



## SMOKELESS TOBACCO IN THE UNITED STATES

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### Health Harms of Smokeless Tobacco

Public health authorities including the Surgeon General and the National Cancer Institute have found that smokeless tobacco use is hazardous to health and can lead to nicotine addiction.<sup>1</sup> Smokeless tobacco contains at least 28 cancer-causing chemicals and causes oral, pancreatic and esophageal cancer. Smokeless tobacco use increases the risk of death when users have heart attacks or strokes.<sup>2</sup> Use of smokeless tobacco is also associated with other health problems including lesions in the mouth and tooth decay.

### *Health Care Authorities on Smokeless Tobacco Products in the USA*

#### *U.S. Surgeon General<sup>3</sup>*

- “After a careful examination of the relevant epidemiologic, experimental, and clinical data, the committee concludes that **the oral use of smokeless tobacco represents a significant health risk. It is not a safe substitute for smoking cigarettes. It can cause cancer and a number of non-cancerous oral conditions and can lead to nicotine addiction and dependence.**”
- “**The scientific evidence is strong that the use of snuff can cause cancer in humans.** The evidence for causality is strongest for cancer of the oral cavity, wherein cancer may occur several times more frequently in snuff dippers compared to non-tobacco users.”

#### *U.S. National Cancer Institute*

- “There is sufficient evidence that ST [smokeless tobacco] products cause addiction; precancerous oral lesions; cancer of the oral cavity, esophagus, and pancreas; and adverse reproductive and developmental effects including stillbirth, preterm birth, and low birth weight.”<sup>4</sup>
- “**The bioassay data strongly support the epidemiological observation that ST is carcinogenic to humans.** Twenty-eight carcinogens have been identified in chewing tobacco and snuff. The high concentrations of N-nitrosamines in ST, and especially the high levels of TSNA, are of great concern.”<sup>5</sup>
- “**The evidence that NNK and NNN play a role in human oral cancer induced by snuff is strong.** Both compounds are present in significant amounts in snuff and in the saliva of snuff dippers. They are metabolically activated in snuff dippers to intermediates that bind to hemoglobin. They cause oral tumors in rats and are metabolically activated by rat and human oral tissue. Although there are many questions about the mechanisms by which snuff causes oral tumors in rats and humans, there is no doubt that the presence of NNK and NNN in snuff is an unacceptable risk to people who choose to use these products.”<sup>6</sup>
- “Smokeless tobacco causes oral cancer, esophageal cancer, and pancreatic cancer.”<sup>7</sup>

#### *U.S. National Toxicology Program<sup>8</sup>*

- “**The oral use of smokeless tobacco is known to be a human carcinogen** based on sufficient evidence of carcinogenicity from studies in humans.”
- “**Smokeless tobacco has been shown to cause cancer of the oral cavity.** Cancer of the oral cavity has been associated with the use of both chewing tobacco and snuff, which are the two main forms of smokeless tobacco used in the United States. Tumors often arise at the site where the tobacco is placed.”

Despite all the evidence of the harms of smokeless tobacco, smokeless tobacco companies, particularly the U.S. Smokeless Tobacco Company (UST), now a subsidiary of Altria, the parent company of Philip Morris USA, have a history of denying that smokeless tobacco causes cancer or any other disease.<sup>9</sup>

The health harms from smokeless tobacco use amount to an estimated \$3.4 billion in excess health care costs in the U.S.<sup>10</sup>

## **Smokeless Tobacco Use in the U.S.**

Although cigarette smoking among youth in the U.S. has declined significantly since 2000, use of smokeless tobacco among youth has not followed that same trend.<sup>11</sup>

