



Boehringer Ingelheim and Lilly to collaborate with Duke Clinical Research Institute on a pragmatic trial examining Jardiance's® effects following an acute myocardial infarction

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- **Ischemic heart disease, including myocardial infarction, is the leading cause of death in the U.S.**
- **EMPACT-MI is the first trial in the SGLT2 inhibitor class to investigate the prevention of heart failure after acute myocardial infarction in adults with and without diabetes**
- **The trial is part of the EMPOWER clinical trial program, the broadest and most comprehensive of any SGLT2 inhibitor, exploring the impact of Jardiance (empagliflozin) on the lives of people across the spectrum of cardio-renal-metabolic conditions**

RIDGEFIELD, Conn. and INDIANAPOLIS, May 26, 2020 /PRNewswire/ -- Boehringer Ingelheim and Eli Lilly and Company (NYSE:LLY) today announced an academic research collaboration with the Duke Clinical Research Institute (DCRI) on a new trial, EMPACT-MI (EMPAGliflozin for the prevention of Chronic heart failure and mortality after an acute Myocardial Infarction). The collaboration will investigate whether Jardiance® (empagliflozin) can improve outcomes and prevent heart failure in adults with and without diabetes who have had an acute myocardial infarction, more commonly known as a heart attack. This randomized clinical trial will be conducted, analyzed and reported in partnership with the DCRI, with Boehringer Ingelheim and Lilly providing funding.

EMPACT-MI will include approximately 3,300 adults across at least 16 countries who have had an acute myocardial infarction. The primary endpoint of the trial is to assess the effect of Jardiance on all-cause mortality and hospitalization for heart failure. The trial will be part of the EMPOWER program, the broadest and most comprehensive clinical trial program exploring the impact of Jardiance on the lives of people with cardio-renal-metabolic conditions.

"This collaboration represents an important step in understanding how to safeguard and protect the lives of patients with acute myocardial infarction," said Adrian Hernandez, M.D., M.H.S., co-chair of the EMPACT-MI trial and DCRI executive director. "Myocardial infarction is the leading cause of death in cardiology, and this is the first trial in the SGLT2 inhibitor class to investigate the potential to increase survival and decrease progression to heart failure in people who have had a recent myocardial infarction."

Javed Butler, M.D., M.P.H., M.B.A., chair of the EMPACT-MI trial and professor and chairman of the Department of Medicine at the University of Mississippi, added, "We are delighted to lead the EMPACT-MI trial to find out whether Jardiance could become a new standard of care option to improve the outcomes and lives of people with acute myocardial infarction."

Pragmatic clinical trials focus on the relationship between treatments and outcomes in real-world health system practice. This partnership will leverage the DCRI's experience in pragmatic trials by implementing innovative and efficient trial elements, including remote follow-up and a focused data collection approach, which enable a strong patient focus while maintaining high data quality.

"We are pleased to collaborate with the Duke Clinical Research Institute on the EMPACT-MI trial to investigate the potential to increase survival and prevent heart failure from developing in adults who have had a heart attack. Despite current therapies, these patients have a high residual risk that could be addressed by the multiple benefits we have observed with SGLT2 inhibition," said Waheed Jamal, M.D., corporate vice president and head of CardioMetabolic Medicine, Boehringer Ingelheim.

"The EMPACT-MI trial is part of our broad and comprehensive clinical development program, which aims to explore how Jardiance can improve health outcomes and fill therapeutic gaps for a broad range of patients suffering from cardio-renal-metabolic conditions," said Jeff Emmick, M.D., Ph.D., vice president, Product Development, Lilly.

About the Duke Clinical Research Institute

The DCRI, part of the Duke University School of Medicine, is the largest academic clinical research organization in the world. Its mission is to develop and share knowledge that improves the care of patients through innovative research. The institute conducts groundbreaking multinational clinical trials, manages major national patient registries, and performs landmark outcomes research. DCRI research spans multiple disciplines, from pediatrics to geriatrics, primary care to subspecialty medicine, and genomics to proteomics. The DCRI also is home to the Duke Databank for Cardiovascular Diseases, the largest and oldest institutional cardiovascular database in the world, which continues to inform clinical decision-making 40 years after its founding.

