



VCU LIFE SCIENCES SURVEY

*Conducted for VCU Life Sciences
by the VCU Center for Public Policy*

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Americans Welcome Scientific Advancements with Caution

Americans are extremely supportive of the giant strides being made in science and technology but also are very concerned about the moral implications inherent in areas such as stem-cell research and genetic testing, according to a new nationwide survey conducted by Virginia Commonwealth University in Richmond.

The VCU Life Sciences Survey was conducted from August 23- September 2, 2001 with 1122 adults nationwide. The margin of error for the poll is +/- 3 percent.

Highlights of the survey found that:

Scientific Progress and Moral Values

- An overwhelming majority of Americans (85 percent) believe that science and technology have made society better, but at the same time a majority (72 percent) also believe that science doesn't pay enough attention to moral values. More religious Americans are especially likely to think that science doesn't pay enough attention to moral values.
- Americans are more confident about the capacity of science and medicine to solve problems associated with disease than they are about society's capacity to address many other problems. 83 percent are confident that genetic research will lead to major advances in the treatment of diseases during the next 15 years. 73 percent believe it is likely that mortality rates from cancer will be reduced by half in the next 15 years compared to only 20 percent who think the crime rate will be reduced by half and 31 percent who said the number of deaths from truck and automobile accidents will be reduced by half.

Stem Cell Research

- Medical research that uses stem cells from human embryos is favored by a 48 to 43 percent plurality. There are clear divisions in viewpoint over stem cells depending on the importance of religious beliefs. 71 percent of those who say religion is not important to them favor stem cell research compared to 38 percent who say religion provides a great deal of guidance in their life. At the same time, the vast majority of Americans (78 percent) believe that ethical concerns over stem cell research are serious.

- The public is more likely to trust information on stem cell research from scientific researchers and medical ethicists than information that comes from other groups. 86 percent say they would trust information on stem cell research that comes from scientific and medical researchers and 81 percent would trust information from specialists in medical ethics. This compares with 58 percent who would trust information from family and friends on this issue, 54 percent from religious leaders, and 46 percent from the media.

Genetic Testing and Discrimination

- A clear majority (77 percent) believe that genetic testing should be made easily available. Six in ten report they would get tested if it was easily available and even more (67 percent) would get their children tested if it was easily available.
- Large majorities believe that genetic testing results will lead to discrimination by health insurance companies and employers. 84 percent believe that health insurance companies will deny coverage and 69 percent believe that employers will deny people jobs because of genetic testing results. Americans are almost evenly split (by 46 to 43 percent) over whether it is even possible to prevent discrimination from genetic testing results.
- On the issue of which groups or individuals can protect people from the misuse of genetic information, large majorities express confidence in physicians, genetic counselors, and scientists. Just under half, 47 percent, have confidence that the federal or state government can protect people from misuse of this information. Confidence in the media is strikingly lower than any other group asked about. Only 21 percent of Americans have confidence in the media to protect people from the misuse of this information.

Trust and the News Media

- While a 45 percent plurality say they would turn first to the news media to learn more about stem cell research, few appear to trust the information provided by the media. Trust for the media on this issue was lower than that for all but one other group—the U.S. Congress. Similarly, fewer people expressed confidence in the media to protect people from the misuse of genetic information than did so for any of ten other groups.

Religion, Catholics, and Science

- While the Roman Catholic leadership has been active in the debate against stem cell research, Catholics in America hold views quite similar to the public at large on stem cells. The same holds for opinion on abortion.
- More religious Americans depart sharply from other Americans on new developments in science and medicine. Those who are more religious are more likely to oppose stem cell research, are less likely to think the benefits of genetic research outweigh the risks and are more likely to believe that “science doesn’t pay enough attention to moral values.”

Americans’ Express Ambivalence About Science: Extremely Supportive Yet Very Concerned About Moral Issues

The American public clearly acknowledges the contributions that science and technology have made to the improvement of society. 86 percent of the respondents report that developments in science have helped to make society better and 85 percent say the same about new technology. This positive view is seen in several ways. An overwhelming majority of respondents (96 percent) believe that that it is either very or somewhat important for the country to encourage more young people to enter careers in science and technology.

