Kira Pharmaceuticals Announces Clearance to Initiate Phase 2 Evaluation of KP104 in IgA Nephropathy (IgAN) and Complement 3 Glomerulopathy (C3G) in China and Australia

CAMBRIDGE, MA, USA and SUZHOU, JIANGSU, CHINA (December 20, 2022) – Kira Pharmaceuticals, a global biotechnology company pioneering transformational complement therapies to treat immune-mediated diseases, announced today that the Chinese National Medical Products Administration (NMPA) and the Australian Therapeutic Goods Administration (TGA) have approved initiation of Phase 2 studies for evaluation of KP104, a first-in-class bifunctional biologic that selectively targets the alternative and terminal complement pathways, in a renal basket study including IgA nephropathy (IgAN) and complement 3 glomerulopathy (C3G).

“These clearances add to the multiple INDs Kira has secured this year for KP104 and mark our first in IgAN and C3G, serious immune-mediated conditions that cause kidney damage and often result in kidney failure,” said Frederick Beddingfield, M.D., Ph.D., CEO of Kira. “We believe that KP104’s ability to simultaneously and synergistically block two key complement targets makes it a unique therapeutic option with the potential to make a profound impact on the lives of patients living with these kidney diseases around the world.”

IgAN is an autoimmune disease that damages the kidneys, impacting organ function and often resulting in end-stage kidney disease. Though the exact pathogenesis of IgAN remains unknown, immune complex deposition in the kidneys is characteristic of the disease, causing inflammation and glomerular damage. Recent studies have implicated complement activation across multiple complement pathways as a major contributor to kidney injury and disease progression in IgAN. Drugs that selectively inhibit either the alternative or terminal pathway have shown partial efficacy in recent human studies. KP104 is a potent inhibitor of both the alternative and terminal complement pathways. Thus KP104 may have the unique potential to address IgAN more effectively, where multiple pathways are involved.

In C3G, a hyperactivated alternative complement pathway causes excessive cleavage and activation of complement protein 3 (C3) and complement protein 5 (C5), resulting in harmful C3 fragments getting lodged in the kidney and C5 split products contributing to further glomerular inflammation and damage. There are currently no approved therapies for the condition, making KP104 a novel therapeutic option with the potential for transformative patient impact.

The Phase 2 studies will evaluate the efficacy, safety, tolerability, pharmacokinetics (PK), and pharmacodynamics (PD) of KP104 in participants with IgAN and C3G in China and Australia. Phase 1 data from the SYNERGY-1 first-in-human (FIH) study of KP104 demonstrated clinical proof-of-mechanism (PoM) for the biologic, which received Orphan Drug Designation for treatment of paroxysmal nocturnal hemoglobinuria (PNH) from the US Food and Drug Administration (FDA) earlier this year. KP104 is currently undergoing Phase 2 evaluation in PNH and will additionally be evaluated in other hematology and nephrology indications in upcoming clinical trials.

About IgA Nephropathy

IgA Nephropathy (IgAN) is an autoimmune disease that damages the kidneys, impacting organ function and often resulting in end-stage kidney disease. IgAN is the most common form of glomerulonephritis, with a global population incidence of roughly 2.5 per 100,000 per year, though the exact pathogenesis of the disease remains unknown. In IgAN, the body produces abnormal immunoglobulin A (IgA) antibodies that stimulate an immune response and result in formation of immune complexes that become trapped in the kidney. The immune complexes in the kidney cause inflammation and tissue damage, potentially leading to renal failure. There remains significant unmet need for therapeutics that effectively address IgAN, with current treatment approaches for serious cases largely reliant on corticosteroids to manage inflammation. Recent studies have implicated aberrant complement activity as a major

contributor to glomerular inflammation and disease progression of IgAN. KP104 is a potent inhibitor of the alternative and terminal complement pathways that offers unique potential to address IgAN through selective modulation of complement activity.

