Supplement

Table S1. Materials and reagents.

Antibody list	**Company**	**Item number**	**Usage**
Rabbit anti-CD81(SN206-1)	Invitrogen	MA5-32333	Immunoblot (1:500)
Rabbit anti-COL1A2 (L-Plastin)	GeneTex	GTX105789	Immunoblot (1:1000)
Rabbit mAb anti-TNC	Cell Signaling	(E5J3B) 33352	Immunoblot (1:1000)
Rabbit mAb anti-IGFBP2	Cell Signaling	(F3E6V) 42816	Immunoblot (1:1000)
Rabbit anti-vWF	Abcam	ab316979	Immunoblot (1:1000)
Goat anti-AIF-1	NovusBio	NB100-0128	Immunofluorescence (1:200)
Rabbit Anti-mouse GFAP	ThermoFisher	PA5-85109	Immunofluorescence (1:50)
Alexa Fluor-594-isolection B4	ThermoFisher	I21413	Immunofluorescence (20 µg/ml)
Brilliant Violet 421™Anti-mouse CD206	BioLegend	141717	Immunofluorescence (1:250)
Donkey anti-Rabbit IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor™ 488	ThermoFisher	A21206	Immunofluorescence (1:200)
Donkey anti-Goat IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor™ 488	ThermoFisher	A32814	Immunofluorescence (1:200)
PCR primer list	**Company**	**Item number**	**Usage**
Aif1	ThermoFisher	Mm00479862_g1	qRT-PCR
Pycard (Asc)	ThermoFisher	Mm00445747_g1	qRT-PCR
Casp3	ThermoFisher	Mm01195085_m1	qRT-PCR
Casp8	ThermoFisher	Mm00802247_m1	qRT-PCR
Il1b	ThermoFisher	Mm00434228_m1	qRT-PCR
Il6	ThermoFisher	Mm00434228_m1	qRT-PCR
Gsdmd	ThermoFisher	Mm00509958_m1	qRT-PCR
Nlrp3	ThermoFisher	Mm00443258_m1	qRT-PCR
Vegfa	ThermoFisher	Mm01281449_m1	qRT-PCR
Other reagents	**Company**	**Item number**	**Usage**
miRNeasy Mini Kit	Qiagen	217004	RNA isolation
SuperScript™ III CellsDirect™ cDNA Synthesis Kit	ThermoFisher	18080200	cDNA synthesis

Table S2. Data for Volcano Plot in Figure 7C.
Table S3. Data for heatmap in Figure 7E.
Table S4. The role of significantly upregulated unique proteins in BPD-EVs.

Proteins		Full Name	Log2FC	Inflammation, Angiogenesis and Cell death
IGFBP2 (31kDa)		Insulin-like Growth Factor Binding Protein 2	3.36	Regulates cytokines and immune cell migration (**inflammation**); Promotes endothelial cell survival and migration (**angiogenesis**); Inhibits **apoptosis** in cancer cells; **Non-traditional NLRP3 inflammasome activator**
DEFA1B (10kDa)		Defensin alpha 1B	4.40	Highly pro-inflammatory, Innate immune and **inflammatory** response; Stimulates VEGF production indirectly; Induces apoptosis in infected or cancer cells; **Non-traditional NLRP3 inflammasome activator**
MPO (60kDa)		Myeloperoxidase	10	Catalyzes the formation of ROS; promotes inflammation and biomarker for disease severity of BPD; contribute to chronic i**nflammation** and **angiogenesis**
COL1A2 (129kDa)		Collagen Type I Alpha 2 Chain	4.81	Upregulated during tissue injury and chronic **inflammation**; Promotes endothelial cell migration and blood **vessel formation**; Influence **cell survival**
LCP1 (70kDa)		Lymphocyte cytosolic protein 1	4.87	Upregulated in activated immune cells (**inflammation**); Indirectly involved in **angiogenesis** via TAMs secreting VEGF and MMPs; Influence **cell survival** in cancer and immune cells; **Non-traditional NLRP3 inflammasome activator**
CD5L (36kDa)		Soluble CD5 Ligand	2.39	Modulates immune responses in chronic **inflammation**; Modulating **angiogenesis** via macrophage pathways; Inhibits **apoptosis** in macrophages and contributes to cell survival during infection and inflammation.
TNC (240kDa)		Tenascin C	1.66	Strongly upregulated in tissue injury and chronic **inflammation**; modulates cytokine expression and immune cell migration; Promotes or inhibits **angiogenesis** depending on isoform and context; Induce **apoptosis** or protect from it depending on cell type and signaling context
vWF (300kDa)		von Willebrand Factor	1.93	Acts as an acute-phase reactant; Released by endothelial cells during **inflammation**; Regulates endothelial proliferation and **vessel formation**.

