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Radius Presents Positive Phase 2a Study Results Establishing Clinical Proof of Concept for RAD1901 in Reducing Menopausal Hot Flashes

—Four-week study data revealed during late-breaking poster session at ENDO 2010 meeting—
—Potential first-in-class SERM achieves 77% reduction in frequency of moderate and severe hot flashes—

CAMBRIDGE, Mass., June 19, 2010— Radius Health ("Radius") today announced positive results from a Phase 2a clinical trial of the Company's RAD1901 selective estrogen receptor modulator (SERM) in relieving menopausal hot flashes. The data will be presented today in the late-breaking poster session at the 92nd annual meeting of the Endocrine Society (ENDO 2010) held June 19–22 in San Diego.

The objectives of the proof-of-concept study were to determine the clinical safety and efficacy of RAD1901 over 28 days of treatment in postmenopausal women experiencing frequent moderate-to-severe hot flashes as reflected in reduction in frequency and severity of symptoms; and to select dose levels of RAD1901 for further clinical evaluation. Overall, the greatest clinical benefit was demonstrated by the lowest dose of RAD1901 tested (10 mg) compared to placebo and relative to the other dose groups studied (25 mg, 50 mg, and 100 mg). RAD1901 10 mg achieved a statistically significant 77 percent reduction in frequency of moderate and severe hot flashes at Week 4 ($p<0.05$) relative to baseline, compared with 54 percent for placebo. A significant reduction in frequency of moderate and severe hot flashes was also observed at Weeks 2 and 3. None of the other dose groups were statistically different from placebo. A similar and significant reduction in composite score was also seen at these same three time points. RAD1901 was well tolerated at all doses in the study, with no serious adverse events reported. Radius is planning to confirm these results in a larger Phase 2 study of RAD1901 with a longer duration of treatment.

Key findings from the 10 mg dose group at Week 4:

- Mean percent change of moderate and severe hot flashes from baseline:
  -77%, compared with -54% in placebo
- Percent change in mean daily severity of hot flashes from baseline:
  -37%, compared with -31% in placebo
- Mean percent change in hot flash composite score (frequency x severity) from baseline:
  -76%, compared with -56% in placebo

"We are very pleased to see a statistically significant reduction of moderate and severe hot flashes effects with the 10 mg dose of RAD1901 after four weeks of treatment," said Louis O'Dea, MD, Chief Medical Officer of Radius. "While not a classic dose-response effect, these overall results are not atypical of the response to CNS-active

drugs that have mixed agonist-antagonist effects. The potential that RAD1901 may be a tissue-selective drug with both estrogen-agonist and -antagonist action underscores its potential to offer the ideal therapy to prevent and reduce menopausal hot flashes without the undesirable effects on endometrial and breast tissue associated with estrogens."

"This proof-of-concept study of RAD1901 provides preliminary evidence of efficacy in reducing hot flashes in symptomatic postmenopausal women, specifically at the 10 mg dose level," said C. Richard Lyttle, PhD, President and CEO of Radius. "Based on the data presented today at ENDO, we believe RAD1901 is emerging as a potentially important new treatment approach that may improve the standard of care for the millions of women living with hot flashes by providing the efficacy of hormone therapy without the safety concerns. We look forward to further investigating this promising SERM candidate to confirm the findings at the 10 mg dose, to potentially evaluate lower doses, and to further define the safety of RAD1901 over longer periods of exposure."

The abstract, titled "RAD1901, a Novel Selective Estrogen Receptor Modulator (SERM), Demonstrates Evidence of Efficacy on Postmenopausal Hot Flashes in an Early Phase Human Study," will be presented at ENDO 2010 starting on Saturday, June 19, at 1:30 p.m. Accepted late-breaker abstracts for the ENDO meeting are available on the ENDO 2010 website.

Study Design

The Radius Phase 2a double-blind, placebo-controlled, dose-ranging clinical trial enrolled 100 otherwise healthy postmenopausal women with documented history of moderate to severe hot flashes and was conducted at nine clinical centers in Argentina. The statistical primary endpoint of the study was the frequency and severity of hot flashes relative to baseline. The women were randomized to receive one of four doses of RAD1901 or placebo once daily over a four-week treatment period.

About RAD1901

RAD1901 is a potential first-in-class novel selective estrogen receptor modulator (SERM) under development at Radius for menopausal hot flashes. SERMs are small molecules that bind to and selectively modulate estrogen receptors. These molecules have the ability to stimulate or block estrogen's activity in different types of tissue, functioning as estrogen receptor agonists in some tissues and as estrogen receptor antagonists in others. Currently available SERMS are approved for the treatment and prevention of breast cancer and osteoporosis but tend to respectively increase the frequency and severity of hot flashes. In preclinical studies, Radius demonstrated RAD1901's potential to reduce or prevent the hot flashes associated with menopause, along with a simultaneous bone-protective effect, without stimulating breast or uterine tissues. In Phase I studies, RAD1901 showed a favorable safety profile. RAD1901 is distinctive from other SERMs in its unique biological profile, combined with its significant ability to penetrate the blood-brain barrier, which enables RAD1901 to function within certain dose ranges as an estrogen agonist within the central nervous system and thereby relieve hot flashes. RAD1901 was discovered by Eisai Co., Ltd. and was licensed by Radius (excluding Japan) in 2006.

About Vasomotor Symptoms (Menopausal Hot Flashes)

Hot flashes are a common symptom during menopause, experienced by more than 75% of women during the menopause transition for a median duration of four years. These symptoms can disrupt sleep and interfere with quality of life. An estimated 6,000 U.S. women reach menopause every day (more than two million per year) with a total population of 50 million postmenopausal women. In addition, most women receiving systemic therapy for breast cancer suffer hot flashes, often with more severe or prolonged symptoms. Treatment with estrogen or hormone replacement therapy (ERT or HRT) is the standard of care for many women suffering hot flashes, but due to concerns about potentially serious risks and contraindications, including increased risk of developing heart disease, breast cancer, stroke, and dementia, there is a significant need for new therapeutic options.

About Radius (WWW.RADIUSPHARM.COM)

Radius is a leading company in the discovery and development of a new generation of drug therapies for osteoporosis and women's health. Radius has raised $106.5 million in private equity financing since its establishment in 2003 and is based in Cambridge, Massachusetts.

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