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**For Immediate Release**

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**Otsuka Announces Phase 3 Results for Tolvaptan in Patients with Autosomal Dominant Polycystic Kidney Disease (ADPKD)**

- REPRISE trial presented as a late breaking abstract at American Society of Nephrology (ASN) Kidney Week 2017
- Tolvaptan reduced the rate of decline of kidney function by 35 percent over a 12-month period, compared to placebo, in patients with ADPKD
- ADPKD, the most common type of polycystic kidney disease, is a progressive disease leading to kidney failure, diagnosed in 100,000 to 150,000 people in the U.S.

Otsuka Pharmaceutical Co., Ltd. (Otsuka) announced detailed results from the Phase 3 REPRISE trial of tolvaptan, which is under investigation in the United States in patients with autosomal dominant polycystic kidney disease (ADPKD).

Trial results showed that tolvaptan showed greater reduction on the primary endpoint, the rate of change in estimated glomerular filtration rate (eGFR) compared to placebo. Estimated GFR, the primary endpoint of the trial, is a key measure of kidney function. Change in estimated eGFR from pre-treatment baseline to post-treatment follow-up, adjusted by the duration of the trial for each patient and expressed per year was -2.34 mL/min/1.73 m<sup>2</sup>/year with tolvaptan versus -3.61 mL/min/1.73 m<sup>2</sup>/year with placebo, representing a 35% reduction of 1.27 mL/min/1.73 m<sup>2</sup>/year (95% CI 0.86 to 1.68; P<0.001). These data were presented on November 4 as a late breaking oral abstract at the American Society of Nephrology (ASN) 2017 Kidney Week in New Orleans, and were simultaneously published online in the New England Journal of Medicine\*.

\*URL : <http://www.nejm.org/doi/full/10.1056/NEJMoa1710030#t=abstract>

Polycystic kidney disease (PKD) is a progressive genetic disorder affecting the kidneys, in which fluid-filled cysts develop in the kidneys over time, enlarging these organs and inhibiting their ability to function normally, leading to kidney failure in most patients. Autosomal dominant PKD, known as ADPKD, is the most common type, and is the fourth leading cause of kidney failure. By age 57, more than half of people with ADPKD will need dialysis or a kidney transplant.

Vicente Torres, MD, PhD, Director of the Mayo Clinic Translational Polycystic Kidney Disease Center, and lead investigator on the REPRISE trial, commented, “Tolvaptan slowed the rate of kidney function

decline in this trial. “These data represent a significant milestone in the investigation of this condition, for which there are currently no approved treatments in the US.”

“It is gratifying to see the significance of findings from the REPRISE trial, which further support the utility of tolvaptan in patients with ADPKD,” said Robert McQuade Ph.D. Executive Vice President and Chief Strategic Officer, Otsuka Pharmaceutical Development & Commercialization, Inc. “These robust findings provide evidence that tolvaptan, if approved in the US, may be an important new treatment option with the potential to help patients with this debilitating disease, and we look forward to discussing these data with regulatory agencies.”

Along with results from previous pivotal studies, findings from the REPRISE trial have formed the basis of a response to the Complete Response Letter (CRL) that FDA issued in August, 2013, which Otsuka has submitted to FDA for tolvaptan as a treatment for patients with ADPKD.