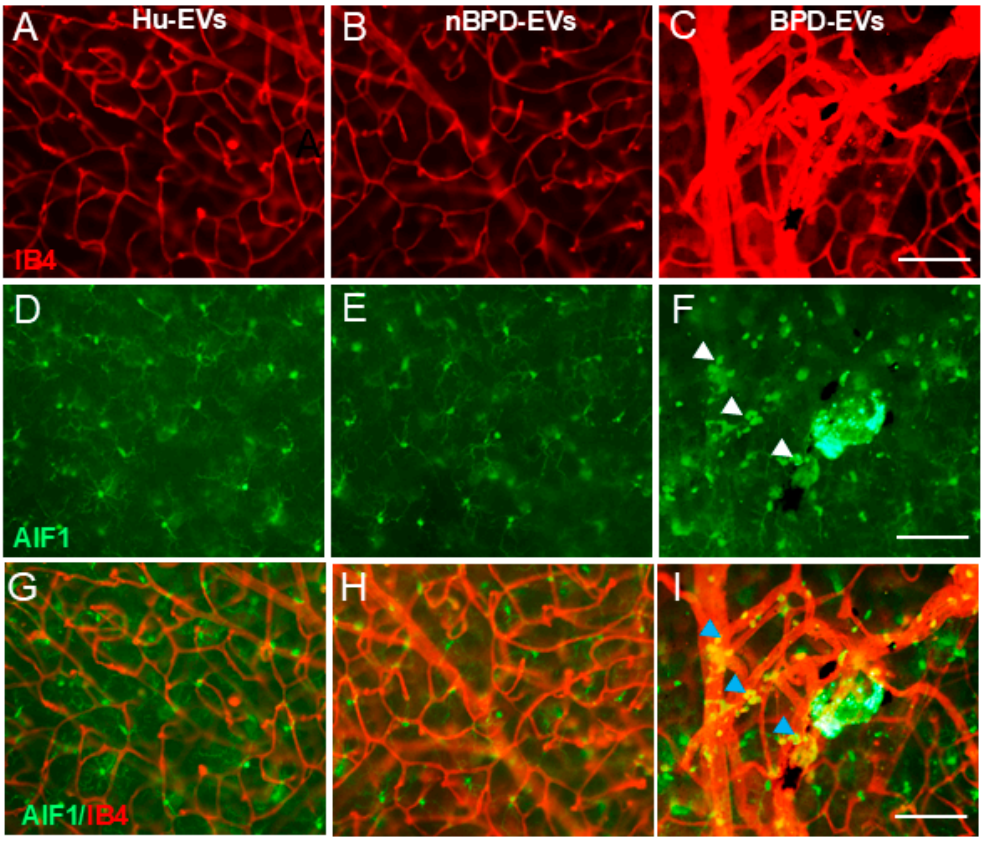


Figure S1. BPD-EVs increase microglial cell number in the retinas of neonatal mice. A-C. Representative images of retinas stained with IB4 (Red). D-F. Representative images of retinas stained for microglial marker AIF1 (Green). G-I. Images of merged anti-AIF1 and IB4 staining. F. White arrows indicate activated microglial cells. I. Blue arrows indicate merged activated microglial cells with vascular endothelial cells. A, D&G: Control Hu-EVs, B, E&H: nBPD-EVs, C, F&I: BPD-EVs. Scale bars: 50 μm.

