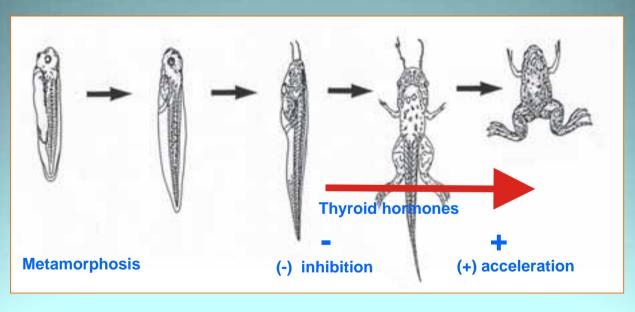
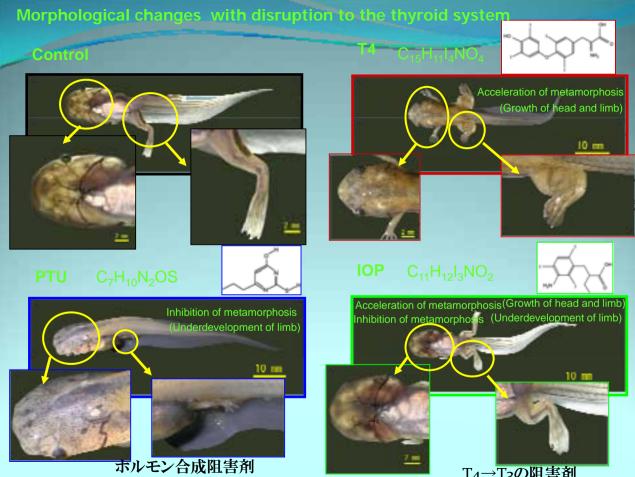
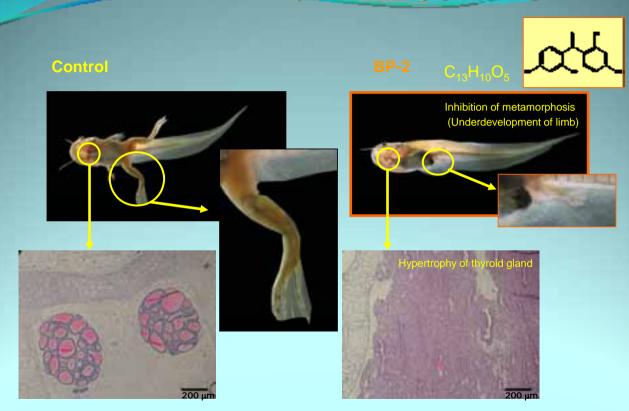
# Development of Xenopus





## Results of Metamorphosis Assay (Phase 3)



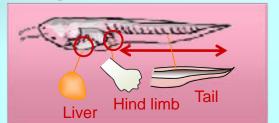
甲状腺ホルモン合成酵素の阻害剤

### Identified T. Responsive Genes

About a gene identified by a gene expression profile, acquired the individual genetic information such as sequence and the gene function from database and classified it in known gene or unknown gene.

