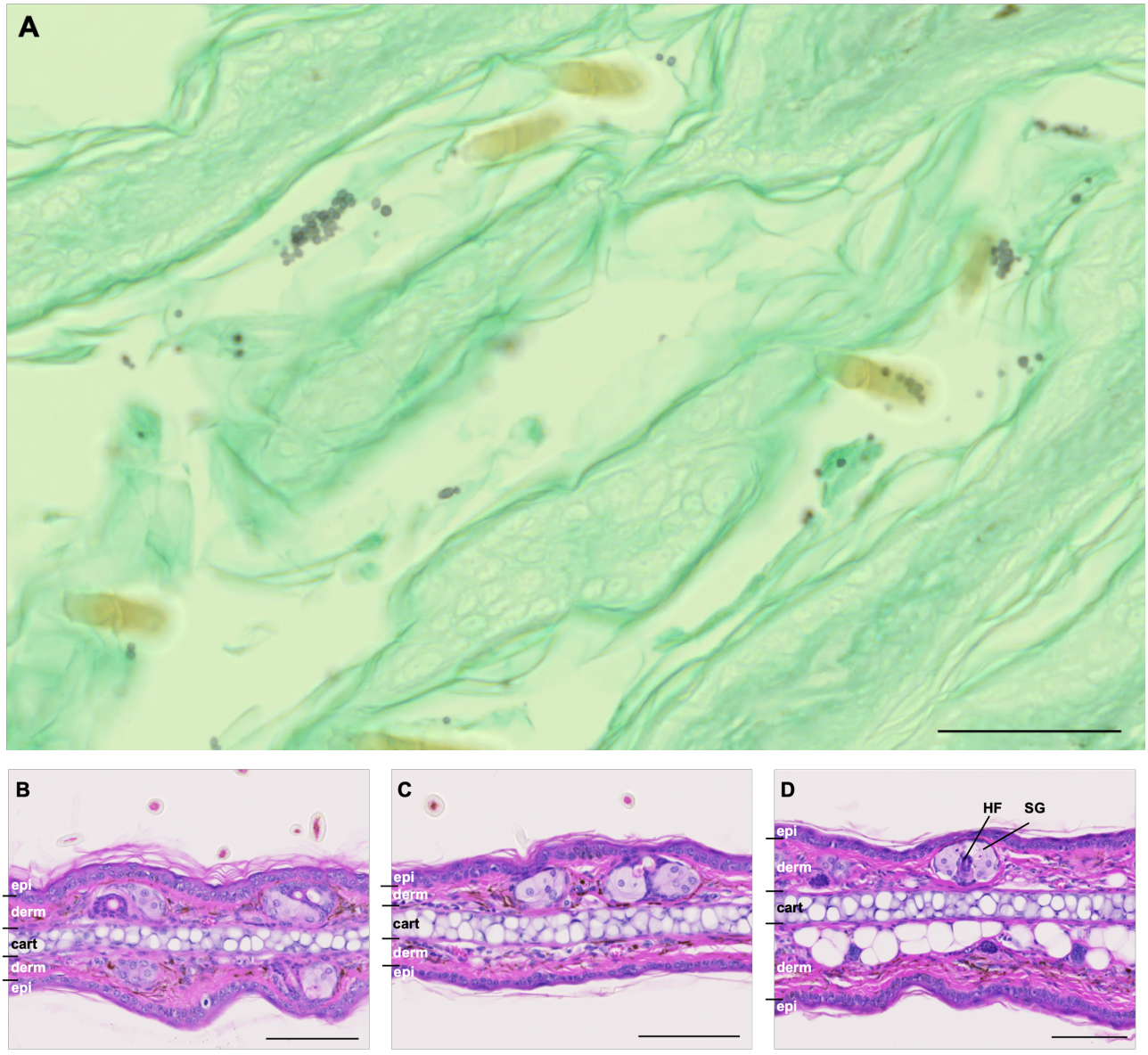