About EMPACT-MI

EMPACT-MI (EMPAGliflozin for the prevention of Chronic heart failure and mortality after an acute Myocardial Infarction) is a streamlined, randomized, blinded, placebo-controlled, multi-center trial exploring the efficacy and safety of Jardiance in adults hospitalized with an acute myocardial infarction.

About EMPOWER

The EMPOWER program reinforces the long-term commitment of Boehringer Ingelheim and Eli Lilly and Company to improve outcomes for people living with cardiovascular and renal disease. EMPOWER is one of the largest cardiovascular clinical trial programs for an SGLT2 inhibitor to date with more than 13,000 adults worldwide. The aim of the program is preventing major clinical cardiovascular and renal outcomes that affect millions of adults worldwide as well as families and healthcare systems.

In addition to EMPACT-MI, the development program encompasses:

- EMPEROR reduced, in adults with chronic heart failure with reduced ejection fraction to prevent cardiovascular death and hospitalization due to heart failure
- EMPEROR preserved, in adults with chronic heart failure with preserved ejection fraction to prevent cardiovascular death and hospitalization due to heart failure
- EMPULSE, in adults hospitalized for acute heart failure to improve clinical and patient reported outcomes
- EMPA-KIDNEY, in adults with established chronic kidney disease to reduce the progression of kidney disease and the occurrence of cardiovascular death
- EMPERIAL reduced, in adults with chronic heart failure with reduced ejection fraction to improve functional ability and patient reported outcomes
- EMPERIAL preserved, in adults with chronic heart failure with preserved ejection fraction to improve functional ability and patient reported outcomes
- EMPA-REG OUTCOME®, in adults with type 2 diabetes and established cardiovascular disease to prevent major adverse cardiovascular events, including cardiovascular death
- EMPRISE, a comparative effectiveness and safety study in routine clinical care.

About Acute Myocardial Infarction

Ischemic heart disease, including acute myocardial infarction (heart attack), is the leading cause of death and disability in the United States, with over 7 million acute myocardial infarctions occurring every year around the world. People who suffer an acute myocardial infarction are at a high risk of heart failure and death. Heart attacks occur when the blood supply to an area of the heart is blocked by a blood clot or by atherosclerosis (fatty deposits or plaques lining vessel walls), causing heart tissue to die. Rapid diagnosis and treatment to restore blood flow through the affected vessel are vital to save as much of the heart tissue as possible.

About Heart Failure

Heart failure is a progressive, debilitating and potentially fatal condition that occurs when the heart cannot supply adequate circulation to meet the body's demands for oxygenated blood or to do so requires increased blood volume leading to fluid accumulation (congestion) in the lungs and peripheral tissues. It is a widespread condition affecting 60 million people worldwide and expected to increase as the population ages. Heart failure is highly prevalent in people with diabetes; however, approximately half of all people with heart failure do not have diabetes.

The Jardiance heart failure program was initiated based on data from the EMPA-REG OUTCOME trial, which assessed the effect of Jardiance (10 mg or 25 mg once daily) added to standard of care compared with placebo added to standard of care. EMPA-REG OUTCOME was the first SGLT2 inhibitor trial to show a relative risk reduction in cardiovascular death in adults with type 2 diabetes and established cardiovascular disease. This population was comprised of more than 45% of adults with a prior myocardial infarction.

What is JARDIANCE? (www.jardiance.com)

JARDIANCE is a prescription medicine used along with diet and exercise to lower blood sugar in adults with type 2 diabetes.

JARDIANCE is also used to reduce the risk of cardiovascular death in adults with type 2 diabetes who have known cardiovascular disease.

JARDIANCE is not for people with type 1 diabetes or for people with diabetic ketoacidosis (increased ketones in the blood or urine).

IMPORTANT SAFETY INFORMATION

Do not take JARDIANCE if you are allergic to empagliflozin or any of the ingredients in JARDIANCE.

Do not take JARDIANCE if you have severe kidney problems or are on dialysis.

JARDIANCE can cause serious side effects, including:

- **Dehydration.** JARDIANCE can cause some people to have dehydration (the loss of body water and salt). Dehydration may cause you to feel dizzy, faint, light-headed, or weak, especially when you stand up.