In addition, Americans are optimistic about the ability to make progress in science and medicine. 83 percent are very or somewhat confident that genetic research will lead to major advances in the treatment of diseases during the next 15 years. Seven in ten Americans (71 percent) believe the mortality rate from cancer will be reduced by half in the next 15 years. Americans are more optimistic about the ability to make progress on reducing cancer mortality rates than they are for a variety of other problems facing society including raising voter turnout, reducing traffic accident fatalities, and cutting the crime rate. One other problem was seen as likely to be significantly reduced: teaching children to read by the time they reach the third grade. Three-quarters of the public think this is either very or somewhat likely to be accomplished within the next 15 years.

Expectations for progress within the next 15 years	Very or Somewhat Likely	Not very or Not at all Likely
Nearly every child in U.S. schools reading by 3 rd grade	75%	23%
Mortality rate from cancer reduced by more than half	71%	25%
At least 80% of adults voting in U.S. presidential elections	46%	52%
Deaths from truck and auto accidents reduced by half	31%	65%
Crime rate in U.S. cut in half	20%	77%

While Americans seem quite positive about the benefits of science to society, at the same time, a significant portion express concern about the level of attention scientific research pays to moral values and any negative consequences that scientific research may have for society. 72 percent of the public either strongly or somewhat agree with the statement that “scientific

research these days doesn't pay enough attention to moral values." Similarly, 54 percent strongly or somewhat agree with the statement that "scientific research has created as many problems for society as it has solutions."

Majorities in all demographic groups either strongly agree or somewhat agree with the statement that scientific research these days doesn't pay enough attention to moral values. But there are notable differences in agreement with this statement depending on the importance of religion, attention and information held about science, and party affiliation.

"Scientific research these days doesn't pay enough attention to the moral values of society."	All U.S.	Religious	Not Religious	Not Informed on Science	Very Informed on Science
Strongly or Somewhat Agree	72%	78%	54%	78%	55%
Strongly or Somewhat Disagree	23%	17%	39%	14%	40%

Concern over attention to moral values in science is higher among more religious respondents. 78 percent of those who say that religious guidance means a great deal to their life agree with the statement that scientific research today doesn't pay enough attention to moral values compared to 55 percent among those who say that religious guidance is not important to their life.

Those most likely to express concern about attention to moral values in science are likely to be the least informed about scientific discoveries. 78 percent of those who consider themselves not very or not at all informed about scientific discoveries agree with the statement that scientific research today doesn't pay enough attention to moral values. 73 percent of respondents who consider themselves "somewhat informed" about scientific discoveries agree with the statement. Those who consider themselves "very informed" about scientific discoveries, however, are less likely to express this concern; 55 percent of this group agree that scientific research today doesn't pay enough attention to moral values.

Other differences in outlook are evident among Americans of different party affiliations. 80 percent of Republicans agree that scientific research doesn't pay enough attention to moral values compared to 73 percent of independents and 65 percent of Democrats. These political differences are statistically independent of the relationship between religious guidance and beliefs on science.

Cary Funk, Ph.D., director of the survey, notes that “the American public is both highly supportive and at the same time clearly concerned about the ethical issues raised by new developments in science today. Americans recognize the benefits science has provided and want its potential to be pursued. At the same time, they have serious questions about its consequences and the attention it pays to moral values.”

Nation Favors Stem Cell Research Despite Ethical Concerns; Opposition More Common Among the Religious

Medical research that uses stem cells from human embryos is favored by a 48 to 43 percent plurality. There is a huge divide, however, based on the importance of religious guidance in people’s lives. 71 percent of those who say religious beliefs are not important to them favor stem cell research compared to 38 percent support from those who say religious beliefs provide a great deal of guidance in their lives.

