

HEALTH FROM THE SOIL UP

Daphne Miller, MD

Clinical Professor

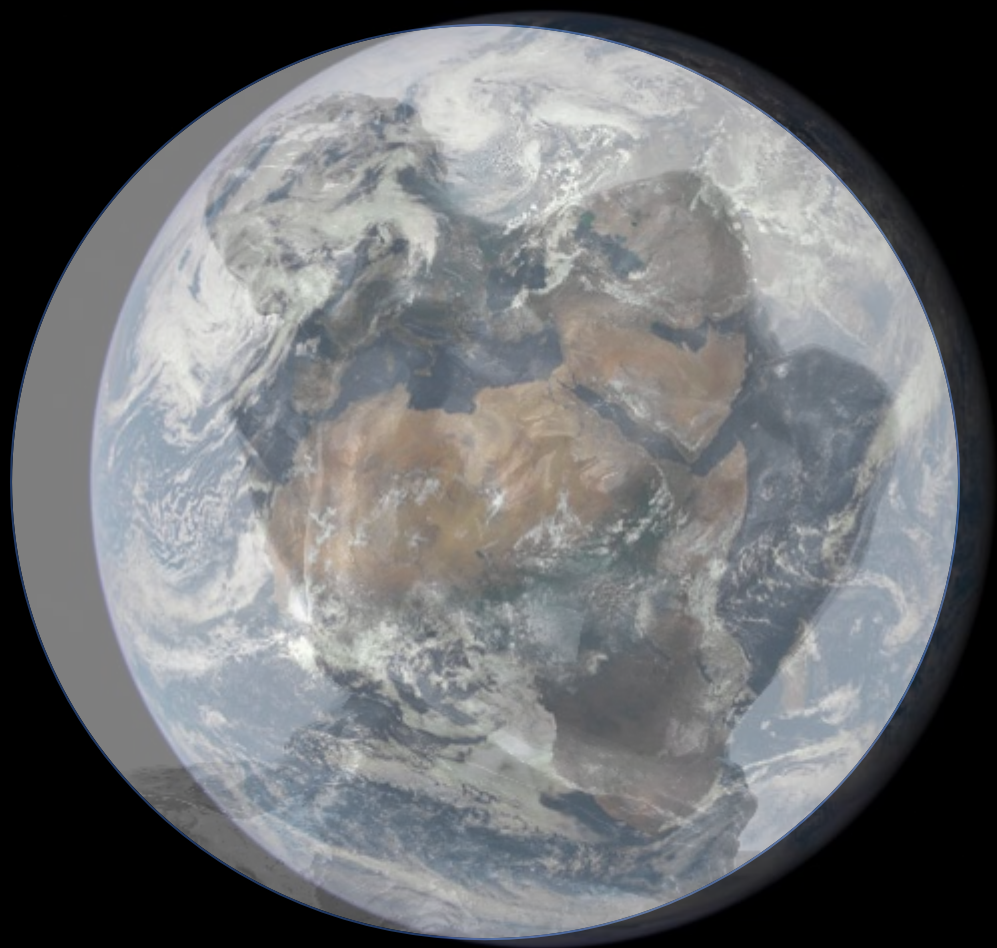
University of California San Francisco

@drdaphnemiller



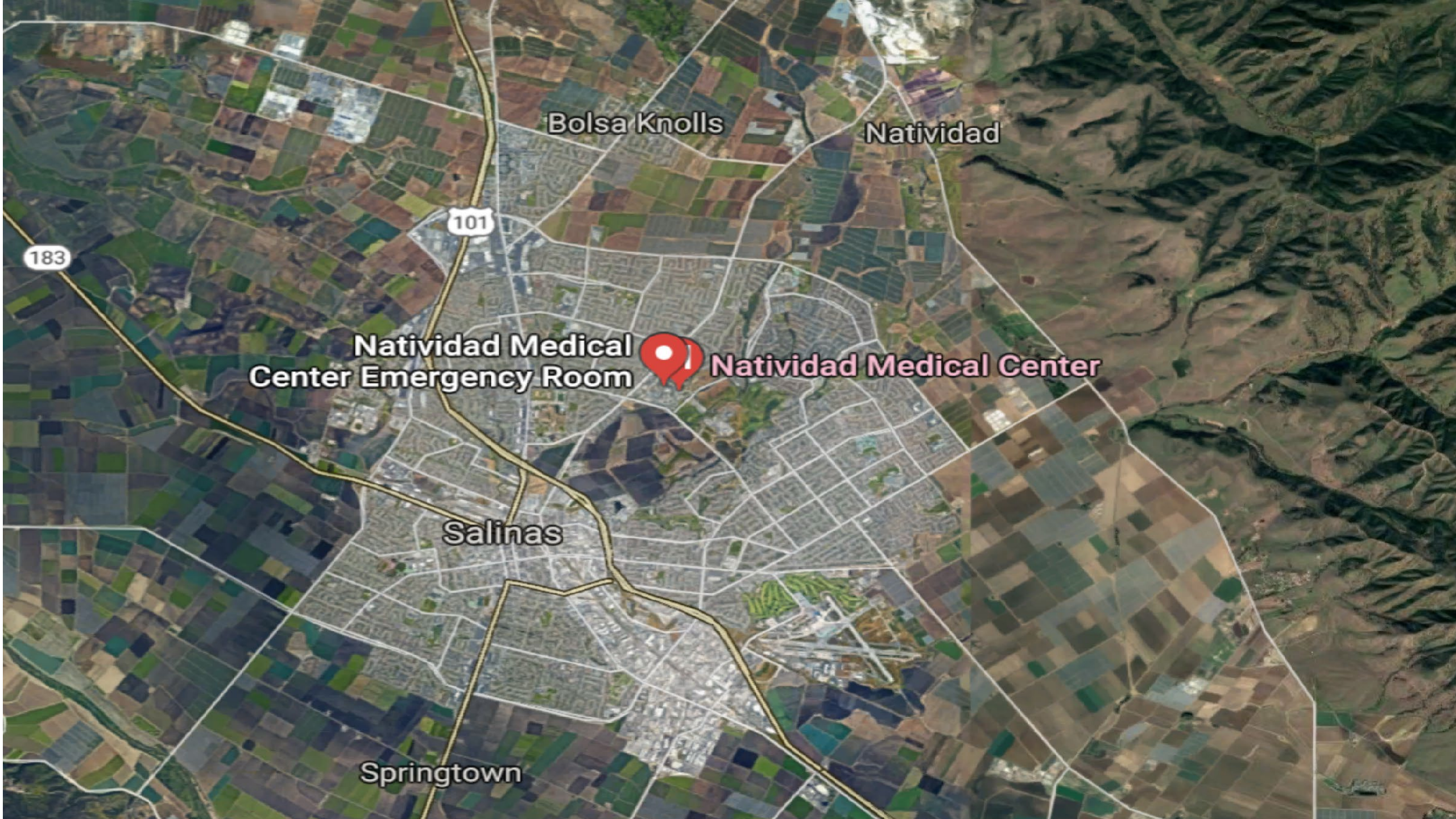












Bolsa Knolls

Natividad

101

183

Natividad Medical Center Emergency Room



Natividad Medical Center

Salinas

Springtown



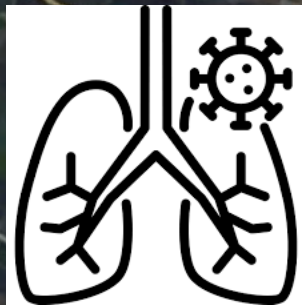