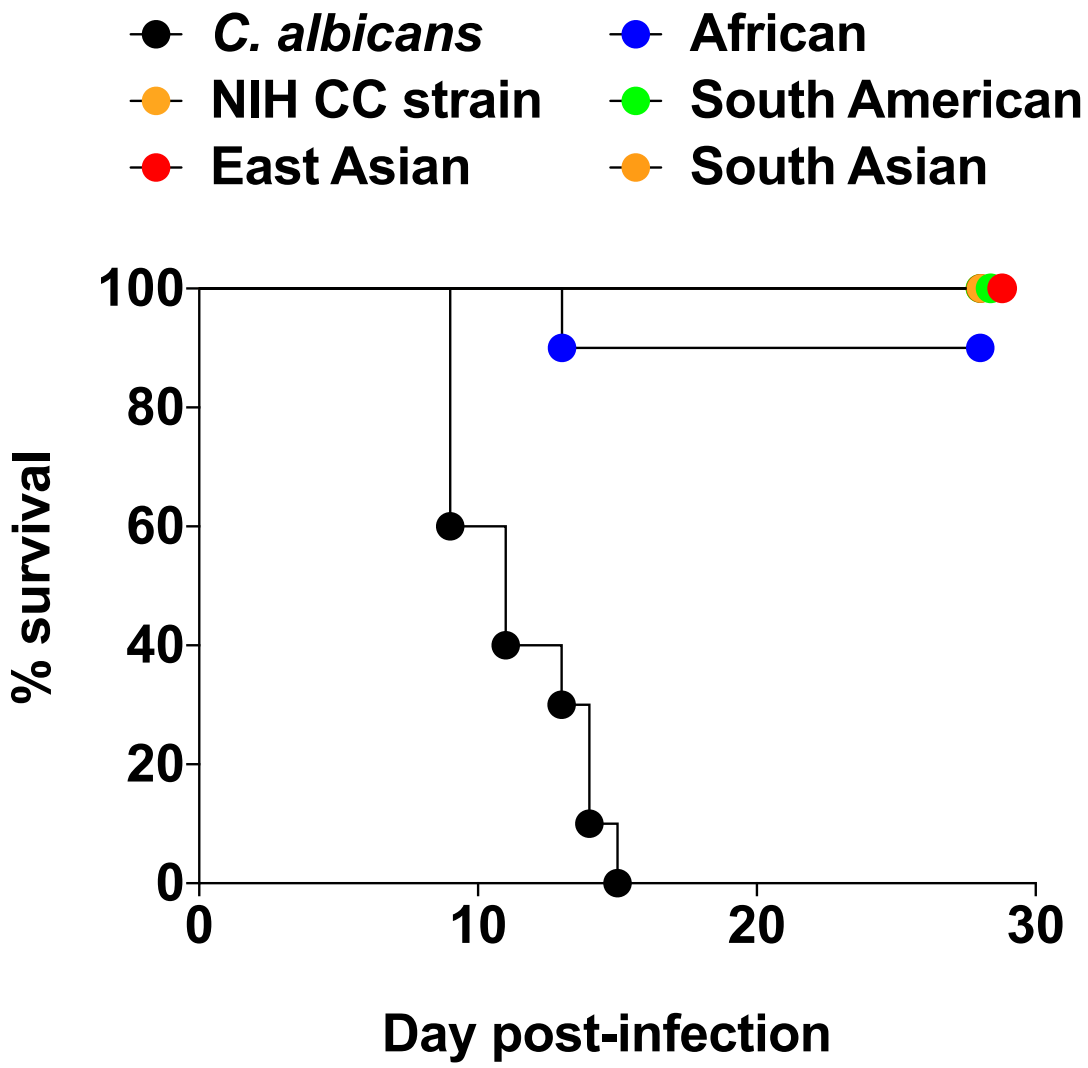
SUPPLEMENTAL FIGURES AND TABLES

