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1 **I. Expert Qualifications**

2 **Q: Please state your full name for the record.**

3 A: Anthony Biglan.

4 **Q: Have you provided the Court a copy of your curriculum vitae?**

5 A: Yes. It is U.S. Exhibit 78,524.

6 **Q: What is your understanding of the kind of expertise you have been asked to offer in**
7 **this case?**

8 A: I am offering expertise as a psychologist on adolescent psychology, specifically the
9 psychological needs of adolescents that are met by imagery in cigarette brand marketing,
10 and on youth smoking prevention efforts.

11 **A. Work at Oregon Research Institute**

12 **Q: You are a psychologist at Oregon Research Institute?**

13 A: Yes. I am a Senior Scientist and member of the Board of Directors at Oregon Research
14 Institute (ORI).

15 **Q: Before you discuss your work, please tell the Court briefly about Oregon Research**
16 **Institute.**

17 A: ORI is a private, nonprofit organization, founded in 1960. At ORI, scientists conduct
18 research in the behavioral sciences. Most of the work at ORI relates to public health.
19 Scientists study the factors that contribute to disease and to risky health habits and
20 develop and evaluate treatment programs to alter unhealthy behaviors such as cigarette
21 smoking, lack of exercise, risky sexual behavior, depression, and drug abuse. Our
22 scientists also develop and evaluate intervention programs to prevent public health

1 problems before they occur. Prevention programs developed at ORI include parenting
2 skills training programs, school-based programs to prevent tobacco, alcohol, and other
3 drug use, and interventions to prevent adolescent depression. We deliver these
4 preventive interventions through clinics, schools, communities, the worldwide web, and
5 entire states.

6 ORI has also contributed to the development of statistical and experimental
7 methods in the behavioral sciences. These include techniques for analyzing human
8 development within the context of families, schools, and communities, and the use of
9 certain experimental designs known as interrupted time series to assess the effectiveness
10 of interventions.

11 **Q: How is ORI funded and what is its budget?**

12 A: ORI receives the bulk of its funding from the National Institutes of Health but also
13 receives funding from other Federal agencies, foundations, and private sources. We
14 currently have 60 research grants and an operating budget of about \$17 million.

15 **Q: According to your curriculum vitae, you have been a psychologist for 31 years?**

16 A: Yes. I have been doing research on clinical and preventive interventions for most of that
17 time. During the late 1970s and early 1980s, I also was involved in a private practice as a
18 clinical psychologist. Since then, my clinical work has involved developing and
19 evaluating clinical interventions.

20 **Q: What is your educational background?**

21 A: In 1966, I received a Bachelors degree in Psychology from the University of Rochester.

22 In 1968, I received a Masters degree in Social and Organizational Psychology from the

1 University of Illinois. In 1971, I received a Ph.D. in Social Psychology from the
2 University of Illinois.

3 **Q: Would you briefly describe the origins of your work in the field of psychology?**

4 A: I began working in the field of social and organizational psychology, the area in which I
5 received my Ph.D. in 1971. My doctoral dissertation concerned the organization of
6 university departments. I created a model of characteristics of academic areas that has
7 since come to be known as the “Biglan Model.”

8 Soon after getting my degree, I obtained post-doctoral training in clinical
9 psychology from the University of Washington and did an internship in clinical
10 psychology at the Psychiatry Department at the University of Wisconsin. I then took a
11 position at the University of Oregon as a Visiting Assistant Professor and subsequently as
12 an Assistant Professor in Clinical Psychology. My research at that time included work on
13 geriatric rehabilitation and the treatment of depression. I also did research on the
14 treatment of anxiety, insomnia, and social skill deficits.

15 From 1977 to 1982, I was a clinical psychologist at the Behavior Change Center,
16 an innovative clinic that I helped found. We created the clinic to provide research-based
17 treatment at a low cost. At the clinic, I worked with families on child and adolescent
18 problems and worked directly with adolescents on a variety of behavioral problems.

19 **Q: Can you describe further your work at the clinic with children and adolescents who
20 had behavioral problems?**

21 A: With respect to children, I worked mainly with families who were having problems with
22 their children’s misbehavior. Treatment involved a widely accepted approach, namely
23 behavioral parenting skills training. In this approach, parents learned how to use positive

1 reinforcement to help their children develop cooperative social behavior, self-
2 management skills, and many other skills that children need to succeed with peers,
3 teachers, and other adults. I also worked with adolescents who were having a variety of
4 problems, including difficulties in school, such as skipping class, getting into fights, and
5 not doing schoolwork. Often the teenagers I worked with were also having conflict with
6 their parents and, not uncommonly, they were experiencing depression and anxiety.
7 Many of the teenagers lacked skills for getting along with their peers. My treatment
8 approach typically involved working with the whole family and included: helping parents
9 develop more positive and less confrontational approaches to guiding their teenager's
10 behavior; helping the teenagers get what they needed at school and at home through more
11 positive behavior; helping the family set up a system for reinforcing cooperative
12 behaviors, such as helping around the house and doing schoolwork (since these
13 behaviors are fundamental building blocks for success in schools and families);
14 understanding the important things that the teenagers were concerned about and helping
15 them get those things; teaching them social skills for relating to peers; teaching families
16 how to build positive relationships; developing ways of problem solving; and helping
17 parents set clear, consistent, but not harsh, limits on their teenager's behavior.

18 **Q: Please briefly explain how you drew upon your work with adolescents at the clinic**
19 **in performing your analysis in this case.**

20 A: My work with adolescents and their families has given me an understanding of the
21 process of adolescent development and the needs of adolescents that motivate their
22 behavior. My understanding of the key needs of adolescents is one basis for analyzing
23 the impact of Defendants' marketing practices on adolescent smoking.

1 **Q: According to your curriculum vitae, you began working at ORI in 1979. What kind**
2 **of work have you focused on at ORI?**

3 A: I have done research on tobacco use, depression, diabetes regimen maintenance,
4 parenting skills, and adolescent problem behaviors, which in addition to tobacco use
5 include alcohol and other substance use, high risk sexual behavior, and antisocial
6 behavior. During my time at ORI, I have moved from a focus on the behavior of
7 individuals to a public health perspective, which emphasizes understanding and
8 intervening on *all* of the determinants of the prevalence of a problem in a defined
9 population.