# HUMAN AND SOIL HEALTH CONNECTIONS



Community



Chemicals



Creatures



Climate



Consumption

183

101

Bolsa Knolls

Natividad

Natividad Medical Center Emergency Room



Natividad Medical Center

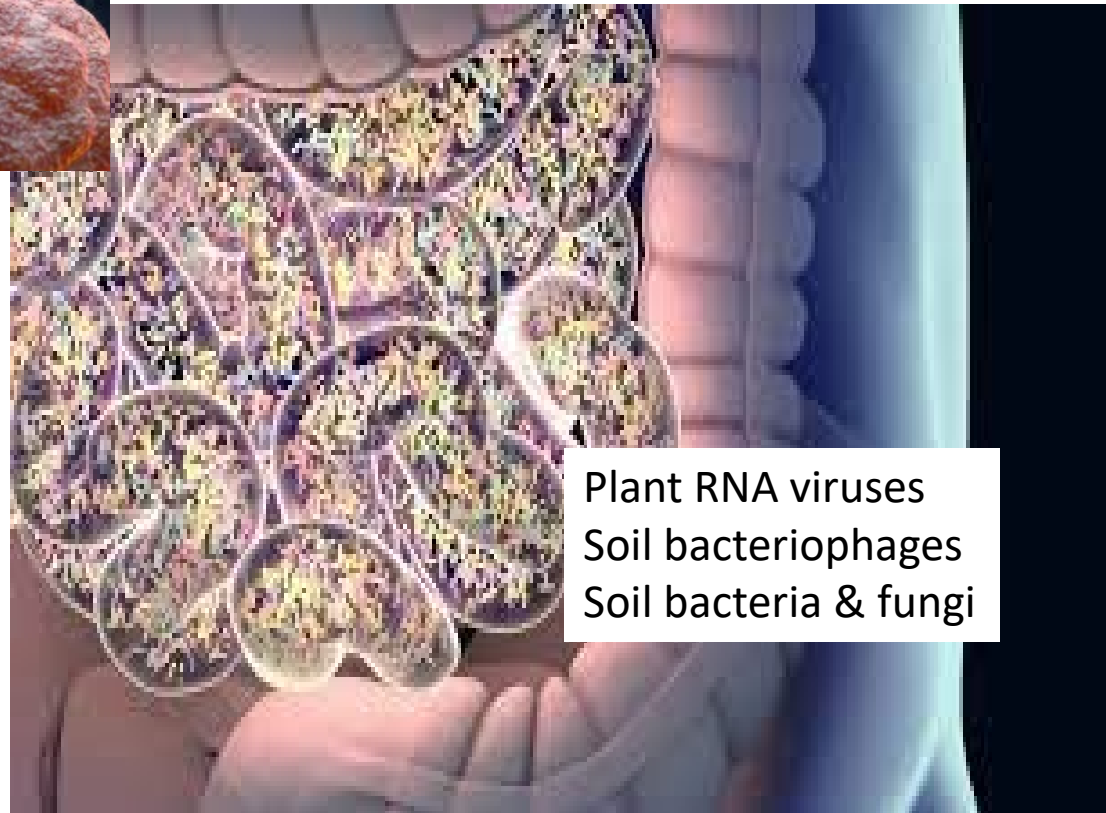
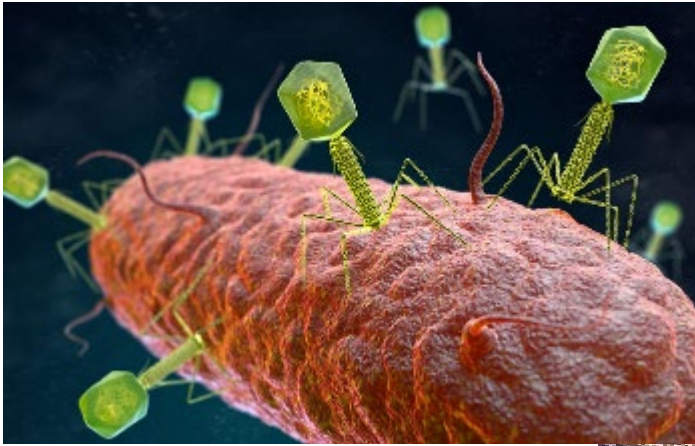
Salinas

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Growing evidence that farms and soil are an  
important driver of human health



# Microbiome



Scarpellini et al., Digestive and Liver Diseases, 2015



Food Security, Child linear growth,  
Dietary diversity, Self-rated health.

↑ 23 studies

Journal Club > Nutrition > PMID: 29014817

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[Nutr Rev](#), 2017 Oct; 75(10): 769-782.

