Subject Index

Acetylcholine

synthesis and storage in *Pleurodeles* embryo cultures: DUPRAT AND OTHERS 167

Actin

genes in Xenopus and their developmental control: GORDON, MOHUN, BRENNAN & CASCIO 125

role in development of *Xenopus*: WYLIE, BROWN, GODSAVE, QUARMBY & HEASMAN 1

Ambystoma mexicanum (axolotl)

embryo

regional specificity of glycocon jugates: SLACK, CLEINE & SMITH 137

evidence for role of fibronectinin gastrulation: BOUCAUT AND OTHERS 211

monoclonal antibody to an epidermal marker: JONES 155

role of fibronectin in gastrulation: BOUCAUT AND OTHERS 211

sperm

role of extragenic components in early axolotl development: MALACINSKI & BARONE 53

Amphibia

cell lineage labels and region-specific markers: SMITH, DALE & SLACK 317

inductive interactions in early development:
NIEUWKOOP 335

information transfer during embryonic induction: GRUNZ 349

maturation promoting factors and cell cycle regulation: FORD 271

role of gap junctions in development: WARNER 365

single cell analysis of commitment in early embryogenesis: HEASMAN, SNAPE, SMITH & WYLIE 297

Antibody

to gap junctional protein in amphibian development: warner 365

Blastomere

Xenopus

isolation and axial body specification: COOKE 69

Body pattern

specification in early development of Xenopus: COOKE 69

Calcium ionophore A 32187

information transfer during embryonic inductions in amphibia: GRUNZ 349

Cardiac actin

control of gene activity in Xenopus: GURDON, MOHUN, BRENNAN & CASCIO 125

Catecholamines

synthesis and storage in *Pleurodeles* embryo cultures: DUPRAT AND OTHERS 167

cDNA cloning

subtractive, in *Xenopus* embryogenesis:
DAWID AND OTHERS 113

Cell adhesion

role in vertebrate neurulation and relation to birth defects: GORDON 229

Cell cycle

chromosome replication in early development of *Xenopus*: LASKEY 285

regulation in amphibia and maturation promoting factors: FORD 271

Cell movement

during conversant extension in gastrulation of Xenopus: Keller, Danilchik, Gimlich & Shih 185

evidence for role of fibronectin in amphibian gastrulation: BOUCAUT AND OTHERS 211

Choline acetyl transferase

changes in activity in *Pleurodeles* embryos:
DUPRAT AND OTHERS 167

Chordamesoderm

induction in *Xenopus* embryos: GIMLICH 85

Commitment

single cell analysis in early embryogenesis: HEASMAN, SNAPE, SMITH & WYLIE 297

Competence

inductive interactions in early amphibian development: NIEUWKOOP 335

Computational embryology

theories of vertebrate neurulation and relation to birth defects: GORDON 229

Concanavalin A

information transfer during embryonic inductions in amphibia: GRUNZ 349

Convergent extension

during gastrulation of *Xenopus*: Keller, Danilchik, Gimlich & Shih 185

Cyclic AMP

information transfer during embryonic inductions in amphibia: GRUNZ 349

Cvtokeratin

role in development of *Xenopus*: WYLIE, BROWN, GODSAVE, QUARMBY & HEASMAN 1

Cytoplasmic

clock and temporal control of early embryonic development in amphibians: satoh 257

determinants in *Xenopus* development: WYLIE, BROWN, GODSAVE, QUARMBY & HEASMAN 1

determinant and developmental regulation of genes in *Xenopus*: GURDON, MOHUN, BRENNAN & CASCIO 125

localization and chordamesoderm induction in frog embryo: GIMLICH 89

Cytoskeletal actin

control of gene activity in *Xenopus*: GURDON, MOHUN, BRENNAN & CASCIO 125

Cytoskeleton

in maturation of *Xenopus* oocytes: Hausen, wang, dreyer & stick 17

role in development of *Xenopus* oocytes: WYLIE, BROWN, GODSAVE, QUARMBY & HEASMAN 1

Cytostatic factor

and cell cycle regulation in amphibia: FORD 271

Determination

inductive interactions in early amphibian development: NIEUWKOOP 335

single cell analysis of commitment in early embryogenesis: HEASMAN, SNAPE, SMITH & WYLIE 297

DNA replication

and cell cycle regulation in amphibia: FORD

and chromatin assembly in early Xenopus:

LASKEY 285

and temporal control of early embryonic development in amphibians: saтон 257

Dorsalization

analysis with cell lineage labels and regionspecific markers: SMITH, DALE & SLACK 317

Electrophysiological coupling

role in amphibian development: WARNER 365

Epidermal

keratins and gene expression in *Xenopus* embryogenesis: DAWID AND OTHERS 113

Epidermis

development in *Xenopus* – monoclonal antibody to an epidermal marker: JONES 155

Epimucin

relationship to epidermal antigen in Xenopus: JONES 155

Epithelia

theories of vertebrate neurulation and relation to birth defects: GORDON 229

Eulerian buckling

theories of vertebrate neurulation and relation to birth defects; GORDON 229

Extracellular matrix

evidence for role of fibronecting in amphibian gastrulation: BOUCAUT AND OTHERS 211

Extragenic effect

role in early amphibian pattern specification: MALACINSKI & BARONE 53

Fate map

for gastrulation in Xenopus laevis: Keller, Danilchik, Gimlich & Shih 185

for Xenopus early development and body axial plan: COOKE 69

Fibronectin

evidence for role in amphibian gastrulation:
BOUCAUT AND OTHERS 211

Finite element analysis

theories of vertebrate neurulation and relation to birth defects: GORDON 229

FLDx

and chordamesoderm development in Xenopus: GIMLICH 89

and early development in *Xenopus*: cooke 69

used to study induction: SMITH, DALE & SLACK 317

Fluorescein-lysine-dextran(FLDx)

used to study mechanism of convergent extension in *Xenopus*: KELLER, DANILCHIK, GIMLICH & SHIH 185

G₁ phase

chromosome replication in early development of *Xenopus*: LASKEY 285

G₂ phase

chromosome replication in early development of *Xenopus*: LASKEY 285

Gap junction

role in amphibian development: WARNER 365

Gastrulation

evidence for role of fibronectin: BOUCAUT AND OTHERS 211

Xenopus laevis

function and mechanism of convergent extension: KELLER, DANILCHIK, GIMLICH & SHIH 185

Gene

expression in *Xenopus* embryogenesis: DAWID AND OTHERS 113

Germinal vesicle

in maturation of *Xenopus* oocytes: HAUSEN, WANG, DREYER & STICK 17

Germ plasm

origin in Xenopus development: wylie, brown, godsave, quarmby & heasman 1

Globin mRNA

role in translational control in *Xenopus* oocytes: TAYLOR, ROBINSON & SMITH 35

Glycolipids

regional specificity in *Xenopus* and axolotl embryos: SLACK, CLEINE & SMITH 137

Glycoproteins

regional specificity in *Xenopus* and axolotl embryos: SLACK, CLEINE & SMITH 137

Gradients

and developmental control of actin genes in Xenopus: GURDON, MOHUN, BRENNAN & CASCIO 125

Gravity

reorientation and axial body plan specification: cooke 69

Induction

and developmental control of actin genes in Xenopus: GURDON, MOHUN, BRENNAN & CASCIO 125

cell lineage labels and region-specific markers: SMITH, DALE & SLACK 317

in axolotl and *Xenopus* embryos—synthesis of glycoconjugates: SLACK, CLEINE & SMITH 137

in early amphibian development: NIEUW-KOOP 335

information transfer during embryonic inductions in amphibia: GRUNZ 349

mesoderm-role of gap junctions: WARNER 365

neural-role of gap junctions: WARNER 365 of neural structures in *Pleurodeles waltl*: DUPRAT AND OTHERS 167

single cell analysis of committment in early embryogenesis: HEASMAN, SNAPE, SMITH & WYLIE 297

Inductive interaction

cell lineage labels and region-specific markers: SMITH, DALE & SLACK 317

in early amphibian development: NIEUW-KOOP 335

Intracellular

pH-role in transitional control in *Xenopus* oocytes: TAYLOR, ROBINSON & SMITH 35

Keratins

epidermal, and gene expression in Xenopus embryogenesis: DAWID AND OTHERS 113

Lamin L III

distribution during maturation of Xenopus oocyte: HAUSEN, HUI, DREYER & STICK 17

Lectins

regional binding patterns in *Xenopus* and axolotl: SLACK, CLEINE & SMITH 137

Lucifer Yellow

used to study role of gap junctions in amphibian development: WARNER 365

Marginal zone

movement during convergent extension in Xenopus gastrulation: KELLER, DANIL-CHIK, GIMLICH & SHIH 185

