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**Supplemental Information**

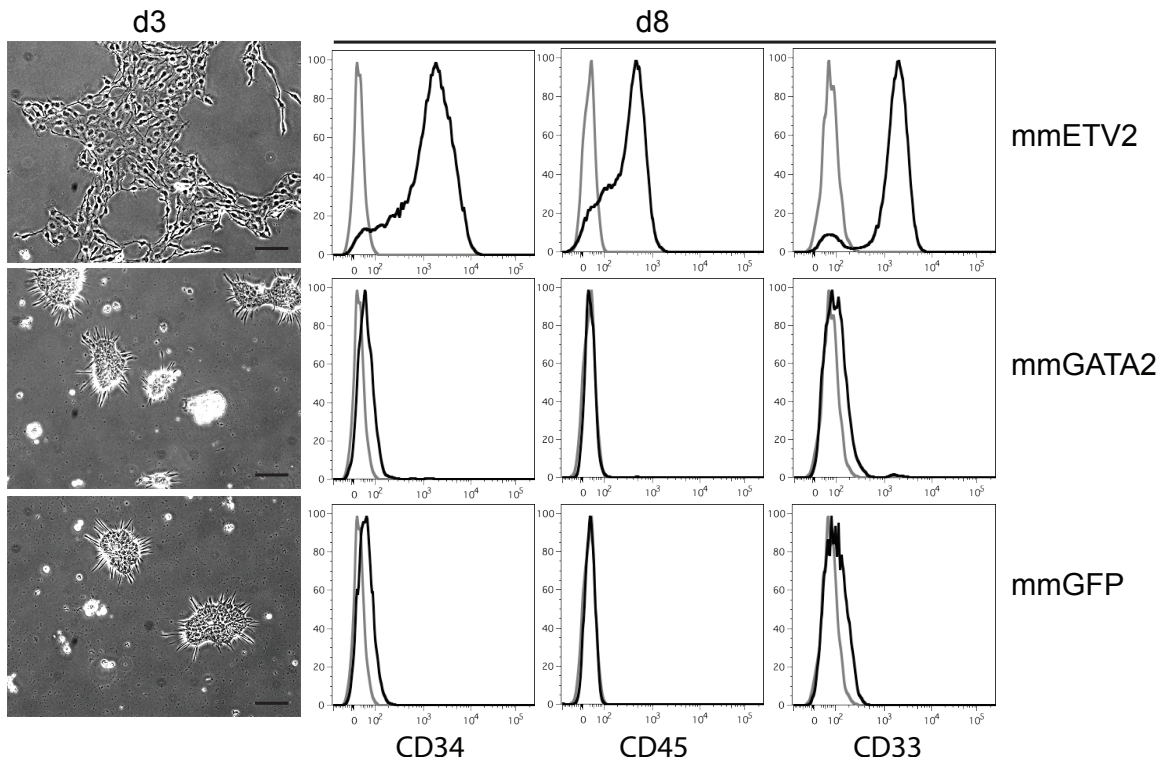
**Effective and Rapid Generation of Functional Neutrophils from Induced  
Pluripotent Stem Cells Using ETV2-Modified mRNA**