Published online 2017 Sep 15. doi: 10.1093/nutrit/nrx040.

PMCID: PMC5614317

PMID: 29028270

**Critical review of the emerging research evidence on agricultural biodiversity, diet diversity, and nutritional status in low- and middle-income countries**

[Access Reviews](#)

Nutr R



↓  
Soil health

Land access, Food safety, Water access,  
Farmworker health, Erosion prevention



5 case studies



### Narrow and Brittle or Broad and Nimble? Comparing Adaptive Capacity in Simplifying and Diversifying Farming Systems

Margiana Pedersen-Rockney<sup>1\*</sup>, Patrick Bour<sup>2†</sup>, Aides Guzman<sup>3</sup>, S. Franz Bauder<sup>4,5</sup>, Adam Cain<sup>6</sup>, Federico Casallo<sup>7</sup>, Kathryn De Maistre<sup>8</sup>, Antoinette Dumont<sup>9</sup>, Kenzo Esquivel<sup>10</sup>, Claire Kremer<sup>11</sup>, James LaChance<sup>12</sup>, Maria Mooshammer<sup>13</sup>, Joanne Ory<sup>14</sup>, Mindy J. Price<sup>15</sup>, Yvonne Socolar<sup>16</sup>, Paige Stanley<sup>17</sup>, Alastair Iles<sup>18</sup> and Timothy Stoltze<sup>19</sup>



Diversified Farming System

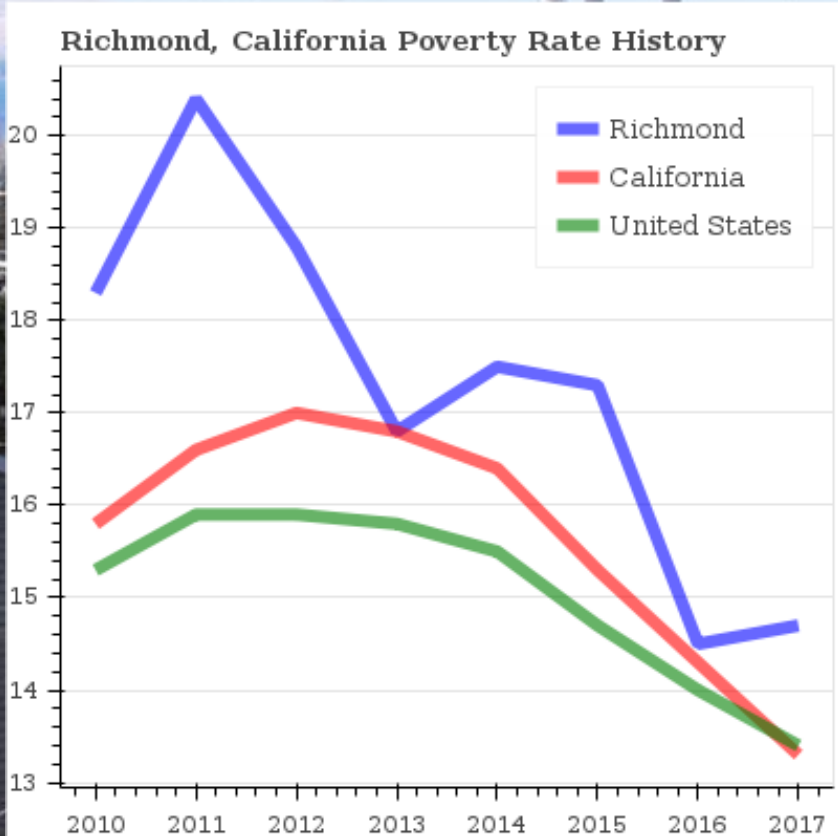


Soil health



## Win Win Solutions

How can we protect and preserve soil and human health?