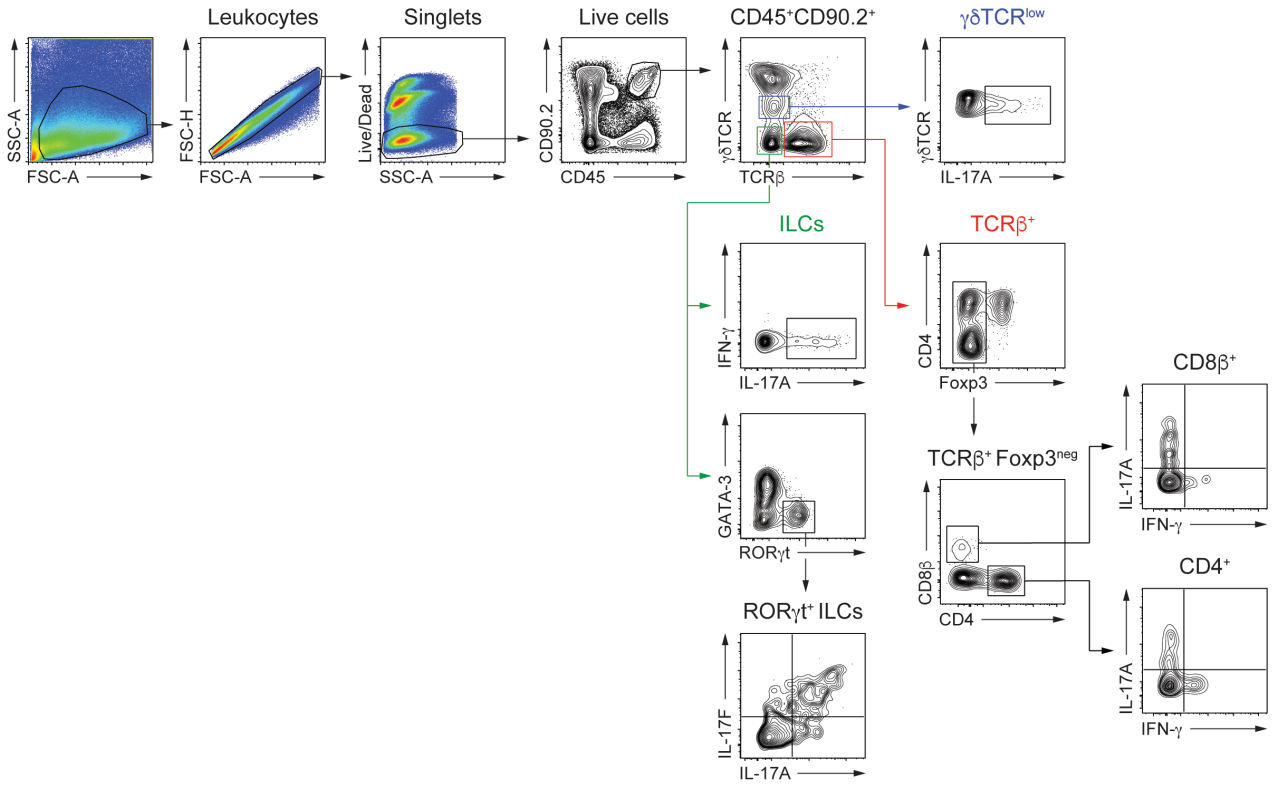


Supplemental Figure 1. *C. auris* colonization on mouse skin surface and within skin tissue compartment does not elicit overt skin inflammation or skin architecture disruption. Related to Figure 1. (A) Grocott's methenamine silver stain for fungi on ear pinna longitudinal section of a WT mouse topically associated seven days prior with *C. auris*. Clusters of *C. auris* cells (purple) can be seen on the skin surface (stratum corneum) and located around a hair shaft. 50 μm scale bar is displayed at the bottom right. (B-D) Hematoxylin and eosin staining of pinna skin transverse sections from a naïve WT mouse (B), mouse topically associated seven days prior with *C. auris*; and (C), mouse topically associated fourteen days prior with *C. auris* (D). epi: epidermis, derm: dermis, cart: cartilage, HF: hair follicle, SG: sebaceous gland. 100 μm scale bar is displayed at the bottom right of each panel.

