Exhibit 10.2  
Execution Version  
REGISTRATION RIGHTS AGREEMENT  
This REGISTRATION RIGHTS AGREEMENT (this “Agreement”) is made and entered into as of March 28, 2024 by and among Xilio Therapeutics, Inc., a Delaware corporation (the “Company”), and the “Investors” named in that certain Securities Purchase Agreement by and among the Company and the Investors, dated as of the date hereof (the “Purchase Agreement”). Capitalized terms used herein have the respective meanings ascribed thereto in the Purchase Agreement unless otherwise defined herein.  
The parties hereby agree as follows:  
1.Definitions.  
As used in this Agreement, the following terms shall have the following meanings:  
“Agreement” has the meaning set forth in the first paragraph.  
“Allowed Delay” has the meaning set forth in Section 2(c)(ii).  
“Company” has the meaning set forth in the first paragraph.