CLAIMS

1. A method of characterizing a first agent, comprising

   (i) contacting the first agent with a composition comprising a condensate, wherein the condensate comprises a second agent before contacting with the first agent, and

   (ii) measuring the ability of the first agent to cause eviction of the second agent from the condensate;

   wherein the eviction of the second agent from the condensate characterizes the first agent as having one or more of following properties:

   (a) the first agent has higher affinity for a component of the condensate than the second agent;

   (b) the first agent has similar or higher condensate partition coefficient than the second agent; or

   (c) the first agent and the second agent have similar structure; or

   (d) when the condensate comprises a target for both the first agent and the second agent, the first agent has better therapeutic activity than the second agent, and

   wherein the first agent and the second agent are both small molecules.

2. The method of claim 1, wherein the first agent and/or the second agent comprises a detectable tag.

3. The method of claim 2, wherein the detectable tag is a fluorescent tag.

4. The method of claim 2 or 3, wherein the detectable tag does not affect the condensate partition coefficient of the first agent and/or the second agent.

5. The method of any one of claims 1-4, wherein the condensate comprises a target for the second agent.

6. The method of any one of claims 1-4, wherein the condensate does not comprise a target for the second agent.

7. The method of any one of claims 1-6, wherein the first agent is an isomer of the second agent.

8. The method of any one of claims 1-7, wherein the composition comprising the condensate is a cellular composition comprising the condensate within a cell.

9. The method of any one of claims 1-7, wherein the composition comprising the condensate does not comprise a cell.

10. The method of any one of claims 1-9, wherein

    i) the ability of the first agent to cause eviction of the second agent from the condensate is measured by the amount of the second agent remaining in the condensate after contacting the composition with the first agent;

    ii) the ability of the first agent to cause eviction of the second agent from the condensate is measured by the amount of the second agent outside of the condensate after contacting the composition with the first agent; or

    iii) the ability of the first agent to cause eviction of the second agent from the condensate is measured by the ratio of the second agent inside and outside of the condensate after contacting the composition with the first agent.

11. The method of any one of claims 1-10, wherein measuring the ability of the first agent to cause eviction of the second agent from the condensate comprises use of a technique selected from one or more of Raman spectroscopy, spectrophotometry, mass spectrometry, nuclear magnetic resonance, chromatography, quantitative phase microscopy, fluorescent microscopy, and a spin down assay.

12. The method of any one of claims 1-11, wherein the composition is contacted with an increasing amount of the first agent, and the eviction of the second agent from the condensate is measured continuously or at discrete intervals.

13. The method of any one of claims 1-12, wherein the method comprises contacting the first agent with a plurality of compositions each comprising a condensate having at least one different component.

14. The method of any one of claims 1-13, wherein the method comprises contacting a plurality of first agents with a plurality of compositions each comprising a condensate comprising the same component.

15. The method of any one of claims 1-14, wherein the component of the condensate is a transcriptional condensate component, a heterochromatin condensate component, a component of a condensate physically associated with mRNA initiation, or a component of a condensate physically associated with mRNA elongation.

16. The method of any one of claims 1-15, wherein the component of the condensate is a mediator, a mediator component, MED1, BRD4, POLII, SRSF2, FIB1, NPM1, or HP1α.

17. The method of any one of claims 1-16, wherein the condensate is a super-enhancer condensate, a splicing speckle condensate, a heterochromatin condensate, a nucleolus, a chromatin condensate, a polycomb condensate, or a DNA damage repair condensate.

18. The method of any one of claims 1-17, wherein the component of the condensate comprises an intrinsically disordered region (IDR).

19. The method of any one of claims 2-18, wherein the component of the condensate comprises a different detectable tag than the first agent and/or the second agent.

20. The method of any one of claims 1-19, wherein the first agent is capable of binding to a target.

21. The method of claim 20, wherein the target is genomic DNA or a protein.

22. The method of claim 20 or 21, wherein the condensate does not comprise the target.

23. The method of claim 20 or 21, wherein the target is present primarily outside the condensate.

24. The method of claim 20 or 21, wherein the target is present primarily in the condensate.

25. The method of any one of claims 20-24, wherein the target is a therapeutic target.

26. The method of any one of claims 20-25, wherein the target is an enzyme, a receptor, a ligand, an oncogene, an oncogene product, or a transcription factor.

27. The method of any one of claims 20-26, wherein the composition comprises the target.

28. The method of any one of claims 1-27, wherein the relative amount of the first agent incorporated in the condensate, or not incorporated in the condensate, is measured.

29. The method of any one of claims 1-28, wherein the condensate is physically associated with DNA.

30. The method of any one of claims 8 and 10-29, wherein the cell is a diseased cell.

31. The method of claim 30, wherein the diseased cell is a cancer cell.

32. The method of any one of claims 1-31, wherein the first agent and/or the second agent is a chemotherapeutic agent.

33. The method of any one of claims 1-31, wherein the first agent and/or the second agent is a candidate chemotherapeutic agent.