Record Nr. UNINA9910298262603321 Life Extension: Lessons from Drosophila / / edited by Alexander M. **Titolo** Vaiserman, Alexey A. Moskalev, Elena G. Pasyukova Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2015 **ISBN** 3-319-18326-5 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (350 p.) Collana Healthy Ageing and Longevity, , 2199-9015; ; 3 Disciplina 591.35 610 612.67 618.97 Soggetti Medicine - Research Biology - Research Genetics Geriatrics Biomedical Research Genetics and Genomics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Preface -- SECTION I: Genetic regulation of longevity -- Mutations and

Preface -- SECTION I: Genetic regulation of longevity -- Mutations and quantitative genetic variation: lessons from Drosophila -- Modulation of Drosophila lifespan by neuronal genes -- Life span, stress resistance and age-dependent transcriptome dynamics in fruit flies with constitutive and conditional overexpression of GADD45 -- Superoxide dismutase over-expression and the mitochondrial unfolded protein response -- Effect of Wolbachia infection on aging and longevity-associated genes in Drosophila -- SECTION II: Drosophila models for aging-associated diseases -- Skeletal muscle homeostasis and aging -- Drosophila models of cardiac disease -- Genetic modulation of cardiac functional aging -- Functional links between circadian clocks, redox state and aging in Drosophila -- Drosophila models in therapeutic drug discovery -- SECTION III: Life-extending treatments -- Phytochemicals with lifespan extension effect in Drosophila -- Life

Sommario/riassunto

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extension in Drosophila by inhibitors of histone deacetylases --Drosophila healthspan extension using dietary manipulation -- The effect of the artificial atmosphere on the flies' longevity -- Effects of several mild stresses applied in adults on aging and longevity -- Life extension via stage-specific drug interventions in Drosophila -- Index. This book looks at aging through research on Drosophila, the fruit fly that is one of the most widely used model organisms in biogerontology. Work in model organisms can expand the theoretical knowledge of aging: it yields valuable insight into the molecular and cellular processes that underlie aging process, and it can perhaps provide new therapeutic targets for the treatment of age-related disorders in humans. Drosophila models have been developed for a large variety of aging-related processes and diseases, and this book provides readers with an overview of current research on the use of the Drosophila model to understand the genetic, molecular and physiological mechanisms that underlie the aging process. Themes of healthspan, life extension and longevity-associated genes emerge in this collation of international research on Drosophila that is of relevance to geriatrics and gerontology, animal genetics and genomics, and biomedicine. This fascinating, illustrated book will be of interest to a wide audience, ranging from academic researchers to the general