

Self-Assembly of Thin Plates from Micrococcal Nuclease-Digested Chromatin of Metaphase Chromosomes

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Supporting Material

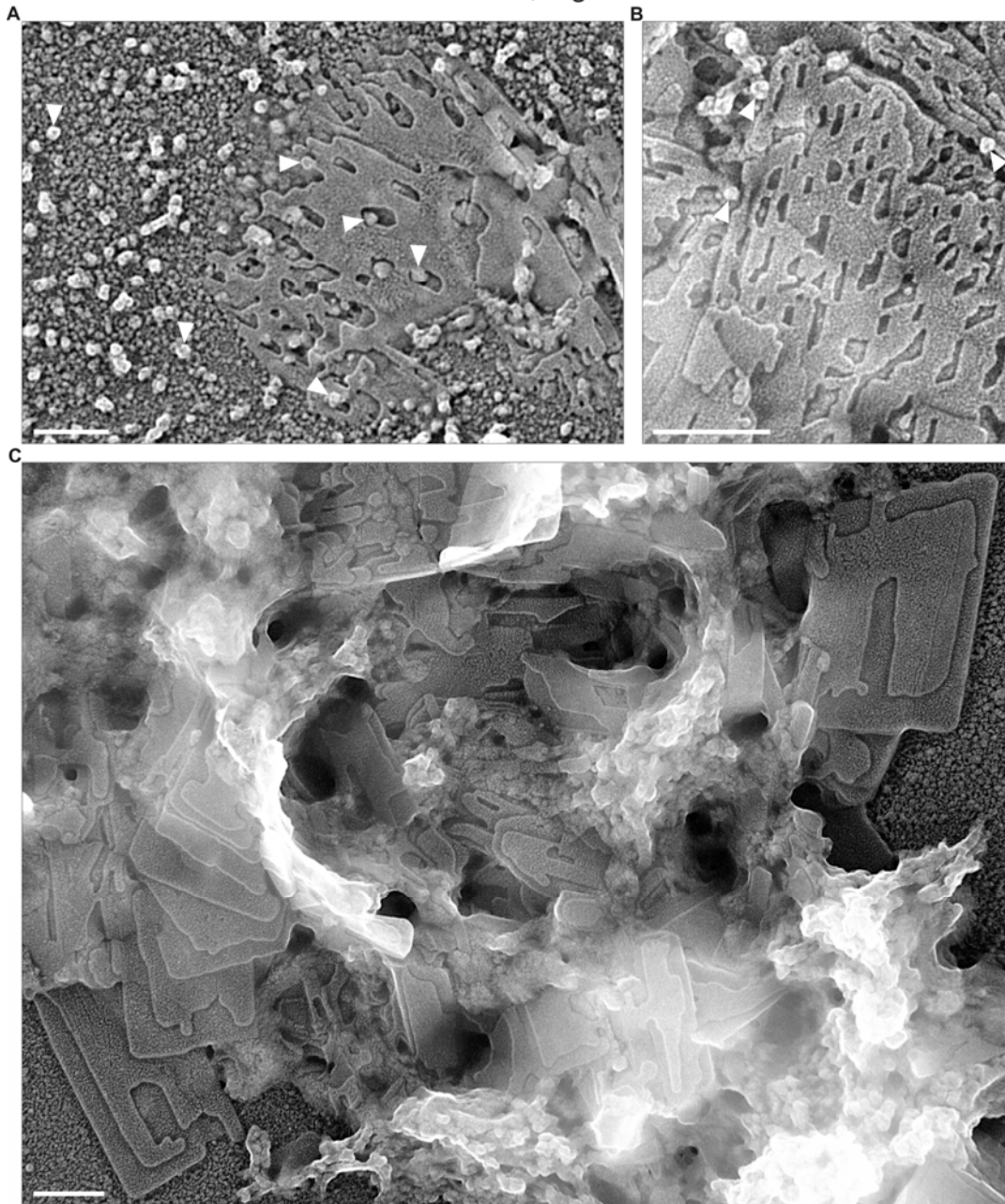
