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DEPARTMENT OF HEALTH & HUMAN SERVICES

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**TESTIMONY ON THE SCIENTIFIC EVIDENCE ON FLAVORED TOBACCO PRODUCTS**

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**OREGON STATE SENATE  
SALEM, OREGON  
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Thank you for the opportunity to submit testimony today about the scientific evidence and public health impact of flavored tobacco products. I am Dr. Tim McAfee, Senior Medical Officer to the Centers for Disease Control and Prevention's (CDC) Office on Smoking and Health. I have over twenty years of tobacco control experience and have served as the Director of the office at CDC that leads national comprehensive tobacco control approaches for over four years. Before coming to CDC in 2010, I also served as Chief Medical Officer for Free & Clear (now Alere Health), a Seattle-based company that specializes in telephone- and web-based programs to improve health, which has supplied quitline services to the State of Washington. I also served as Director of Washington State's Group Health Center for Health Promotion from 1997 to 2003 in Seattle, Washington. I also practiced as a family physician for over a decade and am an affiliate faculty member at the University of Washington's School of Public Health. I have served as a principal investigator and scientist on numerous research studies, am an author on over 100 scientific papers, and authored the World Health Organization's quitline manual for low- and middle-income countries. I am drawing upon my decades of experience in evidence-based tobacco prevention and control efforts and my current position at the nation's leading public health agency to inform today's discussion.

For the record, I am submitting expert witness testimony today at the request of Oregon Senator Laurie Monnes Anderson, to discuss the evidence surrounding flavored tobacco products. Also for the record, this testimony is not for or against any specific legislative proposal.

### **The Public Health Burden of Tobacco Use**

Cigarette smoking and exposure to secondhand smoke are responsible for approximately 480,000 deaths each year in this country—or about one in every five deaths—making smoking the single most preventable cause of death and disease in the United States.<sup>1</sup> Since the publication of the first Surgeon General's report on the health effects of smoking in 1964, cigarette smoking has been causally linked to diseases of nearly all organs of the body.<sup>1</sup> And since 1964, more than 20 million premature deaths can be attributed to cigarette smoking.<sup>1</sup>

The effects of smoking on health are profound. Smokers cut over 10 years of their life expectancy, meaning they are likely to die 10 years earlier than if they had not started smoking.<sup>2</sup> Non-smokers are twice as likely to live to age 80 compared to smokers.<sup>2</sup> In other words, smoking is not just killing people at the end of their lives, but killing them in middle age. In Oregon, an estimated 5,500 people die from smoking every year.<sup>3</sup> Furthermore, due to tobacco use, 68,300 Oregonian youths younger than 18 years of age are projected to die from smoking if the status quo remains unchanged.<sup>3</sup> And smoking-related illnesses costs Oregon over \$1.5 billion every year in medical costs alone.<sup>3</sup>

### **Overview of Flavored Tobacco Products**

Flavored tobacco products are particularly appealing to youth, especially since they can mask the harshness of tobacco, easing tobacco use initiation.<sup>4,1</sup> These products help new tobacco users establish behaviors that can lead to long-term addiction and the risk of the multitude of health harms from tobacco use.<sup>4</sup> Furthermore, 9 out of 10 adult smokers first start smoking before the age of 18.<sup>1</sup>

In 2009, the Family Smoking Prevention and Tobacco Control Act banned cigarettes and their component parts from containing any characterizing flavors (such as strawberry or cinnamon), excluding menthol and tobacco flavors. However, this regulation did not extend to other tobacco products, such as large cigars, little cigars, smokeless tobacco products (including chewing tobacco, snuff, and snus), shisha (hookah tobacco), and nicotine solutions (which are consumed through electronic nicotine delivery systems such as electronic cigarettes).<sup>4</sup> These products remain sold in a variety of flavors such as mint, wintergreen, berry, cherry, apple, cotton candy, and bubble gum—flavors that can be particularly appealing to youth.<sup>5</sup>

## **Youth Use and Appeal of Flavored Tobacco Products**

Although manufacturers have consistently maintained that their flavored tobacco products are intended for adult smokers, data demonstrate otherwise.<sup>4</sup> Much of the growing popularity of small cigars and smokeless tobacco is among younger adult consumers (aged <30 years) and appears to be linked to the marketing of flavored tobacco products that, like cigarettes, might be expected to be attractive to youth.<sup>4</sup>

