

# U of L researchers develop new transplant techniques

By RANDI HANSEN

A year ago this January, people all over the world were reading about the University of Louisville and Jewish Hospital as the forces behind the first hand transplant in the United States. The surgery was performed by members of the world-renowned Kleinert-Kutz and Associates hand care team.

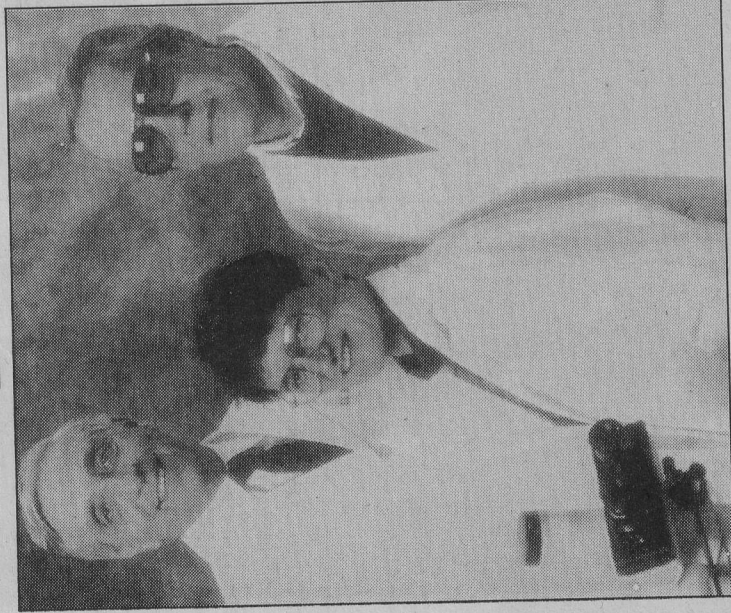
What made the procedure unique was that much of the research that made the operation possible - in France and China as well as Louisville - was conducted at the University of Louisville and shared with others at conferences all over the world.

Matthew Scott, the nation's first hand transplant recipient, continues to do well and reported at his one-year check-up in January that he could open doors, tie his shoes and hold the hands of both his children. He pronounced the operation a success and told Stone Phillips of "Dateline NBC" that it had changed his life for the better.

Hand transplantation, however, is only one of a number of transplant research initiatives at the University of Louisville Health Sciences Center.

Dr. Suzanne Ildstad, a surgery professor and director of the Institute for Cellular Therapeutics at the University of Louisville, is working with transplant surgeons at the Louisville Medical Center to develop a surgical procedure that will free transplant recipients of the need to take toxic anti-rejection drugs for the rest of their lives.

The procedure involves transplanting both the solid organ - such as a heart, liver or kidney, for example - as well as some of the donor's bone mar-



**Clinical professor and eye surgeon Norman Radtke (left) works with ophthalmology professors Magdalene Seifer and Robert Aramant on a surgical procedure an instrument that allows them to transplant retinal tissue as thin as a single layer of cells into damaged areas of the retina.**

row. The marrow is treated with a process developed by Ildstad to reduce the risk of graft-versus-host disease, a potentially fatal condition in which the transplanted marrow attempts to reject its new body.

Research from Ildstad's lab shows that such treated-marrow-plus-organ transplants enable the recipients' bodies to develop "mixed chimerism," a sort of dual immune system that tolerates both its own and the donor's marrow and organs.

If the process is proved effective, transplant recipients may no longer need to take a life-long regimen of immunosuppressant drugs that are highly toxic and can cause serious side effects.

Nor has the university limited its efforts to solid organs alone. Ophthalmology professors Robert Aramant and Magdalene Seiler are working with clinical professor and eye surgeon Norman Radtke to perfect both a surgical procedure and a surgical instrument that allows them to transplant sheets of retinal tissue as thin as a single layer of cells into damaged areas of the retina.

Their research, still in the earliest stages of patient testing, nevertheless holds promise for sufferers of diseases like retinitis pigmentosa and macular degeneration - eye diseases for which there is currently no cure and only minimal treatment.

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be involved at all until all possible efforts to save your life have failed. The criteria used to determine brain death are very strict.

**Q:** Will my family be required to pay for the removal of my organs and tissues?

**A:** No. The donor's family and the donor hospital are not responsible for any procurement expenses. The cost will be absorbed by the transplant center, the recipient, or in some cases the donor's estate.

interfere with a normal funeral?

**A:** No. Donation occurs in a hospital operating room under the same conditions as any other operation. There is no disfigurement of the body. Organ & tissue donation does not prevent an open casket funeral.

**Q:** Will my family be asked to consent to the donation of my organs and tissues?

**A:** Yes. Federal and state laws require physicians and hospital staff to offer the option of organ & tissue donation. Although a signed donor

and pancreas. Tissues that can be donated include corneas, skin, heart valves, bones, saphenous veins and tendons.

**Q:** Who can donate?

**A:** Age limitations may apply with some specific organs and tissues, but in general, anyone who wishes to be a donor can sign the back of their driver's license or donor card. Those under the age of 18 may legally donate their organs & tissues with the consent of a parent or guardian.

## Organ & Tissue Donation

*Organ & Tissue transplantation has many proven benefits, but some people still have reservations about the organ & tissue donation process.*