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Life Sciences Reporting Summary

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Please do not complete any field with "not applicable" or n/a. Refer to the help text for what text to use if an item is not relevant to your study. For final submission: please carefully check your responses for accuracy; you will not be able to make changes later.

Experimental design

1. Sample size

Describe how sample size was determined.

For all in vitro studies, using Cyp1a1 or Il10 expression after apoptotic cell exposure the power of the comparison was 100% using n=3 samples per condition. Likewise, using cytokine data for splenic IL-10 protein production after apoptotic cell injection the power for the comparison was 100% using n=5/group. Thus these numbers were used for experiments unless otherwise noted. For survival studies the power of the comparison was 100% using n=10 mice/group.

2. Data exclusions

Describe any data exclusions.

All data was included, there was no exclusion

3. Replication

Describe the measures taken to verify the reproducibility of the experimental findings.

All experiments were repeated at least 2 times, with most being repeated 3-4 times. Always with similar results (i.e. all findings were reproducible).

4. Randomization

Describe how samples/organisms/participants were allocated into experimental groups.

For animal and human studies there was no randomization of animal allocation

5. Blinding

Describe whether the investigators were blinded to group allocation during data collection and/or analysis.

For animal and human studies there was no blinding with the exception of pathologic assessment of kidney pathology which was scored in a blinded manner.

Note: all in vivo studies must report how sample size was determined and whether blinding and randomization were used.

6. Statistical parameters

For all figures and tables that use statistical methods, confirm that the following items are present in relevant figure legends (or in the Methods section if additional space is needed).

n/a	Confirmed	
☐	☒	The exact sample size (n) for each experimental group/condition, given as a discrete number and unit of measurement (animals, litters, cultures, etc.)
☐	☒	A description of how samples were collected, noting whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
☐	☒	A statement indicating how many times each experiment was replicated
☐	☒	The statistical test(s) used and whether they are one- or two-sided *Only common tests should be described solely by name; describe more complex techniques in the Methods section.*
☐	☒	A description of any assumptions or corrections, such as an adjustment for multiple comparisons
☐	☒	Test values indicating whether an effect is present *Provide confidence intervals or give results of significance tests (e.g. P values) as exact values whenever appropriate and with effect sizes noted.*
☐	☒	A clear description of statistics including central tendency (e.g. median, mean) and variation (e.g. standard deviation, interquartile range)
☐	☒	Clearly defined error bars in all relevant figure captions (with explicit mention of central tendency and variation)

See the web collection on statistics for biologists for further resources and guidance.

Software

Policy information about availability of computer code

7. Software

Describe the software used to analyze the data in this study.	Image analysis was done using National Institutes of Health Image-J software. Statistics were analyzed using Prism© V6 software (GraphPad Software Inc). Flow cytometry data was analyzed with FlowJo software (TreeStar)

For manuscripts utilizing custom algorithms or software that are central to the paper but not yet described in the published literature, software must be made available to editors and reviewers upon request. We strongly encourage code deposition in a community repository (e.g. GitHub). *Nature Methods* guidance for providing algorithms and software for publication provides further information on this topic.

Materials and reagents

Policy information about availability of materials

8. Materials availability

Indicate whether there are restrictions on availability of unique materials or if these materials are only available for distribution by a third party.	There are no restrictions on availability of proprietary materials and all commercially acquired reagents are duly noted in the report.

9. Antibodies

Describe the antibodies used and how they were validated for use in the system under study (i.e. assay and species).

Flow antibodies:
αF4/80 (clone BM8, Biolegend, Catlog: 123110, Lot: B251637), αCD11c (clone N418, Biolegend, Catlog: 117318, Lot:B251124), αCD8α (clone 53-6.7, Biolegend, Catlog: 100712, Lot: B244174), αCD4 (clone GK1.5, Biolegend, Catlog: 100451, Lot: B233640), αCD86 (clone GL1, BD Biosciences, Catlog: 561962, Lot: 7020894), αMHCII (clone M5/114.15.2, eBiosciences, Catlog: 46-5321-82, Lot: E10789-1634), αCD44 (clone IM7, BD Biosciences, Catlog:553133, Lot: 28751), αCD24 (clone M1/69, Biolegend, Catlog: 101808, Lot: B200541), αB220 (clone RA3-6B2, eBiosciences, Catlog: 45-0452-82, Lot: E08338-1632), αCD23 (clone B3B4, BD Biosciences, Catlog: 553139, Lot: 91865), αCD21/CD35 (clone 7G6, BD Biosciences, Catlog: 561770, Lot: 4283747) αCD103 (clone 2E7, Biolegend, Catlog: 121406, Lot: B205063) αIL-10 (clone JES5-16E3, eBioscience, Catlog: 12-7101-81, Lot: E02094-1634), αIL-6 (clone MP5-20F3, BD Biosciences, Catlog: 554401, Lot: 82557), α-TNFα (clone MP6-XT22, BD Biosciences, Catlog: 51-18135Z, Lot: 46709), anti CD45.2 (clone 104, Biolegend, , Catlog: 109830, Lot: B228756)

Mouse sorting:
αSignR1 (clone ERTR9, Serotec, Catlog: MCA2394), αCD169 (clone MOMA-1,Serotec, Catlog: MCA947A647, Lot: 0215), αCD11c (clone N418, Biolegend, Catlog: 117318, Lot:B251124), αCD8α (clone 53-6.7, Biolegend, Catlog: 100712, Lot:B244174), αF4/80 (clone BM8, Biolegend, Catlog: 123110, Lot:B251637), αB220 (clone RA3-6B2, eBiosciences, Catlog: 45-0452-82, Lot: E08338-1632), αCD103 (clone 2E7, Biolegend, Catlog: 121406, Lot: B205063)

