

Three-Dimensionally Printed Agarose Micromold Supports Scaffold-Free Mouse Ex Vivo Follicle Growth, Ovulation, and Luteinization

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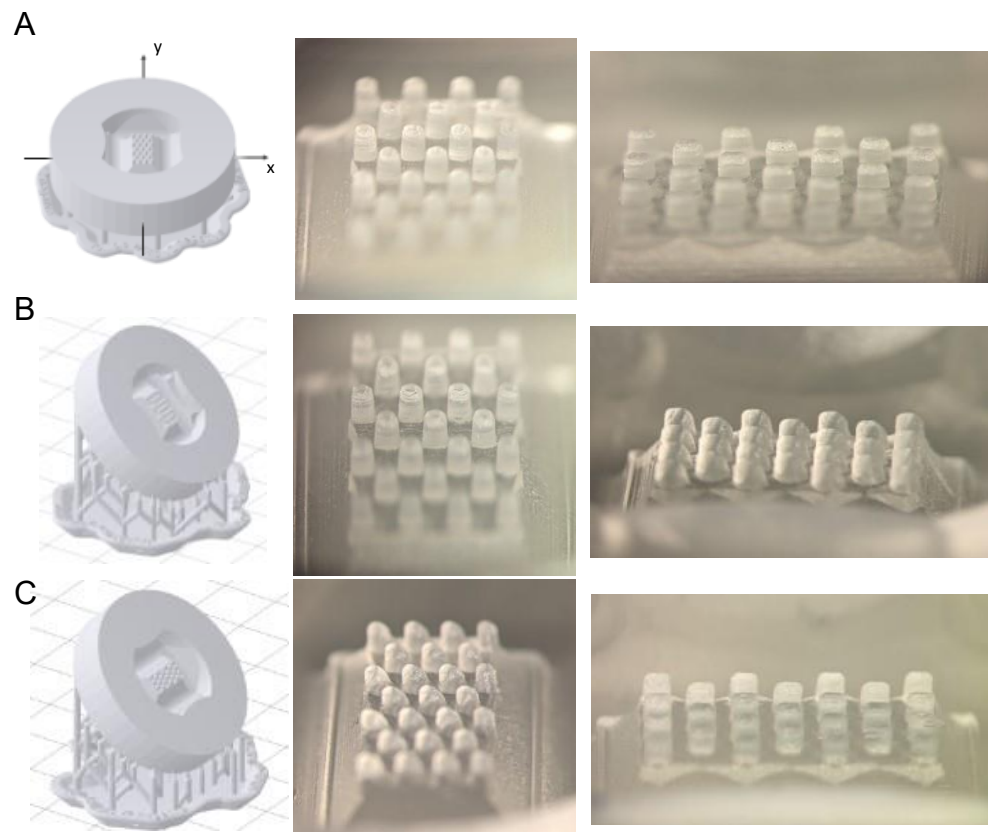


Figure S1. Print orientation affects final microwell geometry. **(A)** Flat print orientation results in correct print resolution. **(B)** 45-degree tilt along the x axis leads to well distortions in the longitudinal direction (right). **(C)** 45-degree tilt along the y axis leads to well distortions in the transversal direction (left).