Younger smokers are also more likely to have tried flavored cigarettes than older smokers.<sup>4</sup> For example, a study of college students found that they consistently rated flavored brands more positively, regardless of their smoking status—and were more likely to try the brand, regardless of smoking status.<sup>6</sup> In 2011, 42.4% of current cigars or cigarette smokers in grades 6 through 12 reported using flavored little cigars or flavored cigarettes.<sup>7</sup> Adding flavorings may make a manufacturer's brand inherently more attractive to starter smokers.<sup>6</sup>

The latest data show that for U.S. middle and high school students, current use of flavored cigarettes was 4.2%.<sup>7</sup> 3.3% used flavored little cigars and 6.3% used either product.<sup>7</sup> Among cigar smokers, prevalence of no intention to quit tobacco was higher among flavored-little-cigar users (59.7%) than those middle and high school students that did not use flavored tobacco.<sup>7</sup>

Overall, epidemiologic data reveal concerning trends for youth and their use of these other tobacco products. For instance, the use of hookah among high school students rose from 4.1 percent in 2011 to 5.4 percent in 2012.<sup>8</sup> During the same time period, use of cigars by black high school students also rose from 11.7 to 16.7 percent—more than double since 2009.<sup>8</sup> These alarming increases are likely due to a number of factors, including that these products are offered in flavors that appeal to youth.<sup>7</sup>

## **Tobacco Industry Promotion of Flavored Products**

The Surgeon General has found that, “older [tobacco] industry marketing documents openly discuss the use of flavoring agents in cigarettes to attract the interest of young smokers.”<sup>4</sup> For example, the Brown and Williamson tobacco company stated in a review of new concepts for “youth cigarette,” including cola and apple-flavored products, that “it’s a well-known fact that teenagers like sweet products.”<sup>9</sup> R.J. Reynolds internal documents also reveal the company speculated about products that could compete with target competitor brands (Marlboro and Kool) that had “exhibited exceptional strength in the under 35 age group, especially in the 14–20 group.”<sup>10</sup> Recent research highlights that the tobacco industry has added a number of new flavored non-cigarette brands to the market and exploring new flavor technologies, which can serve as new sources of promotion and advertising.<sup>11</sup>

The Surgeon General noted that, “even after tobacco manufacturers agreed as part of the 1998 Master Settlement Agreement to discontinue any marketing that might appeal to adolescents,” this behavior—especially related to flavored tobacco products—continued.<sup>4</sup> For instance, R.J. Reynolds introduced a new line of cigarettes with flavors such as Crema, Mandarin Mint, and Warm Winter Toffee.<sup>4</sup> In 2003, R.J. Reynolds introduced Salem Silver with flavors such as Dark Currents and Cool Myst, and B&W introduced Kool Smooth Fusions, which include flavors such as Midnight Berry and Mocha Taboo.<sup>4</sup> Internal industry documents indicate awareness that these exotic candy and liqueur-flavored products with alluring names are appealing to younger and novice smokers.<sup>11</sup>

At present, characterizing flavors are only banned by the FDA for cigarettes, not cigars. The 2012 Surgeon General’s Report found that, “given this loophole, some flavored cigarettes are reemerging as flavored cigars.”<sup>4</sup> These little cigars are comparable to cigarettes with regard to shape, size, filters, and packaging, and the tobacco industry has promoted little cigars as a lower-cost alternative to cigarettes.<sup>4</sup>

For example, after the regulation on flavored cigarettes, “Djarum clove cigarettes re-emerged in the market as clove flavored cigars, and Sweet Dreams flavored cigarettes re-emerged as Sweet Dreams flavored cigars.”<sup>12,4</sup>

In addition, these nearly identical products are also sold outside of the requirements that apply to cigarettes, such as a minimum pack size of 20 cigarettes and cigarette excise taxes.<sup>4</sup> “Little cigars” are commonly sold as a single stick for about \$1.00—adding additional appeal for youth and young adults that are experimenting with tobacco.<sup>4</sup> Marketing strategies have also blurred the line between cigarettes and little cigars.<sup>4</sup>

Electronic nicotine delivery systems, including e-cigarettes, are also offered in a variety of flavors. A recent study estimated that electronic cigarettes sold online are offered in 7,764 unique flavors, including fruit, desserts and candy, and alcohol or drink-flavors.<sup>13</sup>

