1. Record Nr. UNINA9910155308903321

Titolo	Ageing: Lessons from C. elegans / / edited by Anders Olsen, Matthew S. Gill
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-44703-3
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (VI, 439 p. 40 illus., 32 illus. in color.)
Collana	Healthy Ageing and Longevity, , 2199-9015
Disciplina	610
Soggetti	Medicine - Research Biology - Research Genetics Geriatrics Cytology Biomedical Research Genetics and Genomics Cell Biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Effects of aging on the basic biology and anatomy of C. elegans -- Dauer Formation and Ageing -- Longevity regulation by insulin/IGF-1 signaling -- Mitochondrial longevity pathways -- Influences of Germline Cells on Organismal Lifespan and Healthspan -- Reproductive Aging -- Nervous System Ageing -- Stress Response Pathways -- Oxidative Stress -- Genome stability and Protein homeostasis and ageing in C. elegans -- Translational control of longevity -- Lipid Metabolism, Lipid Signaling and Longevity -- Autophagy and ageing -- Dietary restriction in C. elegans -- Integration of metabolic signals -- Microbiota, Probiotic Bacteria and Ageing -- The Future of Worm Ageing.-Index.
Sommario/riassunto	This book brings together in one volume the current state of ageing research in the nematode Caenorhabditis elegans. The authors are leading researchers in the field, placing this topic in the context of human ageing, describing how and why basic discoveries in this simple

organism have impacted our prospects for intervention in the ageing process. The authors cover a broad range of topics with regards to organismal and reproductive ageing including anatomical, physiological and biochemical changes, as well as genetic and environmental interventions that promote longevity and ameliorate age-related disease. Ageing is the single most important factor determining the onset of human disease in developed countries. With current worldwide demographic trends indicating that the number of individuals over the age of 65 will continue to rise, it is clear that an understanding of the processes that underpin ageing and age-related disease represents a key challenge in the biomedical sciences. In recent years there have been huge advances in our understanding of the ageing process and many of these have stemmed from genetic analysis of C. elegans. With no analogous book in this subject area this work will be of interest to a wide audience, ranging from academic researchers to the general public.