Kira Pharmaceuticals Presents Complete Data from Phase 1 SYNERGY-1 Trial of KP104 at American Society for Nephrology Kidney Week 2022

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Biomarker data demonstrates proof-of-concept for KP104's dual-targeting mechanism via dose-dependent inhibition of alternative and terminal pathways and supports intravenous and subcutaneous administration of KP104 in phase 2 studies

CAMBRIDGE, MA (November 3, 2022) – Kira Pharmaceuticals, a global biotechnology company pioneering transformational complement therapies to treat immune-mediated diseases, today presented complete first-in-human data from its SYNERGY-1 trial of KP104 at the American Society of Nephrology (ASN) Kidney Week 2022 in Orlando, FL. KP104 is a first-in-class bifunctional biologic engineered to selectively target the alternative and terminal complement pathways.

"The data indicate that we can effectively regulate complement activity in healthy volunteers via simultaneous upstream and downstream inhibition at two key intervention points in the alternative and terminal pathways with our bifunctional asset KP104," said Frederick Beddingfield, MD, PhD, CEO of Kira Pharmaceuticals. "Given the presence of complement in both healthy individuals and those living with chronic disease, we're confident in the clinical translation of these results to patients and look forward to initiating Phase 2 evaluation of KP104 in a range of immunologic conditions with limited treatment options."

Key biomarker data demonstrate dose-dependent inhibition by KP104 of the alternative pathway (AP) and terminal pathway (TP) of complement activation, as assessed by a C3b deposition assay and a free C5 assay, respectively. Biomarker assay also included a rabbit red blood cell (RBC) hemolysis assay which measures the combined inhibitory effect of KP104 on AP and TP. Following a single 1200 mg dose administered intravenously, a 99.9% decrease in free C5 and a 98.6% decrease in C3b deposition were observed. At the same dose, 99.4% inhibition of rabbit RBC hemolysis was observed, making KP104 the only biologic in clinical development that can achieve effective alternative and terminal pathway inhibition after a single treatment. Overall,

inhibition of rabbit RBC lysis, C3b deposition, and free C5 reached 80-100% from baseline at administered drug concentrations greater than 150 µg/mL.

Pharmacokinetic (PK) and pharmacodynamic (PD) results from the multiple ascending dose (MAD) cohort demonstrate sustained levels of KP104 in the blood during the dosing period and suggest subcutaneous (SC) dosing is clinically effective following an initial single intravenous (IV) loading dose. The bioavailability of 4 weekly SC doses was approximately 67%, and this dosing regimen achieved sustained reduction in free C5 and C3b deposition as well as inhibition of rabbit RBC hemolysis observed over the course of the treatment period. Data from the Synergy-1 trial also indicate that KP104 is safe and well tolerated in healthy volunteers with no deaths, serious treatment emergent adverse effects (TEAEs), or discontinuations due to related TEAEs reported.

The data support future clinical trials in complement-mediated kidney diseases, including IgA nephropathy (IgAN) and complement 3 glomerulopathy (C3G), in addition to other immunologic conditions. Kira plans to initiate Phase 2 studies of KP104 in three trials that span several indications later this year: a renal basket study including IgAN and C3G, thrombotic microangiopathies secondary to systemic lupus erythematosus (SLE-TMA), and paroxysmal nocturnal hemoglobinuria (PNH).

The presentation will be available via the online meeting platform for in-person and virtual participants through Wednesday, December 21, 2022. The poster can also be viewed on Kira's website starting on November 5, 2022.

Presentation details are as follows:

Title: SYNERGY-1: A Phase 1, first-in-human, safety, tolerability, immunogenicity, PK and PD study of KP104 in escalating single and multiple doses

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Abstract Number: 3761666

Session Title: Glomerular Diseases: IgA and Complement-Mediated GN [PO1302-3]

Session Date and Time: November 5, 2022, from 10:00 AM to 12:00 PM

1Cancer Research Institute, University of South Australia, 2Kira Pharmaceuticals, 3Massachusetts General Hospital – Harvard Medical School, 4Syneos Health, and 5David Geffen School of Medicine - UCLA

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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科越医药在 2022 年美国肾脏病学会年会上公布 KP104 的临床 I 期试验 SYNERGY-1 的完整 数据