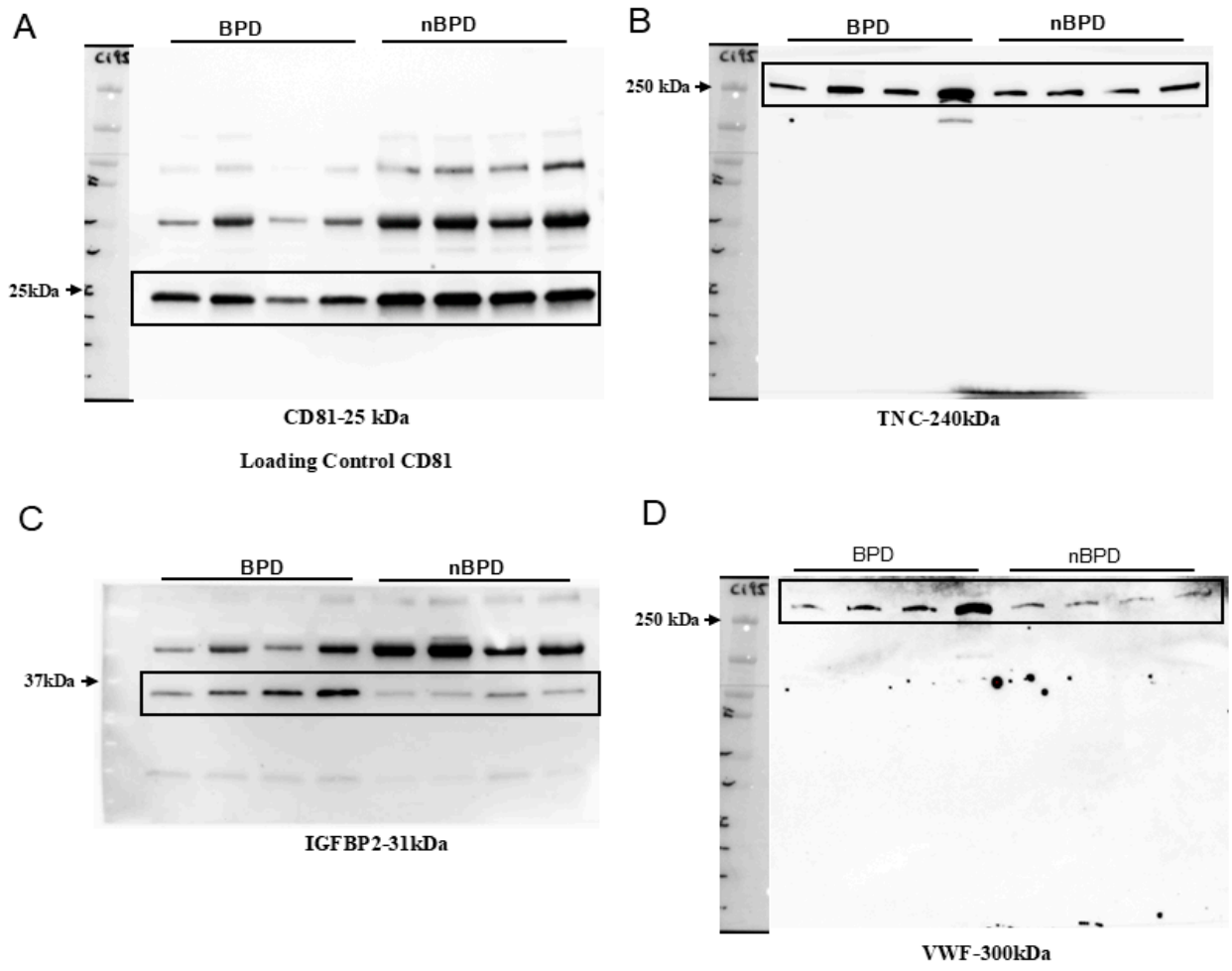


Figure S2. Full images of western blot for anti-CD81, TNC, vWF and IGFBP2 showing increased expression of these proteins in BPD-EVs compared to nBPD-EVs.