- The 2016 National Youth Tobacco Survey (NYTS) shows that 8.3 percent of high-school boys and 5.8 percent of all high-school students overall reported current use of smokeless tobacco products.<sup>12</sup>
- Each day, more than 1,000 kids ages 12-17 use smokeless tobacco for the first time.<sup>13</sup>
- The 2014 NYTS shows that 42 percent of current smokeless tobacco users in high school and about 29 percent of current smokeless tobacco users in middle school used these products on 20 to 30 of the previous 30 days, which is considered frequent use.<sup>14</sup>
- In 19 states, smokeless tobacco use among high school boys is higher than the national rate, with the highest boys' rates in Alabama (19.6%), Kentucky (21.1%), Montana (19.6%), and West Virginia (22.8%).<sup>15</sup>
- Based on data from 2013, high school athletes use smokeless tobacco at higher rates than non-athletes (11.1% vs. 5.9%). Among male high school athletes, smokeless tobacco use is particularly alarming at 17.4 percent. In addition, participation in more sports teams during high school is associated with higher rates of smokeless tobacco use.<sup>16</sup>
- According to the National Adult Tobacco Survey (NATS), among adult men ages 18 and older, 4.8 percent reported using smokeless tobacco "some days" or "every day."<sup>17</sup>

## ***Dual Use – Smokeless Tobacco Use and Cigarette Smoking***

Dual use of smokeless tobacco and cigarettes is concerning, because users can face greater health risks than they would from using either product alone. Moreover, the risk of lung cancer and other smoking-related disease depends largely on how long a person smokes—not just the number of cigarettes smoked.<sup>18</sup> Thus, youth smokers, including those who transitioned from smokeless products, put themselves at greater risk for tobacco-related diseases in the future.

- Research shows that youth who use smokeless tobacco are also more likely to smoke cigarettes.<sup>19</sup>
- According to a 2010 study based on data from national U.S. surveys, the prevalence of cigarette smoking is substantially higher among middle and high school males who use smokeless tobacco than among those who do not. For 12<sup>th</sup> grade males, the prevalence of smoking one-half pack of cigarettes or more per day was nearly five times greater among smokeless tobacco users than non-users.<sup>20</sup>
- The 2014 NYTS shows that more than 70 percent of middle and high school current frequent (20 or more of the preceding 30 days) smokeless tobacco users report currently using two or more tobacco products. Poly-tobacco use is only slightly lower among infrequent users: more than 60 percent of less frequent (1-5 of the preceding 30 days) middle and high school current smokeless tobacco users report currently using multiple tobacco products.<sup>21</sup>

## **Marketing Smokeless Tobacco**

Smokeless tobacco companies in the U.S. have a long history of creating new products that appeal to kids.<sup>22</sup> In recent years, there has been an onslaught of new smokeless tobacco products on the market, which, coupled with aggressive marketing strategies, could attract new youth users.

Not surprisingly, tobacco marketing plays an important role in attracting users – particularly youth. The 2012 Surgeon General's report, *Preventing Tobacco Use among Youth and Young Adults*, found that the "integration of product design with marketing helped to reverse the mid-twentieth century decline in smokeless tobacco use and spurred a rapid increase in smokeless tobacco use by adolescents and young adult males."<sup>23</sup>

From 1998 to 2016 (the most recent year for which data are available), the total advertising and marketing expenditures of the top-five smokeless tobacco companies in the U.S. more than quintupled. In 2016, these smokeless tobacco companies spent \$759.3 million to advertise and market their products, increasing for the fourth year in a row, and more than triple the 2005 expenditures (\$250.8 million), the

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\* Note that the adult data are not comparable to the youth data due to different sources and survey methodologies.

year before the cigarette companies started acquiring and marketing their own smokeless tobacco products.<sup>24</sup>

Some of these funds pay for smokeless tobacco ads in magazines with high youth readership, such as *Sports Illustrated* and *Rolling Stone*.<sup>25</sup> In the few years after signing the Smokeless Tobacco Master Settlement Agreement (STMSA), despite its restrictions placed on youth advertising, UST increased its expenditures in magazines with a significant number of youth readers by 161 percent, from \$3.6 million to \$9.4 million.<sup>26</sup> The smokeless tobacco companies spent over two and a half times as much on magazine advertisements in 2016 compared to 2013 (\$20.6 million vs. \$7.7 million).<sup>27</sup> During this period, Altria returned to advertising in magazines for its UST brands, including those that are popular with boys and young men. However, the tobacco companies continue to spend most of their money (61.6%) in the price discount category, to make their products more affordable and accessible to consumers – including youth.<sup>28</sup>

