**UltraSound, New Peptides Revealed at Meeting**

The discoverer of five new peptides which may prove to be of medical value has been announced by Frances D. Schmitt, Institute Professor. At a press conference sponsored by the American Cancer Society, he gave this as an example of important research being conducted today in medical biology.

Peptides are chains or rings of amino acids which may play key roles in body functions. Some have been found in the past proved beneficial in medicine, Schmitt explained. The new ones were obtained from the nerve fluid of the planning-like squid.

Finding of the peptides has been made possible only by the arrival in recent weeks of large quantities of axoplasm taken from giant squid caught off the coast of Chile. Squid have nerve fibers which are enormous compared to those of most animals, Dr. Schmitt said. During several summers squid about one foot long, found in the Atlantic Ocean, have been shipped in tanks of circulating sea water to the Institute for dissection.

Under a new program, however, more to eight-foot squid are being caught in the Pacific Ocean and they are yielding a much larger amount of axoplasm than was available before. During one week, 301 of these squid were examined, their central nervous systems, as thick as a pencil, as much of the nervous system as might have been extracted from 7,000 Atlantic squid during an entire summer's work. The axoplasm is extractable at the Marine Station near Valparaiso and is shipped by air.

Sharply focused beams of ultrasonic sound—which many physicians already use in medicine—may soon be used to treat serious ailments, Schmitt said. He noted that the police of ultrasound seems to differ from that of X-rays. In this case, the effect of ultrasound damage seems to result from a change in the tissue rather than in the cell nucleus. Schmitt demonstrated this with focused radiant energy, saying that it is impossible to destroy cells intact with ultrasound. Ultrasound separates tissues and cells from the embryo without harm to the embryo or to the drowned material.

In other work, Bell has investigated the effects of focused ultrasound on mouse liver. He finds that when damaged by ultrasound does not "live" this damage as quickly as it would surgical or chemical damage. Yields relate almost twice as long after ultrasonic damage before beginning to return itself.

At present Bell is using ultrasound to separate cells and tissue from embryos; he is concerned with problems of cell differentiation in amphibians and embryonic development in chicks. His technique for separating embryonic material to high-frequency ultrasound separates tissues and cells from the embryo without harm to the embryo or to the embryo material.

**On Campus with Max Shmuel**

(By the Author of "Holly Roly the Flag, Spag, and, "Sharpen Up with Chopch")

**A FRAT TO REMEMBER**

Every year, as we all know, the Benevolent and Protectoral Order of Collegiate Fraternities awards a highly coveted prize to the fraternity house which, in its judgment, has done the most to promote and maintain the fraternity way of life. The prize this year—eight hundred pounds of patty—goes to the Alpha Epsilon Pi chapter of the South Dakota College of Dentistry and Renaissance Art.

The award this year is exceptionally richly deserved, for the Alpha Epsilon Pi chapter is everything a fraternity should be. It is, first of all, a most attractive house physically. The eight square rooms are furnished in homey simplicity and charm. The top room has a desk, a comfortable chair, a good reading lamp, and the housemother lives in the house.

There is in Alpha Epsilon Pi a real gasser of a fraternity. But a fraternity is more than just residence halls and a bunch of cut-up students. Alpha Epsilon Pi is also people. At present Bell is using ultrasound to separate cells and tissue from embryos; he is concerned with problems of cell differentiation in amphibians and embryonic development in chicks. His technique for separating embryonic material to high-frequency ultrasound separates tissues and cells from the embryo without harm to the embryo or to the embryo material.

**HASPEL**

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**and**

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**THE COOP**

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Using this method, he has shown that when the two principal tissues which make up the princepiss are separated independently—that is, in a focused beam of ultrasound— the inner layer alone can give rise to a limb when it is placed in a host in the embryonic stage.

This is an example, Bell said, of how this new tool will be a valuable aid in studies of the way embryonic tissues layers collaborate to form new structures.

In association with H. Thomas Bul- lard, Jr., and T. Michael Ross, a professor of chemistry at the Massachusetts General Hospital, Bell has been studying the effects of focused ultrasound on the brain and central nervous systems.

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