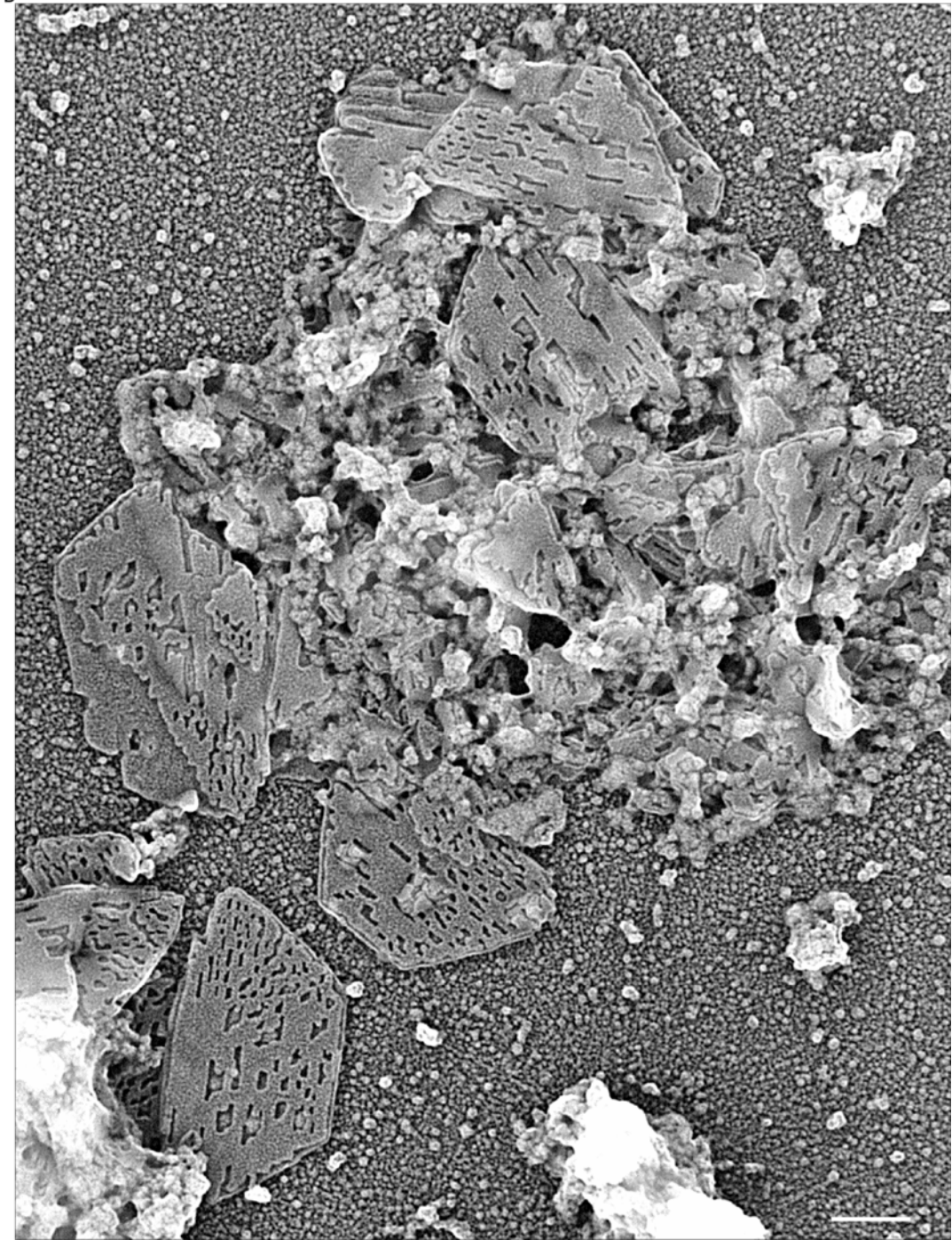
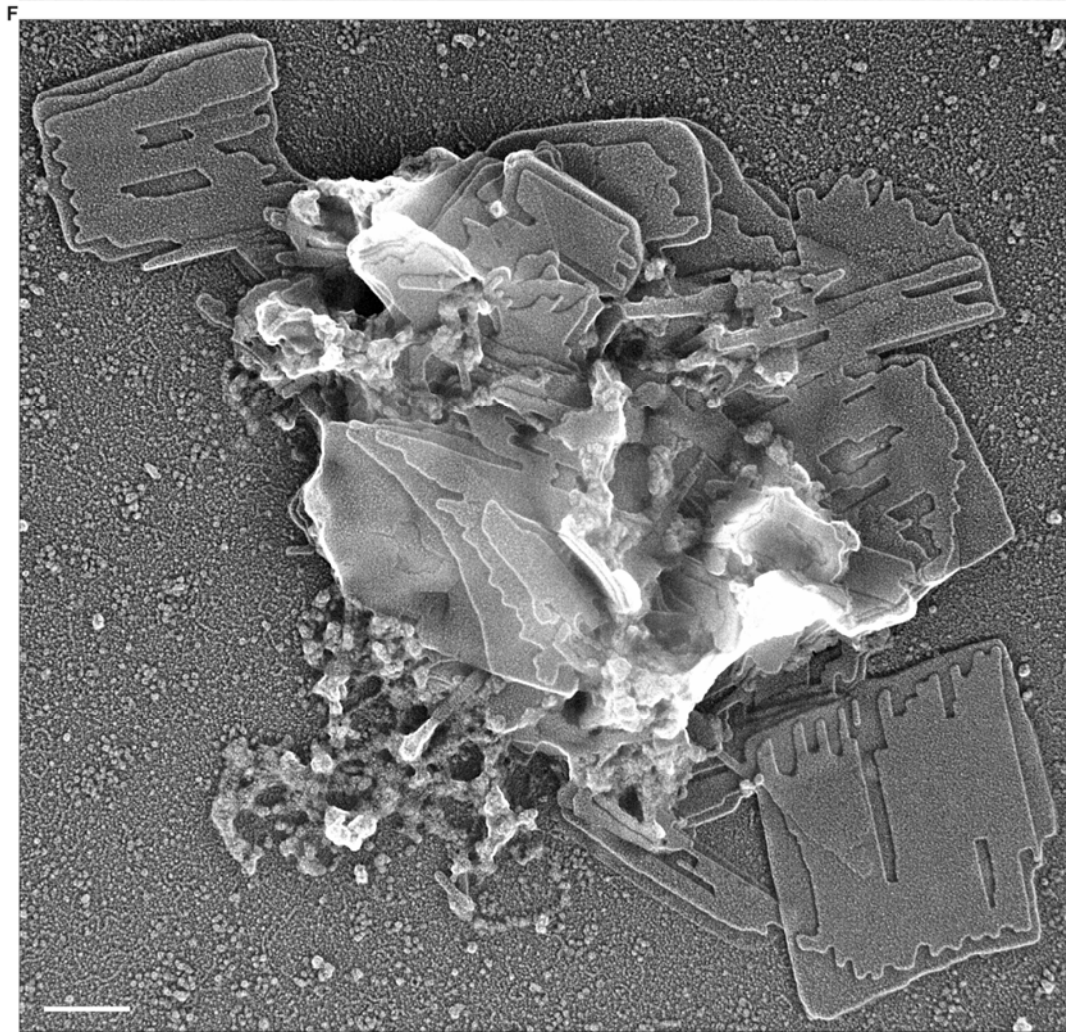
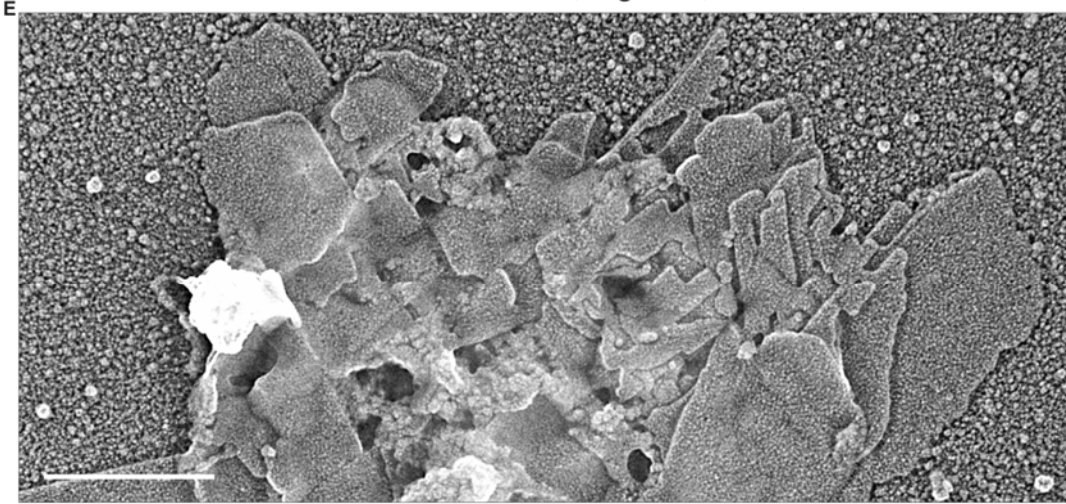


