Editorial-"*Current Aging Science*": An Important Platform for Reporting Advances in Aging-related Research

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One of the major achievements of the 20th century is the significant gain of years in life expectancy in developed and developing countries. For example, lifespan at birth in the United States increased by 55% for men and by 56% for women from 1901-2000, while lifespan at age 65 increased by 40% for men and 58% for women over the same period [1]. There is a shift of peoples' views on aging, which no longer necessarily implies physical decline and illness—in fact, the rate of disability among older people has declined significantly. An unanswered key question is whether increases in life expectancy occur with a concurrent postponement of functional limitations and disability [2]. Although research suggests that aging processes are modifiable and that people are living longer without severe disability, further scientific, technological and medical developments are needed to meet the challenges of aging populations [2]. For example, age is the major risk factor for cardiovascular disease. Heart disease and stroke incidence rise steeply after age 65, accounting for more than 40 percent of all deaths among people age 65 to 74 and almost 60 percent at age 85 and above [3]. In this context, the multidisciplinary journal, *Current Aging Science* serves a unique and useful platform for updated 'review', 'mini-review' and 'experimental' articles in aging-related research that would eventually help promote healthy life in older individuals [4]. *Current Aging Science* reports research primarily on the biological basis of aging, the influence of the environment, diets and genetics on aging process, and preventive strategies for age-related disorders. Some of these studies examine biochemical and cellular processes, and employ behavioral, genetic and applied science in relation to aging. These peer-reviewed manuscripts were written by experts in the field with great insight and dedication.

The international journal *Current Aging Science* enters its third year of successful reporting of research advances on the science of aging and age-related disorders. Reflecting back, *Current Aging Science* has published all the three issues of its second volume on time after rapid peer review, as promised [5]. In the last year alone, contributors of the journal's articles hailed from across the globe. In fact, authors' work originated from 16 different countries, such as Argentina, Australia, Austria, Brazil, Canada, Finland, France, India, Italy, Japan, Portugal Spain, Switzerland, Turkey, UAE, UK and the USA. This is important as different aspects of aging and longevity can be learnt from various cultures and populations, including their diets, natural habitat, lifestyle and other environmental factors. Notably, the manuscripts of the second volume of the journal were enthusiastically received by readers and researchers across several disciplines, including basic scientists, clinical investigators and health professionals.

In the second volume alone, *Current Aging Science* covered some important research areas, such as aging and mitochondria [6], aging and inflammation [7], aging and contact dermatitis [8], age-related changes in protein expression [9], and age-related changes in body posture control [10]. In an important cross-cultural study, the effect of dietary habits and obesity in Palauan people are compared with Japanese and Mongolian people [11]. Articles also represent research advances in the field of age-related disorders, such as Alzheimer's disease and Parkinson's disease [12]. Other important studies include comparative age-effects according to educational attainment [13] and translational pharmacology [14]. The topics covered so far in *Current Aging Science* represented a few snapshots from the ever-increasing field of aging-related research. When the word 'Aging' was searched, PubMed picked up over 12,000 publications during the last one-year period alone, and these numbers may not include other potentially important work that appeared in journals not listed in that database.

The success of the journal's quality has recently been recognized by its acceptance for coverage in PubMed/MEDLINE. Indeed, all abstracts of manuscripts, from the first issue of the journal, are listed in PubMed. The journal is accessible online, in addition to the print edition, and the abstract of each article is freely available on the journal's website (http://www.bentham.org/cas/). Further, *Current Aging Science* is currently abstracted in various databases, such as *Chemical Abstracts* and *Genamics JournalSeek*. The journal is being publicized through different sources, such as other scientific journals, workshops and various meetings. The Bentham Science Publisher is compliant with the article deposit requirements of the National Institutes of Health (NIH), USA. There is also a mechanism for having an article posted on the Bentham site and freely available to all readers for a certain fee. It is noteworthy that a sister journal *Current Alzheimer Research* has successfully completed the 6th anniversary of publication. The PubMed/MEDLINE-indexed journal *Current Alzheimer Research* focuses on mechanistic, behavioral, clinical and translational-based research in the field of Alzheimer's dementia and related neurodegenerative disorders [15], and its contents and articles nicely complement those of *Current Aging Research* [16].

Current Aging Science continues to include other important themes and topics, such as antiaging mechanisms (e.g., calorie restriction), the role of insulin in aging, dietary approaches to deceleration of aging (e.g., resveratrol) and improving techniques for maintaining lifestyle of older adults (e.g., balance control) [5]. Memory and mood changes associated with aging, longevity studies using invertebrate and unicellular models, and life span extension by regenerative medicine are fascinating topics [5]. The journal is committed to publish primarily review articles written by investigators working on biomedical and natural science research using tissue culture, invertebrates and animal models, and on the effect of aging on integrated systems. Other emerging areas, such as adult stem cells, functional imaging, neurogenesis, regenerative medicine and preventive strategies for age-related disorders are of interest to the journal. From a holistic view, advances in the relationship of aging with cardiovascular diseases, obesity and neurodegenerative disorders, and developmental programming are also report-worthy important topics. In this issue, we have selected nine important articles addressing some of these aforementioned topics, and hope that *Current Aging Science* (Volume 3 with three issues) will provide critical highlights of notable advances in the aging field.

Beyond the third volume and in its upcoming issues, *Current Aging Science* will cover a wide range of topics via critical review articles and original research reports that have a great impact on the field. These are likely to report studies on the lifespan in simpler organisms such as yeast, nematodes, flies and mice. Some recent works in the aging field, such as dietary balance, calorie restriction, body temperature and telomerase, are noteworthy. For aging, diet

and longevity are in the balance [17]. In diverse organisms, dietary restriction extends healthy lifespan and reduces fecundity. Recent work suggests that the benefits to lifespan of dietary restriction without incurring a reduction in fecundity can possibly be obtained through a suitable balance of nutrients in the diet [18]. At another angle, reduction of core body temperature has been suggested to prolong life span independent of altered diet or calorie restriction. This is based on studies that transgenic mice with a reduced core body temperature have an increased life span [19]. At the DNA level, the novel proteins that are induced by telomere dysfunction and DNA damage represent biomarkers of human aging and disease [20]. The role of telomeres on immunological diseases of aging is also emerging [21]. Similarly studies of age, neuropathology, and dementia [22], and of DNA damage, aging, and cancer [23] are of great relevance to the field. The role of early environmental exposure of organisms to stresses, such as pathogens and toxins, which potentially could affect gene expression in adult life and trigger late-onset disorders, is another important fast emerging field [24]. In the final thought, we should be aware of the limitation of the current "reductionist" approach, and consider other alternative approaches, such as the "Story Bank" idea of banking on stories for healthier cognitive aging [25].

In summary, the scope of *Current Aging Science* remains broad and strong, and the journal continues to serve as an important and useful international forum for the publication of topic reviews, original research, and translational research on different aspects of aging and age related disorders. On behalf of Bentham Science and the Editorial Board members, I am thankful for continued support and suggestions received from the authors, readers, subscribers and the entire scientific community. I am immensely grateful to the reviewers for their insightful and meticulous work in the peer-review process, which is essential to maintain the high standard of the journal. I am deeply appreciative of the Bentham Science staff members for their constant support, patience and hard work. I am looking forward to your comments and contributions, and hoping that this journal will continue to be of service for many years to come.

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