Identified genes on each tissues

## Preparation of total RNA

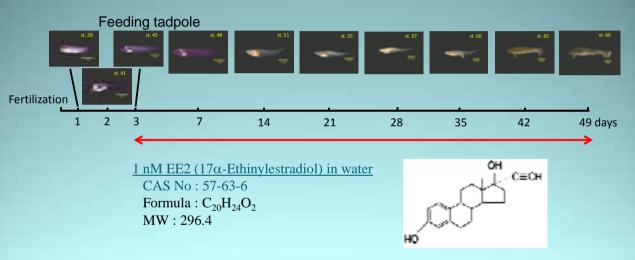


_	簡易同定名	Groupe	発生における	機能別	14応答に関す		相同				
		ar dupe	発現量の増減	気能別	る文献	a	ь	0	d	e	1
	actin, alpha, cardiac muscle fibrillin (Humn sanions)	I	+	1		0		0			
	MvHC (myosin heavy chain) (Cynops pyrrhosaster)	i	- I	1	Sachs 1997			ŏ			
	myosin light chain, fast skeletal muscle (Xenopus /aev/s)	I	+	1	Moutou 2002		0	~			
	myozenin 1	I	+	- 1	-	0	-				
	nebulin (Mus musculus)	I	+	1	-			Ó			
	titin (O.cumiculus) troponin I. skeletal, fast 2	I	+	1	-	0		0			
	Xenopus laevis, myosin light chain (MLC1 )	1 ;	Ŧ	i i	Moutou 2002	0	0				
	activated protein kinase C receptor (RACK1) (Xenoque laevie)	i	+	4			ŏ				
	caspase 6, cysteine protease	I	+	5		0	-				
	mitochondrial (12S rRNA, tRNA-Val, 16S ribosomal RNA gene)	1	+	8		Ō					
	unknown 15 (EST/NIH) unknown 16 (EST/NIH)	I I	+	13					0		
	unknown 16 (EST/NH) unknown 18 (EST/NH)	1 1	+	13					00		
	unknown 20 (EST/NH)	i	÷	13					ŏ		
	unknown 21 (EST/NIH laevis )	1	+	13					1	0	
æ	unknown 24 (EST/NIH)	1	+	13					0		
g.	unknown 25 (EST/NIH) unknown 26 (EST/NIH)	I	++	13					00		
P.	unknown 27 (EST/NIH)	1 ;	Į.	13					ŏ		
Ŧ	unknown 28	1 ;	Ŧ	13					0		lc
	Unknown(要再解析)	i	+	13							13
	thymopoietin	I	-	7		0					
	RNA-binding protein (TPA) (Mus musiculus)	I	-	9		0		0			
	unknown 19 (EST/NIH)	I	-	10		O			0		
	unknown 22 (EST/NIH)	1 ;	1 1	13					ŏ		
	polycystin-2 (pkd2) (Drosophile melanogester)	i	+	2				0	_		Н
	betaine-homocysteine methyltransferase (Homo zapienz)	11	+	6	-			Ô			
	unknown 23	11	+	13		١.					(
	thioredoxin-like 1 proliferating cell nuclear antigen (PCNA)	1	1 1	3 4		00					
	ran GTP-binding protein, RAS family (Xenopus laevis)		-	4		O	0				
	homeo box A7		1 1	9		0	0				ı
	Unknown(要再解析)	II II	-	13		-					1
	similar to CYSTATIN A1 (Xenopus laevis)	11	+	5	-		0				
	DEAD-box protein p72 (P72) (Human) Unknown(要再解析)	1	7	11				0			١,
	Unknown(委件所行) nonmuscle myosin II heavy chain A (Xenopus laevis)	- "	+	13	Sachs 1997		O	_		-	١
	ATPase, H+ transporting, V0 subunit B	i	+	2	Dan 2006	0	~				
	thioredoxin-like 1	I	+	3	-	Ō					
	serine (cysteine) proteinase inhibitor, clade C, member 1 (Xanopus Isavis)	1	+	6	Δ	١.	0				
	mitochondrial mitochondrial (X(appie))	I	+	8		ő					
	mitochondrial (X.laeviz)	I	+	8		0					
	MTERF domain containing 1	1 ;	+	8	_	00				l	
	CCAAT-enhancer binding protein delta (Xenopus leevis) (C/EBP)	i	+	9			0				П
	zinc finger transcription factor slug (slug) gene (SNAI2)	I	+	9	-	0	-			l	L
	eukaryotic translation elongation factor 2	1	+	10	+	0			١.	l	
br	unknown 12 (EST/NH) Unknown (要再解析)	I	+	13					0	l	1
ě	Unknown(委件所引) Unknown(要再解析)	1 ;	Į.	13						l	
2	HMG-CoA reductase mRNA (Xenopus leevis)	i	2	6	Ness 2000		0			l	П
	unknown 10	i	_	13			_				1
						1	_	_	0	_	L
	unknown 8 (EST/NIH)	1	-	13							Г
	serine (or cysteine) proteinase inhibitor, clade A (alpha-1), member 1	II.	†	6	Δ		0	ı			Π.
	serine (or cysteine) proteinase inhibitor, clade A (alpha-1), member 1 unknown 11 (EST/NIH)	ii i	÷	6	Δ		0		0		
	serine (or cysteine) proteinase inhibitor, clade A (alpha-1), member 1		+ + + +	6	Δ	0	0		0		15
	serine (or cysteins) proteinsse inhibitor, clade A (alpha-1), member 1 ushnom 11 (EST/NB1) ushnom 14 (EST/NB1) ribsomal protein S15 ushnom 13 (EST/NB1)	II II II	+ + +	6 13 13 10	-	0			0 0		
	serins (or cysteine) proteinse inhibitor, clade A (alpha-1), member 1 unknomn 11 (EST/NEH) unknomn 14 (EST/NEH) inbasomal protein S15 unknomn 13 (EST/NEH) similar to chemokine receptor 1 (Xenquor Inervia)		+ +	6 13 13 10 13	_ - -	0	0		0		
	serine (or cysteina) proteinsse inhibitor, clade A (alpha-1), member 1 udsnoom 11 (EST/RBH) udsnoom 13 (EST/RBH) udsnoom 13 (EST/RBH) similar to chemokine receptor 1 (Xengsuz leevis) udsnoom 13 (EST/RBH) udsnoom 16 (EST/RBH)	11 11 11	+ + +	6 13 13 10 13 12 13	Δ - -	0			0 0		