### **Cigarette Companies Enter the Smokeless Market**

The downward trend in smoking rates and the continued popularity of smokeless tobacco products has pushed cigarette companies into the smokeless tobacco market, relying on their popular cigarette brand names to attract new users. The two largest U.S. cigarette manufacturers, both of whom were found to be racketeers and guilty of marketing to kids by a U.S. District Court Judge, both acquired two of the largest smokeless tobacco manufacturers and are producing their own smokeless tobacco products under their famous cigarette brand names. Reynolds American – labeled as a “serial violator” of the Master Settlement Agreement by the U.S. Department of Justice – entered into the smokeless tobacco market with its purchase of American Snuff Company (formerly Conwood Tobacco Company) in 2006, while Philip Morris USA’s parent company, Altria, purchased UST in 2009. Today, UST controls more than half (55.6%) of the moist snuff tobacco market (with leading premium brands Skoal and Copenhagen) while American Snuff Company, the makers of Grizzly and Kodiak, holds about one-third of it.<sup>29</sup> Other cigarette companies have also test-marketed their own smokeless tobacco products.

There is reason for concern given the track record of UST and its prior marketing behavior aimed at kids and adolescents as well as the recent entry of Reynolds American and now Philip Morris USA into the smokeless tobacco category.<sup>30</sup> In her landmark ruling in the Department of Justice (DOJ) lawsuit against Philip Morris USA and R.J. Reynolds (and the other defendant cigarette companies), Judge Kessler found, “The evidence is clear and convincing – and beyond any reasonable doubt – that Defendants have marketed to young people twenty-one and under while consistently, publicly, and falsely, denying they do so.”<sup>31</sup> Just one example is a recent California Supreme Court ruling that found R.J. Reynolds (which is owned by Reynolds American) had, on six separate occasions, violated California state law banning the free distribution of cigarettes at events attended by minors.<sup>32</sup>

### **Novel Products**

In the last several years, cigarette companies have introduced a number of new smokeless tobacco products.

**Snus.** Most notable are the snus products, which are small, teabag-like pouches containing tobacco and other flavorings that users place between their upper gum and lip. R.J. Reynolds’s Camel Snus and Philip Morris USA’s Marlboro Snus are now sold nationally in a variety of flavors, and Liggett Group’s Grand Prix Snus and Lorillard’s Triumph Snus were test-marketed in 2008. Swedish Match North America has recently increased its marketing for General Snus, similar to the products it sells in Sweden. Because these products do not require spitting, their use can be easily concealed. One high school student admitted using Camel Snus during class, saying, “It’s easy, it’s super-discreet...and none of the teachers will ever know what I’m doing.”<sup>33</sup>

**Dissolvable Tobacco Products.** Several dissolvable tobacco products have been introduced, but have been discontinued because of low sales or other reasons. Star Scientific used to market Ariva tobacco lozenges and Stonewall Hard Snuff, while R.J. Reynolds marketed Camel Dissolvables – orbs, sticks, and strips – from 2009 to 2013. Philip Morris USA also test-marketed Marlboro Sticks and Skoal Sticks in Kansas beginning in 2011, but also ended the trial a few years later. A few state agencies issued warnings about these types of products when they were on the market.<sup>34</sup> As required by the Family Smoking Prevention and Tobacco Control Act of 2009, the Tobacco Products Scientific Advisory

Committee of the U.S. Federal Drug Administration reviewed the dissolvable products that were on the market at that point and released a report stating, “concluded that the available evidence, while limited, leads to a qualitative judgment that availability of DTPs [dissolvable tobacco products] could increase the number of users of tobacco products.”<sup>35</sup>

While very new, these developments could possibly result in changes in the smokeless tobacco market specifically and more generally in the market for all tobacco products, but the nature of those changes is not certain. Potential outcomes could include:

- Increased youth access to smokeless tobacco products as the new low-weight tobacco products continue to be inadequately taxed at the state and federal level.
- Increased efforts by smokeless manufacturers to encourage adult smokers who are concerned about their health or who are interested in quitting to switch to smokeless tobacco rather than quit completely.
- Increase in nicotine addiction due to dual use of smokeless and combusted tobacco products in light of increasing limitations on public indoor and workplace smoking.
- Increased youth experimentation with smokeless tobacco (due to the ability to use it discretely/secretly) and it could be a deterrent to youth tobacco use cessation efforts.
- Decreased cessation rates as smokers use smokeless tobacco products in places they cannot smoke rather than being abstinent from tobacco and nicotine exposure.

