Errata

The following errors are known to be present in *The Mechanics of Inhaled Pharmaceutical Aerosols: An Introduction*:

p. 4, line 2: "x and dx" should be "x and x+dx"

p. 6: Both sides of eqn. (2.15) should be multiplied by *dx*.

p. 6: After eqn. (2.16), $v_{normalized}(x)$ should be $v_{normalized}(x)dx$ and both sides of eqn. (2.17) should be multiplied by *dx*.

p. 8: After eqn. (2.29), replace "where we interpret *n(x)* as the total number of particles per unit volume" with "where *n(x)* is the count distribution defined by eqn. (2.1)".

p. 9: Insert a negative sign inside the exp of the integrand i.e. the integrand should be

$$\exp\left[\frac{-(u-c)^2}{2b^2}\right]$$

p. 9: Immediately after eqn. (2.35), replace "where" with "where $b=ln(\sigma_g)$ and".

p. 18: Two lines above eqn. (3.5), "acts in the same direction" should read "acts in the opposite direction".

p. 36 Figure 3.6: The double-sided arrow above x is missing its horizontal line.

p. 38, 13 lines from bottom: Q=300 cm^3 s^{-1} should be Q=400 cm^3 s^{-1}

p. 48, 10 lines from the bottom: "Clapyeron" should be "Clapyron"

p. 49 line 4: Capitalize "kelvin".

p. 50, eqn. (4.8): On the right hand side, *a* should be replaced with $\frac{a}{T}$ and the minus sign should be moved to the left so it is between the square and round brackets i.e. this equation should read

$$c_s = \frac{a}{T}\exp\left[-\left(\Delta\mu\big|_{pureH2O} + \delta\mu\right)/kT\right]$$

p. 56, line 11: Insert an additional 0 after the decimal i.e. 0.0002 should be 0.00002.

p. 56, line 13: Insert an additional 0 after the decimal i.e. 0.0004 should be 0.00004.

p. 59, eqn. (4.28): The right hand side is missing a negative sign in front of the 2.

p. 72, eqn. (4.3): The entire right hand side should be divided T, i.e. append $/T$ to the far right side of this equation.

p. 73, eqn. (4.63): On the right hand side, a should be replaced with $\frac{a}{T}$.

p. 73, 2nd line after eqn. (4.67): The negative sign in the exponent of Avogadro's number should removed i.e. $6.023\text{X } 10^{23}$ not $6.023\text{X } 10^{-23}$.

p. 75, line 8: Two lines above eqn. (4.75), replace "drug in droplet" with "drug in the droplet".

p. 85, eqn. (4.116): π should be deleted from this equation.

p. 86, 11 lines from bottom: "ρ/ρ_a"should be "$1- \rho/\rho_a$".

p. 87, eqn. (4.127): The factor 1000 on the right hand side should be replaced with the factor 0.001.

p. 87, eqn. (4.133): The exponent should be 9 not 6 i.e. 10^9 not 10^6 and the units should be given as Pa.

p. 89, line 16: "211 K, i.e. -62^0 C" should be replaced with "209 K, i.e. -64^0 C".

p. 89, last 5 lines of last paragraph starting at "we find the only . . ." should be replace with "we find the droplet temperature is T_s=215 K i.e. -58° C, which is off by 3% from the more correct Stefan flow solution. The relatively small error is the result of the vapor pressure at this temperature still being only a relatively small fraction of the total pressure (see part b of example 4.2 on p. 53)."

p. 98, Table 5.1 column 7: The cumulative volume of generation 16 should be 109.26 not 190.26.

p. 101, 4 lines from bottom of last paragraph before References: "quiet" should be replaced with "quite"

p. 127, line 5: insert "a" before "real lung".

p. 128, 1 line after eqn. (7.35) switch "a particle" and "the fluid"

p. 129, replace κ with t'

p. 149, line 12: "IPA" should be "IPAs"

p. 155, eqn. (7.83): "$\frac{C_c}{72}$" should be replaced with "$\frac{2C_c}{9}$

p. 171, line 33: The volume and page number for the Finlay et al. (2000a) reference should be **161**:91-97 instead of **160**:1-7.

p. 172, 6 lines from bottom: Byro should be Byron.