	serine (or cysteine) proteinase inhibitor, ciade A (alpha-1), member 1 usknoan 11 (EST/NB) usknoan 12 (EST/NB) usknoan 13 (EST/NB) usknoan 13 (EST/NB) usknoan 13 (EST/NB) usknoan 13 (EST/NB) usknoan 15 (EST/NB) usknoan 15 (EST/NB)		+ +	6 13 13 10 13 12 13	-	0		0	0		
	savins (or cystains) proteinsas inhibitor, clade A (alpha-1), mamber 1 unknomn 11 (EST/NBC) unknomn 14 (EST/NBC) unknomn 13 (EST/NBC) similar to themplies (seeptor 1 (Xengous Javins) similar to themplies (seeptor 1 (Xengous Javins) unknomn 17 (EST/NBC) betain-homographism embly/terusferase (Férme appins)	11 11 11	+ + + +	6 13 13 10 13 12 13	-	0		0	0 0		
	servis (or rystans) pritainums shibbitor, clash A (night-1), member 1 sukuman 11 (EST-1), member 1 sukuman 11 (EST-1), member 1 sukuman 11 (EST-1), member 1 sukuman 12 (EST-1), member 1 sukuman 1 sukuman 1 (EST-1), member 1 sukuman 1 sukuman 1 (EST-1), member 1 sukuman 1 s		+ + + + + + + + + + + + + + + +	6 13 13 10 13 12 13 13 6	Δ.	0		0	0 0		
	service for equined proteinses whither, clock A (sighe-1), member 1 strokemen 11 (SETA) and the control of the		+ + + + + + + +	6 13 13 10 13 12 13 13 6	-			00	0 00		
	series for cysteinel proteiness whither, clock A (alphe-1), member 1 schemen 11 (83.77%) and 12 (43.77%) schemen 12 (83.77%) schemen 13 (83.77%) s		+ + + + + + + + + + + + + + + +	6 13 13 10 13 12 13 13 13 6 1 1 8 10	- - - - - - - -	00		00	0 0		
	series for optional proteinses whither, oldes A slagher 11, member 1 stockmen 11 (8377-96) stockmen 13 (8377-96) stockmen 14 (8377-96) stockmen 15 (8377-9		+ + + + + + + + + + + + + + + + + + + +	6 13 13 10 13 12 13 13 6 1 1 8 10 13 5	-	0			0 00		
	series for optional proteinses eithibute, oldes A (solder-1), member 1 soldenen 1 (SETAN) eithibute 1 (SET		+ + + + + + + +	6 13 13 10 13 12 13 13 6 1 8 10 13 5 9	- - - - - - - -	00		00 0	0 00 0		
3	series für opstendi proteineme eribblick über A (spiler-1), mender 1 seriesmen 1 (1837-76).  Gebourne 1 (1837-76).  Herbeite in schreiben erestier (1 (Zeinges lenné) seriemen 1 (1837-76).  Herbeite in Statistich erestieren (1 (1837-76).  Herbeite in Statistich erestieren (1 (1837-76).  Herbeite in Statistich (1 (1837-7		+ + + + + + + + + + + + + + + + + + + +	6 13 13 10 13 12 13 13 13 6 1 8 10 13 5 9	- - - - - - - -	00		0	0 00		
Tal	series for optional proteinses erhölder, oldes A (solder-1), member 1 stelleren 18 (1877-18).  Scholleren 18 (1877-18) stelleren 18 (1877		+ + + + + + + + + + + + + + + + + + + +	6 13 13 10 13 12 13 13 6 1 8 10 13 15 9 13 15 9	- - - - - - - -	00	0		0 00 0		
Tel	service for optional proteinance eribblics, cloted A (palper-1), member 1 sections 10 IEEE/TAS (palper-1), member 1 sections 10 IEEE/TAS (palper-1), member 1 sections 10 IEEE/TAS (palper-1) sections 20 IEEE/TAS (palper-1) (Sections decision) 20 IEEE/TAS (palper-1) (Sections 20 IEEE/TAS (palper-1)) IEEE/TAS (palper-1)		+ + + + + + + + +	6 13 13 10 13 12 13 13 6 1 8 10 13 5 9 13	- - - - - - - -	00	0	0	0 00 0		
2	series for optional proteinses whither, olded A (alphe-1), member 1 sciences 10 (827-76).  In the control of th		+ + + + + + + + + + + + + + + + + + + +	6 13 13 10 13 12 13 13 6 1 1 8 10 13 5 9 13	- - - - - - - -	00	0	0	0 00 0 0	0	
Tel	series for optional proteinses erhölder, oldes A (solder-1), member 1 stelleren 18 (1877-18).  Series of the serie		+ + + + + + + + + + + + + + + + + + + +	6 13 13 10 13 12 13 13 6 1 1 8 10 13 15 9 13 15 9 13 15 15 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	- - - - - - - -	00	0	0	0 00 0 0	0	
Tel	series for optional proteinses whither, olded A (alphe-1), member 1 sciences 10 (827-76).  In the control of th		+ + + + + + + + + + + + + + + + + + + +	6 13 13 10 13 12 13 13 6 1 1 8 10 13 5 9 13	- - - - - - - -	00	0	0	0 00 0 0	0	(