10 **Q: What work have you done on tobacco use?**

11 A: My work on tobacco at ORI has primarily involved adolescent tobacco use. The main
12 thrust of my work has been to develop and evaluate programs to prevent adolescent
13 tobacco use. I have also worked on adolescent smoking cessation interventions, though it
14 has proven difficult to help addicted teenagers stop smoking. As I have evaluated
15 smoking prevention interventions, I have also analyzed some of the risk factors for
16 adolescent tobacco use and other adolescent problems. Finally, I have been involved in
17 the development and evaluation of smoking cessation interventions for adults.

18 **Q: Have you done work on other risk-related behaviors of adolescents?**

19 A: Yes. I have done and continue to do work on adolescent use of alcohol and other drugs
20 besides tobacco. In addition, I have done work on teenagers' high-risk sexual behavior,
21 as well as on delinquency.

22 **Q: What has your work on adolescents' risk-related behaviors involved?**

1 A: Much of it was done at ORI in the context of our development and evaluation of tobacco
2 prevention interventions. Most of our tobacco-related interventions were also designed to
3 prevent other forms of substance use. For this reason, we have routinely assessed these
4 interventions' impact on other substance use, delinquency, and sometimes high-risk
5 sexual behavior. In addition, we have used the data we collected to analyze the ways in
6 which peer and parental factors are associated with adolescent problem behavior.

7 My work on these problems with my colleagues at ORI led us to work on how
8 high risk sexual behavior might be prevented among teenagers. We developed and
9 evaluated a five-session clinical intervention that we found could help teenagers reduce
10 risky sexual behavior.

11 My work on preventing adolescent problem behaviors has also involved the
12 evaluation of a parenting program that helps parents improve their skills in guiding early
13 adolescents. We evaluated its impact in reducing substance use and antisocial behavior
14 among middle school students who were at-risk for problems, and we found that the
15 program was beneficial in preventing adolescents from developing antisocial behavior.

16 **Q: What other work have you done at ORI with children, adolescents, and families?**

17 A: I have done some work evaluating interventions to prevent problem development among
18 elementary school students. The intervention included a parenting skills training
19 component, a social skills component for students, and supplemental instruction in
20 reading. We found that this intervention was quite successful in preventing reading
21 failure and prevented the development of children's aggressive social behavior (which
22 contributes to the later development of delinquency and substance use). I have also

1 conducted a number of studies involving problems of adults, such as depression among
2 mothers.

3 Some of my research has involved the development and evaluation of clinical
4 treatment procedures to help people with a wide variety of problems cope more
5 effectively with thoughts and feelings that are causing them great difficulty. For
6 example, I worked with mothers of developmentally disabled children to help them cope
7 with depression and anxiety and, at the same time, better care for their children.

8 **Q: Have you found in your work at ORI that you draw upon your experience as a
9 clinical psychologist?**

10 A: Yes.

11 **Q: Briefly describe how your experience as a clinical psychologist has assisted with
12 your work at ORI.**

13 A: Being a clinical psychologist involves trying to see the world from the perspective of the
14 client. To help people you have to understand how they think and feel and what is
15 important to them. All of my work at ORI has been influenced by my understanding of
16 the psychological reactions and motivations of people. As I have developed and tested
17 interventions—even when they didn't involve direct clinical contact with people—I have
18 been guided by what I understand about people's psychological needs. For example, I
19 know how important it is for most adolescents to fit in with their peer group—to be liked
20 and accepted. As a result, in developing tobacco prevention programs, I have tried to
21 create programs that would make not smoking tobacco the “in” thing for teenagers.

22 **Q: Would you please define what you mean by “psychological needs?”**

1 A: By psychological needs, I mean the wants, wishes, or desires people have to achieve a
2 certain psychological state. For example, as I will testify below, most adolescents have
3 strong needs to be accepted by their peers and to have an image that they feel will make
4 them acceptable to their peers.

5 **Q: Has your work at ORI helped you understand the psychological needs of**
6 **adolescents?**

7 A: Yes.

8 **Q: Could you give us an example?**

9 A: One example is my work on the MacChoice project. Between 1989 and 1994, a
10 colleague and I developed and evaluated a five-session treatment program to help
11 adolescents develop safer sex practices. The program was designed for teenagers who
12 had come to clinics for sexually transmitted diseases because they had or thought they
13 had a sexually transmitted disease. The program was named “MacChoice” because the
14 teenagers had three choices: Monogamy, Abstinence, or Condoms. Its goal was to help
15 teenagers develop safer sex practices by defining goals for safer sex, identifying
16 situations that put them at risk of engaging in risky sexual practices, and developing skills
17 for negotiating these situations without having risky sex.

18 To do this, we had to understand the sort of psychological needs that they were
19 experiencing. For example, most of the teenage girls who participated were engaging in
20 high-risk sexual behavior because they had strong needs for affection, acceptance, and
21 support. Typically, they had a difficult home life, where they felt unloved, and often they
22 had trouble finding supportive girlfriends. As a result, they were dependent on boys to
23 fulfill these needs. Often, those boys were older and exploitative. The key to helping

1 these teenage girls was to help them feel more accepting of themselves and find less risky
2 ways of getting their psychological needs met. We helped them re-evaluate whether they
3 were getting their needs met in their current relationships and helped them develop the
4 assertiveness skills they needed to resist exploitation by the boys they were involved
5 with, or to extricate themselves from exploitive relationships. Our evaluation of the
6 program showed that it helped teenagers reduce the number of partners they had and
7 develop safer sex practices.

8 **Q: Do you have other examples of how your work has helped you understand the**
9 **psychological needs of adolescents?**

10 A: Yes. Over the past several years, we have been doing research in middle schools. That
11 work has included efforts to help middle schools develop and implement more effective
12 approaches to schoolwide discipline and ways to increase community support for
13 successful early adolescent development.

14 In the course of that work, I have experienced how strong the motivation can be
15 for youth at this age to fit in or be accepted. Through interviews and questionnaires, we
16 found that the rate of teasing and harassment among peers climbs in middle school.
17 Adolescents are called names, threatened, gossiped about, shunned, and sometimes hit.
18 We have also learned a lot about what kinds of things trigger such teasing. For example,
19 in one middle school we asked the school's "leadership class" to list the things about a
20 child that would make it more likely that he or she would be teased. The list included:
21 being small, wearing glasses, being an "A" student, being unattractive, and wearing
22 clothes that are not in fashion. This work gave me an increased appreciation of how

1 strongly many adolescents are motivated to be accepted by their peers and the importance
2 of self-image for that acceptance.