About Complement 3 Glomerulopathy

Complement 3 Glomerulopathy (C3G) encompasses dense deposit disease (DDD) and C3 glomerulonephritis (C3GN), two conditions that result in inflammation and damage of the glomeruli in the kidney. In C3G, abnormal complement system activation results in breakdown of C3, a complement protein. The products of this breakdown become lodged in the kidney, triggering inflammation and immune activity that injure the glomeruli. C3 breakdown also leads to C5 and terminal complement activation, causing further glomerular inflammation and damage. C3G has a global prevalence of 2-3 people out of every million, and roughly half of those living with C3G develop end-stage renal disease within 10 years of diagnosis. There are currently no approved therapies for the condition, making KP104 a novel therapeutic option with potential for transformative patient impact.

About KP104

KP104 is a first-in-class bifunctional biologic designed to simultaneously and selectively block both the alternative and terminal complement pathways, providing a powerful and synergistic method of targeting validated drivers of complement-mediated disease. This dual-target mechanism of action uniquely positions KP104 to address complement-mediated diseases and potentially provide greater benefits than single-target complement agents. Engineered to have an extended half-life and potency, KP104 has a formulation suitable for both intravenous and subcutaneous administrations. KP104 is entering Phase 2 POC trials across multiple renal disease and hematologic indications and has been granted Orphan Drug Designation by the FDA for the treatment of paroxysmal nocturnal hemoglobinuria (PNH). Phase 2 trials will be conducted globally,

including in the U.S., China, and Australia. KP104 is an investigational agent not yet approved for any indication by any health authority.

About Kira Pharmaceuticals

Kira Pharmaceuticals is a clinical-stage biotechnology company pioneering complement-targeted therapies to treat immune-mediated diseases. Enabled by its LOGIC platform, the company has developed a robust pipeline of novel assets against validated complement targets. Headquartered in Cambridge, Massachusetts and with facilities in China and Australia, Kira Pharmaceuticals has established a global team committed to advancing life-changing therapies to patients around the world. More information on Kira can be found at www.kirapharma.com and on LinkedIn.

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科越医药宣布在中国和澳大利亚启动 KP104 在 IgA 肾病（IgAN）和 C3 肾小球病（C3G）的 II 期临床试验

美国马萨诸塞州剑桥市和中国江苏苏州市（2022 年 12 月 20 日）——科越医药，一家致 力于研发创新型补体药物治疗免疫介导疾病的全球生物技术公司，今日宣布，中国国家药 品监督管理局（NMPA）与澳大利亚药品管理局（TGA）均已批准了其 KP104 用于治疗肾 脏疾病包括 IgA 肾病（IgAN）和 C3 肾小球病（C3G）的 II 期临床试验申请。KP104 是一种 全球首创的双靶点生物制剂，它能特异性地抑制补体旁路途径和末端途径。 科越首席执行官 Frederick Beddingfield 博士表示：“科越今年已获得 KP104 的多个 IND 临 床试验申请批准，此次 IND 获批使我们的 KP104 临床试验又向前推进一步，也标志着我 们在 IgAN 和 C3G 这类由严重的免疫介导的肾脏疾病领域迈出第一步。我们认为，KP104 能够同时协同阻断两个关键补体靶点，这使其成为一种独特的治疗选择，有可能对世界各 地患有这些肾脏疾病的患者产生深远影响。” IgA 肾病是一种自身免疫性疾病，损害肾脏，影响器官功能，常导致终末期肾病。尽管 IgA 肾病的确切发病机制尚不清楚，但肾脏中的免疫复合物沉积是该病的特征，导致炎症 和肾小球损伤。最近的研究表明，多种补体途径的补体激活是 IgA 肾病患者的肾脏损伤和 疾病进展的主要因素。在最近的人体研究中，选择性抑制补体旁路或末端途径的药物显示 出部分疗效。而 KP104 可以同时有效抑制旁路途径和末端途径，因此，在涉及多种补体 途径的 IgA 肾病，KP104 可能具有更有效地治疗 IgA 肾病的独特潜力。 在 C3 肾小球病中，过度激活的旁路补体途径导致补体蛋白 3（C3）和补体蛋白 5（C5） 的过度裂解和激活，导致有害的 C3 片段沉积在肾脏中，C5 裂解产物导致进一步的肾小球 炎症和损伤。目前还没有批准的治疗该疾病的方法，因此 KP104 是一种新的潜在治疗选 择，有可能对患者的治疗产生变革性影响。 此次获批的临床 II 期研究将评估 KP104 在中国和澳大利亚的 IgA 肾病和 C3 肾小球病受试 者中的有效性、安全性、耐受性、药代动力学（PK）和药效学（PD）。KP104 的首次人体 研究（FIH）SYNERGY-1 的 I 期数据证实了该生物制剂的作用机制（POM），KP104 今年早 些时候获得了美国食品药品监督管理局（FDA）颁发的用于治疗阵发性睡眠性血红蛋白尿 症（PNH）的孤儿药认证。KP104 目前正在 PNH 患者中进行 II 期临床研究，并将在另外即 将启动的临床试验中对其他血液病和肾脏病适应症进行评估。