p. 190, 10 lines from bottom: 50 x 10^{-5} m should be 50 x 10^{-6} m

p. 194, line 12: "7.40741X 10^{-4}" should be `"7.40741X 10^{-5}"

p. 206 Eqn. (9.27). Velocity "v" in the denominator should be dynamic viscosity "ν".

p. 215 eqn. (8.50): The exponent should be multiplied by minus 1 i.e. this eqn. should be

$$C(t) = C_0\left(\frac{V_{l0}}{V_{l0} - \lambda t}\right)^{1-\frac{\dot{m}_l}{\lambda\rho_l}}$$

p. 224 eqn. (9.2): the 6 should be in the numerator not the denominator i.e. this eqn. should read

$$f = \frac{6C}{r^7}$$

p. 226 eqn. (9.12): the 6 in the denominator should be a 12 i.e. this eqn. should read

$$F_{vdW} = \frac{A}{12D^2}\frac{d_1 d_2}{d_1 + d_2}$$

p. 227 eqn. (9.13): The upper limit of the integral in the denominator should be d not D. Also the integrations should involve a dummy variable, such as Δ', since Δ is reserved for the upper limit in the integrand.

p. 227, first line of running text: "is useful in understanding" should be "are useful in understanding"

p. 231 Figure 9.5: The double-sided arrow below D is missing its horizontal line.

p. 235, last sentence of Figure caption for Figure 9.7: $R_i \to 0$ should be $R_1 \to 0$

p. 254: In Eqn. (9.64) the first equal sign should be deleted.

p. 255: In the line immediately following eqn. (9.68), ρ^{fluid} should be replaced by ρ_{fluid}.

p. 256, line 8: "Eq. (9.63)" should be "Eq. (9.71)"

p. 259, last line of footnote: $\int_0^\infty$ should be replaced with $\frac{1}{T}\int_0^T$

p. 260, line 5: “resulting” should be replaced with “result”.

p. 262 and p. 271, eqn. (9.81): The left hand side of this equation should be squared

p. 271, line 12: “$c_1 \approx 0.25$” should be “$c_1 \approx 0.04$”

p. 271, line 21: “$u_i \approx 0.3$” should be “$u_{i\_} \approx 1.4$”

p. 271, line 22: “0.3 mm” should be “0.14 mm”

p. 271, line 24: “0.3 mm” should be “0.14 mm”

p. 271, 9 lines from bottom: “*Re*=0.1” should be “*Re*=0.28”

p. 271, 9 lines from bottom: insert “almost” at the end of this line i.e. “are almost reasonable”

p. 271, 4 lines from bottom: “0.3 m s^{-1}” should be “1.4 m s^{-1}”

p. 271, 3 lines from bottom: “$2.2X10^{-12}$” should be “$4.9X10^{-11}$”

p. 271, 2 lines from bottom: “0.3 m s^{-1}” should be “1.4 m s^{-1}”

p. 271, last line: “$1.5X10^{-10}$” should be “$1.7X10^{-9}$”

p. 272, line 2: “much less” should be “greater”

p. 272, line 3: “not expected” should be “possible”; delete “however”,; “is considerably” should be “is also considerably”

p. 272, line 7: “less” should be “greater”, “than adhesion” should be “than the adhesion”

p. 272, line 8: delete “not” and “many”

p. 272, line 11: “0.3 m s^{-1}” should be “1.4 m s^{-1}”

p. 272, line 16: “$2X\ 10^{-13}$” should be “$3.4X10^{-12}$”

p. 272, line 18 should read: “the former of which is much larger than $3.4X10^{-12}$ and the latter is of the same size as $3.4X10^{-12}$, so that we do not expect turbulent”

p. 272, line 21: “$3X\ 10^{-10}$” should be “$1X\ 10^{-9}$”

p. 273, line 10: “weaker than (c)” should be “weaker than (c), although (a) is strong enough to cause deaggregation”

p. 273, line 13: “geometry”should be “geometry, with (a) also contributing”

p. 274: In the reference listing for Desai et al., “in press” should be replaced by “**22**:107-113”.

p. 285: In the 1st line after eqn. (10.9), the words “subscript 2” and “subscript 1” should be interchanged.

p. 286, eqn. (10.12): “149.2” should be “-149.2”

p. 289 2nd last line: “s=dU/dt” should read “U=ds/dt”