

# U.S. Medical Student Attitudes on and Knowledge of the Use of Animals in Biomedical Experimentation and Education

The following survey is intended to gather information regarding U.S. medical students' attitudes on and knowledge of the use of animals in biomedical experimentation and education. The survey can be completed anonymously; however, if you would like to be entered in for the opportunity to win a \$100 gift card you will need to include your medical school e-mail address at the end of the survey. This survey will remain open from February 19, 2024, to August 19, 2024.

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\* Indicates required question

1. Which of the following best describes the medical program you are working towards? \*

*Mark only one oval.*


- ☐ MD or DO
- ☐ MD-DO/Ph.D
- ☐ MD-DO/MPH
- ☐ MD-DO/MBS
- ☐ MD-DO/MBA
- ☐ MD-DO/JD
- ☐ OMS
- ☐ Ph.D. now pursuing MD or DO
- ☐ Other: \_\_\_\_\_

2. At what stage are you in your medical education? \*

*Mark only one oval.*

- ☐ MS1
- ☐ MS2
- ☐ MS3
- ☐ MS4
- ☐ Gap Year
- ☐ Research Year
- ☐ Dual Degree Concentration Year
- ☐ Other: \_\_\_\_\_

3. In what state are you currently attending medical school? If you're studying at a non-U.S. medical school, please select "Medical School Located Outside United States." \*

 Dropdown

*Mark only one oval.*

- ☐ Alabama
- ☐ Alaska
- ☐ Arizona
- ☐ Arkansas
- ☐ California
- ☐ Colorado
- ☐ Connecticut
- ☐ Delaware
- ☐ Florida
- ☐ Georgia
- ☐ Hawaii
- ☐ Idaho
- ☐ Illinois
- ☐ Indiana

- ☐ Iowa
- ☐ Kansas
- ☐ Kentucky
- ☐ Louisiana
- ☐ Maine
- ☐ Maryland
- ☐ Massachusetts
- ☐ Michigan
- ☐ Minnesota
- ☐ Mississippi
- ☐ Missouri
- ☐ Montana
- ☐ Nebraska
- ☐ Nevada
- ☐ New Hampshire
- ☐ New Jersey
- ☐ New Mexico
- ☐ New York
- ☐ North Carolina
- ☐ North Dakota
- ☐ Ohio
- ☐ Oklahoma
- ☐ Oregon
- ☐ Pennsylvania
- ☐ Puerto Rico
- ☐ Rhode Island
- ☐ South Carolina
- ☐ South Dakota
- ☐ Tennessee
- ☐ Texas
- ☐ Utah

- ☐ Vermont
- ☐ Virginia
- ☐ Washington
- ☐ West Virginia
- ☐ Wisconsin
- ☐ Wyoming
- ☐ Medical School Located Outside United States

*Skip to question 4*

### Experience Assessment

4. 1. I have participated in biomedical experimentation that used live animals. \*

*Mark only one oval.*

- ☐ Yes
- ☐ No

5. 2. I have participated in biomedical experimentation that used animal parts and/or derivatives (e.g., pig heart valves, pig bio-scaffolds, etc). \*

*Mark only one oval.*

- ☐ Yes
- ☐ No

6. 3. I have participated in biomedical education that used live animals. \*

*Mark only one oval.*

- ☐ Yes
- ☐ No

7. 4. I have participated in biomedical education that used animal parts and/or derivatives (e.g., pigs' feet or chicken breasts in suturing labs, etc).

\*

*Mark only one oval.*

☐ Yes

☐ No

8. 5. I have refused to participate in biomedical education using animals. \*

*Mark only one oval.*

☐ Yes (ethical objection)

☐ Yes (religious objection)

☐ Yes (other objection)

☐ No

### Attitudes Assessment

9. 6. Biomedical experimentation on animals for the development of new drugs for human patients is ethically justifiable.

\*

*Mark only one oval.*

1   2   3   4   5

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Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

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10. 7. Biomedical experimentation on animals is not ethically justifiable, particularly if there are comparable and validated non-animal methods available. \*

*Mark only one oval.*

	1	2	3	4	5	
Strc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

11. 8. Biomedical experimentation on animals is unnecessary and should be replaced by non-animal methods such as computer (in silico) modeling, organs-on-a-chip, and in-vitro models. \*

*Mark only one oval.*

	1	2	3	4	5	
Strc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

12. 9. There are non-animal methods for practicing surgical procedures before they are used on human patients, so the use of animals for biomedical education is not necessary. \*

*Mark only one oval.*

	1	2	3	4	5	
Strc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

13. 10. Biomedical education using animals is unnecessary and should be replaced <sup>\*</sup> by non-animal methods such as task trainers, computer model simulations, virtual reality simulators, and human cadavers.

*Mark only one oval.*

	1	2	3	4	5	
Strc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

14. 11. Biomedical experimentation on animals has little or no bearing on diseases <sup>\*</sup> confronting human patients.

*Mark only one oval.*

	1	2	3	4	5	
Strc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

15. 12. There should be more stringent regulations governing the use of animals <sup>\*</sup> in biomedical experimentation and education.

*Mark only one oval.*

	1	2	3	4	5	
Strc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

16. 13. I trust biomedical experimentation on animals over other non-animal methods (e.g., organs-on-a-chip, computational/mathematic models, stem cell research, and non-invasive diagnosed imaging). \*

*Mark only one oval.*

	1	2	3	4	5	
Strc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

### Knowledge Assessment

17. 14. What do you believe is the attitude of U.S. adults 18 years and older regarding the use of animals for biomedical experimentation and education? \*

*Mark only one oval.*

- ☐ Majority of U.S. adults support the use of animals for biomedical experimentation and education.mericans support animal testing.
- ☐ Majority of U.S. adults oppose the use of animals for biomedical experimentation and education.

18. 15. Live animals, animal parts and/or animal derivatives used in biomedical experimentation and education in the U.S. can come from the following sources: \*

*Check all that apply.*

- ☐ Specialized breeding facilities
- ☐ Factory farms and slaughterhouses
- ☐ The wild
- ☐ Animal shelters



19. 16. The use of animals in biomedical experimentation is required by law for drugs to be approved by the U.S. Food and Drug Administration (FDA). \*

*Mark only one oval.*

- ☐ True  
☐ False  
☐ Other: \_\_\_\_\_

20. 17. What percentage of animals used in biomedical experimentation and education are protected under the U.S. Animal Welfare Act? \*

*Mark only one oval.*

- ☐ 95%  
☐ 75%  
☐ 50%  
☐ 25%  
☐ 5%

21. 18. What percentage of drugs that successfully pass preclinical testing on animals are then successfully marketed for humans? \*

*Mark only one oval.*

- ☐ 1-20%  
☐ 21-40%  
☐ 41-60%  
☐ 61-80%  
☐ 81-100%

Enter for the opportunity to win a \$100 gift card.

22. What is your medical school e-mail address?



This information is only used if you would like to be entered for the opportunity to be randomly selected for a \$100 gift card. Write N/A if you do not desire to be included in gift card drawing.

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