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### **Types of Smokeless Tobacco**

- *Oral (moist) snuff* is a finely cut, processed tobacco, which the user places between the cheek and gum that releases nicotine which, in turn, is absorbed by the membranes of the mouth.
- *Snus (or pouches)* is a tea-bag like packet of moist snuff tobacco and flavorings, placed between the upper gum and lip. The product design does not require the user to spit, unlike traditional moist snuff.
- *Dissolvable tobacco products* are made of ground tobacco and flavorings, shaped into pellets, strips, or other forms, that the user ingests orally. These products do not require spitting.
- *Looseleaf* chewing tobacco is stripped and processed cigar-type tobacco leaves, loosely packed to form small strips. It is often sold in a foil-lined pouch and usually treated with sugar or licorice.
- *Plug* chewing tobacco consists of small, oblong blocks of semi-soft chewing tobacco that often contain sweeteners and other flavoring agents.
- *Nasal snuff* is a fine tobacco powder that is sniffed into the nostrils. Flavorings may be added during fermentation, and perfumes may be added after grinding.

**For more information on smokeless tobacco, see the Campaign’s website at [http://www.tobaccofreekids.org/facts\\_issues/fact\\_sheets/toll/products/smokeless/](http://www.tobaccofreekids.org/facts_issues/fact_sheets/toll/products/smokeless/).**

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<sup>1</sup> For more information about the health harms of smokeless tobacco products, see Campaign for Tobacco-Free Kids factsheet, *Health Harms from Smokeless Tobacco Use*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0319.pdf>.

<sup>2</sup> CDC, *Smokeless Tobacco: Health Effects*, December 1, 2016, [https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/smokeless/health\\_effects/index.htm](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/smokeless/health_effects/index.htm). NCI and CDC, *Smokeless Tobacco and Public Health: A Global Perspective*, Bethesda, MD: HHS, CDC, NIH, NCI, NIH Publication No. 14-7983, December 2014, <http://cancercontrol.cancer.gov/brp/tcrb/global-perspective/index.html>.

<sup>3</sup> U.S. Department of Health and Human Services (HHS), *The Health Consequences of Using Smokeless Tobacco: A Report of the Advisory Committee to the Surgeon General*, Bethesda, MD 20892, NIH Publication No. 86-2874, April 1986, <http://profiles.nlm.nih.gov/NN/B/B/F/C/>.

<sup>4</sup> National Cancer Institute (NCI) and U.S. Centers for Disease Control and Prevention (CDC), *Smokeless Tobacco and Public Health: A Global Perspective*, Bethesda, MD: HHS, CDC, National Institutes of Health (NIH), NCI, NIH Publication No. 14-7983, 2014.

<sup>5</sup> NIH, NCI, *Smoking and Tobacco Control Monograph 2: Smokeless Tobacco or Health: An International Perspective*, September 1992, [http://cancercontrol.cancer.gov/tcrb/monographs/2/m2\\_complete.pdf](http://cancercontrol.cancer.gov/tcrb/monographs/2/m2_complete.pdf).

<sup>6</sup> NIH, NCI, *Smoking and Tobacco Control Monograph 2: Smokeless Tobacco or Health: An International Perspective*, September 1992, [http://cancercontrol.cancer.gov/tcrb/monographs/2/m2\\_complete.pdf](http://cancercontrol.cancer.gov/tcrb/monographs/2/m2_complete.pdf).

<sup>7</sup> NCI, “Smokeless Tobacco and Cancer,” Accessed October 9, 2015, <http://www.cancer.gov/about-cancer/causes-prevention/risk/tobacco/smokeless-fact-sheet#r1>. See also: International Agency for Research on Cancer. *A Review of Human Carcinogens:*

*Personal Habits and Indoor Combustions*. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100E, 2012, <http://monographs.iarc.fr/ENG/Monographs/vol100E/mono100E-8.pdf>.