On the whole, how much do you favor or oppose medical research that uses stem cells from human embryos...?	All U.S.	Religious	Not Religious	College Grads	Very Informed on Science
Strongly or Somewhat Favor	48%	38%	71%	67%	70%
Strongly or Somewhat Oppose	43%	54%	20%	30%	24%

More educated Americans are more likely to hold a favorable view of stem cell research; 67 percent of those with a college degree favor stem cell research while thirty percent oppose it. Those who consider themselves informed about scientific discoveries are more likely to favor stem cell research. Seven in ten of those who are very informed about scientific discoveries favor stem cell research; just 24 percent of this group are opposed.

Stem Cell Research: Political Talk or a Serious Ethical Issue?

While the public at large is more positive than negative about stem cell research, most agree that this is a serious ethical issue. A clear majority of 79 percent said the ethical concerns over embryonic stem cell research were either very or somewhat serious. Just 16 percent thought these issues were not too or not at all serious. More religious Americans were more likely to say the ethical concerns were serious. 83 percent of those who say religious beliefs provide a great

deal of guidance in their life thought so compared to 69 percent of those who say religion is not important in their life. Similarly, those who take the strictest stance against abortion—that it should be illegal in all circumstances-- were more likely to consider the ethical concerns serious. 84 percent of this group thought the ethical concerns raised by stem cell research were serious.

All in all, how serious do you think the ethical concerns are over embryonic stem cell research?	All U.S.	Religious	Not Religious	Abortion should be illegal in all circumstances
Very or somewhat serious	79%	83%	69%	84%
Not too or not at all serious	16%	13%	25%	8%

Thomas F. Huff, Ph.D., Vice Provost of Life Sciences, notes that “ It’s encouraging to see that the public shares our optimism for the promise of new developments in life sciences, but scientists clearly need to pay greater attention to the ethical issues raised by these new technologies.”

Whose Information Can You Trust?

The VCU Survey was conducted after a burst of attention to stem cell research in the news media over the summer months. A quarter of Americans say they have heard “a lot” about the issue of embryonic stem cell research and 45 percent have heard “a little”.

When asked where they would go first for more information about stem cell research, 45 percent cited the news media or the Internet; 18 percent volunteered that they would turn to medical journals or the library. Just 11 percent would turn to church or religious leaders, and the remainder would turn to family and friends, political leaders, or other sources.

But when asked how much they trust the information on stem cell research provided by a variety of groups and individuals, more trusted scientists and other specialists than any other source; this difference is especially stark for information from the media. “The public still goes to the media for information—a plurality would turn there first for more information about stem cell research—but they appear to do so with a skeptical eye. A surprising 18 percent said they would turn directly to medical journals and libraries rather than mediated information. And when asked how much you trust the information from various groups and people, the scientists and

other specialists were rated highly while media information was the least likely to be seen as trustworthy” said Funk.

How much do you trust the information stem cell research provided by these groups or individuals?*	Not Much or		
	A Lot	A Little	Not at All
Scientific and medical researchers	39%	47%	12%
Specialists in medical ethics	28%	53%	14%
Family and friends	15%	43%	38%
Religious leaders	15%	39%	42%
President Bush	11%	38%	46%
The news media	5%	41%	52%
Members of the U.S. Congress	4%	37%	54%

*Items asked in randomized order.

Most Think Genetic Testing Should be Easily Available Despite Predictions of Discrimination

More than three-quarters of Americans (77 percent of the public) believe that genetic testing should be made easily available. A majority of the public (60 percent) report that they would get tested and an even larger majority (67 percent) would get their children tested if it was readily available.

Despite the willingness to get tested among a clear majority of the public, even larger numbers believe that discrimination because of testing results is likely. 84 percent of Americans believe that health insurance companies are likely to deny coverage because of genetic testing results and 69 percent think employers are likely to deny people jobs because of genetic testing results. Americans are almost evenly split (46 to 43 percent) over whether it is even **possible** to prevent discrimination based on genetic testing. Despite these concerns, a 57 percent majority consider the benefits of conducting genetic research to outweigh the risks.