- アフリカツメガエル他、カエルで同定されている遺伝子
- カエルでは同定されていない遺伝子
- ニシツメガエルのESTデータベースが存在する遺伝子 アフリカツメガエルのESTデータベースならば存在する遺伝子 相同性の高いデータベースが存在しない遺伝子

#### Summary of gene expression by T4

# EE2 exposure to *X. tropicalis*



Tadpoles were reared according to the metamorphosis assay in OECD

## Test design

_							
Strain		Nigerian					
Study start		Stage 44/ 46					
Study end		Stage 66 (completion of metamorphosis)					
EE2 concentr	ation	1 nM — Induction of 100% sex-reversed ZZ d X. laevis by E2					
		─Vtg synthesis in cultured hepatic cells of X. laevis E2 = EE2					
Exposure reg	ime	Flow-through design with 25 mL/min					
Endpoint		Developmental stage, whole body length, snout vent length, hind limb length, wet weight, histology of gonad, and VTG induction					
Determination	n days	Day 2, day3 and every 7 days					
Larval density	1	Mainly 20 tadpoles per tank					
Volume of te	st medium	4 L					
Test medium		Tap water dechlorinated with activated carbon					
Feeding	Food	Sera micron (powdered fishery food)					
	Frequency/amount	At least twice a day, quantity adjusted with age of tadpoles					
Lighting		12 h light : 12 h dark					
Water tempe	rature	25±1°C					
pH of breeding	ng water	6.5-8.0					
Dissolved oxy	gen concentration	Above 40% of the air saturation value					
Chemistry su	pplementation	Once a week					

Tadpoles were reared according to the phase 2 method used in metamorphosis assay established in OECD