<sup>8</sup> National Toxicology Program, Public Health Service, HHS, *Report on Carcinogens, Thirteenth Edition*, October 2014, <http://ntp.niehs.nih.gov/ntp/roc/content/profiles/tobacco-related-exposures.pdf>.

<sup>9</sup> Letter to Secretary Donald S. Clark, U.S. Federal Trade Commission, dated February 5, 2002, from Daniel C. Schwartz, Partner, Bryan Cave LLP. UST website (accessed May 8, 2006), *2005 Annual Report & 2006 Proxy UST*, <http://ccbn.mobular.net/ccbn/7/1301/1391/print/print.pdf>.

<sup>10</sup> In 2014 dollars. Wang, Y, et al., "Healthcare Utilization and Expenditures Attributable to Smokeless Tobacco Use among US Adults," *Nicotine & Tobacco Research*, ntx196, <https://doi.org/10.1093/ntr/ntx196>, September 2, 2017.

<sup>11</sup> U.S. Centers for Disease Control & Prevention (CDC), National Youth Tobacco Survey.

<sup>12</sup> CDC, "Tobacco Use Among Middle and High School Students — United States, 2011–2016," *Morbidity and Mortality Weekly Report (MMWR)* 66(23), June 16, 2017.

<sup>13</sup> Substance Abuse and Mental Health Services Administration (SAMHSA), HHS, *Results from the 2016 National Survey on Drug Use and Health, NSDUH: Detailed Tables*, 2017, <https://www.samhsa.gov/data/sites/default/files/NSDUH-DET-Tabs-2016/NSDUH-DET-Tabs-2016.pdf>.

<sup>14</sup> CDC, "Frequency of Tobacco Use Among Middle and High School Students — United States, 2014," *MMWR* 64(38):1061-1065, October 2, 2015.

<sup>15</sup> Other states with boys' smokeless use rates higher than the national rate include Alaska (14.7%), Arkansas (17.2%), Idaho (14.3%), Indiana (15.7%), Mississippi (18.4%), Missouri (17.0%), Nebraska (14.9%), New Mexico (14.2%), North Carolina (14.9%), North Dakota (17.6%), Oklahoma (16.2%), Pennsylvania (16.0%), South Dakota (18.9%), Tennessee (18.5%), and Wyoming (17.2%). CDC, *MMWR* 65(SS-6), June 10, 2016.

<sup>16</sup> CDC, "Combustible and Smokeless Tobacco Use Among High School Athletes — United States, 2001–2013," *MMWR* 64(34):935-939, September 4, 2015.

<sup>17</sup> Hu, SS, et al., "Tobacco Product Use Among Adults — United States, 2013–2014," *MMWR* 65(27):685-691, July 15, 2016, <https://www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6527a1.pdf>.

<sup>18</sup> HHS, *The health consequences of smoking: a report of the Surgeon General*, 2004 (page 95).

<sup>19</sup> Tomar, S, et al., "Patterns of dual use of cigarettes and smokeless tobacco among US males – findings from national surveys," *Tobacco Control* 19:104-109, 2010; Severson, H, et al., "Use of smokeless tobacco is a risk factor for cigarette smoking," *Nicotine & Tobacco Research*, 9(12):1331-1337, December 2007; Forrester, K, et al., "Predictors of smoking onset over two years," *Nicotine & Tobacco Research*, 9(12):1259-1267, December 2007; Tomar, S, "Is use of smokeless tobacco a risk factor for cigarette smoking? The U.S. experience," *Nicotine & Tobacco Research* 5(4):561-569, August 2003; Haddock, CK, et al., "Evidence That Smokeless Tobacco Use Is a Gateway for Smoking Initiation in Young Adult Males," *Preventive Medicine* 32:262-267, 2001.

<sup>20</sup> Tomar, S, et al., "Patterns of dual use of cigarettes and smokeless tobacco among US males – findings from national surveys," *Tobacco Control* 19:104-109, 2010.

<sup>21</sup> CDC, "Frequency of Tobacco Use Among Middle and High School Students — United States, 2014," *MMWR* 64(38):1061-1065, October 2, 2015.