Who Can Protect Public from Misuse of Genetic Information? Physicians, Not the Media, Can Serve as Public Watchdog

Despite concerns over possible discrimination, three-quarters of the public have confidence in physicians and nearly as many (68 percent) have confidence in genetic counselors

to protect people from the misuse of genetic information. Similarly, two-thirds expressed confidence in scientists to protect people from the misuse of this information.

The public was almost evenly split over whether government—either at the federal or state level—would protect the public in this way.

Public confidence in the media is strikingly lower than in any other group asked about in the survey—even below that for employers and health insurance companies. Only two in ten people (21 percent) have confidence in the media to protect people from the misuse of genetic information.

How much confidence do you have in ... to protect people from the misuse of genetic information?*	Very or Somewhat Confident	Not Very or Not at All Confident
Physicians	75%	22%
Genetic Counselors who provide the testing	68%	27%
Scientists involved in genetic research	66%	30%
Consumer watchdog groups	57%	34%
State government agencies	47%	49%
Federal government agencies	47%	48%
Pharmaceutical companies	46%	49%
Employers	44%	50%
Health Insurance companies	34%	62%
Journalists and reporters in the media	21%	75%

*Items asked in randomized order.

News Media Get Vote of No Confidence?

The VCU Survey finds a new low in public confidence for the media. First, in a series of questions about which groups would protect people from the misuse of genetic information, fewer people expressed confidence in journalists and reporters in the media than in any of ten other groups. The media inspired less confidence than even health insurance companies and employers; both of these groups are expected to discriminate against people based on the results of genetic testing by large majorities of the public.

Similarly, in a series of questions about whose information you could trust on stem cell research, few people expressed trust in the media relative to other groups. Only the U.S. Congress held less public trust than the media on that issue.

Funk commented, “These results send a clear message that the vast majority of the public is skeptical of information provided by the media and suspects the media will misuse sensitive information of this nature. This is a major shift from past views of the media as a watchdog for the public. As a group, the media appear to be battling for last place in public confidence and they are coming dangerously close to winning that moniker.”

Religious Divide Based on Devotion Not Catholicism

Religious views clearly have a strong influence on public views toward new developments in science and medicine.

Those who are more religious (whether measured by attendance at religious services or self-reports that religion provides a great deal of guidance in their daily lives), differ sharply from other Americans on a range of issues related to science and medicine. The more religious are more likely to agree that “science doesn’t pay enough attention to moral values in society”. They are also more likely to oppose stem cell research and more likely to see the issue of stem cell research as raising serious ethical concerns. Not surprisingly, the more religious are more likely to turn to and trust the information provided by religious leaders on the issue of stem cell research; two in ten of the more religious Americans say they would turn first to religious leaders for more information on stem cell research compared to 11 percent of all respondents and none of the least religious Americans.

Asked specifically about how much they trust the information on stem cell research provided by religious leaders, about two-thirds (67 percent) of the more religious respondents say they trust the information either a lot or some, compared to just two in ten of those for whom religious beliefs are not important in their lives.

In a clear divide from the Roman Catholic leadership, which has been outspoken in its opposition to stem cell research, Catholics in the U.S. are not more likely to oppose stem cell research, not more likely to think of stem cell research as a serious issue, and no more likely to oppose abortion than other Americans.

Trust Information on Stem Cell Research from Religious Leaders	All U.S.	Catholic	Religious	Not Religious
A lot or some	54%	55%	67%	20%
Not too much or not at all	42%	41%	29%	70%

On issues of genetic testing and research, the religious are also more likely to have concerns. A somewhat smaller portion of strongly religious Americans favor making genetic testing easily available and the religious are less likely to consider the benefits of genetic research to outweigh the risks compared to less religious Americans.

Huff noted “This survey helps to identify and understand public opinion on new developments in science. This survey helps us, as scientists, to make appropriate responses as we seek to take advantage of opportunities the genetic revolution is bringing to provide new therapy for diseases that were previously thought to be unmanageable.”

