Male inmates who received collaborative services were less likely to be back in jail within a year. The Pitt researchers found that the recidivism rate—or rate of relapse into crime—was about 50 percent lower for these inmates compared with another group of inmates who hadn't been exposed to such programs.

drug counseling were less likely to be back in jail within a year. The Pitt researchers found that the recidivism rate—or rate of relapse into crime—was about 50 percent lower for these inmates compared with another group of inmates who hadn't been exposed to such programs.

By examining past studies and conducting in-depth interviews with 300 former inmates, Yamatani and his team showed that inmates who had come through the system since the start of the Allegheny County Jail Collaborative had a recidivism rate of 16.5 percent—compared to 33.1 percent for those who served time and were released before the jail collaborative existed.

Another surprise: Researchers discovered there was no "statistically significant difference" in recidivism rates between Blacks and Whites among ex-offenders who were released from the jail since the rehabilitation programs were implemented. This contrasted with earlier studies from around the country that found racial disparities in recidivism rates.

Other highlights of the research showed that the collaborative's efforts saved the county more than $5 million and led to a better housing situation for former inmates. The research findings demonstrate that efforts to help the incarcerated can result in significant positive returns for the larger society, says Larry Davis, the School of Social Work's dean and Donald M. Henderson Professor. He also directs the school's Center on Race and Social Problems.

As part of their effort, Yamatani and colleagues also implemented an innovative research approach, using applied collaborative research during their three-year evaluation study. Instead of relying solely on ideas selected by traditional academic researchers, Yamatani and the Pitt group sought input from the community. Last year, Yamatani was honored by the grassroots non-profit Community Empowerment Association for his commitment to racial justice. It's important, he says, to understand the role community leaders have in creating positive outcomes. "Community input at the start can help to ensure the 'right' questions are asked, leading to meaningful, applicable solutions."

The final report continues to guide the Allegheny County Jail Collaborative, and the study was selected by the National Institute of Corrections, U.S. Department of Justice, for national access at www.nicic.org/Library/022993.

There have been intangible benefits, too. "It was my first experience with a big school," Rustin says about working with Yamatani and others at Pitt. "When you are in the [jail], you feel cut off, but when you meet people from an academic setting, it motivates you to look at your own field. It motivates you to do more."

It's a characteristic that Rustin shares with Yamatani, who looked around the steel mill where he worked long ago and decided he'd find a way to be an agent for change.

—Frank Reeves

Breakthroughs in the Making

How To Make An Insulin Factory

Millions of Americans live with diabetes. The disease is linked to insufficient insulin, which is needed to fuel cellular energy. Insulin, a hormone, enables glucose to enter cells and produce energy. In people with diabetes, this process isn't working. Diabetes debilitates the body and increases the risk for heart attack and stroke. Over time, many diabetics suffer from eye problems and kidney disease, and others lose limbs from nerve damage.

Imagine if these problems could all go away.

University of Pittsburgh researchers have made a discovery that moves scientists closer to that goal. The team—led by Andrew F. Stewart, a professor of medicine, and Nathalie Fiaschi-Taesch, an assistant professor of medicine—has been able to induce replication of human insulin-producing cells, known as beta cells.

The Pitt group discovered that insulin-producing human beta cells contain considerable amounts of the protein cdk-6, which modifies the function of other proteins and molecules. The team found that it could replicate and multiply beta cells by boosting production of the protein through manipulation of the cdk-6 gene. Further, the team was able to stimulate creation of additional human beta cells by boosting production of cyclin D1, a molecule that's vital in a cell's cycle of life.

When the team's engineered human beta cells were transplanted into the kidney of a diabetic mouse, the cells continued to replicate, and blood sugar levels stabilized and normalized. When the engineered cells were removed, the mouse again developed diabetes.

These findings give new hope to all who are afflicted with diabetes. "This work provides proof-of-principle that the production of human beta cells can be stimulated and that the newly generated cells function effectively both in the lab and in a living animal," says Stewart, who also is chief of the Division of Endocrinology and Metabolism in Pitt's School of Medicine.

—Laura Powers