

# Representing and accessing scientific knowledge about the Alzheimer 's disease: the Semantic BiblioDem Portal

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## ABSTRACT

Among the objectives targeted by the measure 32 of the French Alzheimer Plan is to improve the quality of medical practice by training doctors in clinical epidemiology. In this frame, BiblioDémences, a monthly critical report of bibliography on Alzheimer's Disease (AD) and related disorders has been developed. The Semantic BiblioDem Portal project aims at providing semantic web based features to search easily for BiblioDémences' articles and corresponding critical reports. It will fulfil the following objectives: (i) providing a controlled vocabulary dedicated to the description of the AD and related diseases supporting both content indexing and educational purpose; (ii) providing a semantic portal enabling semantic search and browsing of approved available evidence about AD and related disorders; (iii) taking into account the specificity and variety of users, in particular medical students, research scientists, clinical investigators, general practitioners, administrative people from the French Department of Health and neophytes (including caregivers). The AD structured vocabulary is being developed using Natural Language Processing (NLP) tools on French and English texts from 1,095 BiblioDémences reports. And the automated identification of concepts and relationships involves the use of the UMLS biomedical resources. Preliminary results show that 4,734 candidate concepts have been found from UMLS. Among them, 4.283 have been found automatically and 451 manually thanks to the intervention of an expert.