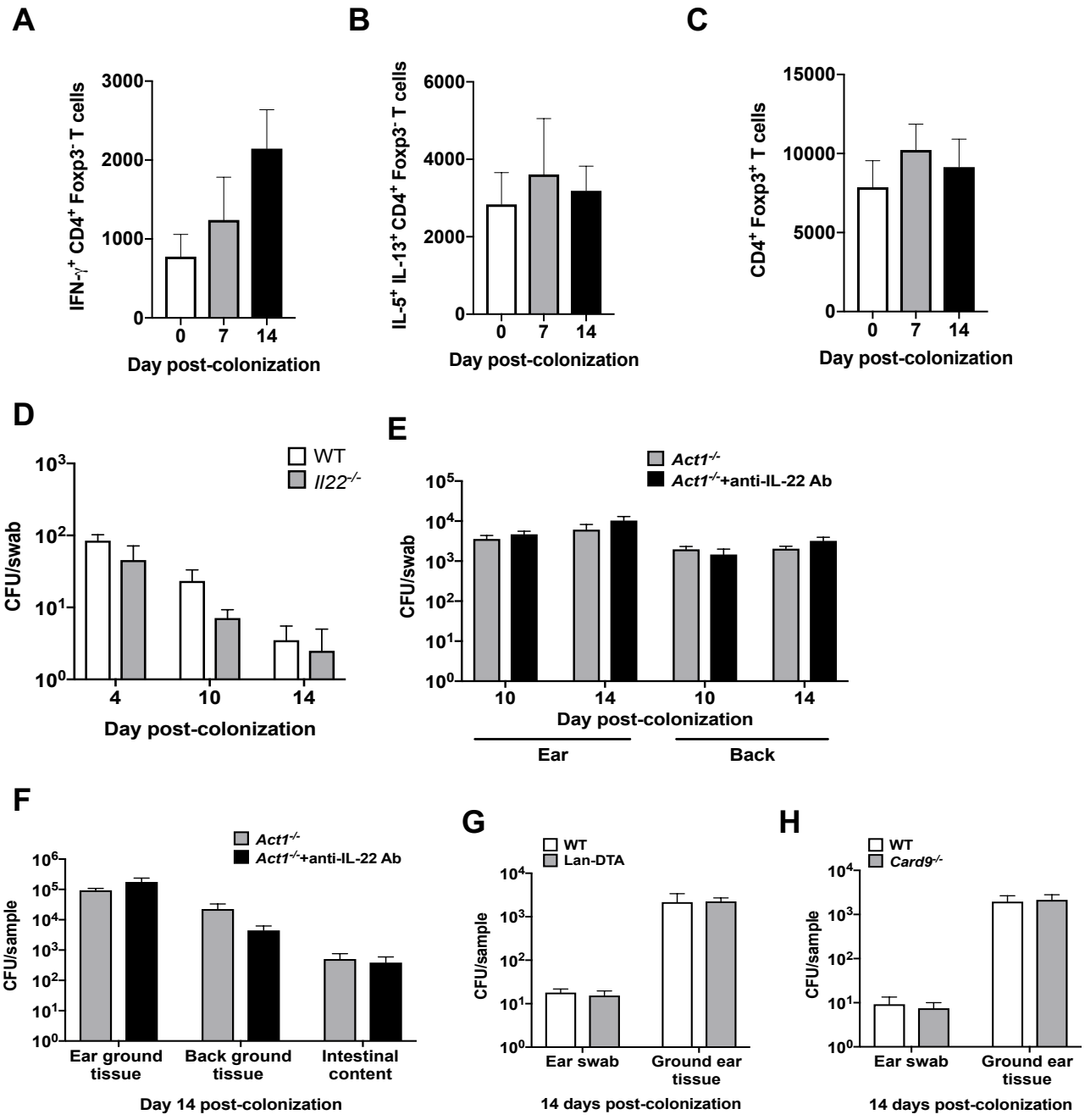


Supplemental Figure 2. Intravenous injection of *C. albicans*, but not *C. auris*, is lethal to WT mice. Related to Figure 1.

$1x10^5$ *C. albicans* SC5314, four genetically distinct clades of *C. auris*, and the NIH CC strain (South Asian clade), were injected into the tail vein of WT mice, and survival followed for 30 days. N=10 for each group.



Supplemental Figure 3. Gating strategy for flow cytometric analysis of IL-17A and IL-17F production by lymphoid cell subsets in the mouse skin. Related to Figure 2. After initial FSC/SSC gating of immune cells, singlets and live cells were selected (three upper left panels). CD45+ CD90.2+ lymphoid cells were delineated as TCRβ$^+$ TCRγδ$^-$ αβ T cells, TCRβ$^-$ TCRγδ^{low} γδ T cells, and TCRβ$^-$ TCRγδ$^-$ innate lymphoid cells (ILCs). Among TCRβ$^+$ cells, CD4 T cells and CD8 T cells were delineated as Foxp3$^-$ CD4$^+$ CD8β$^-$ and Foxp3$^-$ CD4$^-$ CD8β$^+$ cells, respectively. Among ILCs, RORγt was used to delineate IL-17A- and IL-17F-producing RORγt$^+$ ILCs. The total numbers of CD4 T cells, CD8 T cells, γδ T cells and ILCs were quantified and presented in Figure 2A. The IL-17A-producing CD4 T cells (Th17 cells), CD8 T cells (Tc17 cells), γδ T cells and ILCs were quantified and presented in Figure 2B. The IL-17F-producing CD4 T cells, CD8 T cells, γδ T cells and ILCs were quantified and presented in Figure 2C.


