

# News

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\*\*\*\*\*UT Southwestern researchers are hopeful that a brain hormone they are experimenting with may help treat sexual impotency.

DALLAS--Researchers at The University of Texas Southwestern Medical School have produced evidence that the master brain hormone "LHRH" may be useful in treating sexual impotence.

The Dallas scientists have demonstrated that LHRH ("luteinizing hormone releasing hormone") stimulates sexual behavior in rats and recent studies involving 50 men here and at several other laboratories indicate that it also may increase the sex drive in humans, although to a lesser degree.

"The evidence seems to indicate that LHRH does enhance human sexual potency," says Dr. Robert L. Moss, associate professor of physiology at UT Southwestern, "but controlled studies in a larger number of patients must be done in order to prove that it really is a clinically useful aphrodisiac."

Dr. Moss emphasizes that although results so far have been encouraging, LHRH is still just an experimental drug. He says that LHRH probably will help only those with "secondary" impotence, that is, people who have had a normal level of sexual activity in the past but have seen it decline because of aging or job-related stress.

"The number of forty- to fifty-year-old men who have a decrease in sexual function while their wives remain sexually active is probably high," he explains. "Men in stressful jobs such as sales positions often have decreased sex lives. I would guess that a lot of marriages fail because of these kinds of problems. Our aim is to help restore normal sexual function."

Dr. Moss' studies indicate that LHRH is effective only in patients who still have some level of sexual activity before they begin therapy with the drug. Patients who had little or no sex before they entered the study did not show any consistent improvement in sexual performance. In those patients the psychological factors may have been powerful enough to suppress any stimulant effects by LHRH.

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Dr. Moss and Dr. Samuel McCann, professor and chairman of physiology at Southwestern, head the Dallas research team. It was Dr. McCann who in 1960 found the first proof of LHRH's existence. Since then two other peptide hormones produced by the same region of the brain have been discovered, and last year Drs. Roger Guillemin of the Salk Institute in San Diego and Andrew Schally of Tulane won the Nobel Prize for isolating and synthesizing the three peptides.

Through a grant from the Salk Institute's Texas Research Foundation, Dr. Moss recently joined Dr. Wylie Vale, a member of the Guillemin team, in a collaborative effort to find a compound more powerful than LHRH. In that study, Dr. Moss will test a number of LHRH "analogs" (similarly structured chemicals) developed by the Guillemin team on the rat model which Moss developed.

Dr. Moss' rat studies have provided the first evidence that LHRH acts directly on the brain to produce mating behavior--a highly significant finding. Until now most endocrinologists had assumed that luteinizing hormone releasing hormone was solely involved in stimulating release of the reproductive hormones by the pituitary gland, the walnut-sized "master gland" that hangs by a short stalk from the floor of the brain. These pituitary hormones would then stimulate the sex glands (the ovaries and testes) to produce the hormones that increase sexual behavior.

But the UT Southwestern researchers have demonstrated that LHRH increases sex activity even when the rats' sex glands have been removed, so the response appears to be independent of the hormones produced by those glands.

Dr. Moss recently published a paper on experiments he has conducted showing that LHRH does change the electrical activity of certain brain cells, thus adding support to his hypothesis that LHRH acts directly in producing the observed increase in the rats' mating behavior.

Other researchers have reported that LHRH therapy also restores fertility. And a third avenue of LHRH research that could be of enormous benefit is the development of new contraceptives. Researchers around the world currently are looking for inhibitory analogs of LHRH that could be used as a means of birth control in both men and women.

Much work remains to be done in this new and very promising field of research, notes Dr. Moss.

The Dallas team's work is supported by a number of grants from the National Institutes of Health and the National Science Foundation. Dr. Moss is the recipient of the prestigious Career Development Award from NIH.

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