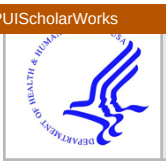

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Advances in Understanding Alzheimer's Disease, and the Contributions of *Current Alzheimer Research*: Ten Years on and Beyond

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INTRODUCTION

The initial issue of *Current Alzheimer Research* (CAR) was first published in 2004, a year marked by the glories of the Athens Summer Olympics as well as the destruction of the Asian Tsunami [1]. Over the last decade, scientific knowledge has moved rapidly forward across numerous disciplines, marked by the discovery of the potential for water and life on Mars [2,3], the generation of the first induced pluripotent stem cells [4], the creation of the first cell controlled by a synthetic genome [5], and genome editing [6]. In the realm of dementia-now, beyond the centennial of the first presentation by Alois Alzheimer on the disease that bears his name [7], important changes too have occurred in the past decade. Whereas the exact prevalence of dementia remains unknown, it is crystal clear that dementia is a common, devastating and costly condition amongst the elderly. The WHO 2012 Report "Dementia: a public health priority" [8] estimates that 35.6 million people suffered with dementia worldwide in 2010. An estimated incidence that is much higher than that approximated in 2004 (18 million people [9]), and this value has undoubtedly grown still more in 2014.

Total new cases of dementia each year worldwide are predicted as 7.7 million or one every four seconds, with the greatest number of new cases occurring in developing countries. Particularly afflicted are the elderly in China, India, and their south Asian neighbors whose health care systems, like those of North America and European nations, are unimaginably strained. Alzheimer's disease (AD) is the most frequent cause of dementia impacting some 5.5 million people in the USA. What have we learned over the past decade and, more importantly, how have scientific discoveries translated to impact the care of patients suffering from this disease?

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To date, extraordinary progress has been achieved in elucidating the molecular events underpinning the neuropathology and cellular dysfunction associated with AD. Additionally, significant new knowledge has also been gained through the identification of genetic mutations associated with AD predisposition as well as AD resilience. Much progress has been made to establish broader national and international collaborations. In addition, public/private partnerships have generated greater cooperation and alliances between academia, the pharmaceutical industry and funding organizations. However, no efficacious treatments have yet been found to delay or stop the progression of AD. Therefore, we currently remain at a cross-road in the study and treatment of AD. We now need to select which of the many potential road maps will lead towards the hopeful translation of our ever increasing basic science knowledge into clinically effective interventions for AD [10, 11]. At the same time, the persistent universal financial crisis is placing an ever-increasing strain on AD research limiting our options of following multiple routes to find a correct one.

In the face of these pressures – indeed, stimulated by these pressures – remarkable scientific advances have and can continue to be made. Breakthroughs, epitomized by those in brain imaging, target elucidation and drug screening [12–15], are opening the door to unprecedented opportunities for the advancement of basic research into human development. Thus far, advances in the study of neuropsychiatric disorders and AD, in particular, have too often been lost in translation [16] in that these fields of research represent areas of high drug attrition [17], but they also are of great opportunity [18]. Advancement in AD research can be achieved by linking new target evaluation and characterization to disease progression and drug discovery in order to provide a mechanism for preclinical optimization with clinical translation and appraisal in human disease. While this pursuit is often long and tortuous, it requires continuous interactions between scientists from numerous backgrounds.

Over the past decade, *Current Alzheimer Research* has provided an important instrument to support this essential crosstalk both between as well as within disciplines. All too often a completely new pair of eyes, frequently from outside the field rather than from within, can provide the impetus to follow a new pathway or see an important association whose relevance others may have missed. *Current Alzheimer Research* intersects a broad spectrum of many disciplines including cellular and molecular biology, pharmacology, medicinal chemistry/drug development and discovery, molecular diagnostics, brain imaging, neurogenetics, and neurology. Far more than many other longer established scientific journals, *Current Alzheimer Research* provides a forum to understand these diverse research approaches in relation to clinical aspects of AD and associated disorders by being inclusive of scientists from different fields. Equally important, *Current Alzheimer Research* likewise readily accommodates for those who may not necessarily be within the main stream of AD research but who can provide a critical reality check [19] as to whether or not chosen directions may be fruitful or fruitless. Thereby these researchers can assess the status of the “Emperor’s new clothes” [20].

Since its inception in 2004, *Current Alzheimer Research* has been listed in PubMed/MEDLINE as well as other notable indexing services, such as BIOBASE, EMBASE, NURSING EMCare, Chemical Abstracts, Current Contents, Genomics, JournalSeek and PsycINFO databases. The scope of our indexing is essential to disseminate new research

findings to other investigators within and across fields. Additionally, *Current Alzheimer Research* continues to receive coverage in Thomson Scientific products and services: BIOSIS Previews, Journal Citation Reports/Science Edition®, Neuroscience Citation Index® and Science Citation Index Expanded (also known as SciSearch®).