Fig. S1. More examples of TEM images corresponding to plates formed by association of metaphase chromatin fragments. Chromatin fragments (obtained by micrococcal nuclease digestion of metaphase chromosomes) extensively dialyzed at 4°C against the self-assembly solution (10 mM Pipes, pH 7.2, 120 mM KCl, 20 mM NaCl, and 17 mM MgCl₂) produced multilaminar structures of different sizes. (A,B) Small plates and chromatin fragments folded as short compact 30-nm fibers seen in top view (some of them are indicated with *head arrows*); note that some fragments probably were in the process of being associated with the growing plates when the sample was spread on the carbon-coated grid; (C-F) Examples of larger plates obtained in the same experiments. Additional details are given in Fig. 1. Scale bars: 200 nm.

Milla & Daban, Fig.S1D



Milla & Daban, Fig.S1E,F



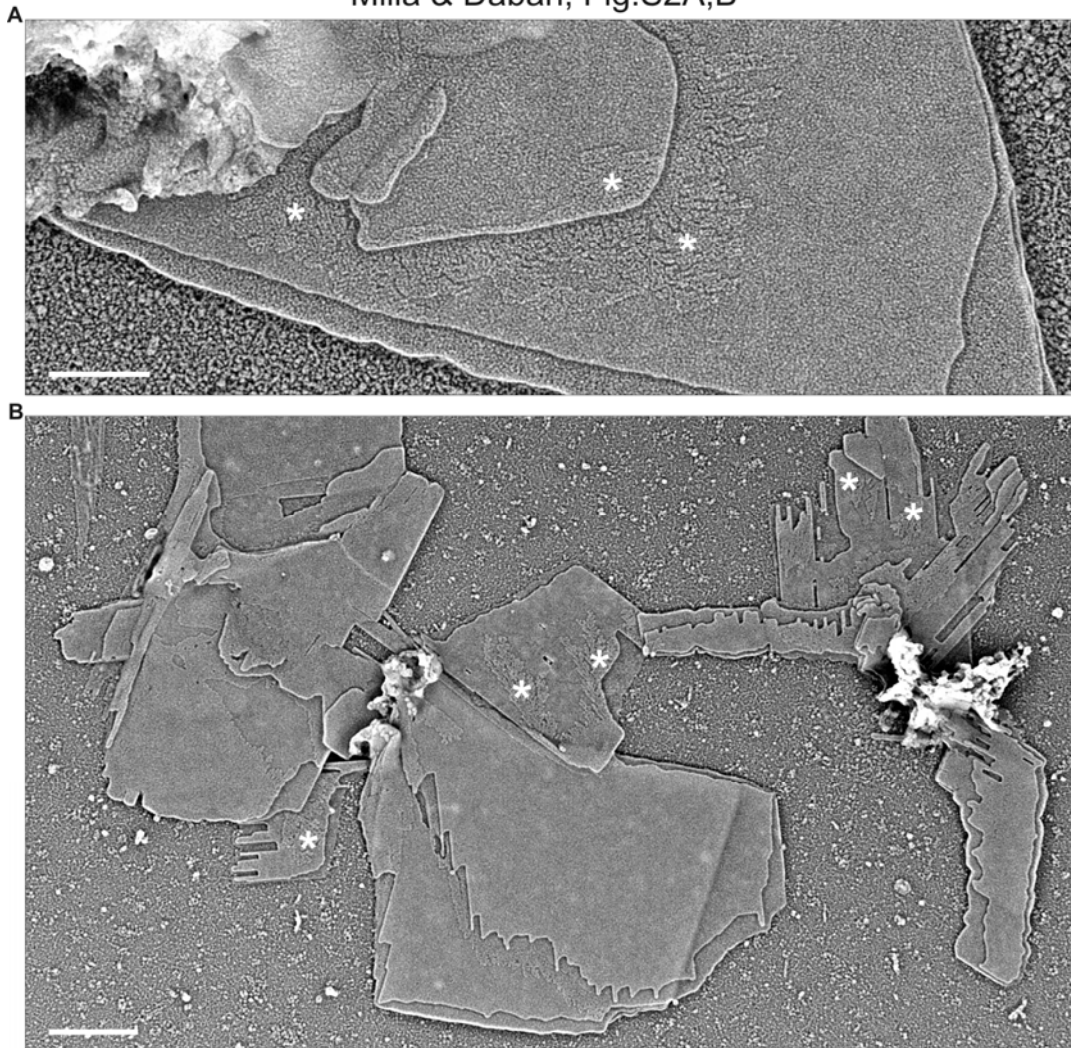


Fig. S2. Additional examples of self-assembled chromatin plates having partially unfolded layers. (A,B) Plates showing regions with a granular texture (indicated by *asterisks*); presumably these granules are unorganized nucleosomes in chromatin filaments not completely incorporated into well-defined layers. Additional details are given in Fig. 2. Scale bars: 200 nm (A); 500 nm (B).

