

**Name:** Magnolia Garbarino

**Year in Course:** 1st, Sophomore year

**Topic:** Botany/Ecology

**Mentor:** Dr. Gederts Ievinš, University of Latvia

**Title:** Molecular, physiological and ecological evaluation of Latvian genetic resources of valuable wild legume species, *Trifolium fragiferum*, in the context of sustainable agriculture

**Bio:**

Magnolia is a sophomore in the science research course. She has always been fascinated by nature and the interactions which exist to make up and sustain Earth's ecosystems. She seeks to learn more about ecosystem dynamics and their implications for climate research. Harnessing knowledge about ecological chemistry and botany in order to develop sustainable agricultural practices is another area Magnolia is interested in researching. She is currently involved with a research project in her family's home country of Latvia involving a rare wild relative to the clover species that are frequently used in European agriculture. She is also working towards the development of a research project investigating the effects of arbuscular mycorrhizal fungi on plant growth and health. Both within and outside of science research, Magnolia is a very dedicated student. She is currently taking three AP classes in addition to this course.

Magnolia is also involved in many extracurricular activities. She participates in the high school's varsity ski and tennis teams, as well as its math team (for which she recently competed in the New York State championship). She also trained in karate for six years (earning her black belt in January 2020), until her dojo was forced to close due to the pandemic. Magnolia loves to sing, having participated in All-County Chorus for four years as well as in the New York Latvian Choir. She attended Latvian school every weekend throughout her childhood, and graduated from Yonkers Latvian School in 2019. Additionally, Magnolia is a member of several councils seeking to improve her school district and community. She serves on the district's Facilities and Finance Committee and Professional Development Committee. She also participates in the Dutchess County Council of Teens, a platform for local teenagers to discuss pertinent issues with local and state-level policymakers. Magnolia is a very dedicated and passionate student who is eager to learn and gain experience working in a scientific setting.



**Awards/Honors**

- ACS Honorary Chemistry Award, 2018 Dutchess County Science and Engineering Fair
- Excellence in Achievement in: Chorus, AP World History I, Computer Science Essentials, Geometry Honors, Spanish II (2020)