**Questions Asked on the VCU Life Sciences Survey
Aug. 23 to Sept. 2, 2001
Number of Respondents: 1122**

1. On the whole, have developments in science helped make society better or not?

Better	86%
Not Better	5%
Don't Know	7%
No Answer	2%

2. What about new technology? On the whole, have developments in new technology helped make society better or not?

Better	85%
Not Better	8%
Don't Know	5%
No Answer	2%

3. How important do you think it is for the United States to encourage more young people to enter careers in science- very important, somewhat important, not very important, or not at all important?

Very Important	67%
Somewhat Important	29%
Not Very Important	2%
Not at All Important	1%
Don't Know	1%
No Answer	0%

4. How important do you think it is for the United States to encourage more young people to enter careers in new technology - very important, somewhat important, not very important, or not at all important?

Very Important	66%
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Somewhat Important	30%
Not Very Important	2%
Not at All Important	1%
Don't Know	1%
No Answer	0%

5. How much do you agree or disagree with the following: "Scientific research these days doesn't pay enough attention to the moral values of society." Do you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with that statement?

Strongly Agree	28%
Somewhat Agree	45%
Somewhat Disagree	15%
Strongly Disagree	8%
Don't Know	4%
No Answer	2%

6. Scientific research has created as many problems for society as it has solutions" (Do you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with that statement?)

Strongly Agree	18%
Somewhat Agree	36%
Somewhat Disagree	26%
Strongly Disagree	14%
Don't Know	4%
No Answer	2%

Now, I have some questions regarding your thoughts about what may happen in the future. For each of the following, please tell me how likely it is to occur within the next 15 years. First, (Questions 7-11 asked in random order).

7. "The mortality rate from cancer will be reduced by more than half." (Is this very likely, somewhat likely, not very likely, or not at all likely to occur within the next 15 years?)

Very Likely	25%
Somewhat Likely	46%
Not Very Likely	19%
Not at All Likely	6%
Don't Know	2%
No Answer	1%

8. "The number of deaths from truck and automobile accidents will be reduced by more than half."(Is this very likely, somewhat likely, not very likely, or not at all likely to occur within the next 15 years?)

Very Likely	6%
Somewhat Likely	26%
Not Very Likely	51%
Not at All Likely	14%
Don't Know	3%
No Answer	0%

9. "Nearly every child in United States' schools will be able to read by the third grade."(Is this very likely, somewhat likely, not very likely, or not at all likely to occur within the next 15 years?)

Very Likely	36%
Somewhat Likely	39%
Not Very Likely	20%
Not at All Likely	3%
Don't Know	2%
No Answer	0%

10. "The crime rate in this country will be cut in half."(Is this very likely, somewhat likely, not very likely, or not at all likely to occur within the next 15 years?)

Very Likely	4%
Somewhat Likely	16%
Not Very Likely	51%
Not at All Likely	26%
Don't Know	2%
No Answer	0%

11. "At least 80% of American adults will vote in presidential elections."(Is this very likely, somewhat likely, not very likely, or not at all likely to occur within the next 15 years?)

Very Likely	18%
Somewhat Likely	28%
Not Very Likely	40%
Not at All Likely	12%
Don't Know	1%
No Answer	0%

12. Now on a different topic, Have you seen, heard or read anything about the Human Genome project?

Yes	48%
No	48%
Don't Know	3%
No Answer	0%

13. Genetic research is being used to develop new ways to diagnose and treat diseases such as cancer, heart disease, Alzheimer's and mental illnesses such as schizophrenia. How much confidence do you have that new genetic research will lead to major advances in the treatment of diseases during the next fifteen years - are you very confident, somewhat confident, not very confident, or not at all confident?

Very Confident	31%
Somewhat Confident	52%
Not Very Confident	12%
Not at All Confident	2%
Don't Know	2%
No Answer	0%

14. Genetic testing is being used to identify people at risk for diseases such as cancer, heart disease, Alzheimer's and others. Overall, how much would you favor or oppose making genetic testing easily available to all who want it - do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose?