3 ***B. Research on Youth Smoking Prevention***

4 **Q: Let's focus on your research regarding the prevention of adolescent smoking.**

5 **Generally, can you give us an overview of the extent of your prevention research?**

6 A: I have received funding continuously since approximately 1979 for research on the topics
7 I just described. I have received 19 grants awarded by seven different institutes at the
8 National Institutes of Health (NIH). The total amount of funding derived from those
9 grants was over \$41 million. Nine of the grants focused partly or entirely on tobacco use
10 and prevention research. The total funding of those grants was over \$35 million. They
11 came from three different institutes.

12 **Q: How are decisions made about which grant proposals receive funding?**

13 A: The National Institutes of Health has a system of peer review of proposals in which
14 scientists working in the area relevant to a proposal convene in committees to review the
15 proposals. Conflict of interest procedures prevent persons from reviewing proposals of
16 close colleagues or those whose funding might benefit the reviewer. The role of people
17 who work on the program side at NIH is quite limited. They cannot participate in the
18 deliberations of review committees and, once proposals have received priority scores
19 from the committee, program officers have little discretion to deviate from funding the
20 projects in the order of ranking.

21 NIH personnel who administer the review committees also have little influence on
22 the priority scores given by the committees. They cannot vote and cannot comment on
23 the substance of the proposals under review.

1 **Q: What sort of research have you performed on adolescent smoking?**

2 A: The primary focus of this research has been to develop and test programs to prevent
3 adolescent smoking. In the process of doing this, we have also analyzed the correlates of
4 adolescent smoking with the measures of risk factors we had available.

5 **Q: How many smoking prevention programs have you developed or evaluated?**

6 A: From about 1979 to the present, I have participated in the development and evaluation of
7 five programs.

8 **Q: Tell us about your work on these programs.**

9 A: In 1979, I received a grant, along with two colleagues, to develop and evaluate a
10 classroom-based smoking prevention program. The classroom-based curriculum that we
11 developed focused primarily on teaching adolescents refusal skills for resisting peer
12 pressures to smoke. We evaluated this curriculum in two studies.

13 **Q: Did you consider the psychological needs of adolescents in developing this
14 prevention program?**

15 A: Yes. In order to create a program that would motivate adolescents not to smoke, it was
16 essential that the program link not smoking to the achievement of outcomes that were
17 important to adolescents.

18 **Q: Please describe how you considered or addressed the psychological needs of
19 adolescents in this program.**

20 A: We considered, for example, the influence that peers have on adolescents' smoking. As
21 our work and the work of others has shown, adolescents whose friends smoke are
22 significantly more likely to smoke themselves. As I stated earlier, and will elaborate
23 below, adolescents have a strong need to be accepted by their peers. Adolescents are

1 more likely to take up smoking if they perceive that smoking will help them gain peer
2 acceptance. For this reason, it was important that our prevention program influence
3 adolescents to perceive that smoking was *not* a route to peer acceptance.

4 **Q: How did you do this?**

5 A: We did it in a number of ways. First, we did classroom exercises in which students
6 received instruction and watched videotaped models of refusal skills for handling
7 situations in which someone might ask them to smoke. Students practiced ways of
8 refusing in small groups and acted out these situations before the whole class. In
9 addition, students were asked to make an explicit commitment not to smoke and were
10 given accurate feedback about the number of students who actually smoked. This
11 feedback was given because of the evidence that adolescents overestimate how many of
12 their peers smoke and because such overestimations lead them to try smoking.

13 We designed all of these activities to counter peer influences to smoke. The
14 refusal skills training was designed to provide adolescents with ways of interacting with
15 peers that would not require them to smoke, but would help them be accepted by their
16 peers. Their participation in the refusal skills training and the other classroom exercises
17 was also designed to increase students' perceptions that most of their peers did not smoke
18 and did not want to smoke. In other words, we hoped that students would conclude that
19 the peer acceptance they so desired could be achieved by not smoking.

20 **Q: What was the effect of this program?**

21 A: The effects were mixed. In the first study, from 1979 through 1985, we found that the
22 program did have a beneficial effect on measures of students' refusal skills; and there was
23 a lower rate of smoking among those who were already smoking when the program

1 began, but there were no beneficial effects for other students. A paper describing this
2 study, Biglan, Severson, Ary, Faller, Gallison, Thompson, et al., 1987, is in my
3 curriculum vitae (U.S. Exhibit 78,524).

4 In the second study, conducted in 1982 through 1986, we also found that, among
5 teenagers already smoking, the program produced lower rates of smoking than for those
6 who didn't get the program; but among boys who had not yet smoked, there was evidence
7 that their smoking increased after the program. A peer-reviewed paper describing this
8 study, Biglan, Glasgow, Ary, Thompson, Severson, Lichtenstein et al., 1987 (U.S.
9 Exhibit 73,223).

10 **Q: Were the papers describing these two studies published in peer-reviewed journals?**

11 A: Yes.

12 **Q: Did you evaluate other prevention programs?**

13 A: Yes. In 1984, we developed a more extensive and elaborate prevention program
14 designed with components for grades six through twelve. This program made use of
15 videotapes both to affect refusal skills and to reduce students' receptivity to tobacco
16 advertising.

17 **Q: How did you address students' receptivity to tobacco advertising?**

18 A: We used videotapes and classroom exercises to teach students about the appeals of
19 tobacco advertising, to get them to analyze how tobacco advertising makes cigarettes
20 appealing, and to rewrite the advertisements to make them more accurate. For example, a
21 student might write on an advertisement that shows a handsome man and the Marlboro
22 brand that the man was likely to die of lung cancer. A description of the video for eighth
23 grade stated that the "video makes specific points about the tobacco industry and its

1 attempt to target a teenager audience by associating smoking with adulthood [and]
2 athletic ability....” A paper we published in a peer-reviewed journal describes this
3 intervention. The paper is in my curriculum vitae as Biglan, James et al., 1988 (U.S.
4 Exhibit 78,524).

