

Dear Alzheimer's Foundation of America,

I am writing this letter to express my strong interest in joining forces with the Alzheimer's Foundation of America to further empower our organization in our mission to provide individuals impacted by Alzheimer's with industrial gardens for therapeutic practices.

Appeal

The success of your mission and concern for the well-being of families and communities affected by Alzheimer's make you an ideal sponsor for this project. Your Anne & Irving Brodsky Innovation Grant seems like a perfect fit for our mission because it focuses on improving the lives of individuals with Alzheimer's. As your foundation understands, there are many ways to improve the lives of those with Alzheimer's beyond research. Your focus on improving day-to-day life for both individuals with Alzheimer's and their families or caregivers aligns with our mission.

The Problem

Approximately 120,000 to 122,000 Missourians are living with Alzheimer's or related dementias, with the number of affected individuals expected to continue growing due to the aging population. There is a critical need for more support and resources for the hundreds of thousands of unpaid caregivers in Missouri who provide essential care.

Two-thirds of people with dementia live in the community, and one-third live in care homes. One-third of people with dementia do not feel a part of their community. Many people, including some healthcare providers, view dementia as a normal part of aging rather than a treatable disease, leading to a delay in seeking help. The stigma surrounding dementia can cause families to deny or hide symptoms.

The World Alzheimer Report 2022 finds that as many as 85 percent of people with dementia could be missing out on post-diagnosis care. There are currently no validated disease-modifying therapies for patients with Alzheimer's, and current treatments are known to have substantial side effects. The Local Government Association Annual Conference revealed that three in five (61%) of people affected by dementia did not feel they had received enough support in the last 12 months.

Multiple interconnected issues contribute to a lack of accessible treatment for people with dementia, including deep-seated healthcare system failures, significant social and financial barriers, and systemic inequities. There is a significant gap in services beyond the "middle stages" of dementia. Patients and caregivers face a shortage of support for early and advanced dementia and a lack of holistic care that addresses social needs alongside medical ones.

The Solution

In response to the rise in prevalence of Alzheimer's and the lack of treatment options, researchers have begun using non-pharmacological methods to improve the quality of life for those with the condition. Gardening has been proven to improve the quality of life for those with dementia.

Health Benefits

Gardening centres can provide dementia patients with relaxation, reminiscence, and sensory stimulation. Research shows that gardening can provide people with dementia with the following health benefits:

- **Physical health benefits:** gardening provides routine exercise and activity for large and small muscle groups through digging, sweeping, cleaning and walking.
- **Opportunities for Vitamin D production:** sunlight keeps bones healthy, helps maintain circadian rhythms to improve sleep quality.
- **Provides stimulation:** the colours, sounds, touch, and smells of wildlife can restore the body and promote feelings of calmness, reduce stress, and lower blood pressure.
- **Providing opportunities to relieve tension:** it has been proven that exposure to gardens improves sleep, increases energy, and reduces agitation, confusion, and aggression.
- **Providing space for reflection and privacy:** reminiscence opportunities to talk about their past lives and reinforcing a sense of self.
- **Provides different social environments:** group activity can improve interaction with others, encourage social skills, and allow privacy for solitude.
- **Alleviate feelings of helplessness:** being dependent on others through caring for plants gives people a sense of control.

Additional physical health benefits are enhanced mobility and strength, improved heart health, and better nutrition. Some emotional and psychological benefits are stress reduction and mental clarity, a sense of accomplishment and purpose, social interaction, and community building. The cognitive benefits are mental stimulation and a delay in cognitive decline. The mental and emotional benefits of gardening are equally as important; they are as follows:

- **Reduces stress and anxiety:** Focusing on a task like weeding or watering can be calming and meditative, reducing stress and anxiety that are common with dementia.
- **Provides a sense of purpose and accomplishment:** Caring for plants can give a sense of purpose and boost self-esteem as individuals see tangible results like new growth or a harvest.
- **Stimulates the senses:** Engaging with plants through touch, smell, sight, and taste can be calming and may help trigger positive, long-term memories.
- **Improves mood:** Outdoor activity and the connection to nature can lift spirits and reduce agitation and aggression.
- **Fosters social interaction:** Gardening together can be a way for families to connect and can also provide opportunities for social interaction in group settings.

Studies Conducted

A study conducted by Abigail C. Styck and Daniel R. George had the objective of exploring how gardening may influence a sense of purpose in people with dementia. Ten residents living with dementia in a skilled care facility participated in hour-long gardening sessions twice weekly at outdoor raised beds over a two-month duration. Half of the participants donated their harvest to a food pantry, and the other half harvested for personal use. The participants were each interviewed to observe the impact of gardening on their sense of purpose. The study found that gardening does, in fact, have biopsychological benefits for patients with Alzheimer's, and there is an added benefit linked to an improved sense of purpose when paired with charitable giving.

A study was conducted with 339 participants aged 60-95 years old from Australia, and they reported numerous benefits of leisure gardening. Restoration and physical benefits were the strongest explanatory variables of participants' positive aging perceptions.