The 2012 Surgeon General’s report also noted that some flavored brands, “such as Dutch Masters, White Owl, and Phillies, are particularly known for their use as blunts (cigars filled with marijuana)...and the popularity of such brands may be associated with marijuana use.”<sup>4</sup> Not only is this particularly relevant given states’ recent changes to marijuana laws, it also reminds us of the risk of the use of tobacco products in conjunction with other substances.<sup>4</sup>

## **Menthol**

It is important to consider menthol specifically in any discussion of the public health impact of flavored tobacco. Menthol is an organic compound that has cooling, analgesic, and irritative properties, which can change the way the brain registers the sensations of taste and pain.<sup>1</sup> Cigarettes have been researched, designed, and manufactured to increase the likelihood that initiation will lead to dependence and decrease the likelihood of cessation due to a number of additives, including menthol.<sup>1</sup>

Menthol cigarette brands have been aggressively marketed to African Americans, covering “literally every aspect of life, from Black-owned publications and jazz concerts through civil rights groups, to massive billboards throughout the Black community.”<sup>14</sup> This aggressive marketing resulted in persistent, high rates of use of menthol brands in African American populations.<sup>14</sup>

Menthol cigarettes are also popular among adolescents, especially younger females of non-white race/ethnicity.<sup>1,15</sup> Furthermore, the use of menthol cigarettes has remained constant or increased from 2004 to 2010 in youth and young adults, even as the use of nonmenthol cigarettes has declined.<sup>1</sup> This disparate progress in reducing youth smoking rates has likely been perpetuated by the sale and marketing of menthol cigarettes, including brands such as Camel Menthol and Marlboro Menthol.<sup>15</sup> In Oregon, 4.8% of eleventh graders report smoking menthol cigarettes.<sup>16</sup>

Although the Family Smoking Prevention and Tobacco Control Act banned the use of characterizing flavors in cigarettes and cigarette tobacco, this ban excluded menthol. However, comprehensive reviews of the patterns of menthol cigarette use, as well as the pharmacology of menthol, illustrate that menthol cigarettes promote experimentation and regular smoking and increased the likelihood of youth smokers becoming addicted.<sup>17</sup> Furthermore, among African Americans, those who smoke menthol cigarettes are less likely to quit successfully.<sup>17</sup>

## What Communities Have Done to Address Flavored Tobacco Products

In order to address flavored tobacco products and youth smoking initiation, several states and communities have restricted the sale of flavored tobacco products. As of February 2015, two states (Illinois and Maine) have passed laws that prohibit the sale of certain flavored tobacco products (flavored rolling papers and blunt wraps, and certain flavored cigars, respectively).<sup>5</sup> In 2009, New York, New York passed an ordinance prohibiting the sale of all flavored tobacco products, except those sold in adult-only “tobacco bars” and excluding menthol flavors.<sup>18</sup> Providence, Rhode Island passed a similar ordinance in 2012, also excluding menthol.<sup>18</sup> Both of these local ordinances were upheld in two federal courts, as the courts found these communities had exercised the authority to regulate the sale of tobacco products, reserved to them in the Family Smoking Prevention and Tobacco Control Act.<sup>18,19</sup>

In 2013, the city of Chicago enacted legislation that prohibited the sale of both flavored and menthol tobacco products within 500 feet of schools—the first of its kind in the United States.<sup>19</sup>

### Summary

Every day, more than 1,200 people in this country die due to smoking.<sup>4</sup> For each of those deaths, at least 2 youth or young adults become regular smokers each day.<sup>4</sup> Almost 90 percent of smokers smoke their first cigarette by age 18.<sup>4</sup>

Flavored tobacco products appeal to youth and make it easier for them to start using tobacco. Furthermore, the tobacco industry has used flavored tobacco products to market to youth and young adults. These products are perpetuating the tobacco use epidemic—our nation’s leading cause of death and disease.

Thank you for your attention to this important public health issue.

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<sup>1</sup> U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.

<sup>2</sup> Clarke R, Emberson J, Fletcher A, Breeze E, Marmot M, Shipley MJ. Life expectancy in relation to cardiovascular risk factors: 38 year follow-up of 19,000 men in the Whitehall study. *BMJ* 2009;339:b3513.

<sup>3</sup> Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control—2014*. Centers for Disease Control and Prevention, Atlanta, Georgia: 2014.

<sup>4</sup> U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.