5 **Q: How did these exercises address adolescents’ psychological needs?**

6 A: The exercises were designed to “taint” cigarette advertising in adolescents’ minds and
7 thereby break the connection between smoking and images of peer acceptance and self-
8 confidence (among others) so that teenagers would no longer perceive that smoking could
9 help them fulfill these needs.

10 **Q: What was the effect of this program?**

11 A: The results for this program were a little better. We found that the intervention had a
12 significant effect on the rates of smoking among those who were already smoking at the
13 beginning of the program. However, it did not affect smoking among those who had not
14 previously smoked. We published the evaluation of the program in a peer-reviewed
15 journal, *The Journal of Behavioral Medicine*. The paper is Ary, Biglan et al., 1990 in my
16 curriculum vitae (U.S. Exhibit 78,524).

17 **Q: Did you do any further tobacco prevention research?**

18 A: Yes.

19 **Q: Please describe that research.**

20 A: Based on the results I just described, we felt that a new initiative was needed. We
21 decided to develop and evaluate a community-wide intervention to prevent adolescent
22 smoking and see if it would do a better job than simply having the type of school-based
23 programs we had previously developed and evaluated. Beginning in the early 1990s, we

1 conducted Project SixTeen. We randomly assigned sixteen small Oregon communities to
2 receive either a classroom-based curriculum alone or to receive the classroom program
3 plus the community intervention. The community intervention had four components:
4 media designed to generate support for smoking prevention efforts, youth anti-tobacco
5 activities, a youth access reduction program, and family communications about tobacco.

6 **Q: Could you describe the access reduction component?**

7 A: This was a program to reduce illegal sales of tobacco to young people by rewarding
8 clerks for not selling tobacco to them. Teenagers working for our project attempted to
9 purchase tobacco. If clerks were willing to sell, the teenager handed them reminders of
10 the law. If the clerks refused to sell, they received a gift certificate worth \$5 to \$10 and
11 the stores received public recognition of their refusal.

12 **Q: What were the results?**

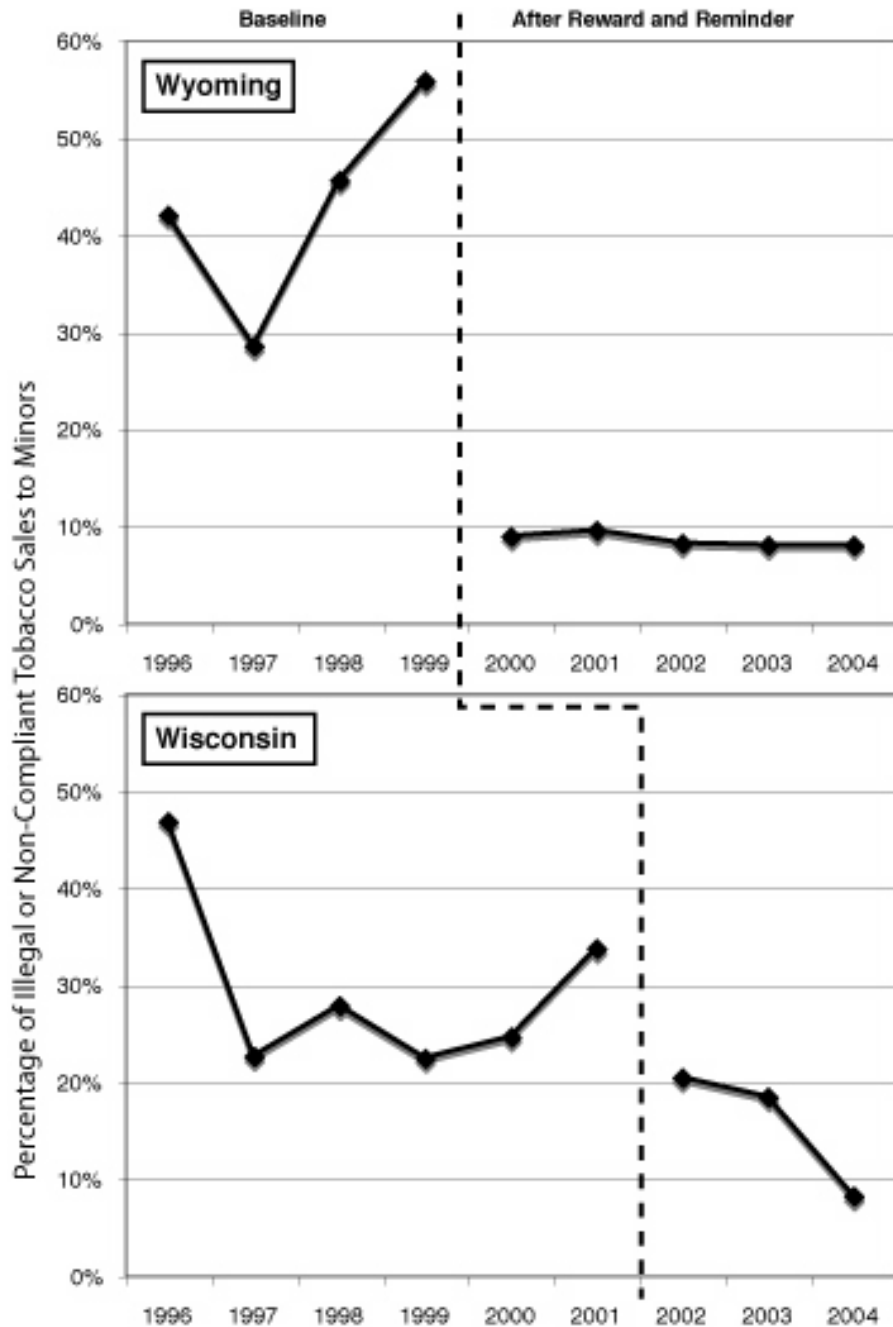
13 A: Research we published showed that the program brought about substantial decreases in
14 illegal sales in the eight communities in which we implemented it. Two peer-reviewed
15 publications describe these findings. They are listed as Biglan, Henderson, et al., 1995
16 and Biglan, Ary, et al., 1996, in my curriculum vitae (U.S. Exhibit 78,524).

