**SUPPLEMENTARY TABLE 1: EVIDENCE FOR DEFICITS THAT CAN REVERSE IN THE FRAILTY INDEX**

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| **SYSTEM** | **DEFICIT** | **EVIDENCE THAT DEFICIT CAN REPAIR** | **REFERENCE** |
| **Integument** | Alopecia  | Alopecia can be caused by overgrooming, fur nibbling and stress. This is reversible by removing a “Barbering” mouse and/or improved thermoregulation with extra nesting material. | Sarna et al., 2000; Wilkinson et al., 2020  |
| Loss of fur colour | Stress and aging lead to loss of fur colour in mice and this can be reversed by suppression of melanocyte stem cells proliferation. | Zhang et al., 2020 |
| Dermatitis | Dermatitis can be reduced by caloric restriction, various pharmaceuticals and can also disappear without treatment. | Sargent et al., 2015; Hampton et al., 2012; Wilkinson et al., 2020 |
| Loss of whiskers | Whisker loss can be caused by overgrooming, whisker eating, stress etc and is reversible. | Sarna et al., 2000 |
| Coat condition | Poor coat condition can be treated by adequate companionship, exercise and caloric restriction.  | Wilkinson et al., 2020 |
| **Physical/****Musculoskeletal** | Tumours | Sodium-glucose cotransporter 2 inhibitors slow tumor growth in mice. | Nasiri et al., 2019 |
| Distended abdomen | Can reverse if underlying causes are addressed/modified, such as reduced adiposity and/or less fluid accumulation.  | Wilkinson et al., 2020 |
| Kyphosis | Voluntary exercise reduces kyphosis. | Ross et al., 2019 |
| Tail stiffening | Tail stiffness can be reduced by caloric restriction.  | Sell & Monnier, 1997 |
| Gait disorders | Sarcopenia is reduced by sodium-glucose cotransporter 2 inhibitors.  | Sasaki et al., 2019 |
| Tremor  | Tremor in mouse models can be treated with many different pharmacological agents (e.g. beta blockers, benzodiazepines).  | Kralic et al., 2005 |
| Forelimbgrip strength | Sarcopenia is reduced by sodium-glucose cotransporter 2 inhibitors, rapamycin or caloric restriction. | Sasaki et al., 2019; Orenduff et al., 2022 |
| Body condition score | Sarcopenia is reduced by sodium-glucose cotransporter 2 inhibitors, rapamycin or caloric restriction. | Sasaki et al., 2019; Orenduff et al., 2022 |
| **Vestibulocochlear/****Auditory** | Vestibular disturbance | Spontaneous hair cell regeneration in the inner ear can occur in mice following gentamicin ototoxicity.  | Kawamoto et al., 2009 |
| Hearing loss  | Late life rapamycin decreases age-related hearing loss in mice. | Altschuler et al., 2021 |
| Cataracts | Sterols can bind and stabilize soluble crystallin and reduce the severity of cataracts in mice. | Makley et al., 2015 |
| Eye discharge/swelling | Can be treated with antibiotics and/or steroids.  | Pettan-Brewer & Treuting, 2011 |
| Microphthalmia | No current treatments, but this is an active area of drug discovery for new treatment strategies.  | Harding et al., 2021 |
| Corneal opacity | Sterols can bind and stabilize soluble crystallin and reduce corneal opacity in mice.  | Makley et al., 2015 |
| Vision loss | Adeno-associated virus delivery of youth-restoring genes (Oct4, Sox2 and Klf4) to the mouse retina reverses vision loss in aging mice. | Yuancheng et al., 2020 |
| Menace reflex | If this is due to vision loss, this can be mitigated by adeno-associated virus delivery of youth-restoring genes (Oct4, Sox2 and Klf4) to the mouse retina.  | Yuancheng et al., 2020 |
| Nasal discharge | Respiratory infections can be attenuated by antibiotic treatment and maintaining a clean cage environment.  | Aiello et al., 2016 |
| **Digestive/****Urogenital** | Malocclusions | Oral health is improved by rapamycin in aging mice. Incisor teeth can also be trimmed to correct malocclusions.  | Burkholder et al., 2012; An et al., 2020 |
| Rectal prolapse | Can be treated pharmacologically with drugs that reduce inflammation and surgically by a veterinarian. | Teixeira et al., 2012; Uchihashi et al., 2015 |
| Vaginal/uterine/penile prolapse | Can potentially be treated surgically by a veterinarian.  | Wilkinson et al., 2020 |
| Diarrhoea | Can be treated pharmacologically with drugs that reduce inflammation. | Teixeira et al., 2012 |
| **Respiratory** | Breathing rate/depth | Treatment with inhaled resveratrol can slow age-related deleterious changes in the mouse lung.  | Navarro et al., 2017 |
| **Discomfort** | MouseGrimace Scale | Can be reversed if the cause of discomfort is identified and mitigated.  | Wilkinson et al., 2020 |
| Piloerection | Can be reversed if the cause of piloerection is identified and mitigated (e.g. if hypothermia, increase nesting materials, ensure cage is not near a draft).  | Wilkinson et al., 2020 |
| **Other** | Temperature | Hypothermia can be reversed by increasing companionship, more nesting materials and ensuring the cage is not near a draft.  | Wilkinson et al., 2020 |
| Weight | Excessive weight gain can be reduced by caloric restriction and extreme weight loss can be treated by serving the mice mashed food.  | Wilkinson et al., 2020 |

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