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Rasilez^{®*}, first-in-class direct renin inhibitor, lowers high blood pressure more effectively than diuretic in obese patients

- Data presented at European Society of Cardiology congress confirm Rasilez is effective in difficult-to-treat patients with obesity, heart failure and diabetes^{1,2,3}
- Data from ALOFT study shows Rasilez reduces marker of heart failure severity when added to optimal therapy in chronic heart failure patients with diabetes²
- Findings important as 70% of patients with high blood pressure are overweight or obese⁴ and 23 million people worldwide have chronic heart failure⁵
- Heart and kidney protection potential of Rasilez independent of blood pressure lowering ability being further studied in ASPIRE HIGHER clinical program

Basel, September 3, 2008 — New clinical data analysis confirms that the first-in-class direct renin inhibitor Rasilez[®] (aliskiren), known as Tekturna[®] in the US, provides significantly greater blood pressure reductions in obese patients with high blood pressure compared to the diuretic hydrochlorothiazide (HCT) alone¹.

The *post hoc* analysis presented at the European Society of Cardiology (ESC) 2008 annual congress showed that Rasilez/Tekturna 300 mg monotherapy provided reductions in mean sitting systolic blood pressure (when the heart is pumping) of -16.7 mmHg compared to -12.2 mmHg for HCT, and diastolic (when the heart is at rest) blood pressure reductions of -12.3 mmHg compared to -9.1 mmHg for HCT (p<0.001)¹.

These findings are significant as 70% of patients with high blood pressure are overweight or obese (body mass index ≥ 30 kg/m²)⁴. Obese patients with high blood pressure have an increased risk of cardiovascular and kidney disease⁶. Approximately 58% of diabetes and 21% of ischemic heart disease is attributable to a body mass index above 21⁷.

“Sixty-five percent of people with high blood pressure worldwide still do not have the condition under control and as the rate of obesity and diabetes continues to rise there is a definite need for new treatments to help bring patients to goal,” said Professor Aldo Maggioni of the Italian Association of Hospital Cardiologists Research Center, Florence, Italy. “In addition to providing effective blood pressure reductions in the general hypertensive population these data further confirm that aliskiren is effective and well tolerated in difficult to treat patients who are obese and in patients with heart failure who also have kidney disease or diabetes.”

Two subgroup analyses of the ALOFT study (Aliskiren Observation of Heart Failure Treatment) were also presented. Rasilez/Tekturna, when added to standard therapy in heart failure patients with or without diabetes, provided a 25% reduction in brain

* Rasilez[®] is the trade name for aliskiren throughout the world, except in the US where it is known as Tekturna[®].

natriuretic peptide (BNP), an indicator of heart failure severity, from baseline compared with placebo². Rasilez/Tekturna was well tolerated when added to standard therapy in chronic heart failure patients, including those with diabetes and kidney disease (eGFR < 60 mL/min/1.73m²)^{2,3}.

BNP is a substance released from the heart's lower ventricles in response to increased wall tension. The level of BNP in the bloodstream increases when heart failure symptoms worsen, and decreases when the heart failure condition is stable.

Approximately 23 million people worldwide have chronic heart failure for which the leading risk factor is high blood pressure⁵. If high blood pressure is properly controlled, the incidence of heart failure and stroke can be reduced by almost half, and heart attacks by one quarter⁸.

“In addition to providing powerful blood pressure reductions that last beyond 24 hours both as monotherapy and in combination, Rasilez continues to demonstrate the potential to protect organs such as the heart and kidneys,” said Trevor Mundel, MD, Head of Global Development Functions at Novartis Pharma AG. “We are pleased to report that studies from the ASPIRE HIGHER program, including data from ALOFT and AVOID, have already paved the way for an enhanced European Union label for Rasilez.”

ASPIRE HIGHER is the largest ongoing cardio-renal outcomes program worldwide and is investigating the potential heart and kidney protection benefit of Rasilez/Tekturna.

Findings from three of the 14 studies in the ASPIRE HIGHER program have already been reported. The AVOID study, published recently in *The New England Journal of Medicine*, showed that Rasilez/Tekturna reduced albuminuria, a key indicator of kidney disease, by an additional 20% in type 2 diabetic patients with kidney disease and high blood pressure who were already taking the maximum standard treatment⁹.

The ALOFT study, recently published in the *Circulation: Heart Failure*, showed that the addition of Rasilez/Tekturna to standard heart failure treatments resulted in nearly five times greater reductions in BNP, a marker of heart failure severity, than the standard therapy alone¹⁰. The ALLAY study demonstrated that Rasilez/Tekturna reduced left ventricular hypertrophy (LVH), a marker of cardiac damage associated with an increased risk of cardiovascular events¹¹. In ALLAY, the combination of Rasilez/Tekturna and the angiotensin receptor blocker (ARB) losartan achieved a numerically greater reduction in LVH than losartan alone, but the result was not statistically significant¹¹.

Rasilez/Tekturna is approved in 55 countries. Tekturna was approved in the US in March 2007, and in the European Union in August 2007 under the trade name Rasilez. Tekturna HCT[®], the first single-pill combination involving Tekturna, was approved in the US in January 2008. Rasilez/Tekturna was discovered by Novartis and developed in collaboration with Speedel.

Novartis is focused on improving the lives of the hundreds of millions of people with cardiovascular and metabolic diseases. As a global leader in cardiovascular and metabolic health for nearly 50 years, Novartis provides innovative therapies and support programs to treat high blood pressure and diabetes – both major public health issues. The portfolio includes the world's most-prescribed angiotensin receptor blocker, the first and only approved direct renin inhibitor, a single pill combining two leading high blood pressure medicines, and a novel DPP-4 inhibitor. Novartis is dedicated to helping physicians and patients through effective medicines, programs and an ongoing commitment to research.

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About Novartis

Novartis AG provides healthcare solutions that address the evolving needs of patients and societies. Focused solely on healthcare, Novartis offers a diversified portfolio to best meet these needs: innovative medicines, cost-saving generic pharmaceuticals, preventive vaccines, diagnostic tools and consumer health products. Novartis is the only company with leading positions in these areas. In 2007, the Group’s continuing operations (excluding divestments in 2007) achieved net sales of USD 38.1 billion and net income of USD 6.5 billion. Approximately USD 6.4 billion was invested in R&D activities throughout the Group. Headquartered in Basel, Switzerland, Novartis Group companies employ approximately 98,000 full-time associates and operate in over 140 countries around the world. For more information, please visit <http://www.novartis.com>.

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