

Principal Researcher	Akihiko Okuyama			Number of Researchers	3	
Research Institution • Department • Title	Professor, Department of Urology, Osaka University, Graduate School of Medicine			Location of Institution	Suita City	
Title of Project	Electroporation-mediated HGF gene transfer for preserving graft survival.					
Abstract of Research Project	<p>Chronic allograft nephropathy(CAN) is a major cause of late graft loss. Recent reports suggest that antigen-independent factors such as acute renal ischemia are involved in the development of CAN.</p> <p>HGF, originally identified and cloned as a potent mitogen for mature hepatocytes, plays diverse roles for the regeneration of the kidney.</p> <p>In an established CAN rat model, we showed that there was remarkably little early injury and no late fibrogenic events in the HGF-treated group.</p> <p>Recently, we developed a new gene transfer method targeting kidney transplant. Electroporation-mediated gene transfer resulted in high cortical luciferase activity 4 days after transfection .Transfection of the HGF gene resulted in the increased immunoreactive HGF in glomeruli .</p> <p>We observed less arterial thickening and tubulointerstitial damages in HGF gene-transfected kidneys than those in untransfected kidney transplant at 6 months post-transplant.</p> <p>In this study, Clinical trial of ELECTROPORATION-MEDIATED HGF GENE TRANSFER FOR PRESERVING GRAFT SURVIVAL is performed.</p>					
References	<p>H.Azuma,S.Takahara,K.Matsumoto,N.Ichimar,J.D.Wang,T.Moriyama, A.Wega, M.Kitamura,Y.Otsuki,A.Okuyama,Y.Katsuoka,A.Chandraker,M.Sayegh and T.Nakamura, Hepatocyte growth factor prevents development of chronic allograft nephropathy in rats, J Am Soc Nephrol 12: 1280-1292, 2001</p> <p>T. Tanaka, N. Ichimaru, S. Takahara, K. Yazawa, M. Hatori, K. Suzuki, Y. Isaka, T. Moriyama, E. Imai, T. Nakamura, A. Okuyama and H. Yamanaka, In vivo gene transfer of hepatocyte growth factor to skeletal muscle prevents changes in rat kidneys after 5/6 nephrectomy, Am J Transplantation 2: 828-836, 2002</p>					
Term of Project	Fiscal years 2003-2005 . (3years)					
Budget Allocation (in thousand of yen)	FY2003	FY2004	FY2005	FY2006	FY2007	TOTAL
	7,600	22,500	22,500			52,600
Homepage Address	<a href="http://www.med.osaka-u.ac.jp/pub/uro/www/uro.htm">http://www.med.osaka-u.ac.jp/pub/uro/www/uro.htm</a>					