Strongly Favor	38%
Somewhat Favor	39%
Somewhat Oppose	13%
Strongly Oppose	7%
Don't Know	3%
No Answer	1%

15. If genetic testing were easily available, how likely would you personally be to get tested - would you be very likely, somewhat likely, not very likely, or not at all likely to get tested?

Very Likely	28%
Somewhat Likely	32%
Not Very Likely	24%
Not at All Likely	13%
Don't Know	2%
No Answer	0%

16. What's the main reason you would get tested? (open-ended responses)

17. What's the main reason you would not get tested? (open-ended responses)

18. Now, assuming that you had a young child and genetic testing was easily available, how likely would you be to get your child tested -- very likely, somewhat likely, not very likely, or not at all likely?

Very Likely	36%
Somewhat Likely	31%
Not Very Likely	19%
Not at All Likely	9%
Don't Know	3%
No Answer	1%

19. Some people think that genetic testing could lead to new forms of discrimination by employers or health insurance companies who might use the results to deny people jobs or health insurance coverage. How likely do you think employers are to deny people jobs because of genetic testing results -- very likely, somewhat likely, not very likely, or not at all likely?

Very Likely	34%
Somewhat Likely	35%
Not Very Likely	21%
Not at All Likely	6%
Don't Know	4%
No Answer	0%

20. How likely do you think health insurance companies are to deny people coverage because of genetic testing results - very likely, somewhat likely, not very likely, or not at all likely?

Very Likely	57%
Somewhat Likely	27%
Not Very Likely	8%
Not at All Likely	5%
Don't Know	3%
No Answer	0%

21. Do you think it is possible to prevent discrimination from genetic testing results?

Yes, Possible	46%
No, Not Possible	43%
Don't Know	10%
No Answer	1%

Next, for each of the following, please tell me how much confidence you have in this group to protect people from the misuse of genetic information.

First, (Questions 22-31 asked in random order).

22. Scientists involved in genetic research? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	20%
Somewhat Confident	46%
Not Very Confident	20%
Not at All Confident	10%
Don't Know	3%
No Answer	1%

23. Physicians? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	23%
Somewhat Confident	52%
Not Very Confident	16%

Not at All Confident	6%
Don't Know	2%
No Answer	1%

24. The Genetic Counselors who provide the testing? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	19%
Somewhat Confident	49%
Not Very Confident	20%
Not at All Confident	7%
Don't Know	5%
No Answer	1%

25. Journalists and reporters in the media? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	4%
Somewhat Confident	17%
Not Very Confident	39%
Not at All Confident	36%
Don't Know	3%
No Answer	0%

26. Pharmaceutical companies? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	10%
Somewhat Confident	36%
Not Very Confident	32%
Not at All Confident	17%
Don't Know	4%
No Answer	1%

27. Consumer watchdog groups? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	14%
Somewhat Confident	43%
Not Very Confident	24%
Not at All Confident	10%
Don't Know	9%
No Answer	1%

28. State government agencies? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	10%
Somewhat Confident	37%
Not Very Confident	31%
Not at All Confident	18%
Don't Know	4%
No Answer	1%

29. Federal government agencies? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	9%
Somewhat Confident	39%
Not Very Confident	30%
Not at All Confident	18%
Don't Know	3%

No Answer 1%

30. Health Insurance Companies? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	7%
Somewhat Confident	27%
Not Very Confident	36%
Not at All Confident	26%
Don't Know	3%
No Answer	1%

31. Employers? (Are you very confident, somewhat confident, not very confident, or not at all confident that they can protect people from the misuse of genetic information?)

Very Confident	5%
Somewhat Confident	39%
Not Very Confident	33%
Not at All Confident	17%
Don't Know	4%
No Answer	1%

32. Overall, would you say the benefits of conducting genetic research outweigh the risks or do the risks outweigh the benefits?

Benefits Outweigh Risks	57%
Risks Outweigh Benefits	27%
Don't Know	13%
No Answer	3%

33. The technology now exists to clone or genetically alter animals. How much do you favor or oppose allowing the same thing to be done in humans -do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose this?