<sup>5</sup> ChangeLab Solutions. *In Bad Taste: What Communities Can Do About Fruit- and Candy-Flavored Tobacco Products*. Available from: [http://changelabsolutions.org/sites/default/files/InBadTaste-FlavoredTobacco\\_FactSheet-FINAL-20140107.pdf](http://changelabsolutions.org/sites/default/files/InBadTaste-FlavoredTobacco_FactSheet-FINAL-20140107.pdf). Accessed December 17, 2014.

<sup>6</sup> Ashare RL, Hawk LW Jr, Cummings KM, O’Connor RJ, Fix BV, Schmidt WC. Smoking expectancies for flavored and non-flavored cigarettes among college students. *Addictive Behaviors* 2007;32(6):1252–61.

<sup>7</sup> King BA, Tynan MA, Dube SR, Arrazola R. Flavored-little-cigar and flavored-cigarette use among U.S. middle and high school students. *Journal of Adolescent Health* 2014;54:40–6.

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- <sup>8</sup> Centers for Disease Control and Prevention. Tobacco product use among middle and high school students—United States, 2011 and 2012. *Morbidity and Mortality Weekly Report* 2013;62(45):893–7.
- <sup>9</sup> Marketing Innovations Inc. Project report. Youth cigarette – new concepts. 1972. Brown & Williamson Collection. Bates No. 170042014. <<http://legacy.library.ucsf.edu/tid/oyq83f00>>.
- <sup>10</sup> Ritchy AP. Apple wine cigarette project. 1972. RJ Reynolds Collection. Bates No. 501283430/3431. <<http://legacy.library.ucsf.edu/tid/buq49d00>>.
- <sup>11</sup> Carpenter CM, Wayne GF, Pauly JL, Koh HK, Connolly GN. New cigarette brands with flavors that appeal to youth: Tobacco marketing strategies. *Health Affairs* 2005;24(6):1601–10.
- <sup>12</sup> Purple Haze. Cigarettes & Cigars, 2011; <[http://shoppurplehaze.com/shop/index.php?main\\_page=index&cPath=3\\_28](http://shoppurplehaze.com/shop/index.php?main_page=index&cPath=3_28)>; accessed: October 24, 2011.
- <sup>13</sup> Zhu SH, Sun JY, Bonnevie E, Cummins SE, Gamst A, Yin L, Lee M. Four hundred and sixty brands of e-cigarettes and counting: implications for product regulation. *Tobacco Control* 2014;23:iii3–iii9 doi:10.1136/tobaccocontrol-2014-051670.
- <sup>14</sup> Gardiner P, Clark PI. Menthol cigarettes: moving toward a broader definition of harm. *Nicotine Tobacco and Research* 2010;12(Suppl 2):S85–S93.
- <sup>15</sup> Giovino GA, Villanti AC, Mowery PD, Sevilimedu V, Niarua RS, Vallone DM, Abrams DA. Differential trends in cigarette smoking in the USA: is menthol slowing progress? *Tobacco Control* 2013;doi:10.1136/tobaccocontrol-2013-051159.
- <sup>16</sup> Oregon Health Authority. 2013 Oregon Healthy Teens Survey. 2014. Available from: [http://public.health.oregon.gov/BirthDeathCertificates/Surveys/OregonHealthyTeens/Documents/2013/2013\\_OHT\\_State\\_Report.pdf](http://public.health.oregon.gov/BirthDeathCertificates/Surveys/OregonHealthyTeens/Documents/2013/2013_OHT_State_Report.pdf). Accessed February 11, 2015.
- <sup>17</sup> U.S. Food and Drug Administration. FDA and NIH announce joint study on tobacco use and risk perceptions [press release], 2011a; <<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm274626.htm>>; accessed: January 9, 2013.
- <sup>18</sup> National Association of Attorneys General. *Court Decision Affirms States’ Role in Regulating and Banning Flavored Tobacco Product Sales*. Available from: <http://www.naag.org/court-decision-affirms-states-role-in-regulating-and-banning-flavored-tobacco-product-sales.php>. Accessed December 17, 2014.
- <sup>19</sup> Community Anti-Drug Coalitions of America. Chicago Officials Agree to Ban Menthol and Flavored Tobacco Products Near Schools. December 12, 2013. Available from: <http://www.cadca.org/resources/detail/chicago-officials-agree-ban-menthol-and-flavored-tobacco-products-near-schools>. Accessed February 11, 2015.