17 **Q: Has the Reward and Reminder Program been used in other places?**

18 A: Yes. Two states, Wyoming and Wisconsin, have since implemented the program. In
19 both cases, the implementation of the program led to reductions in sales rates to below
20 10%. The figure on the following page illustrates the impact of the program.

21 **Q: Did Project SixTeen incorporate elements based upon your experience with, or
22 research about, the psychological needs of adolescents?**

23 A: Yes.



1 Q: What elements were incorporated?

2 A: The school-based program was the same one I described above. As I explained, that
 3 program was designed to influence adolescents to conclude that not smoking would be a
 4 better way than smoking would be to fulfill their psychological needs for peer

1 acceptance, excitement, fun, health, and a positive self-image. However, the community
2 intervention added a youth anti-tobacco component created to further link these
3 adolescent needs to not smoking. Students designed and participated in extracurricular
4 anti-smoking activities such as conducting smoking prevention activities with younger
5 students, running health fairs, and creating anti-smoking sidewalk art.

6 **Q: How did youth anti-tobacco activities address adolescent psychological needs?**

7 A: We fashioned these activities to provide opportunities for positive interactions among
8 teenagers in the context of their making public commitments not to smoke and to foster
9 the association between social acceptance and not using tobacco. These activities also
10 helped to increase the perception that other teenagers were opposed to smoking. At the
11 same time, many of them provided fun, excitement, and boy-girl interactions, which, as I
12 will describe later in my testimony, are important motivators for most teenagers.

13 An evaluation of the impact of both the youth anti-tobacco component and the
14 family communications component was published in a peer-reviewed journal, *American*
15 *Journal of Community Psychology*. It is Biglan, Ary, Yudelson et al., 1996 in my
16 curriculum vitae (U.S. Exhibit 78,524).

17 **Q: Did Project SixTeen address the tobacco companies' marketing of cigarettes to**
18 **adolescents?**

19 A: Yes, it did. In the media advocacy, the youth anti-smoking activities, and the school-
20 based curriculum that were part of Project SixTeen, we tried to counter the influence of
21 tobacco advertising.

22 **Q: How did you do that?**

1 A: One way we tried to do that was by mailing fact sheets to community leaders that were
2 designed to increase community support for youth smoking prevention.

3 **Q: What information did you include relevant to cigarette marketing?**

4 A: One fact sheet consisted of facts about the Joe Camel campaign with references to the
5 empirical evidence. It was titled, “The Case Against Joe Camel.” Sample facts, together
6 with the evidence cited, were as follows:

7 After Joe started selling Camels, the company’s market share went
8 from 3.9% to 4.3% in 1990, and has continued to increase.

- 9 • Why is Joe such a successful salesman for such a lethal
10 product?
- 11 • He’s a “cute”—but macho—cartoon character who drives
12 race cars, rides motorcycles, water skis or hangs out in
13 gambling casinos.
- 14 • He’s sexy!—always surrounded by women. His beach
15 etiquette: “Run into the water. Grab someone and drag
16 her back as if you’ve saved her from drowning. *The more*
17 *she kicks and screams the better....”*

18
19 According to recent research:

- 20 • Over 90% of 6-year-olds recognized Joe Camel and knew
21 he stood for cigarettes.
- 22 • 32% of those under 18 smoke Camels—over twice as
23 many as those 18 to 24.
- 24 • Joe Camel has increased RJR’s share of the illegal
25 children’s cigarette market from .05% to 32%—about
26 \$476 million per year in sales to the children they say
27 they don’t sell to.

28
29 DiFranza, J.R., Richards, J.W., Paulman, P.M., Wolf-Gillespie, N.,
30 Fletcher, C., Jaffe, R.D., & Murray, D. (1991). RJR
31 Nabisco’s cartoon camel promotes camel cigarettes to
32 children. *Journal of the American Medical Association*,
33 266, 3149-3153.

34 Fischer, P.M., Schwartz, M.P., Richards, J.W. Jr., Goldstein, A.O.,
35 & Rojas, T.H. (1991). Brand recognition by children aged
36 3 to 6 years. *Journal of the American Medical Association*,
37 266, 3145-3148.

38 Pierce, J.P. Gilpin, E. Burns, D.M., Whalen, E., Rosbrook, B.,
39 Shopland, D. Johnson, M. Does tobacco advertising target

1 young people to start smoking? *Journal of the American*
2 *Medical Association, 266, 3154-3158.*

3
4 **Q: Was there evidence that the community intervention was effective?**

5 A: The study provided modest evidence that the community intervention prevented more
6 adolescent smoking than was true in communities that only received the classroom-based
7 program.

8 **Q: Was the evaluation of Project SixTeen published?**

9 A: Yes. The results of the program as a whole were published in the peer reviewed journal,
10 *Tobacco Control*. It is listed in my curriculum vitae (U.S. Exhibit 78,524) as Biglan, Ary
11 et al., 2000.

12 **Q: Have you performed other research related to the work you have conducted on**
13 **these smoking prevention programs?**

14 A: Yes. In the process of evaluating the smoking prevention programs I just described, we
15 were able to collect additional data relevant to peer and parental influences on adolescent
16 smoking.

17 **Q: What did you find in these studies?**

18 A: We generally found that adolescents whose friends smoked were more likely to be
19 smokers. The evidence about an association between parental smoking and adolescent
20 smoking was more mixed. However, we did find some evidence that parental monitoring
21 of their teenager's behavior was a predictor of the teenager's association with deviant
22 peers and of the teenager taking up smoking.

23 **Q: Did you publish this research in peer-reviewed journals?**

24 A: Yes, there are a number of papers. They include Kniskern, Biglan et al., 1983; Biglan,

1 Severson et al., 1983; Biglan, McConnell et al., 1984; Friedman, Lichtenstein, & Biglan,
2 1985; Ary & Biglan, 1988; Biglan, Duncan et al., 1995; Ary, James, & Biglan, 1999;
3 Biglan & Smolkowski, 2002, all listed in my curriculum vitae (U.S. Exhibit 78,524).

4 **Q: Are you currently involved in any research on prevention programs?**

5 A: Yes.

6 **Q: What does it entail?**

7 A: I am currently involved in a project that is evaluating family communications and youth
8 anti-smoking activities to prevent adolescent tobacco use.

