which it is taken cannot be seen by the human eye.

However, since this is a new creation, the great Torah scholars must decide on the matter.

6. And regarding eating such a burger with dairy, there is no problem of Maarit Ayin, since we do not add to the list of things forbidden in the Gemara on account of Maarit Ayin, otherwise there would be no end to such decrees (Pri Chadash, Yoreh Deah 87:7). This is similar to the permission to use margarine, non-dairy creamer and Parve ice cream (Shut Yechaveh Daat 3:59).

Rav Aviner on…

Placing Techelet in One’s Tzitzit
[Be-Ahavah U-Be-Emunah – Ki Tzetzei 5773 – translated by R. Blumberg]

Question: Should one include the modern sky-blue “Techelet” strings, created with dye from the murex snail, in one’s Tzitzit?

Answer: For more than a thousand years we have not had Techelet, so it is clear that such a halachic innovation must be effected by the great Torah luminaries of the generation. Yet we see with our own eyes that almost all the great Rabbis of our generation do not place Techelet in their Tzitzit. Thus the Halachah has been decided, and if someone conducts himself publicly counter to their practice, that constitutes arrogance, in other words, religious arrogance as though he is smarter and more righteous than they. Thus, I shall not clarify whether to add Techelet or not, but rather why the great Torah luminaries reject it.

From their lengthy deliberations, one can discern three main avenues of rejection:
1. The precedent of a thousand years. 2. Unwillingness to rely on proofs to re-institute a tradition. 3. The weakness of the proofs that have been offered.

1. When the Radziner Rebbe first identified a particular animal, the cuttlefish, as the source of Techelet, he quoted the halachic response of the Ha-Gaon Rav Yosef Dov Soloveitchik of Brisk, the “Beit Ha-Levi”, who had written that if the murex snail had been known, and the means of production of its dye had been known the entire time that the Jewish People had ceased to use Techelet, yet they still had not added it to their Tzitzit, then it is as though this constitutes a tradition that this was not the same snail that our sages spoke about.

And even if we bring as many proofs as the sands of the sea, it will not help against the practical conduct of the Jewish People.
Ha-Gaon Ha-Rav Avraham Shapira quoted the Beit Ha-Levi in a letter of his that was included in Rav Harari's "Laws of the Seder Night" (Letter #1), and he added there that the very fact that the murex snail was known but was not used to make Techelet proves that it is not the Techelet of the Torah. It could not possibly be that the proper snail existed and Jews would fail to do all they could to search for it and investigate it so as not to nullify the Mitzvah of Techelet from the Torah. Only if practically speaking no Techelet dye existed would there be cause to clarify and to look for the right one. He concluded by saying that his basis was our Sages' words, “Israel, if they are not prophets, still descended from prophets, and it cannot be that the holiness of the Torah would fail to enlighten them to keep the Mitzvah as commanded.

Ha-Gaon Ha-Rav Yosef Shalom Elyashiv likewise quoted the Beit Ha-Levi regarding the contemporary use of the murex snail, and he further noted that the Radziner Rebbe's identification did not achieve acceptance, nor did that of Ha-Gaon Ha-Rav Yitzchak Isaac Ha-Levi Herzog. How then do we know, he concluded, that the present identification will not be rejected, as were its predecessors? (Kovetz Teshuvot 2:1).

2. Ha-Gaon Ha-Rav Yosef Dov Soloveitchik quoted the words of his great-grandfather, the Beit Ha-Levi, in a slightly different manner:

“Since the tradition about identifying Techelet ended, since for many generations we have not know what the 'Chilazon' [snail] of our sages refers to, then even if we succeeded in restoring this information through technical, scientific proofs and clear phenomena, that information still could not enter our tradition, and it is impossible for us to pass legal rulings based on this information without a halachic tradition.”

(Nefesh Ha-Rav, pp. 52-53)

In other words, it is impossible to reconstitute a lost tradition regarding a Mitzvah object or a sin object, via proofs, but only via a continuing tradition of those who saw it with their own eyes.

It's a little like those matters whose rulings are based on expert testimony, as with torts, as opposed to those rulings that need eyewitness, as with capital crimes or the validity of a marriage.

The wording of Beit Ha-Levi quoted above is more strict than that of the Radziner Rebbe.

For the latter, there is no rejection in principle of various proofs. All the same they are rejected due to the weight of the years in which it was not used, that constituting a "negative tradition". Had the murex snail disappeared for a thousand years, there would be room for proofs.

Yet Rav Yosef Dov Soloveitchik holds that even then, if murex had disappeared, it would still be impossible to rely on proofs, because a tradition is required.

3. The proofs about the new identification are far from final. In the Mishnah and amongst our medieval Sages we find seven identifying markers for what constitutes the snail associated with Techelet.

a. It has a shell (Shabbat 75a)

b. The dye has to be produced from a living snail (ibid.)

c. It emerges from the sea once in seventy years, in other words, rarely (Menachot 44a).

d. It's similar to a fish (ibid.).

e. Mediterranean House Geckos bite it and it dies (Sifri, Zot HaBeracha 13).

f. Its color is as black as ink (Rambam, Hilchot Tzitzit 2:2).

If we now investigate the recently identified murex snail we find the following:

a. It has a shell.
b. With a lot of snails, you do have to produce the dye immediately. Yet precisely with murex you can dry it and then produce the dye much later.
c. Murex does not come out of the sea. Rather, it remains attached to the sea floor. Likewise, it is not rare, but is found in all the Mediterranean sea ports by the ton, for use as food.
d. It does not look like a fish.
e. Its shell is hard and house geckos cannot crack it. A hammer is required for that.
f. The dye that emerges from it is transparent (the sun just blackens it).
g. The snail is not black but white.
Those who support identifying it with Techelet try to answer all of these questions, but the identification cannot be called certain.
As a rule, we must realize that all scientific hypotheses have the stamp of doubt on them. New facts are liable to be discovered that will change the hypothesis, and any man of science who frames a theory first states cautiously, “according to the present state of our knowledge…”
Let us therefore conclude by quoting Ha-Gaon Rabbi Yehoshua of Kutna in his response to the Radziner Rebbe:
“It's been rejected for a hundred years, and the wording in Arizal agrees with this, that there is no Techelet except when the Temple is standing. It has been concealed by Heaven.”

Shut She'eilat Shlomo - Questions of Jewish Law

Two cans from Coke machine
Q. I paid for one can of Coke from a vending machine, but two cans came out. What do I do?
A. You have no way to put it back into the machine, so let's say that you try to find to whom the machine belongs. You have to search and call and figure out, etc… The halachah says that when I return a lost object I can ask to be reimbursed for the expenses incurred while doing so. My time, the telephone calls… In this case, since a can of Coke only costs about five shekels, and you will ask for the expenses, let's say – twenty shekels, it will not be worth it for them. Even though the can belongs to the owner of the machine, since the expenses are greater than the value of the returned object, you may keep the can of Coke.

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