关于 IgA 肾病

IgA 肾病（IgAN）是一种自身免疫性疾病，损害肾脏，影响器官功能，常导致终末期肾 病。IgA 肾病是最常见的肾小球肾炎，全球人口发病率约为每年十万分之 2.5，该疾病的 确切发病机制尚不清楚。在 IgA 肾病中，机体产生异常的免疫球蛋白 A（IgA）抗体，刺激 免疫反应，形成免疫复合物，并沉积在肾脏中。肾脏中的免疫复合物引起炎症和组织损 伤，可能导致肾衰竭。对于有

效解决 IgA 肾病的治疗方法，仍存在大量未满足的临床需 求，目前严重病例的治疗方法主要依赖糖皮质激素来控制炎症。最近的研究表明，补体活 性异常是 IgA 肾病肾小球炎症和疾病进展的主要因素。KP104 是补体旁路和末端途径的有 效抑制剂，通过选择性调节补体活性提供了治疗 IgA 肾病的独特潜力。

关于补体 3（C3）肾小球病

C3 肾小球病（C3G）包括致密物沉积病（DDD）和 C3 肾小球肾炎（C3GN），这两种疾病 导致肾脏肾小球炎症和损伤。在 C3G 中，异常的补体系统激活导致补体蛋白 C3 的裂解。 这种 C3 裂解的产物沉积在肾脏中，引发炎症和免疫反应，从而导致肾小球炎症和损伤。 C3 裂解也会导致 C5 和末端补体途径激活，从而导致肾小球进一步炎症和损伤。C3G 在全 球的患病率约为每百万人口 2-3 例，约半数的 C3G 患者在确诊后 10 年内会进展为终末期 肾病。目前 C3G 尚无获批的治疗药物，KP104 作为一种新的治疗手段，可能对患者的治疗 产生深远影响。

关于 KP104

KP104 是一种具有独特作用机制的全球首创双靶点补体药物。它可特异性地同时作用于补 体旁路途径和末端途径，从而有效地、协同性地抑制补体，以更加有选择性的精准治疗补 体介导的疾病。KP104 还被设计成具有延长的半衰期和效力，其配方可用于静脉注射和皮 下给药。KP104 正进入多个适应症的 II 期临床试验，包括 IgA 肾病、C3 肾小球病、继发于 系统性红斑狼疮的血栓性微血管病（SLE-TMA）和阵发性睡眠性血红蛋白尿症 （PNH）。 临床 II 期试验将在全球范围内进行，包括美国、中国和澳大利亚。KP104 是一种尚未获得 任何监管当局批准用于任何适应症治疗的研究药物。

关于科越医药

科越医药是一家处于临床研发阶段的全球化生物技术公司，致力于研发补体靶向疗法治疗 免疫介导疾病。公司凭借自己的 LOGIC 药物发现平台，致力于推进首创疗法 （FIC）及同 类最佳疗法（BIC），以改变患者的生活。科越医药总部位于马萨诸塞州剑桥，并通过在 中国苏州和上海以及澳大利亚建设研发中心和办公室，致力于建立全球足迹并为世界各地 的患者提供先进的治疗药物。如需了解有关科越医药的更多信息，请访问公司官网 www.kirapharma.com 和关注 LinkedIn。

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