Members of gardening groups also reported increased social and physical benefits compared to those who are not a part of a group. Positive aging is more than the absence of disease and the preservation of physical and cognitive function. Most models of successful aging identify the importance of physical activity and active engagement in social activities. Attending to the task of gardening provides positive aging due to its outlet for purposeful activity among elderly people. Gardening is a productive and gratifying activity, but it also provides well-being benefits and is linked to the love of nature and the restorative properties of natural environments.

Benefits for the Community

Community gardens create the benefit of healthy food access for all. Community gardens do not just help alleviate hunger; they provide nutritious food. Poverty status is a risk for poor health; some of the low-income areas in the United States have a decreased life expectancy compared to the national average. Community gardens create accessibility to healthy food for all types of people within the community.

Milwaukee Community Gardens shares six benefits that they have witnessed through their community garden, and they are as follows:

- Growing healthy food for residents to harvest.
- Bringing neighbours together through positive activity and safe space.
- Building strong community bonds through partnerships with local organizations, schools, and businesses.
- Beautifying neighbourhoods through green space and art installations.
- Providing outdoor education, recreation, and meeting space for all age groups
- Improving residents' quality of life

Application

Shady Acres Care Center would require an industrial garden with the proper precautions to ensure that it is dementia friendly. A few considerations to ensure comfort and safety for patients are as follows:

- **Ensure accessibility:** Create clear, level paths, and consider raised garden beds for those who have difficulty bending.
- **Create a safe and inviting space:** Avoid steps where possible, and ensure there are comfortable places to sit. Make sure to avoid dark or foreboding areas.
- **Focus on sensory experiences:** Plant flowers and herbs that are fragrant and colorful. Include a variety of textures. Water features can also be very calming.
- **Involve familiar plants:** Grow plants that are meaningful to the individual to help trigger positive memories.
- **Simplify tasks:** Focus on simple activities like watering, deadheading, or harvesting. Avoid tasks that could be overwhelming.

We want our patients to be included in the process of creating this garden. Research offers three tips for success when creating a community garden in personal care homes. The three tips are design considerations, plant selection, and staff support engagement. Having careful thought into each of these aspects will create a successful community garden in a personal care home. Outdoor spaces are just as essential as indoor environments to elderly people.

Capabilities

I am qualified to create this industrial garden because of the team that I have supporting me. Our organization is passionate about improving the lives of people impacted by dementia. Our team is ready to improve the lives of patients at Shady Acres Care Center and is willing to work hard to achieve this. We will create this garden together with the assistance of Bryan Scott with Scott's Hardscape and Excavation. Bryan Scott has numerous reviews speaking positively of both his work and pricing. His website provides pictures of his work, and he responded to my message almost immediately.

We want to ensure that garden beds are an accessible shape and height for all our patients. The design concept that I have discussed with Bryan Scott consists of three 5x10 gardening beds, each 3.5 feet high, and a concrete pathway to and throughout the garden. The concrete pathway ensures that all patients, even those who are handicapped, can access the garden. The height of the gardening beds ensures that patients will not be required to lower themselves to the ground.

One garden bed will consist of herbs, one with flowers, and one with vegetables. We want the garden to be interactive and vibrant. It is our goal for patients to be able to harvest food and find serenity while in the garden.

Budget

Bryan Scott provided me with a quote for the concrete and raised beds. The plants will be purchased through Home Depot, and the benches and windchime through Walmart.

Item	Price
Concrete	\$8 per square foot. 350 square feet Total: \$2,800
Raised beds	340 per bed, 3 raised beds Total: \$1,020
Solutions Premium Gardening Soil	167 per cubic yard, 4 cubic yards Total: \$668
Sweet Genovese Basil Plant	\$5.98 per plant, 2 plants Total: \$11.96
Dill Plant	\$5.98 per plant, 2 plants Total: \$11.96
Lavender Plant	\$5.98 per plant, 2 plants Total: \$11.96
Rosemary Plant	\$5.98 per plant, 2 plants Total: \$11.96
Sweet Mint Plant	\$5.98 per plant, 2 plants Total: \$11.96
Italian Flatleaf Parsley Plant	\$5.98 per plant, 2 plants Total: \$11.96
Oregano Plant	\$5.98 per plant, 2 plants Total: \$11.96
Pansy Plant (6 pack)	\$2.98 per pack, 4 packs Total: \$11.92
Daisy Plant	\$23.93 per plant, 2 plants Total: \$47.86
Tulips (set of 50)	\$39.15

Sweet Green Bell Pepper (2 pack)	\$10.59
Boston Pickling Cucumber	\$4.98 per plant, 2 plants Total: \$9.96
Hot Jalapeno Pepper Plant (2 pack)	\$10.68
Lieutenant Broccoli Plant (6 pack)	\$5.98
Heirloom Tomato Plant (2 pack)	\$10.59
Garden benches	\$48.95 per bench, 3 benches Total: \$146.85
Windchime	\$43.00
	Total: \$4,908.30

I am hopeful that after reviewing this proposal, you will assist our organization with its mission of improving the quality of life for those impacted by dementia. Please reach out to me with any questions or concerns you may have regarding this proposal. I look forward to hearing from you and making a difference. Together, we can do amazing things!

Sincerely,
Gabrielle Burns