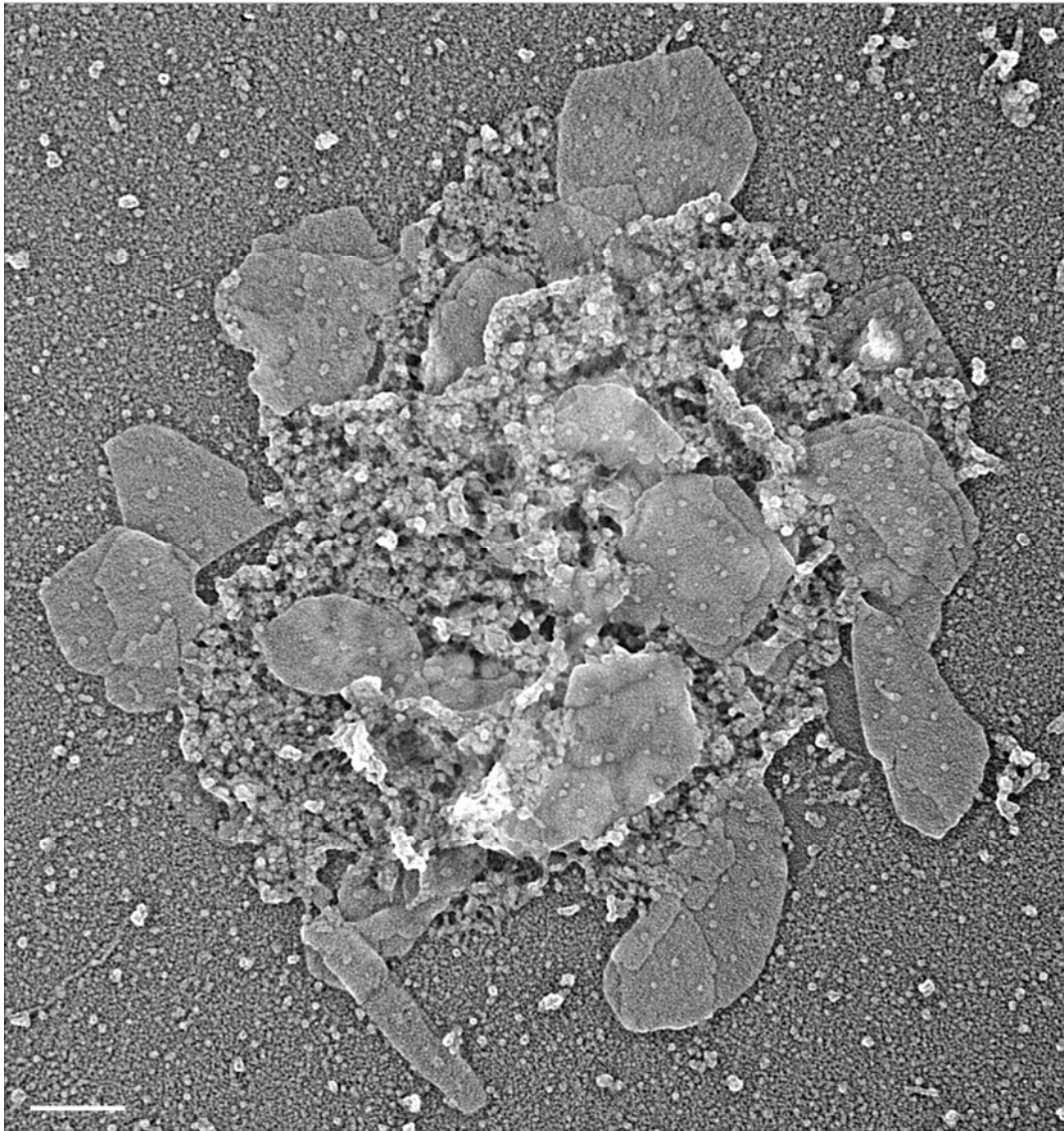


Fig. S3. Additional example of plate self-assembly from metaphase chromatin fragments purified by nondenaturing electrophoresis. Plates obtained by self-assembly of chromatin fragments having a DNA length (~8 kb) corresponding to ~42 nucleosomes. Additional details are given in Fig. 3. Scale bar: 200 nm.