9 **Q: What does that project involve?**

10 A: We have randomly assigned 40 middle schools in Oregon to receive or not receive the
11 intervention and we are tracking the program's impact on the prevalence of middle
12 school students' tobacco use.

13 **Q: What is your involvement?**

14 A: I am the Principal Investigator on the project and was involved in designing the
15 intervention and the study that evaluates it.

16 **Q: Does this project incorporate any information based upon your knowledge of the
17 psychological needs of adolescents?**

18 A: Yes.

19 **Q: What kind of information was incorporated?**

20 A: This program has a youth anti-smoking activity component. As I stated above, such
21 activities associate not smoking with having friends, fun, excitement, success, and a
22 positive self-image.

23 **Q: Does the program address industry marketing of tobacco?**

1 A: Yes it does. Students and their parents receive a series of videos from their school that
2 they watch together at home. One of those videos discusses the influence of tobacco
3 marketing on adolescent tobacco use. It is designed to sensitize adolescents to the
4 influence of cigarette brand advertisements and to encourage them to react negatively to
5 these advertisements, rather than to form the impression that they can achieve positive
6 outcomes by becoming a smoker. After watching the video, students and parents
7 together do an activity designed to solidify the teenager's commitment not to smoke.

8 **Q: Have you evaluated this research yet?**

9 A: No. We do not yet have results of this project.

10 **Q: Are there other smoking prevention programs that you are working on?**

11 A: Yes. We have just begun a project at ORI in which we are trying to develop direct
12 mailings to teenagers and their parents that would motivate adolescents not to smoke.
13 We are trying to convey the message that popular people do not smoke, that smoking
14 harms others, and that smokers typically are not socially successful.

15 **Q: In your work on this project, how, if at all, have you employed your understanding
16 of adolescent needs?**

17 A: We have designed each of the themes in our mailings to speak to a key adolescent need.
18 Both the theme that popular people don't smoke and that smokers are socially
19 unsuccessful are direct attempts to counter images of smokers as socially accepted and
20 popular and to further the perception that social acceptance will be better achieved by not
21 smoking. The message that smoking harms others is not so much a health message as an
22 effort to associate not smoking with being a caring and mature person.

1 **Q: For each of the tobacco intervention programs you have developed, have you**
2 **considered the influence of tobacco marketing in how you structure the program?**

3 A: Except for our earliest efforts in the early 1980s, all of the preventive interventions that I
4 have developed with my colleagues at ORI have included efforts to counteract the
5 influence of tobacco marketing on young people. The smoking cessation program did not
6 address cigarette advertising.

7 **Q: Why does ORI include efforts to counter the influence of tobacco marketing on**
8 **adolescents in its prevention programs?**

9 A: Because research shows that such marketing motivates adolescents to smoke by
10 associating advertised brands with appealing images of the smokers of those brands. For
11 this reason, we keep trying to find ways to undermine the association of appealing images
12 with smoking. One example is the design and creation of videos for our family
13 communications intervention. We included material designed to get parents and youth to
14 understand how the tobacco companies try to make cigarettes and smokeless tobacco
15 appealing to youth and to react in negative ways to the images of smokers that such
16 advertising conveys.

17 **Q: Have you worked on any other tobacco intervention programs?**

18 A: Yes.

19 **Q: Please tell the Court about them.**

20 A: During the 1990s, ORI collaborated with the Center for Health Research at Kaiser
21 Permanente in Portland, Oregon to develop and evaluate tobacco interventions within
22 Kaiser's HMO. There were five different projects: (a) smoking cessation for hospitalized
23 patients, (b) smoking cessation for patients seen in clinics, (c) smoking cessation for

1 adolescents, (d) cessation of smokeless tobacco use in a dental clinic, and (e) a worksite
2 intervention on smoking cessation.

3 **Q: What was your involvement?**

4 A: I had two roles. I was the Principal Investigator on the adolescent smoking cessation
5 project and I was in charge of developing videos that accompanied each of the
6 interventions.

7 **Q: For your work on the Kaiser programs, did you incorporate any knowledge or
8 information based upon your experience or on research regarding the psychological
9 needs of adolescents?**

10 A: We certainly made use of my knowledge of adolescents' psychological needs in
11 designing the adolescent smoking cessation program.

12 **Q: How did you do that?**

13 A: The success of the program required that we understand the psychological needs of each
14 adolescent and see if we could find ways to help each of them achieve those needs
15 without smoking. The program consisted of brief visits to a nurse by adolescents who
16 were enrolled in the Kaiser HMO and had already experimented with cigarettes. Our
17 nurse interventionists attempted to befriend the teenagers, understand the most important
18 issues in their life and, within that context, develop a plan for quitting that was likely to
19 work for each teenager. The nurses were generally very nurturing and empathetic people
20 who achieved good rapport with and participation by adolescents.

21 **Q: What was the result of this program?**

1 A: Like many other evaluations of adolescent smoking cessation programs, we found that
2 we could not achieve a higher rate of cessation for adolescents who participated in the
3 program than for adolescents randomly assigned not to receive the program.

4 **Q: Your testimony today involves adolescent psychology and its application to cigarette
5 brand advertising. Can you please explain how your experience in adolescent
6 psychology equips you to examine and analyze the imagery that Defendants use to
7 advertise and market cigarettes?**

8 A: I can apply my understanding of adolescents' needs to the images and themes in
9 Defendants' cigarette advertisements and other marketing pieces and I can determine
10 whether those images and themes would appeal to adolescents. Moreover, it equips me
11 to understand Defendants' internal research memoranda that discuss the imagery in their
12 advertisements and to evaluate its relevance to adolescents.

13 **C. Publications**

14 **Q: How many publications have you written?**

15 A: Between 1970 and 2004, I wrote or co-wrote 126.

16 **Q: Of these, how many are articles in peer-reviewed journals?**

17 A: Of these, 94 are in peer-reviewed journals.

18 **Q: What subject areas do your publications cover?**

19 A: I have published papers on a number of substantive areas of public health including
20 tobacco, alcohol, and other drug use; high-risk sexual behavior among adolescents; adult
21 depression; parenting skills interventions for parents of both children and adolescents; the
22 treatment of chronic abdominal pain of children; insomnia; test-taking anxiety; chronic

1 and social anxiety; and social skills deficits. I published a description of a clinical
2 intervention for severely distressed parents of developmentally delayed children.

