WHAT IS CLAIMED:

1. A pipette tip for use with a pipettor including a pipettor shaft, the pipettor shaft having a terminal end and including a shaft interlock feature proximate the terminal end, the pipette tip having opposed proximal and distal ends and comprising:

a tubular body extending between the proximal and distal ends, wherein:

the tubular body defines a fluid passage;

the fluid passage terminates at a proximal opening adjacent the proximal end and at a distal opening adjacent the distal end; and

the tubular body has a proximal portion; and

a coupling portion on the proximal end, the coupling portion including a coupling member mounted on the proximal portion of the tubular body, wherein the coupling member includes a pipette tip interlock feature configured to mechanically interlock with the shaft interlock feature of the pipettor shaft to releasably secure the pipette tip to the pipettor shaft;

wherein:

the shaft interlock feature includes a cooperating groove or rib on the pipettor shaft and the pipette tip interlock feature includes a circumferentially extending rib or groove configured to interlock with the cooperating groove or rib on the pipettor shaft;

mating surfaces of the coupling member and the proximal portion of the tubular body are bonded to one another;

the coupling member includes an integral, annular sealing rib extending radially inwardly from an inner diameter of the coupling member, the sealing rib is adapted to form a fluid-tight seal with an outer diameter of the pipettor shaft when the pipettor shaft is inserted into the coupling portion and the pipette tip interlock feature is interlocked with the shaft interlock feature;

the coupling member includes a plurality of integral, circumferentially distributed coupling tabs;

the coupling tabs are configured to be radially outwardly displaced by the pipettor shaft when the terminal end of the pipettor shaft is inserted into the

coupling portion;

the pipette tip interlock feature is located on at least one of the coupling tabs and is configured to be displaced radially outwardly with the at least one of the coupling tabs when the terminal end of the pipettor shaft is inserted into the coupling portion;

each of the coupling tabs is attached or merged at its distal end to the sealing section and has a proximal free end;

the coupling member includes a plurality of circumferentially spaced apart slots defined between the coupling tabs;

the slots are open between the coupling tabs and at the proximal free ends of the coupling tabs such that the slots are open in a direction away from the distal end of the pipette tip; and

the tubular body and the coupling member are formed of different materials from one another.

2. The pipette tip of Claim 1 wherein the shaft interlock feature includes an annular groove on the pipettor shaft and the pipette tip interlock feature includes a circumferentially extending rib configured to interlock with the cooperating annular groove on the pipettor shaft.

3. The pipette tip of Claim 1 wherein:

the material of the coupling member is less stiff than the material of the tubular body.

4. The pipette tip of Claim 3 wherein:

the durometer of the material of the tubular body is at least 60 Shore D; and

the durometer of the material of the coupling member is less than 70 Shore A.

5. The pipette tip of Claim 3 wherein:

the material of the tubular body includes polypropylene; and

the material of the coupling member includes a thermoplastic elastomer.

6. The pipette tip of Claim 1 wherein the coupling portion includes a stop shoulder configured to engage the terminal end and thereby limit insertion of the pipettor shaft into the coupling portion.

7. The pipette tip of Claim 1 wherein the fluid-tight seal is gas-tight up to at least 5 psi.

8. The pipette tip of Claim 1 wherein:
the tubular body and the sealing rib are formed of different materials; and
the material of the sealing rib is less stiff than the material of the tubular body.

9. The pipette tip of Claim 1 wherein:
the tubular body and the coupling tabs are formed of different materials; and
the material of the coupling tabs is less stiff than the material of the tubular body.

10. The pipette tip of Claim 9 wherein:
the tubular body and the sealing rib are formed of different materials; and
the material of the sealing rib is less stiff than the material of the tubular body.

11. A method for mounting a pipette tip on a pipettor shaft, the pipettor shaft having a terminal end and including a shaft interlock feature proximate the terminal end, the method comprising:

providing a pipette tip having opposed proximal and distal ends, the pipette tip including:

a tubular body extending between the proximal and distal ends, wherein:

the tubular body defines a fluid passage terminating at a proximal opening adjacent the proximal end and at a distal opening adjacent the distal end; and

the tubular body has a proximal portion; and

a coupling portion on the proximal end, the coupling portion including a coupling member mounted on the proximal portion of the tubular body, wherein

the coupling member includes a pipette tip interlock feature configured to mechanically interlock with the shaft interlock feature of the pipettor shaft to releasably secure the pipette tip to the pipettor shaft;

wherein:

the shaft interlock feature includes a cooperating groove or rib on the pipettor shaft and the pipette tip interlock feature includes a circumferentially extending rib or groove configured to interlock with the cooperating groove or rib on the pipettor shaft;

mating surfaces of the coupling member and the proximal portion of the tubular body are bonded to one another;

the coupling member includes an integral, annular sealing rib extending radially inwardly from an inner diameter of the coupling member, the sealing rib is adapted to form a fluid-tight seal with an outer diameter of the pipettor shaft when the pipettor shaft is inserted into the coupling portion and the pipette tip interlock feature is interlocked with the shaft interlock feature;

the coupling member includes a plurality of integral, circumferentially distributed coupling tabs;

the coupling tabs are configured to be radially outwardly displaced by the pipettor shaft when the terminal end of the pipettor shaft is inserted into the coupling portion;

the pipette tip interlock feature is located on at least one of the coupling tabs and is configured to be displaced radially outwardly with the at least one of the coupling tabs when the terminal end of the pipettor shaft is inserted into the coupling portion;

each of the coupling tabs is attached or merged at its distal end to the sealing section and has a proximal free end;

the coupling member includes a plurality of circumferentially spaced apart slots defined between the coupling tabs;

the slots are open between the coupling tabs and at the proximal free ends of the coupling tabs such that the slots are open in a direction

away from the distal end of the pipette tip; and

the tubular body and the coupling member are formed of different materials from one another; and

inserting the terminal end of the pipettor shaft into the coupling portion to mechanically interlock the interlock feature with the pipettor shaft proximate the terminal end and thereby releasably secure the pipette tip to the pipettor shaft.

