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Thank you to the subcommittee for inviting me. I am Richard Mohs, Chief Science Officer for the Global Alzheimer's Platform (GAP) Foundation a not-for-profit organization founded by patient advocates to help speed the completion of high quality clinical trials of potential new therapies for treating and preventing Alzheimer's disease. It is the belief of our founders, primarily George and Trish Vradenburg along with John Dwyer that only thru rapid and rigorous testing of potential new treatments will we be able to make progress in alleviating the suffering caused by Alzheimer's disease. The foundation has worked with academic investigators, government agencies, pharmaceutical companies and, very importantly, other similar groups outside the United States, to develop networks of clinical trial sites that can conduct studies quickly and with high quality. GAP has found eager partners for our efforts in the European Union with its EPAD network, Japan with it's JPAD Network, Australia with APAD and we have partnerships developing in other regions of the globe.

Before joining GAP I was, for 14 years, at Eli Lilly and Company where, for 5 years I led the Global Alzheimer's Development team. In that role I was responsible for clinical testing of two potential new medicines for AD, semagacestat and solanezumab. While both compounds were very promising scientifically, neither showed sufficient efficacy in global phase 3 studies to enable registration. Conducting the trials, however, gave me considerable insight into the impact AD has around the globe and the ways patients, families, and health care systems cope with the epidemic. The four phase 3 clinical trials for these compounds included a total of 4,694 patients with mild to moderate Alzheimer's disease from 31 countries. Of the total approximately 40% were seen at clinical sites in North America, 21% at sites in Western Europe, 10% at sites in Japan, 9% at sites in Mexico and South America, 8% at sites in Eastern Europe including Russia, 7% in Asian countries outside of Japan, and 5% in South Africa and Australia.

From these experiences with the GAP Foundation and Eli Lilly and Company I'd like to share the following observations about the global burden of this disease and the prospects for developing new treatments.

1. In all of the countries and regions where GAP and Lilly have worked we have found a high degree of interest and cooperation from clinicians, health authorities, regulators, patients and families It was not difficult anywhere to

find people concerned about the disease and eager to work toward better treatments.

2. The clinical presentation and care burden of patients is quite similar across geographies, countries and health systems. Memory problems, difficulty in communication and progressively greater need for assistance in activities of daily living are found in all patients regardless of country.
3. In spite of their limited efficacy, the currently approved medicines for AD are widely used and are an integral part of medical management. The highest use is in North America, Western Europe and Japan where over 90% of enrolled patients with AD were receiving one or more medications for AD, but over 70% of study patients with AD in every region were taking at least one AD medicine.
4. The primary caregivers for patients with AD varied by region. Patients with AD enrolled in clinical trials are required to have a caregiver or study partner who knows them well and will assist in monitoring adherence to medication along with the patient's symptoms, daily functioning, and changes in health status. In North America, Western Europe, South Africa/Australia and Japan approximately 70% of primary caregivers were spouses while in other regions primary caregivers were more likely to be adult children or other study partner. These differences may be relevant to the integration of behavior management plans with medication.
5. There is a need to improve the efficiency of the drug discovery and development process. Novel ideas about how to treat and prevent AD are slow to get from basic science laboratories to clinical testing. Policies that facilitate communication and collaboration of academic scientists with those in the biopharmaceutical industry are necessary to enable rapid discovery of high quality clinical candidate molecules accompanied by biomarkers and other tools needed for clinical testing.
6. The conduct of clinical trials could be faster. The process of starting clinical studies, identifying clinical trial sites and enrolling patients is slower that it needs to be if we are to test all of the promising compounds available. Streamlining processes of study review, contracting with sites, review by ethics committees and site certification could reduce time to complete clinical testing.
7. There is a need for more global collaboration on the discovery, development and testing of potential new treatments for Alzheimer's disease. Active participation by US agencies with international groups such as the World Health Organization (WHO), Organization for Economic Cooperation and Development (OECD) and the World Development Council (WDC) is needed to insure faster development and more efficient use of resources globally to meet this global challenge.
8. There is a growing discrepancy between the way patients with AD are diagnosed in ordinary clinical practice and the way they are enrolled in clinical trials. In clinical practice patients are usually diagnosed fairly late in disease when symptoms are unequivocal and cannot be ignored. Many clinical trials are now designed to test prevention therapies in patients who

are at high risk because of biomarkers but with few of no disease symptoms. Finding appropriate patients for these prevention studies is very difficult.

9. To develop truly effective ways to treat, manage and delay the onset of AD will require many studies of potential medicines, behavioral interventions, patient assistance technologies and combination approaches. These studies should be done quickly, with rigorous methodology and with results communicated quickly to investigators, patients and clinicians so that we can, collectively develop and disseminate the best treatment approaches.

Thank you very much for your attention.