3 Over the last 15 years, I have published a book and a number of journal articles
4 concerning the movement within the behavioral sciences toward more population-based
5 research that includes analysis of the role of organizations in affecting the prevalence of
6 problems in populations. These have included an analysis of the evolution of the
7 practices of the tobacco industry and the tobacco control community in recent years, as
8 each has tried to achieve its goals related to smoking and smoking prevention and
9 cessation.

10 I have also published papers on the philosophy of science and on methodological
11 issues involved in behavioral science research.

12 I have published on organizations, including work on leadership and the nature of
13 university organizations, as well as on the evolution of the practices of organizations as a
14 function of the material consequence of those practices.

15 **Q: How many articles have you published on the topic of adolescent smoking behavior?**

16 A: Forty-seven of my articles specifically focus on adolescent tobacco use, of which 42 are
17 peer reviewed.

18 **Q: What books have you authored?**

19 A: In 1995, I wrote a book, *Changing Cultural Practices: A Contextualist Framework for*
20 *Intervention Research*, published by Context Press in Reno, Nevada, listed in my
21 curriculum vita, (U.S. Exhibit 78,524). It concerns intentional efforts to change cultural
22 practices, focusing particularly on cultural practices that affect human well-being, such as
23 childrearing practices, tobacco control practices, and sexism.

1 In addition, two books came out of my work at the Center for Advanced Study in
2 the Behavioral Sciences in Palo Alto, California.

3 **D. Center for Advanced Study**

4 **Q: What was your work at the Center for Advanced Study?**

5 A: In 2000-2001, I spent a year—by invitation—at the Center for Advanced Study in the
6 Behavioral Sciences. The Center asked me to assemble and lead a team of scientists in
7 reviewing and summarizing knowledge about the development and prevention of youth
8 problem behaviors. The Robert Wood Johnson Foundation and a consortium of agencies
9 at the National Institutes of Health (the National Institute on Drug Abuse, the National
10 Cancer Institute, the National Institute on Alcohol Abuse and Alcoholism, and the Office
11 of Behavioral and Social Science Research) funded the project.

12 **Q: What resulted from your work?**

13 A: This effort led to two books. I am the first author on *Helping Adolescents at Risk:*
14 *Prevention of Multiple Problem Behaviors*, published by Guilford Press in 2004. This
15 book summarizes the evidence and defines next steps for research and practice on dealing
16 with youth with multiple problem behaviors. A second book produced during this year
17 provides brief summaries of what we know about the development, prevention, and
18 treatment of adolescent problems. I was the first editor and wrote several chapters of the
19 2003 Plenum Press book, entitled *Preventing Youth Problems*.

20 **E. Public Health Perspective**

21 **Q: Earlier you testified that you have moved, over the years, toward a public health**
22 **perspective in your study of human behavior. Could you say more about what you**
23 **mean by that?**

1 A: A public health perspective involves a focus on the incidence and prevalence of a disease
2 or a health-relevant behavior in a defined population. The defined population might be a
3 community, state, nation, or set of nations. The concern of a public health perspective is
4 to understand *all* of the variables or factors that affect the incidence or prevalence of a
5 problem and to use that understanding to reduce the incidence or prevalence of the
6 targeted problem.

7 **Q: How is that different from the orientation you began with?**

8 A: Since I received training as a social and clinical psychologist, my orientation differed
9 from a public health perspective in two ways. First, as a clinical psychologist, I focused
10 on the influences of psychological factors and the immediate social environment on
11 behavior and tended not to look at the larger social context influencing behavior. Second,
12 as a clinical psychologist, I naturally was more oriented toward how I could help
13 individuals change behaviors they wanted to change through means that were under their
14 or my control.

15 **Q: Could you give an example of what you mean by that?**

16 A: Well, if I were working with an adolescent who was having problems in school I would
17 focus on the specific behaviors of the adolescent, the psychological needs of that teenager
18 that might be motivating those behaviors, and the things that the teenager and the parents
19 might do to help the adolescent change his or her behavior. Over time, I, and most other
20 psychologists, realized it was important to analyze and intervene in the school
21 environment in order to change an adolescent's behavior. So, I might set up a system
22 where teachers gave a daily report to parents about the adolescent's behavior so that the
23 parents could reinforce the teenager's progress at school. However, even in this example,

1 a clinical psychologist working with individual families would not be able to affect larger
2 social system issues that might be important influences on the behavior of the adolescent.

3 **Q: Why not?**

4 A: Well, the organization of the school itself might be a factor that was contributing to the
5 teenager's problems. For example, there is growing evidence that middle schools—as
6 opposed to kindergarten through eighth grade elementary schools—increase problems
7 among adolescents. Moving from our current system of middle schools to a K through 8
8 arrangement might be a positive step, but a clinical psychologist working only with an
9 individual family would be unable to effect such a change.

10 **Q: Do your publications reflect this transition to a public health orientation?**

11 A: Yes, they do. In 1990, I began publishing papers that discussed the need to understand
12 the influence of the larger social context on the behavior of individuals and the
13 interactions among family members.

14 **Q: Can you identify specific publications?**

15 A: Yes. In 1990, I published a peer-reviewed paper with Russell Glasgow, Ph.D., and
16 George Singer, Ph.D., entitled, "The Need for a Science of Larger Social Units: A
17 Contextual Approach," listed in my curriculum vitae. In it, we argued that behavior
18 strategies that focused only on individuals and families were beginning to reach the limits
19 of their effectiveness and that "[c]ontinued progress may require more attention to the
20 larger context within which problems of individuals occur. As the environmental
21 determinants of behavior of individuals are identified, the question becomes how those
22 environments themselves can be modified." We further stated, "Research has begun to
23 identify the limitations of interventions delivered to individuals, families, or small

1 groups. Such limitations generally involve variables in the context of the target group
2 that cannot be affected by one-on-one and group interventions.” Biglan, A., Glasgow,
3 R.E., & Singer, G. (1990). The need for a science of larger social units: A contextual
4 approach. *Behavior Therapy*, 21, 195-215 at 196 and 197.