临床数据表明 KP104 能同时抑制补体旁路途径和末端途径，且抑制作用具有剂量依赖性，数据也支持在 II 期临床试验中采用静脉给药和皮下给药

美国马萨诸塞州剑桥市和中国江苏苏州市（2022 年 11 月 3 日）——今天，科越医药在于佛罗里达州奥兰多市举行的 2022 年美国肾脏病学会（ASN）年会上公布了其 KP104 临 床 I 期试验 SYNERGY-1 的完整数据。科越医药是一家致力于研发新一代补体药物治疗免 疫介导疾病的全球生物技术公司。KP104 是一种全球首创的双靶点补体抑制剂，它可选择 性地同时靶向补体旁路途径和末端途径。

科越医药首席执行官 Frederick Beddingfield 博士说：“临床 I 期试验数据表明，我们的产品 KP104 在健康受试者中，能同时抑制补体系统上游的旁路途径和下游的末端途径，从而有效抑制补体活性。因为补体系统在健康受试者和慢性病患者体内都存在，因而我们有信心 KP104 在患者体内也会发挥抑制补体的活性。我们很期待能尽快启动 II 期临床试验，以评估 KP104 对一些缺乏有效治疗手段的免疫疾病的作用。”

通过对关键指标 C3b 沉积和游离 C5 水平的评估，表明 KP104 对补体系统的旁路途径（AP）和末端途径（TP）均具有抑制作用，且抑制具有剂量依赖性。其他的观测指标还包括兔红细胞（RBC）裂解，该指标可用于测量 KP104 对 AP 和 TP 的联合抑制作用。单次 给药剂量递增队列中 (SAD) 静脉给药 1200 mg 后，可观察到游离 C5 水平减少 99.9%，C3b 沉积减少 98.6%。在相同剂量下，观察到 99.4%的兔红细胞裂解被抑制。KP104 是处于临 床开发阶段的唯一一种在单次给药后可实现对旁路途径和末端途径同时有效抑制的生物制 剂。总体而言，当血药浓度大于 150μg/mL，KP104 对兔红细胞裂解、C3b 沉积和游离 C5 水平的抑制都能达到 80-100%。

来自多次给药剂量递增（MAD）队列的药代动力学（PK）和药效学（PD）结果表明，KP104 的血药浓度在给药期间保持稳定，在初始单次静脉（IV）给予负荷剂量后，皮下（SC）给药能有效维持血药浓度。每周一次 SC 给药持续 4 周的生物利用度约为 67%，该 给药方案在治疗期间能持续抑制游离 C5 水平、C3b 沉积和兔红细胞的裂解。来自 Synergy-1 试验的数据还表明，KP104 在健康志愿者中是安全的，耐受性良好，没有死亡、严重治疗期不良事件（TEAE）或因药物相关 TEAE 而停药。

这些临床 I 期试验数据支持进一步开展 KP104 用于补体介导的肾脏疾病的临床试验，包括 IgA 肾病（IgAN）和 C3 肾小球病（C3G），以及其他免疫疾病。科越计划在今年晚些时候 启动三项 KP104 的 II 期临床试验，这三项试验涉及多个适应症：包括 IgAN 和 C3G 在内的 肾脏疾病、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）。

今日起至 2022 年 12 月 21 日（星期三），参会者可通过在线会议平台或线下参与的形式 了解此次演讲。从 2022 年 11 月 5 日开始，也可以在科越的官方网站上查看会议海报。

演讲详情如下

标题：SYNERGY-1:评估 KP104 安全性、耐受性、免疫原性、PK 和 PD 的单次和多次给药剂 量递增临床 I 期、首次人体研究

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摘要编号：3761666

分会场名称：肾小球疾病：IgA 和补体介导的肾小球肾炎[PO1302-3]

会议日期和时间：2022 年 11 月 5 日，上午 10:00 至下午 12:00

1 南澳大利亚大学癌症研究所、2 科越医药、3Massachusetts General Hospital–Harvard Medical School、4Syneos Health 赛纽仕和 5UCLA David Geffen 医学院

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能，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（IgAN）、C3 肾小球病 （C3G）、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 。II 期临床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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