Maternal effect

role in early amphibian pattern specification: MALACINSKI & BARONE 53

Maturation promoting factor (MPF)

and cell cycle regulation in amphibia: FORD 271

and temporal control of early embryonic development in amphibians: SATOH 257 chromosome replication in early development of *Xenopus*: LASKEY 285

effect on ribosomal protein phosporylation in *Xenopus* oocyte: TAYLOR, ROBINSON & SMITH 35

Maturation

of Xenopus oocyte-distribution of nuclear proteins: HAUSEN, WANG, DREYER & STICK 17

Meiosis

and cell cycle regulation in amphibia: FORD 271

Mesoderm

formation in Xenopus and convergent extension during gastrulation: KELLER, DANIL-CHIK, GIMLICH & SHIH 185

induction in *Xenopus* embryos: GIMLICH 89 induction—use of cell lineage label and region-specific markers: SMITH, DALE & SLACK 317

induction and information transfer in amphibia: GRUNZ 349

Microfilaments

role in vertebrate neurulation and relation to birth defects: GORDON 229

Microtubules

role in vertebrate neurulation and relation to birth defects: GORDON 229

Midblastula transition (MBT)

onset of gene activity: DAWID AND OTHERS 113

Mitochondrial

mitochondrial RNA synthesis in Xenopus embryogenesis: DAWID & OTHERS 113

Mitosis

and cell cycle regulation in amphibia: FORD 271

chromosome replication in early development of *Xenopus*: LASKEY 285

Monoclonal antibody

regional binding patterns in *Xenopus* and axolotl: SLACK, CLEINE & SMITH 137

study of inductive interactions in amphibia: SMITH, DALE & SLACK 317

to an epidermal marker in Xenopus: JONES 155

Monovalent antibody

to fibronectin-arrests gastrulation in amphibia: BOUCAUT AND OTHERS 211

MPF (See Maturation promoting factor)

Neural induction

embryonic determination in *Pleurodeles* waltl: DUPRAT AND OTHERS 167

information transfer in amphibia: GRUNZ 349

use of cell lineage label and region-specific markers: SMITH, DALE & SLACK 317

Neural plate

theories of vertebrate neurulation and relation to birth defects: GORDON 229

Neural tube

defects in vertebrates and theories of neurulation: GORDON 229

Neurofilaments

changes in activity of polypeptides in *Pleuro-deles* embryos: DUPRAT AND OTHERS 167

Neurone

differentiation in *Pleurodeles waltl* embryos: DUPRAT AND OTHERS 167

Neurotransmitters

synthesis and storage in *Pleurodeles* embryo cultures: DUPRAT AND OTHERS 167

Neurulation

theories and relationship to neural tube birth defects: GORDON 229

Notochord

formation in Xenopus and convergent extension during gastrulation

Nucleocytoplasmic ratio

and temporal control of early embryonic development in amphibians: SATOH 257

Nucleoplasmin

distribution during maturation of Xenopus oocyte: HAUSEN, WANG, DREYER & STICK 17

Oocyte

amphibia

maturation promoting factor and cell cycle regulation: FORD 271

Xenopus

distribution of nuclear proteins during maturation: HAUSEN, WANG, DREYER & STICK 17

role of cytoskeleton in development: WYLIE, BROWN, GODSAVE, QUARMBY & HEASMAN 1

transitional control by intracellular pH and protein phosphorylation: TAYLOR, ROBINSON & SMITH 35

Oogenesis

in Xenopus-role of cytoskeleton in development: wylie, brown, godsave, Quarmby & Heasman 1

Parental mutant

ts-1 in axolotl: Malacinski & Barone 53

Paternal effect

role in early amphibian pattern specification: MALACINSKI & BARONE 53

Pattern

specification in early development of Xenopus: COOKE 69

pΗ

intracellular-role in transitional control in Xenopus oocytes: TAYLOR, ROBINSON & SMITH 35

Phosphorylation

of ribosomal protein—in translational control in *Xenopus* oocytes: TAYLOR, ROBINSON & SMITH 35

