Energy drinks are highly caffeinated beverages designed to provide a short-term energy boost. These drinks typically contain as much caffeine as a cup of coffee and three times as much as a standard soft drink, with some brands containing much higher doses. Energy drinks also contain sweeteners, amino acids such as taurine or l-carnitine, massive doses of B vitamins, and plant or herbal extracts such as gingko biloba, ginseng, or milk thistle. The potential interactions among these ingredients are not well understood.

With sales expected to approach $20 billion a year by 2013 in the U.S. alone, energy drinks such as Red Bull, Monster, and Rockstar have become staples of the adolescent and young adult market. Although provocatively named brands such as Full Throttle, Daredevil, Havoc, Rage, Bawls, Who's Your Daddy, Whoop Ass, and Extreme Ripped Force are designed to appeal to a target demographic of 18-25 year olds, they are nearly as common among high school students.

Excessive energy drink use is associated with several potential health risks. Overuse can lead to symptoms ranging from mild (headaches, jitteriness, anxiety) to severe (insomnia, heart palpitations, seizures). Poison control centers and emergency rooms have documented a rapidly growing number of cases of caffeine intoxication involving energy drink use, particularly when coupled with alcohol or other substance use. After several highly publicized cases in 2010, the FDA no longer permits ready-to-drink alcoholic beverages such as Four Loko, Joose, or Maxx to contain caffeine. However, caffeinated mixed drinks such as Red Bull & vodka or Jagerbombs remain extremely popular.

Timely Research
Highlights of RIA research findings in this area included:

- **Risk-taking and energy drink use in college students.** Undergraduate students who used energy drinks frequently were three times as likely to smoke cigarettes, abuse prescription drugs, or be in a

**Continued on page 2**
serious physical fight as infrequent users or nonusers. Frequent energy drink consumers also reported drinking alcohol, having alcohol-related problems, and using marijuana about twice as often as less frequent consumers. Other risk behaviors associated with frequent energy drink use included unsafe sex, not using a seatbelt, participating in extreme sports, and doing something dangerous on a dare.

Demographic differences. Men were significantly more likely to consume energy drinks than women (46% vs. 31%). Whites were also significantly more likely to consume them than African Americans (40% vs. 25%).

Energy drinks and alcohol. Two thirds of college student energy drink users also used energy drinks as mixers with alcoholic beverages.

Substance use and energy drink use in musicians. In a RIA study of amateur and professional musicians between the ages of 18 and 45, energy drink users were more likely than nonusers to report misuse of legal substances, including binge drinking (76% vs. 59%), alcohol-related problems (78% vs. 69%), and misuse of prescription drugs (31% vs. 13%). Energy drink users were also significantly younger on average (25.7 years vs. 30.4 years) and scored higher on personality measures of sensation-seeking, an attraction to novel and varied experiences.

# Reaching Others

These research results have been communicated to various constituencies — individuals, families, medical professionals, addiction treatment providers, other scientists -- in multi-media kinds of ways: newspapers, tv and radio, websites and blogs, peer-reviewed journals. A selection of ‘media hits’ demonstrate the widespread interest by diverse publics on this subject:

**Newspaper/TV/Radio:** The New York Times; Chicago Tribune; Dallas News; Buffalo News; Buffalo Criterion; Woman’s World Magazine; UPI; Hamilton, Ontario radio; various Buffalo radio stations; Addiction Professional Magazine; CBC; the Sciences et Avenir, a French science newspaper; British newspaper The Independent; USA Today; Today Show; CNN Headline News; National Public Radio; Medscape Psychiatry from WebMD; Odyssey Magazine (for teens 11-18); Global Television-Toronto; EAP Lifeworks Program newsletter; the Seattle Post Intelligencer and more!

**Web:** foodconsumer.org; topix.com/forum/city/buffalo; www.genengnews.com (Genetic Engineering & Biotechnology News); http://www.dailydose.net of Great Britain; webmd.com, rodale.com (Men’s Health, Women’s Health, Prevention), ScienceDaily.com, wkbw.com (Buffalo TV), philly.com/inquirer (The Philadelphia Inquirer), HealthNewsDigest.com, WNYE Radio; musicindustryreport.org; http://www.breitbart.com; esciencenews.com; stoneheartnewsletters.com; topix.com; medicalxpress.com; medscape.com/psychiatry; examiner.com/sandiego; futurity.org/health-medicine; WUSA-TV, Washington, DC; mms.news-medical.net/news; scienceblog.com; Milwaukee Journal Sentinel blog; scienceline.com; collegenews.com, topnews.co.uk; citytowninfo.com; International Business Times; aol.com; dailyindia.com and more!