WHAT IS CLAIMED IS:

1. A method for automatically maintaining an amount of immersion fluid on an optical immersion lens, comprising:

(a) providing a chamber fluidically coupled to a fluid delivery line, wherein said chamber comprises said optical immersion lens;

(b) dispensing, via said fluid delivery line, immersion fluid into said chamber, wherein, after said dispensing, said chamber has at least a predetermined amount of immersion fluid disposed therein; and

(c) maintaining said at least said predetermined amount of said immersion fluid in said chamber.

2. The method of claim 1, further comprising, between (a) and (b), determining said optical immersion lens does not have said predetermined amount of immersion fluid on said optical immersion lens.

3. The method of claim 2, wherein said determining is an automatic determining.

4. The method of any one of claims 2 or 3, wherein said determining comprises use of a sensor configured to determine said amount of said immersion fluid on said optical lens.

5. The method of any one of claims 2-4, wherein said determining comprises use of a timer to determine a time since the last addition of said immersion fluid.

6. The method of any one of claims 1-5, wherein said optical immersion lens is a portion of a system configured to autonomously image a sample for at least 2 days using at least in part said objective lens.

7. The method of any one of claims 1-6, further comprising using said optical immersion lens to image at least a portion of an in situ biological sample.

8. The method of any one of claims 1-7, wherein said chamber is configured to capture excess immersion fluid.

9. The method of any one of claims 1-8, further comprising using a fluid removal line to remove said immersion fluid from said chamber.

10. The method of claim 9, wherein said fluid delivery line and said fluid removal line operate in tandem.

11. An automated fluidic module for an optical immersion lens, comprising:

a pump coupled to a fluid delivery line configured to dispense an immersion fluid into an immersion fluid collar disposed on said optical immersion lens; and

a processor configured to, in response to a determination that said optical immersion lens does not have a predetermined level of said immersion fluid, activate said pump to deliver said immersion fluid to said optical immersion lens until said optical immersion lens has at least said predetermined level of said immersion fluid.

12. The automated fluidic module of claim 11, wherein said immersion fluid is water.

13. The automated fluidic module of any one of claims 11 or 12, wherein said immersion collar is configured to hold said immersion fluid on said immersion lens.

14. The automated fluidic module of any one of claims 11-13, wherein substantially no bubbles are introduced to said immersion fluid in said fluid delivery line.

15. The automated fluidic module of any one of claims 11-14, further comprising another optical immersion lens and another fluid delivery line configured to dispense said immersion fluid onto said another optical immersion lens.

16. The automated fluidic module of claim 15, wherein said automated fluidic module is configured to maintain said predetermined level of said immersion fluid on both said optical immersion lens and said another optical immersion lens.

17. The automated fluidic module of claim 11, wherein said automated fluidic module maintains said optical immersion lens under said immersion fluid for at least about 5 days.

18. The automated fluidic module of any one of claims 11-17, further comprising an additional optical immersion lens coupled to an additional immersion fluid collar.

19. The automated fluidic module of any one of claims 11-18, wherein said immersion fluid collar is configured to capture excess immersion fluid.

20. The automated fluidic module of any one of claims 11-19, further comprising an additional pump configured to remove said immersion fluid from said immersion fluid collar.