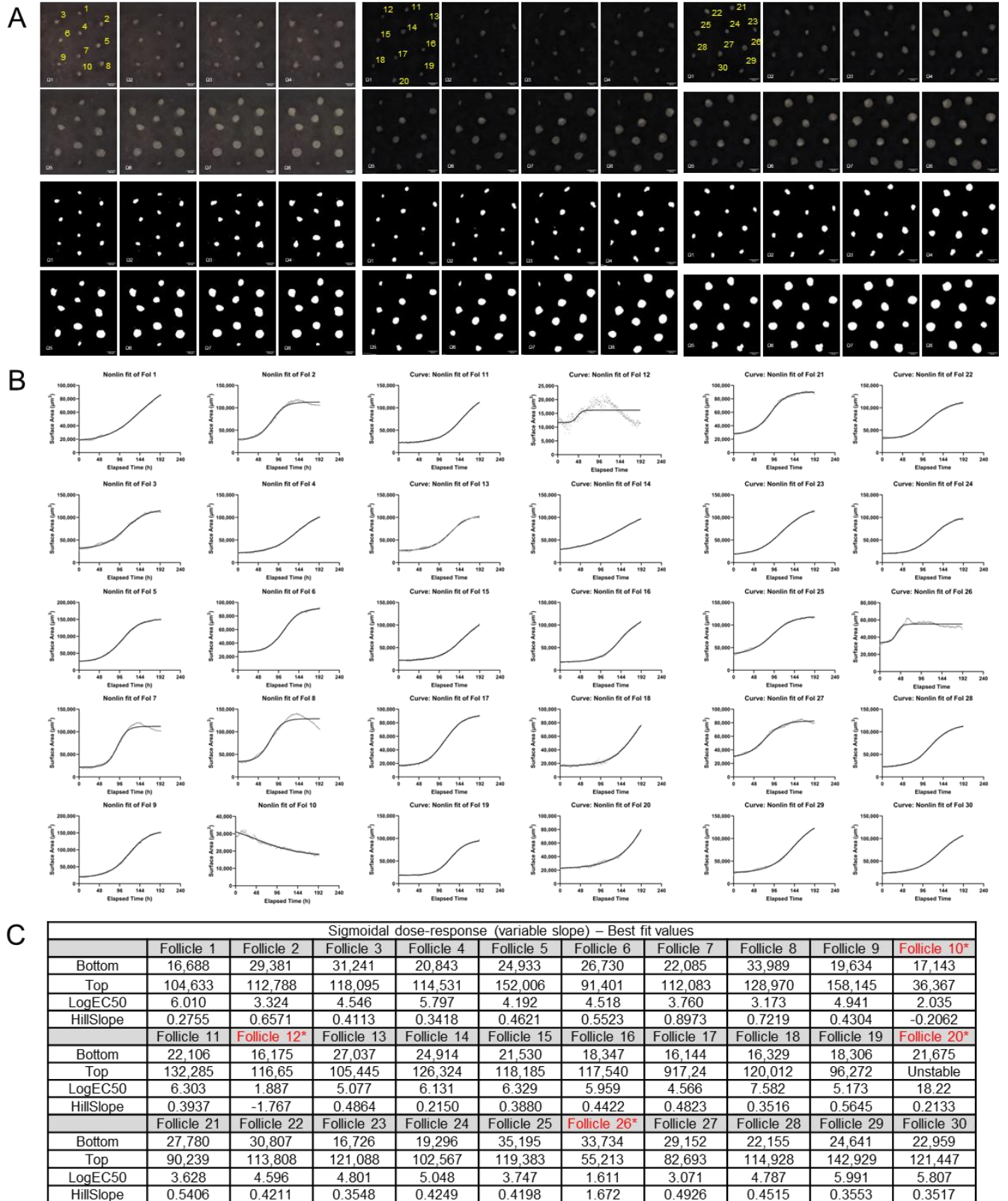


Figure S2. Growth curve analysis during follicular phase. (A) Representative images of microarray capture for each day of the 8-day follicular culture period ($n = 3$, 30 follicles). (B) Timelapse growth curves for all follicles were fitted using four parameter logistic regression model. (C) Growth curve parameters extracted from each individual follicle. Follicles were excluded if they were not viable, or if the plot yielded no results (red).