Strongly Favor	4%
Somewhat Favor	10%
Somewhat Oppose	18%
Strongly Oppose	64%
Don't Know	2%
No Answer	1%

34. How much have you seen, read, or heard about medical research involving embryonic stem cells - a lot, a little, not much, or nothing at all?

A Lot	25%
A Little	44%
Not Much	19%
Nothing at All	10%
Don't Know	1%
No Answer	0%

35. On the whole, how much do you favor or oppose medical research that uses stem cells from human embryos - do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose this?

Strongly Favor	17%
Somewhat Favor	31%
Somewhat Oppose	21%
Strongly Oppose	22%
Don't Know	7%
No Answer	2%

36. If you wanted to know more about the issue of embryonic stem cell research, where would you go first for more information - news media, family and friends, church or religious leaders, or political leaders such as the President or Congresspersons?

News Media (includes Internet)	45%
Family and Friends	8%
Church or Religious Leaders	11%
Political Leaders	4%
Medical Journals/Library (Volunteered)	18%
Other (Volunteered)	7%
Don't Know	6%
No Answer	2%

A variety of groups and individuals have been involved in public discussion of stem cell research. Please tell me how much you trust the information on stem cell research provided by each of the groups or individuals mentioned. First, for...(Questions 37-43 asked in random order).

37. Religious leaders (How much do you trust the information on stem cell research provided by religious leaders--a lot, some, not too much, or not at all?)

A Lot	15%
Some	39%
Not Too Much	24%
Not at All	18%
Don't Know	3%
No Answer	1%

38. Scientific and medical researchers in the field? (How much do you trust the information on stem cell research provided by scientific and medical researchers in the field--a lot, some, not too much, or not at all?)

A Lot	39%
Some	47%
Not Too Much	9%
Not at All	3%
Don't Know	2%
No Answer	1%

39. The News media? (How much do you trust the information on stem cell research provided by The News media--a lot, some, not too much, or not at all?)

A Lot	5%
Some	41%
Not Too Much	29%
Not at All	23%
Don't Know	2%
No Answer	0%

40. Family and friends? (How much do you trust the information on stem cell research provided by Family and friends--a lot, some, not too much, or not at all?)

A Lot	15%
Some	43%
Not Too Much	26%
Not at All	12%
Don't Know	3%
No Answer	1%

41. Members of the United States Congress? (How much do you trust the information on stem cell research provided by Members of the United States Congress--a lot, some, not too much, or not at all?)

A Lot	4%
Some	37%

Not Too Much	31%
Not at All	23%
Don't Know	4%
No Answer	1%

42. President George W. Bush? (How much do you trust the information on stem cell research provided by President George W. Bush--a lot, some, not too much, or not at all?)

A Lot	11%
Some	38%
Not Too Much	22%
Not at All	24%
Don't Know	4%
No Answer	1%

43. Specialists in medical ethics? (How much do you trust the information on stem cell research provided by specialists in medical ethics--a lot, some, not too much, or not at all?)

A Lot	28%
Some	53%
Not Too Much	10%
Not at All	5%
Don't Know	3%
No Answer	1%

44. All in all, how serious do you think the ethical concerns are over embryonic stem cell research - very serious, somewhat serious, not too serious, or not at all serious?

Very Serious	43%
Somewhat Serious	36%
Not Too Serious	12%
Not at All Serious	4%
Don't Know	4%
No Answer	1%

45. Now on a different topic. How much are you personally interested in new scientific discoveries - a lot, some, not much, or not at all?

A Lot	43%
Some	44%
Not Much	8%
Not at All	4%
Don't Know	1%
No Answer	0%

46. How well informed are you about scientific discoveries - are you very informed, somewhat informed, not very informed, or not at all informed?

Very Informed	11%
Somewhat Informed	60%
Not Very Informed	24%
Not at All Informed	4%
Don't Know	1%
No Answer	0%

47. How much are you personally interested in new medical discoveries -a lot, some, not much, or not at all?

A Lot	49%
Some	41%
Not Much	9%
Not at All	1%
Don't Know	0%

No Answer 0%

48. How well informed are you about medical discoveries - are you very informed, somewhat informed, not very informed, or not at all informed?