As a consequence of the relevance and scientific quality of the papers on one side and the indexing, review and timeliness provided by the publisher, Bentham Science, on the other, *Current Alzheimer Research* is one of the top 35 journals among 193 Clinical Neurology journals, and has consistently maintained a high impact factor and ranking (the current impact factor is 3.67 with a five-year impact factor of 4.20). Beyond this number and ranking, the quality of citations of the journal's articles speak volumes of the journal itself. For example, several articles published in *Current Alzheimer Research* have been referenced in other reputable journals, including *JAMA*, *Nature Medicine* (plus other Nature publishing group's journals), *N. Eng. J. Med.*, *Neuron*, *J. Neuroscience*, *Proc. Natl. Acad. Sci. USA, Science* and *Sci. Transl. Med*.

Bentham Science continues to supply free online Abstracts of each article and the full text of Editorials on the journal's website (http://benthamscience.com/journal/index.php?journalID=car#top). Moreover, each first issue of the year's journal volume is now made available for free open access viewing of all published articles. Bentham Science launched a new website in January 2014 with many new attractive functionalities. The publisher is fully compliant with article deposit requirements of the National Institutes of Health (NIH), USA. Based on the feedback from authors and readers, the journal has started handling all its submission and editorial processes by the ScholarOne system, thereby making the publication experience more efficient and user-friendly.

Notably, the Editorial Board for *Current Alzheimer Research* has been revamped recently with the inclusion of several experts and reviewers in the field, including two Nobel Laureates. We all are benefitted by their advice and expertise, and are thankful for their time and service to the journal and, in turn, to the AD field of research.

Besides publishing standard review and research articles, the journal also publishes full or mini 'Thematic Issues'. These 'Thematic Issues' are focused on contemporary topics that represent recent developments in the field, and these issues are guest edited by eminent scientists. The number of expert contributions varies from 8 to 10 articles for a Full-Thematic Issue to 5 articles for a Mini-Thematic Issue. Such thematic issues are widely read, and usually receive higher citations compared to the regular journal issues that are published. During the last year alone, the journal successfully published several separate theme-based 'hot topic' issues. These provide the latest exciting information on high profile subjects, in addition to the excellent articles covering an extensive range of topics in our regular issues.

The articles in the 11th volume of *Current Alzheimer Research* cover a wide breadth of recent research in AD. The research topics include several disease-modifying and interventional strategies as well as brain imaging, immunotherapy, neuroinflammation, and neuropathology. In addition, this volume will continue to publish the theme-based issues

written by a group of experts in the field. Indeed, several interesting issues are lined up for publication this year. These timely and exciting contributions are key to the success and future progress of the AD field, and should be well worth reading. We also continue to follow the original mission of the journal [1] and the recently proposed vision [21].

Last year, a special session on neurodegenerative diseases was held with eminent scholars to commemorate the achievement of *Current Alzheimer Research* at the "Drug Discovery & Therapy World Congress 2013" (DDTWC 2013) in Boston, USA. Likewise, we are also planning to highlight the advances in AD this year and to celebrate the 10th year anniversary of *Current Alzheimer Research* at the DDTWC 2014 in Boston from June 16–19, 2014. It is our distinct pleasure to invite you to join the celebration of your achievements riding on the "CAR", as *Current Alzheimer Research* journal is affectionately called the most reliable and dynamic vehicle to report and disseminate AD research. Our scientific journey with the CAR has been uninterrupted, productive and all-season-serving through the bumpy roads of the 2004 Summer Olympics to the memorable 2014 Winter Olympics. We hope and are planning for the continuation of this success with your support and contributions.

On behalf of Bentham Science and the Editorial Board, we profoundly thank the authors, readers, and the neuroscience community for their advice, input and support. We express our sincere gratitude to the guest editors, reviewers and referees of manuscripts. Indeed, their combined efforts and insights have significantly enriched the quality of articles published in the journal. Finally, we are especially grateful to the staff of Bentham Science for their indefatigable effort and cooperation in creating the final shape of the journal.

As we focus on our mission and attempt to keep the engine of scientific discovery both running as well as moving in the correct direction – rather than, between us, generating inconsistent results [22,23], our goal should be to join the rank of one of the highly touted scientific discoveries of the year [24]. This goal will provide shared success between the authors and readers of *Current Alzheimer Research* that, hopefully, will be more successfully translated to and enjoyed by the public – particularly those suffering from AD and their care givers. Our hope is that *Current Alzheimer Research* will continue to contribute towards accelerating the progress of the AD research field, imparting the latest findings so that they can be rapidly acted upon. We always look forward to your comments and contributions. At this longed-for moment of the uninterrupted 11th anniversary of the journal's inception, let us join in wishing a bright, creative and successful future for *Current Alzheimer Research*.

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