12. The method of Claim 11 wherein the shaft interlock feature includes an annular groove on the pipettor shaft and the pipette tip interlock feature includes a circumferentially extending rib configured to interlock with a cooperating annular groove on the pipettor shaft.

13. The method of Claim 11 wherein:

the tubular body and the coupling member are formed of different materials; and

the material of the coupling member is less stiff than the material of the body.

14. The method of Claim 13 wherein:

the durometer of the material of the tubular body is at least 60 Shore D; and

the durometer of the material of the coupling member is less than 70 Shore A.

15. The method of Claim 13 wherein:

the material of the tubular body includes polypropylene; and

the material of the coupling member includes a thermoplastic elastomer.

16. The method of Claim 11 wherein the coupling portion includes a stop shoulder that engages the terminal end and thereby limits insertion of the pipettor shaft into the coupling portion when the terminal end of the pipettor shaft is inserted into the coupling portion.

17. The method of Claim 11 wherein the fluid-tight seal is gas-tight up to at least 5 psi.

18. The method of Claim 11 wherein:

the tubular body and the sealing rib are formed of different materials; and
the material of the sealing rib is less stiff than the material of the tubular body.

19. The method of Claim 11 wherein:
the tubular body and the coupling tabs are formed of different materials; and
the material of the coupling tabs is less stiff than the material of the tubular body.

20. The method of Claim 19 wherein:
the tubular body and the sealing rib are formed of different materials; and
the material of the sealing rib is less stiff than the material of the tubular body.

21. A pipetting system comprising:
a pipettor including a pipettor shaft having a terminal end, the pipettor shaft including a shaft interlock feature proximate the terminal end; and
a pipette tip having opposed proximal and distal ends and including:

a tubular body extending between the proximal and distal ends, wherein:
the tubular body defines a fluid passage;
the fluid passage terminates at a proximal opening adjacent the proximal end and at a distal opening adjacent the distal end; and
the tubular body has a proximal portion; and
a coupling portion on the proximal end, the coupling portion including a coupling member mounted on the proximal portion of the tubular body, wherein the coupling member includes a pipette tip interlock feature configured to mechanically interlock with the shaft interlock feature of the pipettor shaft to releasably secure the pipette tip to the pipettor shaft;
wherein:
the shaft interlock feature includes a cooperating groove or rib on the pipettor shaft and the pipette tip interlock feature includes a circumferentially extending rib or groove configured to interlock with the cooperating groove or rib on the pipettor shaft;

mating surfaces of the coupling member and the proximal portion of the tubular body are bonded to one another;

the coupling member includes an integral, annular sealing rib extending radially inwardly from an inner diameter of the coupling member, the sealing rib is adapted to form a fluid-tight seal with an outer diameter of the pipettor shaft when the pipettor shaft is inserted into the coupling portion and the pipette tip interlock feature is interlocked with the shaft interlock feature;

the coupling member includes a plurality of integral, circumferentially distributed coupling tabs;

the coupling tabs are configured to be radially outwardly displaced by the pipettor shaft when the terminal end of the pipettor shaft is inserted into the coupling portion;

the pipette tip interlock feature is located on at least one of the coupling tabs and is configured to be displaced radially outwardly with the at least one of the coupling tabs when the terminal end of the pipettor shaft is inserted into the coupling portion;

each of the coupling tabs is attached or merged at its distal end to the sealing section and has a proximal free end;

the coupling member includes a plurality of circumferentially spaced apart slots defined between the coupling tabs;

the slots are open between the coupling tabs and at the proximal free ends of the coupling tabs such that the slots are open in a direction away from the distal end of the pipette tip; and

the tubular body and the coupling member are formed of different materials from one another.

22. The pipetting system of Claim 21 wherein the shaft interlock feature includes an annular groove on the pipettor shaft and the pipette tip interlock feature includes a circumferentially extending rib configured to interlock with the cooperating annular groove on the pipettor shaft.

23. The pipetting system of Claim 21 wherein:
the tubular body and the coupling member are formed of different materials; and
the material of the coupling member is less stiff than the material of the tubular body.

24. The pipetting system of Claim 23 wherein:
the durometer of the material of the tubular body is at least 60 Shore D; and
the durometer of the material of the coupling member is less than 70 Shore A.

25. The pipetting system of Claim 23 wherein:
the material of the tubular body includes polypropylene; and
the material of the coupling member includes a thermoplastic elastomer.

26. The pipetting system of Claim 21 wherein the coupling portion includes a stop shoulder configured to engage the terminal end and thereby limit insertion of the pipettor shaft into the coupling portion.

27. The pipetting system of Claim 21 wherein the fluid-tight seal is gas-tight up to at least 5 psi.

28. The pipetting system of Claim 21 wherein:
the tubular body and the sealing rib are formed of different materials; and
the material of the sealing rib is less stiff than the material of the tubular body.

29. The pipetting system of Claim 21 wherein:
the tubular body and the coupling tabs are formed of different materials; and
the material of the coupling tabs is less stiff than the material of the tubular body.

30. The pipetting system of Claim 29 wherein:
the body and the sealing rib are formed of different materials; and
the material of the sealing rib is less stiff than the material of the body.