**Vera S. Brok-Volchanskaya, David A. Bennin, Kran Suknuntha, Lucas C. Klemm, Anna  
Huttenlocher, and Igor Slukvin**

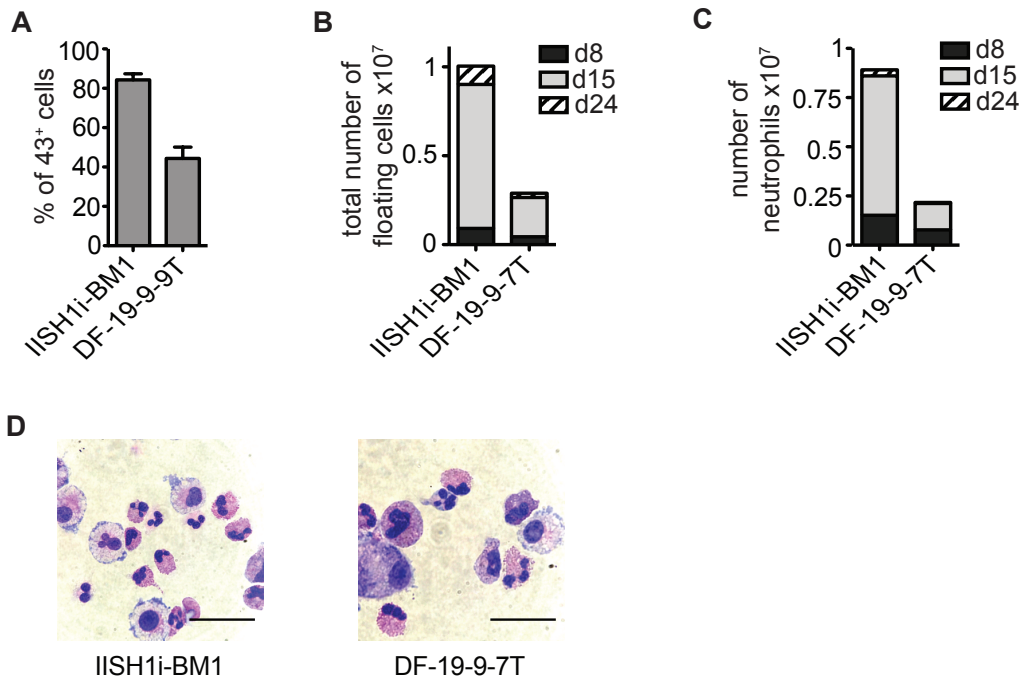
## **Supplementary Information**

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Effective and rapid generation of functional neutrophils from induced pluripotent stem cells using ETV2 modified mRNA



**Supplementary Figure 1. Induction of myeloid progenitors is specific for ETV2 modified mRNA.** iPSCs were transfected with ETV2, GATA2 or GFP modified RNA and cultured as outlined in Fig. 1A. Formation of CD34<sup>+</sup>CD33<sup>+</sup>CD45<sup>+</sup> myeloid progenitors was observed only in ETV2 mmRNA transfected cultures.



**Supplementary Figure 2. Neutrophil production from IISH1i-BM9 and DF-19-7T iPSC lines using ETV2 modified mRNA.** (A) Proportion of CD43<sup>+</sup> cells formed on day 8 of differentiation. (B) Total number of floating cells collected from differentiation cultures. (C) Total number of neutrophils produced in cultures. (D) Cytopspins showing the morphology of the generated neutrophils.

## Supplementary Video 1-4

Video 1-Fig 4a hiPSC derived neutrophils random migration.

Video 2-Fig 4a hiPSC derived neutrophils chemotaxing to fMLP.

Video 3-Fig 4a hiPSC derived neutrophils chemotaxing to IL8.

Video 4-Fig 4c hiPSC derived neutrophils migrating and phagocytosing

*Pseudomonas aeruginosa*.

## Supplementary Table 1. Antibodies used in this study.

Antigen	Conjugate	Source	Cat No.
CD10	BV510	BD Biosciences	563032
CD11b	APC	BD Biosciences	550019
CD11b	PE	Life Technologies	12-0118-42
CD15	BV711	BD Biosciences	563142
CD16	FITC	Life Technologies	11-0168-42
CD16	APC	Life technologies	17-0168-42
CD16	PE-Cy7	BD Biosciences	557744
CD33	PE-Cy5	Biolegend	303406
CD34	PE-Vio770	Miltenyi Biotec	130-100-844
CD34	FITC	BD Biosciences	555821
CD41a	APC	BD Biosciences	559777
CD43	VioBlue	Miltenyi Biotec	130-097-373
CD45	PE	Miltenyi Biotec	130-113-118
CD45	PE-Vio770	Miltenyi Biotec	130-110-634
CD45	APC-Vio770	Miltenyi Biotec	130-110-773
CD66b	PE	BD Biosciences	561650
CD144	PE-Vio770	Miltenyi Biotec	130-100-720
CD182	PE	Invitrogen	12-1829-42
CD235a	APC	BD Biosciences	551336
Lactoferrin	PE	Life Technologies	GIC206
MPO	FITC	Invitrogen	11-1299-42
Ghost red	780	Tonbo Biosciences	13-0865-T100