1. Record Nr. UNISA996205169403316 Autore Sawada Hitoshi Titolo Sexual Reproduction in Animals and Plants / / edited by Hitoshi Sawada, Naokazu Inoue, Megumi Iwano Pubbl/distr/stampa Cham, : Springer Nature, 2014 Tokyo:,: Springer Japan:,: Imprint: Springer,, 2014 **ISBN** 9784431545897 (PDF) 9784431563518 (paperback) Edizione [1st ed. 2014.] 1 online resource (463 pages): illustrations (some color) Descrizione fisica 571.8 Disciplina Developmental biology Soggetti Plant science Botany Cell biology **Developmental Biology** Plant Sciences Cell Biology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references at the end of each chapters and Nota di bibliografia index. Part 1 Sperm Attraction, Activation and Acrosome Reaction -- 1 Sperm Nota di contenuto Chemotaxis: The First Authentication Events Between Conspecific Gametes Prior to Fertilization (Manabu Yoshida) -- 2 Respiratory CO2 Mediates Sperm Chemotaxis in Squids (Noritaka Hirohashi) -- 3 Specific Mechanism of Sperm Storage in Avian Oviducts (Tomohiro Sasanami) -- 4 Allurin: Exploring the Activity of a Frog Sperm Chemoattractant in Mammals (Douglas E. Chandler) -- 5 Structure, Function and Phylogenetic Consideration of Calaxin (Kazuo Inaba) -- 6 CI- Channels and Transporters in Sperm Physiology (Alberto Darszon) -- 7 Equatorin-related Subcellular and Molecular Events During Sperm Priming for Fertilization in Mice (Kiyotaka Toshimori) -- 8 Acrosome Reaction-mediated Motility Initiation that is Critical for the Internal

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Sommario/riassunto

This book contains the proceedings of the International Symposium on the Mechanisms of Sexual Reproduction in Animals and Plants, where many plant and animal reproductive biologists gathered to discuss their recent progress in investigating the shared mechanisms and factors involved in sexual reproduction. This now is the first book that reviews recent progress in almost all fields of plant and animal fertilization. It was recently reported that the self-sterile mechanism of a hermaphroditic marine invertebrate (ascidian) is very similar to the self-incompatibility system in flowering plants. It was also found that a male factor expressed in the sperm cells of flowering plants is involved in gamete fusion not only of plants but also of animals and parasites. These discoveries have led to the consideration that the core mechanisms or factors involved in sexual reproduction may be shared by animals, plants and unicellular organisms. This valuable book is highly useful for reproductive biologists as well as for biological scientists outside this field in understanding the current progress of reproductive biology.