A
IFN-γ+ CD4+ Foxp3- T cells
3000
2000
1000
0
0 7 14
Day post-colonization
B
IL-5+ IL-13+ CD4+ Foxp3- T cells
6000
4000
2000
0
0 7 14
Day post-colonization
C
CD4+ Foxp3+ T cells
15000
10000
5000
0
0 7 14
Day post-colonization
D
WT
Il22-/-
CFU/swab
10^3
10^2
10^1
10^0
4 10 14
Day post-colonization
E
Act1-/-
Act1-/-+anti-IL-22 Ab
CFU/swab
10^5
10^4
10^3
10^2
10^1
10^0
10 14 10 14
Day post-colonization
Ear
Back
F
Act1-/-
Act1-/-+anti-IL-22 Ab
CFU/sample
10^6
10^5
10^4
10^3
10^2
10^1
10^0
Ear ground tissue
Back ground tissue
Intestinal content
Day 14 post-colonization
G
WT
Lan-DTA
CFU/sample
10^4
10^3
10^2
10^1
10^0
Ear swab
Ground ear tissue
14 days post-colonization
H
WT
Card9-/-
CFU/sample
10^4
10^3
10^2
10^1
10^0
Ear swab
Ground ear tissue
14 days post-colonization

Supplemental Figure 4. Immunological factors not associated with *C. auris* skin colonization. Related to Figures 2 and 3.

(A-C) *C. auris* skin colonization does not elicit Th1, Th2 or regulatory T cell responses. Numbers of interferon gamma-producing T helper cells (A), IL-5/IL-13-producing T helper cells (B), and regulatory T cells (C) are shown from naïve WT mice, WT mice colonized by *C. auris* 7 days after first topical association, and 14 days after first topical association.

(D-F) IL-22 is dispensable in regulating *C. auris* colonization.

(D) *C. auris* colonization on ear skin surface of WT and *Il22*$^{-/-}$ mice on days 4, 10 and 14 after topical association.

(E) *C. auris* colonization on ear and back skin surface of *Act1*$^{-/-}$ mice and *Act1*$^{-/-}$ mice injected with IL-22 neutralizing antibody on days 10 and 14 after topical association.

(F) *C. auris* residence in ear and back skin and intestinal compartments of *Act1*$^{-/-}$ mice and *Act1*$^{-/-}$ mice injected with IL-22 neutralizing antibody.

(G-I) Langerhans cell deficient, *Card9*$^{-/-}$ and *Rag2*$^{-/-}$ mice have normal *C. auris* skin colonization compared with WT mice.

(G and H) *C. auris* colonization on ear skin surface or disaggregated ear skin tissue of WT and Langerhans cell deficient (G) and *Card9*$^{-/-}$ (H) mice.

(I) *C. auris* colonization on back skin surface of WT and *Rag2*$^{-/-}$ mice on days 2, 8 and 15 after topical association.

(A-H) N=5 mice for each group. Numbers are shown with mean ± SEM.

Supplemental Table 1. Within tissue residence by *Candida auris* in WT mice for up to 4 months. Related to Figure 1

Group	CFU/Pi*
Day58_Pi	40,5,5,0
Day98_Pi	0,/,5,0
Day120_Pi	10,0,5,0
Day153_Pi	0,0,0,0

/: mortality
* each value represents an individual mouse
WT: wild-type; Pi: pinnae

Supplemental Table 2. Summary of treatments not contributing to longer-term *Candida auris* colonization or higher fungal load in the skin. Related to Figure 1

Experimental Treatment	Colonization sites
AMNV[a] pre-exposure for 4 weeks	Back skin
FLU[b] pre-exposure for 4 weeks	Back skin
AMNV+FLU pre-exposure for 4 weeks	Back skin
Diabetic mice (db/db)	Ear and back skin
High-fat (western) diet-fed mice (high body mass index) for 2 weeks	Ear and back skin
TET[c] pre-exposure for 4 weeks	Ear and back skin
TMP-SMX[d] pre-exposure for 4 weeks	Ear and back skin

[a]AMNV: Ampicillin, metronidazole, neomycin and vancomycin

[b]FLU: Fluconazole

[c]TET: Tetracycline

[d]TMP-SMX: Trimethoprim-sulfamethoxazole

Supplemental Table 3. Chrorhexidine retains C. auris genomic DNA on mouse skin. Related to Figure 4

Time	Treatment	Average CFU	Average Ct
Day 3	Chlorhexidine	3540 **	16.9
	Control	7244	17.3
Day 7	Chlorhexidine	44	22.5 **
	Control	76	25.2
Day 11	Chlorhexidine	7	27.2 *
	Control	16	29.6
Day 15	Chlorhexidine	6	29.8 *
	Control	19	32.0

Two-tail t-test was used to compare differences between groups.

N=5 mice for each group. *: $p<0.05$; **: $p<0.01$.