You may be at a higher risk of dehydration if you:
 - have low blood pressure
 - take medicines to lower your blood pressure, including water pills (diuretics)
 - are on a low salt diet
 - have kidney problems
 - are 65 years of age or older.
- **Vaginal yeast infection.** Women who take JARDIANCE may get vaginal yeast infections. Talk to your doctor if you experience vaginal odor, white or yellowish vaginal discharge (discharge may be lumpy or look like cottage cheese), and/or vaginal itching.
- **Yeast infection of the penis.** Men who take JARDIANCE may get a yeast infection of the skin around the penis, especially uncircumcised males and those with chronic infections. Talk to your doctor if you experience redness, itching or swelling of the penis, rash of the penis, foul smelling discharge from the penis, and/or pain in the skin around penis.
- **Ketoacidosis (increased ketones in your blood or urine).** Ketoacidosis is a serious condition and may need to be treated in the hospital. Ketoacidosis may lead to death. Ketoacidosis occurs in people with type 1 diabetes and can also

occur in people with type 2 diabetes taking JARDIANCE, even if blood sugar is less than 250 mg/dL. Ketoacidosis has also happened in people with diabetes who were sick or who had surgery during treatment with JARDIANCE. **Stop taking JARDIANCE and call your doctor right away if you get any of the following symptoms**, and if possible, check for ketones in your urine:

- nausea
 - vomiting
 - stomach-area (abdominal) pain
 - tiredness
 - trouble breathing
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- **Kidney problems.** Sudden kidney injury has happened in people taking JARDIANCE. Talk to your doctor right away if you reduce the amount you eat or drink, or if you lose liquids; for example, from vomiting, diarrhea, or being in the sun too long.
 - **Serious urinary tract infections.** Serious urinary tract infections can occur in people taking JARDIANCE and may lead to hospitalization. Tell your doctor if you have symptoms of a urinary tract infection, such as a burning feeling when passing urine, a need to urinate often or right away, pain in the lower part of your stomach or pelvis, or blood in the urine. Sometimes people also may have a fever, back pain, nausea or vomiting.
 - **Low blood sugar (hypoglycemia): If you take JARDIANCE with another medicine that can cause low blood sugar, such as sulfonylurea or insulin, your risk of low blood sugar is higher. The dose of your sulfonylurea or insulin may need to be lowered. Symptoms of low blood sugar may include:**
 - headache
 - drowsiness
 - weakness
 - dizziness
 - confusion
 - irritability
 - hunger
 - fast heartbeat
 - sweating
 - shaking or feeling jittery
 - **Necrotizing fasciitis. A rare but serious bacterial infection that causes damage to the tissue under the skin in the area between and around your anus and genitals (perineum).** This bacterial infection has happened in women and men who take JARDIANCE, and may lead to hospitalization, multiple surgeries, and death. **Seek medical attention immediately if you have fever or are feeling very weak, tired or uncomfortable (malaise), and you develop any of the following symptoms in the area between and around your anus and genitals: pain or tenderness, swelling, and redness of skin (erythema).**
 - **Allergic (hypersensitivity) reactions.** Symptoms of serious allergic reactions to JARDIANCE may include:
 - swelling of your face, lips, throat and other areas of your skin
 - difficulty with swallowing or breathing
 - raised, red areas on your skin (hives)If you have any of these symptoms, stop taking JARDIANCE and contact your doctor or go to the nearest emergency room right away.
 - **Increased fats in your blood (cholesterol).**

The most common side effects of JARDIANCE include urinary tract infections and yeast infections in females.

These are not all the possible side effects of JARDIANCE. For more information, ask your doctor or pharmacist.

Before taking JARDIANCE, tell your doctor if you:

- have kidney problems. Your doctor may do blood tests to check your kidneys before and during your treatment with JARDIANCE
- have liver problems
- have a history of urinary tract infections or problems with urination
- are going to have surgery. Your doctor may stop your JARDIANCE before you have surgery. Talk to your doctor if you are having surgery about when to stop taking JARDIANCE and when to start it again

- are eating less or there is a change in your diet
- have or have had problems with your pancreas, including pancreatitis or surgery on your pancreas
- drink alcohol very often, or drink a lot of alcohol in the short term ("binge" drinking)
- have any other medical conditions
- are pregnant or plan to become pregnant. JARDIANCE may harm your unborn baby. Tell your doctor right away if you become pregnant during treatment with JARDIANCE
- are breastfeeding or are planning to breastfeed. JARDIANCE may pass into your breast milk and may harm your baby. Do not breastfeed while taking JARDIANCE

Tell your doctor about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. Especially tell your doctor if you take water pills (diuretics) or medicines that can lower your blood sugar, such as insulin.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088. For more information, please see [Prescribing Information](#) and [Medication Guide](#).