<sup>22</sup> See, e.g., TFK Factsheet, *Smokeless Tobacco and Kids*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0003.pdf>.

<sup>23</sup> HHS, *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*, 2012, at 539.

<sup>24</sup> FTC, *Smokeless Tobacco Report for 2016*, 2018, [https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2016-federal-trade-commission-smokeless-tobacco-report/ftc\\_smokeless\\_tobacco\\_report\\_for\\_2016\\_0.pdf](https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2016-federal-trade-commission-smokeless-tobacco-report/ftc_smokeless_tobacco_report_for_2016_0.pdf). Data for top 5 manufacturers only: Altria Group, Inc.; North Atlantic Trading Company, Inc.; Reynolds American, Inc.; Swedish Match North America, Inc.; and Swisher International Group, Inc.

<sup>25</sup> Morrison, MA, et al., "Under the Radar: Smokeless Tobacco Advertising in Magazines With Substantial Youth Readership," *American Journal of Public Health (AJPH)* 98:543-548, 2008. See also, *Sports Illustrated*, July 30, 2001, and December 11, 2009; *Rolling Stone*, June 10, 2010, and December 5, 2013.

<sup>26</sup> Massachusetts Department of Public Health, *Smokeless Tobacco Advertising Expenditures Before and After the Smokeless Tobacco Master Settlement Agreement: A Report of the Massachusetts Department of Public Health*, May 2002, <http://archives.lib.state.ma.us/bitstream/handle/2452/49479/ocm50878863.pdf>.

<sup>27</sup> FTC, *Smokeless Tobacco Report for 2016*, 2018 [Data for top 5 manufacturers only].

<sup>28</sup> FTC, *Smokeless Tobacco Report for 2016*, 2018 [Data for top 5 manufacturers only].

<sup>29</sup> Altria Group, Inc., Form 10-K, 2016 Annual Report, filed February 27, 2017,

<https://www.sec.gov/Archives/edgar/data/764180/000076418017000028/a2016form10-k.htm>. Reynolds American, Inc., Form 10-K, 2016 Annual Report, filed February 9, 2017, [https://www.sec.gov/Archives/edgar/data/1275283/000156459017001245/rai-10k\\_20161231.htm](https://www.sec.gov/Archives/edgar/data/1275283/000156459017001245/rai-10k_20161231.htm).

<sup>30</sup> For more examples, see TFK Factsheet, *Smokeless Tobacco and Kids*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0003.pdf>.

<sup>31</sup> Tobacco Control Legal Consortium, *The Verdict Is In: Findings From United States v. Philip Morris, Marketing to Youth*, 2006.

<sup>32</sup> California Attorney General, *Attorney General Lockyer Announces \$5 Million Settlement with R.J. Reynolds to Resolve Lawsuit Over Firm's Distribution of Free Cigarettes*, May 8, 2006, [http://oag.ca.gov/news/press\\_release?id=1301](http://oag.ca.gov/news/press_release?id=1301).

<sup>33</sup> Nelson, L, "If you think Snus is a safe alternative to smoking, think again," *Kansas City Star*, October 31, 2007.

<sup>34</sup> Indiana Poison Center, *New Forms of Smokeless, Spitless Tobacco Put Users and Children at Risk*, News Release, January 1, 2009.

<sup>35</sup> Kansas Department of Health and Environment, *World No Tobacco Day; Kansas Test Market for New Tobacco Product*, Press Release, May 26, 2011, [http://www.kdheks.gov/news/web\\_archives/2011/05262011.htm](http://www.kdheks.gov/news/web_archives/2011/05262011.htm).

<sup>36</sup> U.S. Food and Drug Administration's Tobacco Products Scientific Advisory Committee (TPSAC), *Summary: TPSAC Report on Dissolvable Tobacco Products*, March 1, 2012. See also, Deyton, L (Director of the FDA Center for Tobacco Products), "Letter to Industry on Dissolvable Smokeless Tobacco Products (R.J. Reynolds Tobacco Company)" and "Letter to Industry on Dissolvable Smokeless Tobacco Products (Star Scientific, Inc)," February 1, 2010.