Human sorting:
αCD56 (clone NCAM16.2, BD Biosciences, Catlog: 565139, Lot: 7026671), αCD19 (clone HIB19, BD Biosciences, Catlog: 564977, Lot: 7026663), αCD3(clone UCHT1, BD Biosciences, Catlog:565119, Lot: 6196912), αCD11c (clone B-Ly6, BD Biosciences, Catlog: 563403, Lot: 7047632), αCD123 (clone 7G3, BD Biosciences, Catlog: 560826, Lot: 7054756), αCD11b (clone ICRF44, BD Biosciences, Catlog: 564518, Lot:6320767), αHLA-DR (clone G46-6, BD Biosciences, Catlog: 562331, Lot: 7158731), αBDCA2/CD303 (clone V24-785, BD Biosciences , Catlog: 566427, Lot: 6347548), αCD14 (clone 61D3, eBioscience, Catlog: 17-0149-42, Lot: 4299676), αCD4 (clone RPA-T4, BD Biosciences, Catlog: 560650, Lot: 6217692), αCD8 (clone SK1, BD Biosciences, Catlog: 565192, Lot: 6308712), αCD3 (clone SK7, BD Biosciences, Catlog: 564003, Lot: 4022797)

Microparticles (MPs) characterization:
CD31 (clone WM59, Biolegend, Catlog: 303117, Lot: B232311), CD45 (clone 2D1, BD Biosciences, Catlog: 560274, Lot: 6119751), CD66b (clone G10F5, Biolegend , Catlog: 305109, Lot: B230406), CD19 (clone HIB19, , Catlog: 564977, Lot: 7026663), CD3 (clone UCHT1, BD Biosciences, Catlog: 561810, Lot: 6147946), annexin V (Biolegend, Catlog:640920, Lot:B241065), DAPI (Thermo, Catlog: D1306), CD9 (Clone M-L13; BD Biosciences), CD63 (Clone H5C6; eBioscience), HLA-ABC (Clone W6/32, BD Biosciences), HLA-DR (Clone L243, BD Biosciences)

Immunofluroscence:
AF568 conjugated goat anti-mouse IgG antibody (Life Technologies, Catlog: A11031, Lot: 1736975), IgM-FITC (Clone RMM-1, Biolegend, Catlog: 406506 , Lot: B121494), Complement C3-FITC (MP Biomedical, LLC, Catlog: 55500, Lot: 05201), αF4/80 (clone BM8, Biolegend, Catlog: 123110 , Lot:B251637),

Western Blot
anti-AhR antibody (Enzo Life Sciences, Catlog: BML-SA210-0100), anti-β-actin (clone AC-15, Sigma, Catlog: A5441), anti-H3 (clone D1H2, Cell Signalling Technology, Catlog: 4499S, Lot: 1)

All antibodies used are commercially available and validated by the manufacturer.

10. Eukaryotic cell lines

a. State the source of each eukaryotic cell line used.

Jurkat T cells were obtained from ATCC.

b. Describe the method of cell line authentication used.

The only cell line used was jurkat T cells ordered directly from ATCC immediately prior to use. These cells are rigorously authenticated by ATCC usingmorphology, karyotyping, and PCR based approaches to confirm the identity of human cell lines and to rule out both intra- and interspecies contamination. These include an assay to detect species specific variants of the cytochrome C oxidase I gene (COI analysis) to rule out inter-species contamination and short tandem repeat (STR) profiling to distinguish between individual human cell lines and rule out intra-species contamination.

c. Report whether the cell lines were tested for mycoplasma contamination.

Cells were negative for mycoplasma.

d. If any of the cell lines used are listed in the database of commonly misidentified cell lines maintained by ICLAC, provide a scientific rationale for their use.

Jurkat was not listed in the most current ICLAC list.

Animals and human research participants

Policy information about studies involving animals; when reporting animal research, follow the ARRIVE guidelines

11. Description of research animals

Provide all relevant details on animals and/or animal-derived materials used in the study.

C57BL/6J (B6), B6.Ahr-/-, B6.LysMCre, B6.Ido1-/-, B6.Act-mOVA-II (Act-mOVA), B6.OTII +Thy1.1+, B6.Fcgr2b-/-, B6.Ahrflox/flox, MRLlpr, and MRL-MpJ mice were bred and maintained in specific pathogen free conditions at the Princess Margaret Cancer Center animal facilities. Female mice between 8-12 weeks of age were used unless otherwise noted. All animal procedures were followed as per the University Health Network Institutional Animal Care and Use Committee guidelines.

Policy information about studies involving human research participants

12. Description of human research participants

Describe the covariate-relevant population characteristics of the human research participants.

SLE patients, satisfying 4 or more of the revised 1997 American College of Rheumatology classification criteria for SLE, were recruited from the University of Toronto Lupus Clinic under full, informed consent according to UHN institutional guidelines. Blood and clinical data were obtained enabling calculation of disease activity using the SLE disease activity index (SLEDAI-2K) 45. Active patients (defined as a clinical SLEDAI-2K > 0, ie. not including the complement and anti-dsDNA Ab components of the SLEDAI-2K) had SLEDAI-2K scores from 4 to 32, and quiescent patients had SLEDAI scores from 0 to 4 (derived from low serum complements and/or high anti-dsDNA Ab levels alone, mean 1.8). Control blood samples were obtained from healthy donors with no family history of SLE. In one set of experiments we collected fresh blood from active SLE patients or healthy controls . The study was approved by the Research Ethics Board of UHN with participants providing informed consent.