

An error occurred in Appendix I of the paper since the boundary condition of Eq. A3 was incorrect. A few other typographic errors also appear in the published version of the solution. We present the correct equations below. These changes do not alter the main conclusion of the paper that a bound cell disturbs the local shear rate up to 2.5 cell diameters away.

The origin of the co-ordinate system for the solution presented here lies at the center of the substrate adherent cell. In this case, the undisturbed linear shear flow of gradient  $\gamma_w$  in the  $x$ -direction is  $v_x = \gamma_w(y+a)$  where  $a$  is the cell radius.

The correct equations are:

$$\begin{aligned} v_r &= v_0 \left[ 1 - \frac{3}{2} \left( \frac{a}{r} \right) + \frac{1}{2} \left( \frac{a}{r} \right)^3 \right] \cos \theta \\ v_\theta &= -v_0 \left[ 1 - \frac{3}{4} \left( \frac{a}{r} \right) - \frac{1}{4} \left( \frac{a}{r} \right)^3 \right] \sin \theta \\ v_\phi &= 0 \end{aligned} \quad (A1)$$

$$G = \begin{bmatrix} 0 & 0 & 0 \\ \gamma_w & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix} \quad (A2)$$

$$\begin{aligned} \nabla P &= \mu \nabla^2 \mathbf{v} \\ \nabla \cdot \mathbf{v} &= 0, \quad \text{for all } |y| > a \\ B.C.1: \mathbf{v} &= 0 \quad \text{at } |y| = a \\ B.C.2: \mathbf{v} &= \mathbf{y} \cdot \mathbf{G} \quad \text{at } |y| \rightarrow \infty \end{aligned} \quad (A3)$$

$$\mathbf{v} = \mathbf{E} \cdot \mathbf{y} \left[ 1 - \frac{a^5}{r^5} \right] + (\mathbf{E} : \mathbf{y}\mathbf{y})\mathbf{y} \left\{ -\frac{5}{2} \frac{a^3}{r^5} \left[ 1 - \left( \frac{a}{r} \right)^2 \right] \right\} + \boldsymbol{\omega} \times \mathbf{y} \left[ 1 - \frac{a^3}{r^3} \right] \quad (A4)$$

Where  $\mathbf{E} (= \mathbf{G} + \mathbf{G}^T)/2$  is the symmetric rate-of-strain tensor and  $\boldsymbol{\omega}$  is the angular velocity vector in the  $z$  direction with magnitude  $-G/2$ .

$$\begin{aligned} v_x &= C_1 y / 2 + C_2 x^2 y + C_3 x^2 + C_4 + C_5 y / 2 + G(y + a) \\ v_y &= C_1 x / 2 + C_2 xy^2 + C_3 xy - C_5 x / 2 \\ v_z &= C_2 xyz + C_3 xz \end{aligned} \quad (A5)$$

where  $C_1 = -\gamma_w(a/r)^5$ ,  $C_2 = -(5/2)\gamma_w((a^3/r^5) - (a^5/r^7))$ ,  $C_3 = -(3/4)\gamma_w a((a/r^3) - (a^3/r^5))$ ,  $C_4 = -\gamma_w a(3/4 \times (a/r) + 1/4 \times (a/r)^3)$  and  $C_5 = -\gamma_w(a/r)^3$ .