Pleurodeles waltl

embryo

neural induction and expression of specific neuronal traits: DUPRAT AND OTHERS 167

evidence for role of fibronectinin gastrulation: BOUCAUT AND OTHERS 211

Poly A+ RNA

in Xenopus embryogenesis: DAWID AND OTHERS 113

Precleavage

events in *Xenopus* and axial body specification: cooke 69

Protein

ribosomal-role in translational control in Xenopus oocytes: TAYLOR, ROBINSON & SMITH 35

synthesis

role in translational control in *Xenopus* oocytes: TAYLOR, ROBINSON & SMITH 35

Proteoglycans

regional specificity in *Xenopus* and axolotl embryos: SLACK, CLEINE & SMITH 137

Replication

chromosomal-origins in early development of *Xenopus*: LASKEY 285

Ribonucleic acid (RNA)

role in translational control in *Xenopus* oocytes: TAYLOR, ROBINSON & SMITH 35 synthesis of poly A⁺ in *Xenopus* embryogenesis: DAWID AND OTHERS 113

Ribosomal

protein-role in translational control in Xenopus oocytes: TAYLOR, ROBINSON & SMITH 35

Romeis fixative

used to study distribution of nuclear proteins: HAUSEN, HUI, DREYER & STICK 17

Single cell

transplantation and chordamesoderm development in Xenopus: GIMLICH 89

Skeletal actin

control of gene activity in *Xenopus*: GURDON, MOHUN, BRENNAN & CASCIO 125

Specification

cell lineage labels and region-specific markers: SMITH, DALE & SLACK 317

in axolotl and Xenopus embryos-synthesis of glycoconjugates: SLACK, CLEINE & SMITH 137

information transfer during embryonic inductions in amphibia: GRUNZ 349

in neural induction in embraces of *Pleuro-*deles waltl: DUPRAT AND OTHERS 167

in *Xenopus* epidermal development: JONES 155

of axial body plan in *Xenopus* after early perturbations: cooke 69

of Xenopus dorsal embryonic body axis: GIM-LICH 89

single cell analysis of commitment in early embryogenesis: HEASMAN, SNAPE, SMITH & WYLIE 297

Sperm

role of extragenic components in axolotl early development: MALACINSKI & BARONE 53

S phase

chromosome replication in early development of *Xenopus*: LASKEY 285

Subtractive

cDNA cloning in *Xenopus* embryogenesis:
DAWID AND OTHERS 113

Synthetic peptides

inhibition of mesodermal cell migration in amphibian gastrulation: BOUCAUT AND OTHERS 211

Temporal control

of early embryonic development in amphibians: SATOH 257

Texas red

used to study role of gap junctions in amphibian development: WARNER 365

Timing mechanism

for early embryonic development in amphibians: SATOH 257

Translational control

role of intracellular pH and ribosomal protein in *Xenopus* oocytes: TAYLOR, ROBINSON & SMITH 35

Transplantation

of single cells and chordamesoderm development in *Xenopus*: GIMLICH 89

TRITC (tetramethyl rhodamine isothiocyanate)

used in study of single cell analysis of commitment: HEASMAN, SNAPE, SMITH & WYLIE 297

ts-1 mutant

in axolotl-model system for extragenic effects: MALACINSKI & BARONE 53

Tubulin

role in development of *Xenopus*: wylie, brown, godsave, quarmby & heasman 1

Tunicamycin

information transfer during embryonic inductions in amphibia: GRUNZ 349

Vimentin

distribution in early *Xenopus* development: WYLIE, BROWN, GODSAVE, QUARMBY & HEASMAN 1

Xenopus borealis

monoclonal antibody to an epidermal marker: JONES 155

Xenopus laevis

actin genes and their developmental control: GURDON, MOHUN, BRENNAN & CASCIO 125

early development

specification of body axial plan: COOKE 69

embryo

cytoplasmic localization and chordamesoderm induction: GIMLICH 89 regional specificity of glycoconjugates: SLACK, CLEINE & SMITH 137

gene expression in embryogenesis: DAWID AND OTHERS 113

maturation promoting factors and amphibian chromosome replication: LASKEY 285

monoclonal antibody to an epidermal marker: JONES 155

oocyte

role of cytoskeleton in early development: wylie, brown, godsave, quarmby & HEASMAN 1

role of cytoskeleton in early development: wylie, brown, godsave, quarmby & HEASMAN 1

Yolk platelets

distribution during maturation of *Xenopus* oocyte: HAUSEN, WANG, DREYER & STICK 17