5 **Q: How is this relevant to the conclusions you’ve reached in this case?**

6 A: All of these considerations apply directly to the problem of tobacco use in our society.
7 Indeed, we discussed how they apply to tobacco use at length in the paper I just cited.

8 We summarized the influences on the tobacco use of individuals:

9 (a) the reinforcing and addictive properties of nicotine, (b)
10 the aversiveness of smoking attributable to morbidity and
11 mortality, (c) the social influences for and against tobacco use by
12 friends, family, health care providers, advertising, and other media.
13 The immediate social influences are in turn a function of the
14 production, sales, and lobbying of the tobacco industry to
15 encourage tobacco use and the organized activities of anti-tobacco
16 forces to discourage its use. The actions of both the pro- and anti-
17 tobacco industries are ultimately a result of the exigencies of their
18 survival. The profits produced by manufacturing and marketing
19 practices of tobacco companies appear to be the outcome that
20 maintains these practices. The effective outcomes for the health
21 care structure appear to include the successful treatment of disease
22 as well as financial outcomes.

23
24 Biglan, A., Glasgow, R.E., & Singer, G. (1990). The need for a science of
25 larger social units: A contextual approach. *Behavior Therapy*, 21, 204-
26 205.

27 **Q: Are there other papers in which you discussed the role of the practices of the**
28 **tobacco companies in promoting tobacco use?**

29 A: Yes. I have elaborated upon this basic analysis in my book on cultural practices and in a
30 peer-reviewed paper, Biglan & Taylor, 2000a, listed in my curriculum vitae, Exhibit
31 78,524.

1 **Q: Can you give us an example?**

2 A: In my 1995 book, *Changing Cultural Practices*, I devoted a chapter to the cultural forces
3 that influence tobacco use. I discussed the function of tobacco marketing practices in
4 recruiting new smokers as well as the way in which tobacco industry lobbying functions
5 to maintain a positive public perception of smoking and of the tobacco industry, thereby
6 preventing restrictions on the industry's marketing practices.

7 **Q: Is your public health perspective limited to your work on tobacco use?**

8 A: No. I wrote and published numerous peer-reviewed papers between 1993 and 2004 and
9 presented numerous talks on what this perspective implies for reducing antisocial
10 behavior, preventing substance use, generally improving the outcomes of the childrearing
11 practices of our society, and reducing marital conflict.

12 **Q: Are these publications listed in your curriculum vitae?**

13 A: Yes. The paper I mentioned above with Glasgow and Singer addresses a public health
14 perspective more generally. Also, I published a paper with Dr. Metzler in 1998 on a
15 public health approach to research on family interventions. The paper is listed in my
16 curriculum vitae as Biglan and Metzler, (1998) (U.S. Exhibit 78,524).

17 ***F. Professional Positions***

18 **Q: Have you ever been associated with any professional organizations?**

19 A: Yes. I have been a member of the Association for the Advancement of Behavior
20 Therapy, the American Psychological Association, the Association for Behavior
21 Analysis, and the Society for Prevention Research. I am also a Fellow in the Society for
22 Community Research and Action.

23 **Q: Have you been involved in the leadership of any of these organizations?**

1 A: Yes. I have been on the program committee of the Association for Behavior Analysis
2 and chaired the Society for Community Research and Action's committee on advocacy. I
3 have been on the board of directors of the Society for Prevention Research since 1997
4 and have led their strategic planning process. In 2003, I became President-Elect of the
5 society; in June of 2005, I will become president for two years.

6 **Q: Please tell the court about your work with the Society for Prevention Research.**

7 A: Prevention science is a relatively new field. In most areas of human behavior and public
8 health, the emphasis was initially on treating problems after they develop. But over the
9 last 30 years, there has been increasing effort to identify ways to prevent problems before
10 they occur and there is growing evidence of our ability to do this. The Society was
11 formed out of the coming together of prevention researchers who are making progress in
12 diverse areas, such as youth substance use, depression, and antisocial behavior.

13 My own work in the Society has involved a continuation of the work I was doing
14 at the Center for Advanced Study. A key development in prevention science and practice
15 is the use of systems for monitoring youth well-being. Recently, I prepared a brief
16 monograph on the developing practice of monitoring the well-being of children and
17 adolescents in communities. The Society for Prevention Research published this
18 monograph as part of its effort to promote the development of effective preventive
19 practices. It is entitled, *Community-monitoring systems: Tracking and improving the*
20 *well-being of America's children and adolescents* (Mrazek, Biglan, & Hawkins, 2004).

21 I have also participated on a committee on standards of evidence for the Society.
22 Thanks to the committee, the Society recently adopted a set of standards for the
23 evaluation of preventive interventions and published them as *Standards of evidence:*

1 *Criteria for efficacy, effectiveness, and dissemination* (Society for Prevention Research,
2 2004).

3 **Q: Have you had any leadership roles at ORI?**

4 A: I have been on the Board of Directors of ORI since 1979, with the exception of one year
5 during which I was at the Center for Advanced Study. I chaired the board from 1990 to
6 1992. I led the organization's strategic planning process during my tenure as Chair of the
7 Board.

8 **G. Consultanting**

9 **Q: Have you been a consultant to any government agencies regarding matters of public
10 health?**

11 A: Yes. From 1996 to 2000, I was a member of the Epidemiology and Prevention Review
12 Committee of National Institute on Drug Abuse, where I reviewed grant proposals, in the
13 system I discussed above.

14 From 1998 to 2001, I was a member of the Behavior Change Expert Panel of the
15 Office of National Drug Control Policy (ONDCP). The panel had the responsibility for
16 advising ONDCP in the development of its media marketing campaign to prevent
17 adolescent drug use. We helped develop plans for the campaign and set up a system for
18 assessing the impact of advertisements. Together with another psychologists and a
19 marketing expert, I wrote the creative brief that guided advertising agencies in
20 developing advertisements to motivate parents to prevent their children's drug use. There
21 was some evidence that the campaign increased parents' monitoring of their children's
22 activities, a practice that is essential to preventing problem behavior of adolescents.

23 **Q: Dr. Biglan, what is the rate at which you have received compensation in this case?**

1 A: I am receiving compensation of \$250 an hour.

2 **Q: Have you ever served as an expert witness in other litigation?**

3 A: No. This is the first and only time I have ever been retained as an expert witness in
4 litigation.