National award allows student to continue research

Homeschooled, Ellen Jack-
son entered veterinary college at
Oklahoma State with the Class
of 2016 at the age of 17 having
already completed her under-
graduate requirements. At the end
of her freshman year, Jackson chose
a research project in Dr. Veronique
Lacombe’s laboratory as part of
the veterinary center’s Summer
Research Scholars Training Pro-
gram. Now, after completing her
second year of veterinary college,
Jackson was one of only 10 vet-
erinary students nationwide to
receive an American Veterinary
Medical Foundation/American
Veterinary Medical Association
2nd Opportunity Summer Schol-
ars Award. This award allowed her
to return to Dr. Lacombe’s lab-
ary to continue her research.

“I chose Dr. Lacombe’s lab
because it uses several different
techniques including live animal
studies, PCR, Western Blot and
a unique biotinylation assay that
detects transporters on the sur-
face of cells,” says Jackson. “I want
to learn many different lab tech-
niques. Additionally, her work has
implications for human and vet-
erinary medicine. I’m interested
in public health, so I was drawn
to lab work that had some human
implications.”

The eventual goal of the study is
to find new connections between
cardiovascular disease and diabetes.
Last year, Jackson was able to find
that genetically engineered labo-
ratory mice on a high-fat diet had
better control of whole body and
cardiac glucose than normal mice
on the same diet.

Jackson collaborates with Dr.
Brenda Smith, Department of
Nutrition, who uses the mice as
a model.

“Dr. Smith sent skeletal and
cardiac muscle samples to Dr.
Lacombe. I made protein extracts
from the frozen hearts of the mice
on the study. I’m using Western
Blotting to detect individual pro-
teins,” she adds.

To be eligible for the 2nd
Opportunity Summer Scholars
Award, Ellen submitted a 250-word
abstract of her previous research
and what she planned for her sec-
ond year on the project. Chris Ross,
DVM, Ph.D., associate dean of aca-
demic affairs and professor of phys-
iological sciences, and Veronique
Lacombe, DVM, Ph.D., associate
professor of physiological sciences,
 wrote letters of support.

“I am very grateful to Dr.
Lacombe for letting me work
in her lab and to Drs. Ross and
Jerry Malayer, associate dean for
research and graduate education,
for supporting my research,” says
Jackson.

With two years of study com-
plete, Jackson enjoys veterinary
college.

“I have shared a lot of experi-
ences with other students between
clubs and classes. And the profes-
sors are friendly, too. I’m interested
in public health related careers,
possibly in epidemiology. However,
a lot can change,” she adds.

She has been accepted into the
DVM/Ph.D. program, which will
give her plenty of time to deter-
mine her path as her career in
 veterinary medicine develops.

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