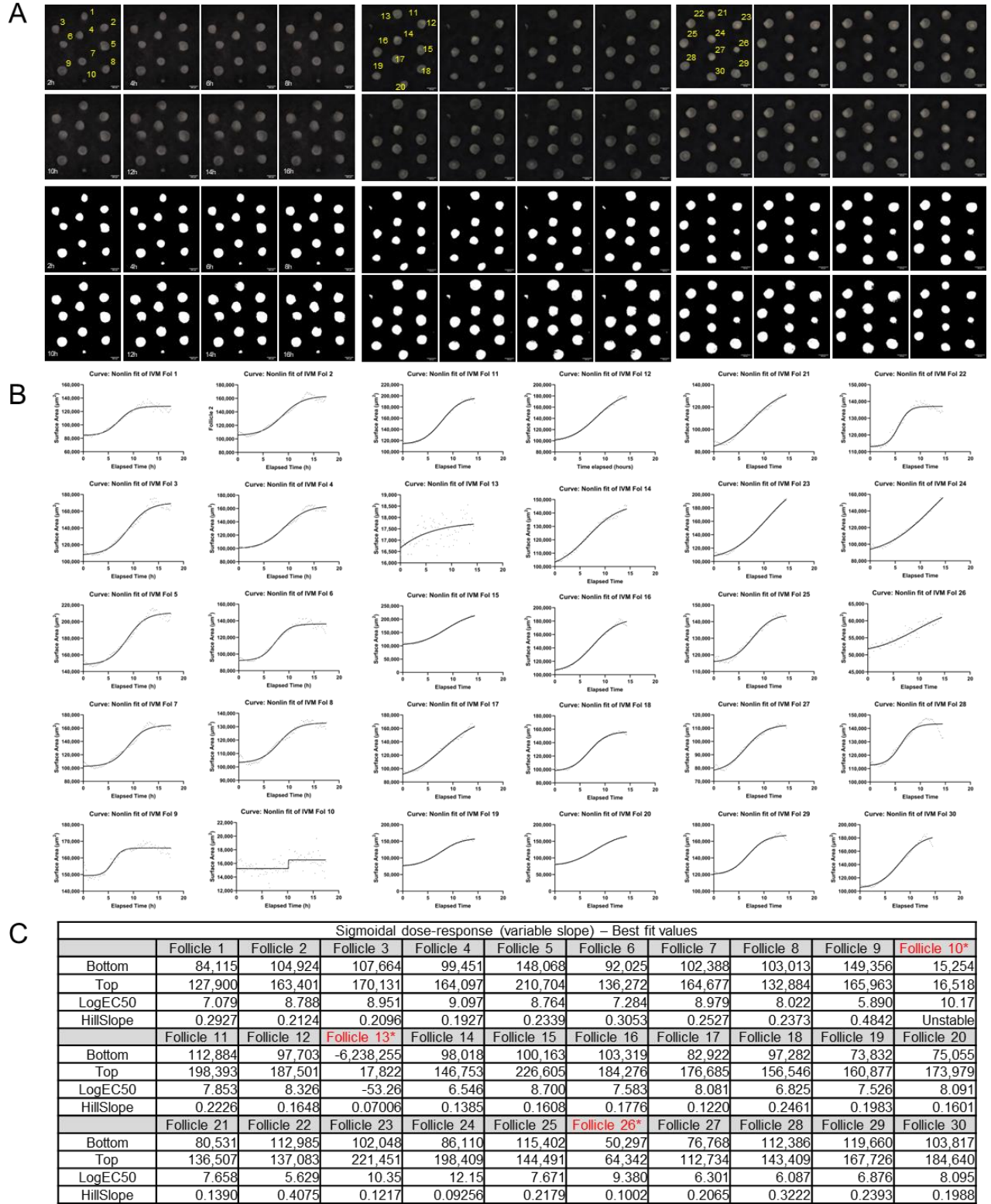


Figure S3. Growth curve analysis during ovulation. (A) Representative images of microarray capture for each day of the 8-day follicular culture period (n = 3, 30 follicles). (B) Timelapse growth curves for all follicles were fitted using four parameter logistic regression model. (C) Growth curve parameters extracted from each individual follicle. Follicles were excluded if they were not viable, or if the plot yielded no results (red).

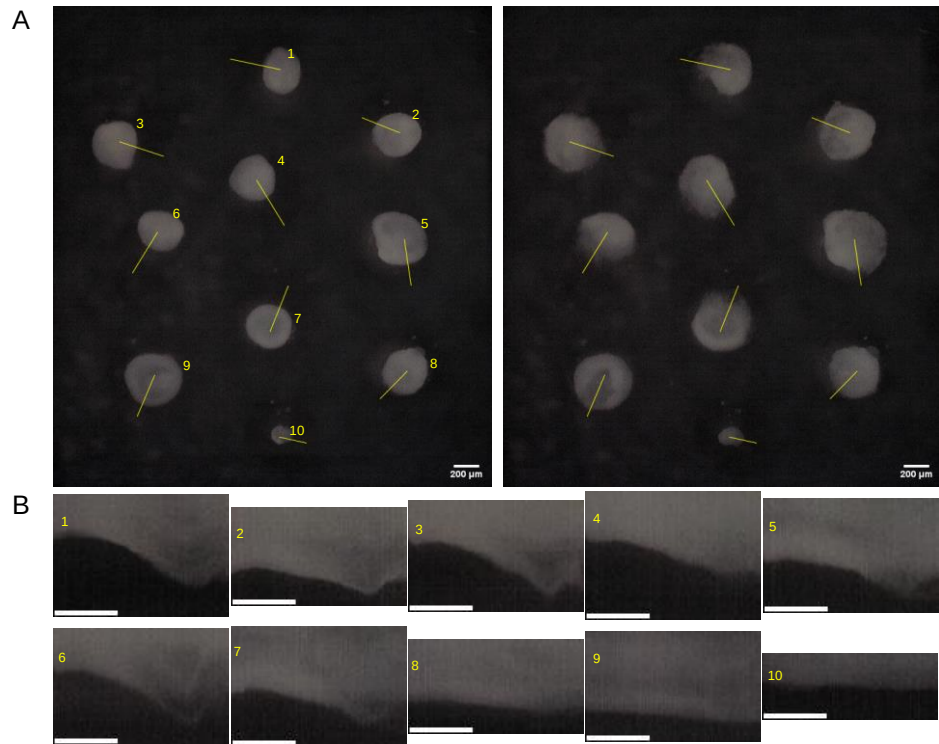


Figure S4. Kymograph visualization of ovulation in agarose micromolds. **(A)** For each follicle a line was drawn following the path where ovulation occurred most visibly. **(B)** Kymograph for each individual follicle made from 106 images during ovulation window.

Video S1. Timelapse of 8-day follicular phase. Images were taken every half hour, 30 fps. Scale bar 400 µm.

Video S2. Timelapse of 16-hour in-vitro maturation phase. Images were taken every 10 minutes, 30 fps. Scale bar 400 µm.

Video S3. Timelapse of 2-day Luteal phase. Images were taken every 10 minutes, 90 fps. Scale bar 400 µm.

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