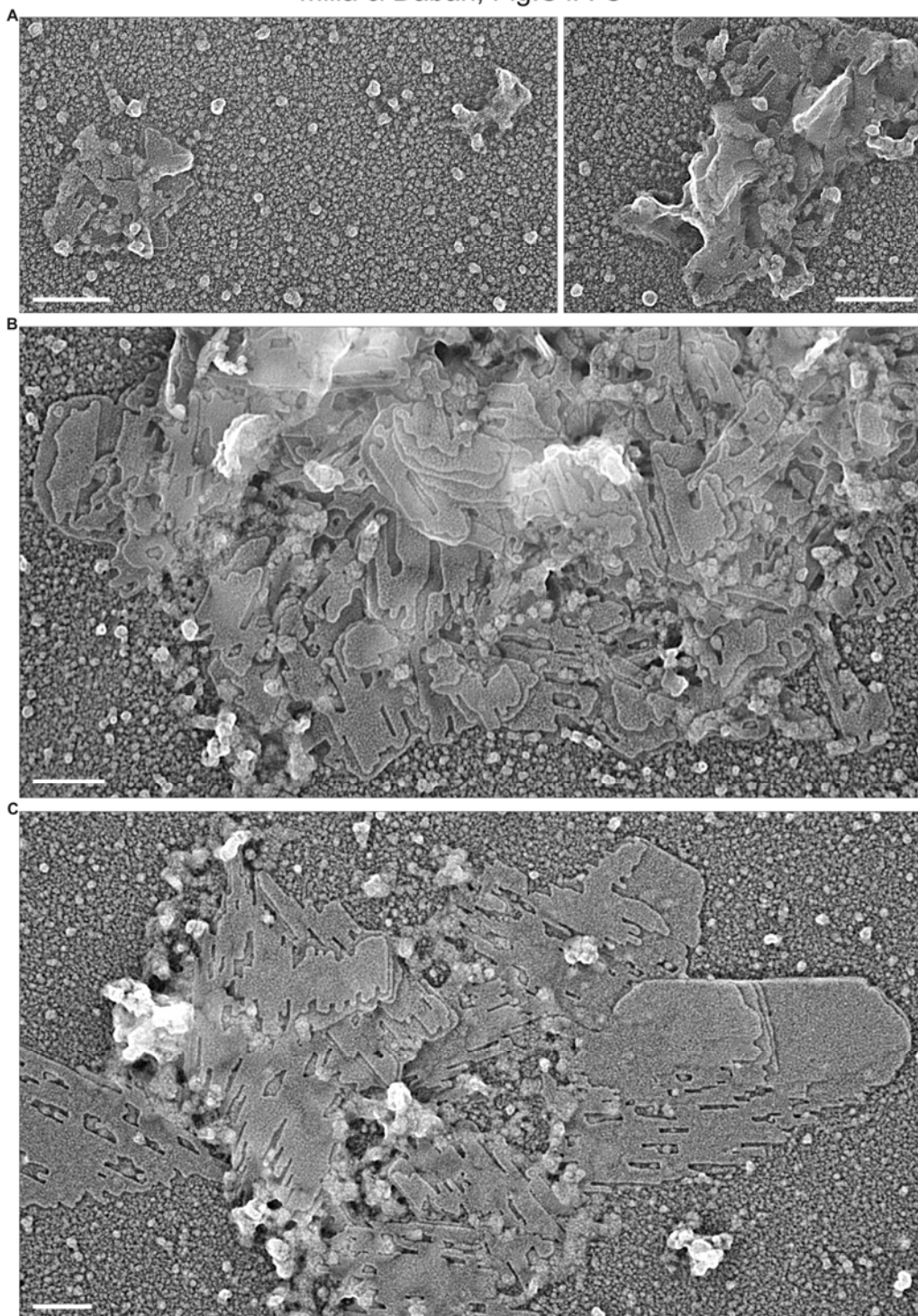


Fig. S4. More examples of plates formed by association of metaphase chromatin fragments at different temperatures. (A-C) 25°C; (D-H) 37°C. The dialysis times were: 3 h (A), 5 h (E), 7 h (C,F-H), 10 h (D), and 24 h (B). The samples in G and H were unidirectionally shadowed to measure the plate height; latex spheres were included as internal reference to determine the shadowing angle corresponding to each micrograph. Additional details are given in Fig. 4. Scale bars: 200 nm (A-E,G,H); 500 nm (F).

Milla & Daban, Fig.S4D-H