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Boehringer Ingelheim and Eli Lilly and Company

In January 2011, Boehringer Ingelheim and Eli Lilly and Company announced an alliance that centers on compounds representing several of the largest diabetes treatment classes. Depending on geographies, the companies either co-promote or separately promote the respective molecules each contributing to the alliance. The alliance leverages the strengths of two of the world's leading pharmaceutical companies to focus on patient needs. By joining forces, the companies demonstrate their commitment, not only to the care of people with diabetes, but also to investigating the potential to address areas of unmet medical need. Clinical trials have been initiated to evaluate the impact of Jardiance on people living with heart failure or chronic kidney disease.

About Boehringer Ingelheim

Making new and better medicines for humans and animals is at the heart of what we do. Our mission is to create breakthrough therapies that change lives. Since its founding in 1885, Boehringer Ingelheim is independent and family-owned. We have the freedom to pursue our long-term vision, looking ahead to identify the health challenges of the future and targeting those areas of need where we can do the most good.

As a world-leading, research-driven pharmaceutical company, more than 51,000 employees create value through innovation daily for our three business areas: Human Pharma, Animal Health, and Biopharmaceutical Contract Manufacturing. In 2019, Boehringer Ingelheim achieved net sales of around \$21.3 billion (19 billion euros). Our significant investment of over \$3.9 billion (3.5 billion euros) in R&D drives innovation, enabling the next generation of medicines that save lives and improve quality of life.

We realize more scientific opportunities by embracing the power of partnership and diversity of experts across the life-science community. By working together, we accelerate the delivery of the next medical breakthrough that will transform the lives of patients now, and in generations to come.

Boehringer Ingelheim Pharmaceuticals, Inc., based in Ridgefield, CT, is the largest U.S. subsidiary of Boehringer Ingelheim Corporation and is part of the Boehringer Ingelheim group of companies. In addition, there are Boehringer Ingelheim Animal Health in Duluth, GA and Boehringer Ingelheim Fremont, Inc. in Fremont, CA.

Boehringer Ingelheim is committed to improving lives and strengthening our communities. Please visit www.boehringer-ingelheim.us/csr to learn more about Corporate Social Responsibility initiatives.

For more information, please visit www.boehringer-ingelheim.us, or follow us on Twitter @BoehringerUS.

About Lilly Diabetes

Lilly has been a global leader in diabetes care since 1923, when we introduced the world's first commercial insulin. Today we are building upon this heritage by working to meet the diverse needs of people with diabetes and those who care for them. Through research, collaboration and quality manufacturing we strive to make life better for people affected by diabetes and related conditions. We work to deliver breakthrough outcomes through innovative solutions—from medicines and technologies to support programs and more. For the latest updates, visit <http://www.lillydiabetes.com/> or follow us on Twitter: [@LillyDiabetes](#) and Facebook: [LillyDiabetesUS](#).

About Eli Lilly and Company

Lilly is a global healthcare leader that unites caring with discovery to make life better for people around the world. We were founded more than a century ago by a man committed to creating high-quality medicines that meet real needs, and today we remain true to that mission in all our work. Across the globe, Lilly employees work to discover and bring life-changing medicines to those who need them, improve the understanding and management of disease, and give back to communities through philanthropy and volunteerism. To learn more about Lilly, please visit us at www.lilly.com and newsroom.lilly.com/social-channels.

This press release contains forward-looking statements (as that term is defined in the Private Securities Litigation Reform Act of 1995) about Jardiance and reflects Lilly's current belief. However, as with any pharmaceutical product, there are substantial risks and uncertainties in the process of drug development and commercialization. Among other things, there can be no guarantee that future study results will be consistent with the results to date or that Jardiance will receive additional regulatory approvals. For a further discussion of these and other risks and uncertainties that could cause actual results to differ from Lilly's expectations, please see Lilly's most recent Forms 10-K and 10-Q filed with the U.S. Securities and Exchange Commission. Lilly undertakes no duty to update forward-looking statements.

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