Principal Researcher		shi Nojima						3
						Resea	rchers	
Research Institution		or, Department	of Molecu	lar Ge	enetics,	Locat	ion of	Suita
·Title	Osaka	University	Research	Inst	itute For	Insti	tution	
	Microl	oial Diseases						
Develop	ment o	f nano stepwise	subtractio	n tech	nique			
We have succeeded in developing an efficient technique denoted as "stepwise subtraction"								
that allows the isolation of almost all of the genes (specifically expressed cDNAs) whose								
expressions are induced by a particular stimulus. Based on this, we will develop a novel								
technique and apply it to basic and practical researches.								
We aim at micronizing this technique at a nanogram-scale level (one human cell weighs								
about one nanogram).								
We will perform functional analyses on the genes isolated by this novel technique to								
verify its usefulness as a nano-biotechnology.								
We will apply this technique to wide varieties of research projects. For example, we will								
comprehensively isolate the specifically expressed cDNAs from the small amount of tissues								
biopsied from the patients and make microarrays that may be useful to construct a novel								
diagnosis system based on specific transcriptomal analysis.								
1) Fujii, T., Tamura, K., Masai, K., Tanaka, H., Nishimune, Y. and Nojima, H.: Use of								
stepwise subtraction to comprehensively isolate mouse genes whose transcription is								
upregulated during spermiogenesis. EMBO Rep. 3(4):367-372, 2002.								
2) Nojima, H: The stepwise subtraction method as a leading technique in the postgenome								
era. Jikken-igaku (Japanese) 20: 1142-1144, 2002.								
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Fiscal year		3-2007 . (5ye FY2004	ars) FY200)5	FY200	6	FY2007	TOTAL
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EMBO Rep. 3(4):36 2) Nojima, H: The stepwise subtraction method as a leading the subtraction method as a leading spermiogenesis.	titution Profesor, Department of Molecular Genetics, Title Osaka University Research Institute For Microbial Diseases Development of nano stepwise subtraction technique We have succeeded in developing an efficient technique denote that allows the isolation of almost all of the genes (specifically expressions are induced by a particular stimulus. Based on this technique and apply it to basic and practical researches. We aim at micronizing this technique at a nanogram-scale levabout one nanogram). We will perform functional analyses on the genes isolated verify its usefulness as a nano-biotechnology. 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