UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

Form 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of October 2025

Commission File Number: 001-40858

XORTX Therapeutics Inc.

3710 – 33rd Street NW, Calgary, Alberta, T2L 2M1

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F. Form 20-F \boxtimes Form 40-F \square

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

XORTX THERAPEUTICS INC.

(Registrant)

Date: October 17, 2025 By: /s/ Allen Davidoff

Name: Allen Davidoff
Title: Chief Executive Officer

EXHIBIT INDEX

99.1 Pro-forma Interim Interim Balance Sheet as at September 30, 2025 and October 16, 2025

XORTX THERAPEUTICS INC. PRO-FORMA INTERIM INTERIM BALANCE SHEET as at September 30, 2025 and October 16,2025

June 30, 2025	September 30, 2025	Post Q3 2025	October 16, 2025	December 31, 2024
\$	\$	\$	\$	\$
1,063,477	1,193,915		1,193,915	2,473,649
10,860	22,092		22,092	17,637
97,589	30,444		30,444	185,412
92,594	111,028		111,028	-
1.264.520	1.357.479	<u>-</u>	1.357.479	2,676,698
1,20 1,520	1,557,177		1,557,177	2,070,070
1.200.000	1.200.000		1,200,000	1,200,000
-,,	-,,,,,,,,	3.250.000	, ,	-,,,,,,,
195,008	193.997	-,,		183,108
82,490	59,602		59,602	34,721
2,742,018	2,811,078	3,250,000	6,061,078	4,094,527
452.002	677.214	150.000	007.214	1.47.205
		150,000		147,205
	,		/	572,000
		150,000		38,785 757,990
711,100	307,100	100,000	207,100	101,220
18,912,699	19,488,598		19,488,598	18,493,571
5,730,349	5,747,026	3,100,000	8,847,026	6,039,078
24,746	24,746		24,746	24,746
(52,605)	(52,605)		(52,605)	(52,605)
(22,584,626)	(23,234,095)		(23,234,095)	(21,168,253)
2,030,563	1,973,670	3,100,000	5,073,670	3,336,537
2,742,018	2,811,078	3,250,000	6,061,078	4,094,527
	2025 \$ 1,063,477 10,860 97,589 92,594 1,264,520 1,200,000 195,008 82,490 2,742,018 453,982 177,000 80,473 711,455 18,912,699 5,730,349 24,746 (52,605) (22,584,626) 2,030,563	2025 2025 \$ \$ </td <td>2025 2025 2025 \$ \$ \$ 1,063,477 1,193,915 10,860 22,092 97,589 30,444 92,594 111,028 1,264,520 1,357,479 - 1,200,000 3,250,000 195,008 193,997 82,490 59,602 2,742,018 2,811,078 3,250,000 453,982 677,314 150,000 177,000 101,000 80,473 59,094 711,455 837,408 150,000 18,912,699 19,488,598 5,730,349 5,747,026 3,100,000 24,746 24,746 (52,605) (52,605) (52,605) (22,584,626) (23,234,095) 3,100,000</td> <td>2025 2025 2025 2025 \$ \$ \$ \$ 1,063,477 1,193,915 1,193,915 10,860 22,092 22,092 97,589 30,444 30,444 92,594 111,028 111,028 1,264,520 1,357,479 - 1,357,479 1,200,000 1,200,000 3,250,000 3,250,000 195,008 193,997 193,997 193,997 82,490 59,602 59,602 59,602 2,742,018 2,811,078 3,250,000 6,061,078 453,982 677,314 150,000 827,314 177,000 101,000 101,000 80,473 59,094 711,455 837,408 150,000 987,408 18,912,699 19,488,598 19,488,598 19,488,598 5,730,349 5,747,026 3,100,000 8,847,026 24,746 24,746 24,746 24,746 (52,605) (52,605) (52,605) (52,605)</td>	2025 2025 2025 \$ \$ \$ 1,063,477 1,193,915 10,860 22,092 97,589 30,444 92,594 111,028 1,264,520 1,357,479 - 1,200,000 3,250,000 195,008 193,997 82,490 59,602 2,742,018 2,811,078 3,250,000 453,982 677,314 150,000 177,000 101,000 80,473 59,094 711,455 837,408 150,000 18,912,699 19,488,598 5,730,349 5,747,026 3,100,000 24,746 24,746 (52,605) (52,605) (52,605) (22,584,626) (23,234,095) 3,100,000	2025 2025 2025 2025 \$ \$ \$ \$ 1,063,477 1,193,915 1,193,915 10,860 22,092 22,092 97,589 30,444 30,444 92,594 111,028 111,028 1,264,520 1,357,479 - 1,357,479 1,200,000 1,200,000 3,250,000 3,250,000 195,008 193,997 193,997 193,997 82,490 59,602 59,602 59,602 2,742,018 2,811,078 3,250,000 6,061,078 453,982 677,314 150,000 827,314 177,000 101,000 101,000 80,473 59,094 711,455 837,408 150,000 987,408 18,912,699 19,488,598 19,488,598 19,488,598 5,730,349 5,747,026 3,100,000 8,847,026 24,746 24,746 24,746 24,746 (52,605) (52,605) (52,605) (52,605)