Very Informed	11%
Somewhat Informed	64%
Not Very Informed	22%
Not at All Informed	3%
Don't Know	0%
No Answer	0%

49. Which of these comes closest to your views about abortion? A woman should be able to get an abortion if she decides she wants one no matter what the reason. Abortion should only be legal in certain circumstances, such as when a woman's health is endangered or when the pregnancy results from rape or incest. or Abortion should be illegal in all circumstances.

Always Legal	37%
Sometimes Legal	44%
Always Illegal	14%
Don't Know	2%
No Answer	3%

50. Regardless of whether or not you attend religious services, do you consider yourself Protestant, Roman Catholic, Jewish or what?

Protestant	60%
Catholic	24%
Jewish	1%
Other (Vol.)	5%
None	7%
Don't Know	2%
No Answer	2%

51. How often do you attend religious services - more than once a week, once a week, once or twice a month, a few times a year, seldom, or never?

More Than Once a Week	16%
Once a Week	24%
Once or Twice a Month	16%
A Few Times a Year	16%
Seldom	17%
Never	9%
Don't Know	0%
No Answer	1%

52. Whether or not you attend services, do you consider religion to be an important part of your life, or not?

53. (IF YES) Would you say your religious beliefs provide some guidance in your day-to-day living, quite a bit of guidance, or a great deal of guidance in your day-to-day living?

Not Important	14%
Some Guidance	19%
Quite a Bit	23%
A Great Deal	41%
Don't Know or No Answer	2%

54. Which of these statements comes closest to describing your feelings about the Bible - The Bible is the actual Word of God, The Bible is the Word of God but not everything in it should be taken literally, or The Bible is a book written by men and is not the Word of God.

Actual word of God	42%
Not everything to be taken literally	36%

Written by men	14%
Don't Know	4%
No Answer	3%

METHODOLOGY OF THE VCU LIFE SCIENCES SURVEY

The VCU Life Sciences Survey is a public opinion survey of U.S. residents. The survey was conducted by telephone from August 23 to September 2, 2001 with a randomly-selected sample of 1122 adults living in the continental U.S. The survey was sponsored by Virginia Commonwealth University's division of Life Sciences. Interviewing was conducted by telephone from the facilities of the Survey and Evaluation Research Laboratory at Virginia Commonwealth University in Richmond, Virginia. The interviewing was conducted by a staff of professionally trained, paid interviewers using computer-assisted telephone interviewing software.

The sample of telephone numbers was prepared by Genesys Sampling Systems of Ft. Washington, Pennsylvania, and was designed so that all residential telephones, including new and unlisted numbers, had a known chance of inclusion. The cooperation rate for the survey was 32%. Using the CASRO response rate calculations, interviews were obtained with respondents in 27% of the known or assumed residential households in the sample.

The data were weighted to adjust for unequal probabilities of selection due to multiple telephone lines and multiple adults living in the household. In addition, the data were weighted on sex, race, age, education and region of residence to reflect the demographic composition of the adult population in the U.S. Percentages reported in the text and tables are weighted, while the number of cases shown in the tables for various subgroups is the actual number of respondents.

Questions answered by the sample of 1122 adults are subject to a sampling error of plus or minus approximately 3 percentage points at the 95 percent level of confidence. This means that in 95 out of 100 samples like the one used here, the results obtained should be no more than 3 percentage points above or below the figure that would be obtained by interviewing all adults with telephones. Where the answers of subgroups are reported, the sampling error would be higher. Because of nonresponse (refusals to participate, etc.), standard calculations of sampling error are apt to understate the actual extent to which survey results are at variance with the true population values. Surveys are also subject to errors from sources other than sampling. While every effort is made to identify such errors, they are often difficult or impossible to measure. Readers making use of the results are urged to be mindful of the limitations inherent in survey research. More information on the methodology is available from the director of the survey, Dr. Cary Funk, at 804 827 1430 or clfunk@vcu.edu.

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