Sexual Development
Genetics, Molecular Biology, Evolution, Endocrinology, Embryology and Pathology of Sex Determination and Differentiation
The standard reference combining ISCN and HGVS nomenclature

ISCN 2016
An International System for Human Cytogenomic Nomenclature (2016)

Editors
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The 2016 edition of the International System for Human Cytogenomic Nomenclature (ISCN 2016) offers standard nomenclature that is used to describe any genomic rearrangement identified by techniques ranging from karyotyping to FISH, microarray, various region-specific assays, and DNA sequencing. Suggestions from the international cytogenetics community have been reviewed by the Standing Committee, an international group of experts, nominated by their peers.

This updated edition offers:
• many new examples, particularly for microarray and region-specific assays
• trackable changes in the main text compared to the previous edition for easier identification
• a nomenclature standard to facilitate the description of chromosome rearrangements characterized by DNA sequencing developed through collaboration between the Human Genome Variation Society (HGVS) and ISCN to accommodate the increased use of sequencing technologies in the characterization of chromosomal abnormalities

The ISCN 2016 is an indispensable reference volume for human cytogeneticists, molecular geneticists, technicians, and students for the interpretation and communication of human cytogenetic and molecular cytogenomic nomenclature.

After a long collaboration with Cytogenetic and Genome Research, ISCN is now again part of this leading journal on chromosome and genome research, combining day-to-day business with the latest findings. ISCN 2016 is available individually as a reprint of Cytogenetic and Genome Research Vol. 149, No. 1–2, 2016 ahead of the special issue. The special issue is part of every 2016 subscription and available to subscribers only. It will be published in print and electronically and will be released in fall 2016.

Main Headings
• Historical Introduction
• Normal Chromosomes
• Symbols and Abbreviated Terms
• Karyotype Designation
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• Order of Chromosome Abnormalities in the Karyotype
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• Microarrays
• Region-Specific Assays
• Sequence-Based Assays

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Aims and Scope
Recent experimental and clinical research have led to impressive advances in our knowledge of the genetic and environmental mechanisms governing sex determination and differentiation, their evolution as well as the mutations or endocrine and metabolic abnormalities that interfere with normal gonadal development. The new journal Sexual Development aspires to provide a unique forum for this rapidly expanding field. Its broad scope will cover all aspects of genetics, molecular biology, embryology, endocrinology, evolution and pathophysiology of sex determination and differentiation. It will publish high-quality original research manuscripts, review articles, short reports, case reports and commentaries. Sexual Development is a modern journal managed by an internationally renowned and multidisciplinary editorial team of three Chief Editors and ten prominent scientists serving as Section Editors, supported by a distinguished panel of editorial board members. They are committed to ensuring fast and author-friendly editorial processing and peer reviewing. Contributions from the scientific community are invited to make Sexual Development the long-awaited and viable forum for basic and medical research on sex determination and differentiation.

Sexual Development
Publishes high-quality original papers and reviews covering all biological and clinical aspects of human and animal sexual determination and differentiation.

Categories of publications in conventional issues

Original Articles are full reports in the following areas:
- Genetics
- Molecular Biology
- Evolution
- Endocrinology
- Embryology
- Pathology of Sex Determination and Differentiation.

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Exploring vertebrate sexual differentiation

This special topic issue on Sexual Differentiation of Vertebrate Reproductive Organs continues and complements the story that was first taken up in a previously published issue dealing with the Control of Gonadal Development. This new publication focuses on the transition from sex determination to sexual differentiation. Due to the fact that most work has been conducted on mice, it is not surprising that many generalisations have developed, even though only some of these apply to all mammals. This special topic issue aims to shed some light on these generalisations. It covers the different mechanisms of sex determination in mice, reptiles and birds. Further insights are provided on the somatic lineages, gonadal differentiation and disorders of sexual development in mammals, fishes and humans. The last few chapters focus on the development and molecular control of the duct system and the development of external genitalia in mammals and also discuss how these evolved in reptiles.

This publication is recommended for anyone who would like to know more about what directs male and female sexual dimorphisms at molecular, cellular, developmental, physiological and endocrinological levels.

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