COVID Deaths  
Disability from chronic disease  
Unemployment  
Food Insecurity  
Uninsured









URBAN TILTH

carlosqnm







# Livelihood







Education and Purpose





LifeLong William Jenkins Health Center | 150 Harbour Way, Richmond





Nourishment





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The polluters

Environment

Susie Cagle in San Francisco

Wed 9 Oct 2019 07:00 EDT



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## Richmond v Chevron: the California city taking on its most powerful polluter



▲ Firefighters douse flames at the Chevron oil refinery in Richmond, California, in August 2012. Photograph: Josh



# Cycle of Health

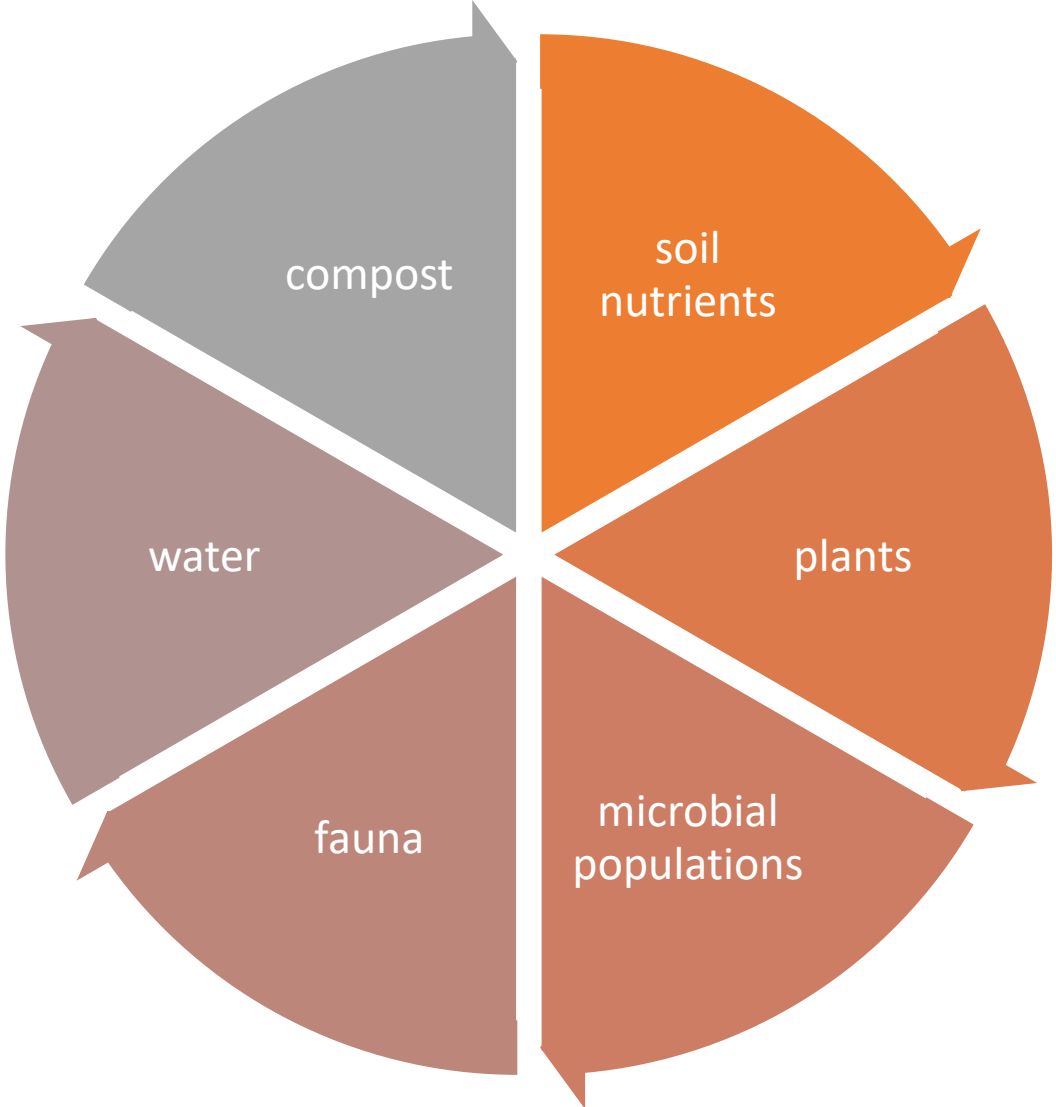




Our Work Moving Forward



# SOIL HEALTH, A holistic approach

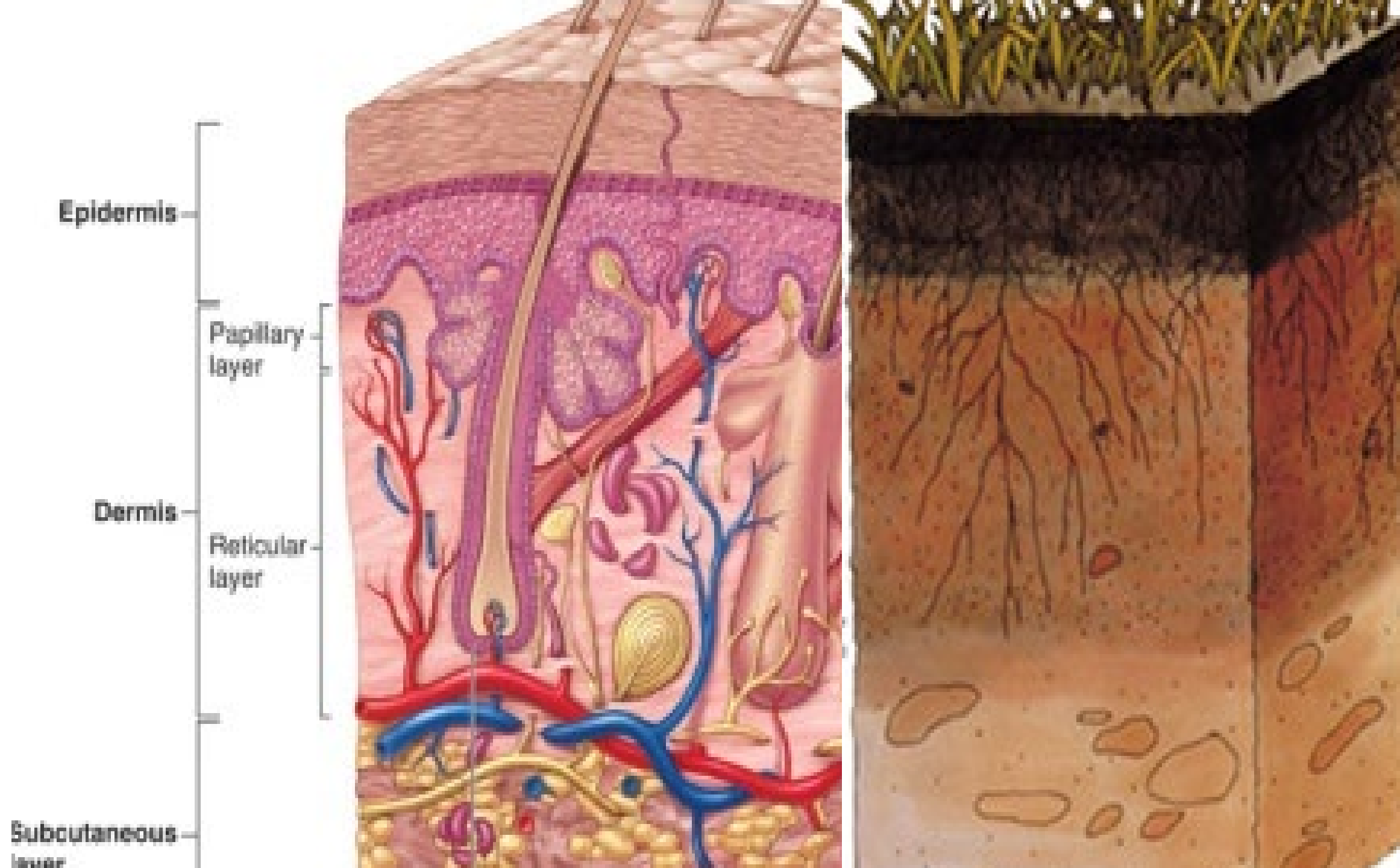




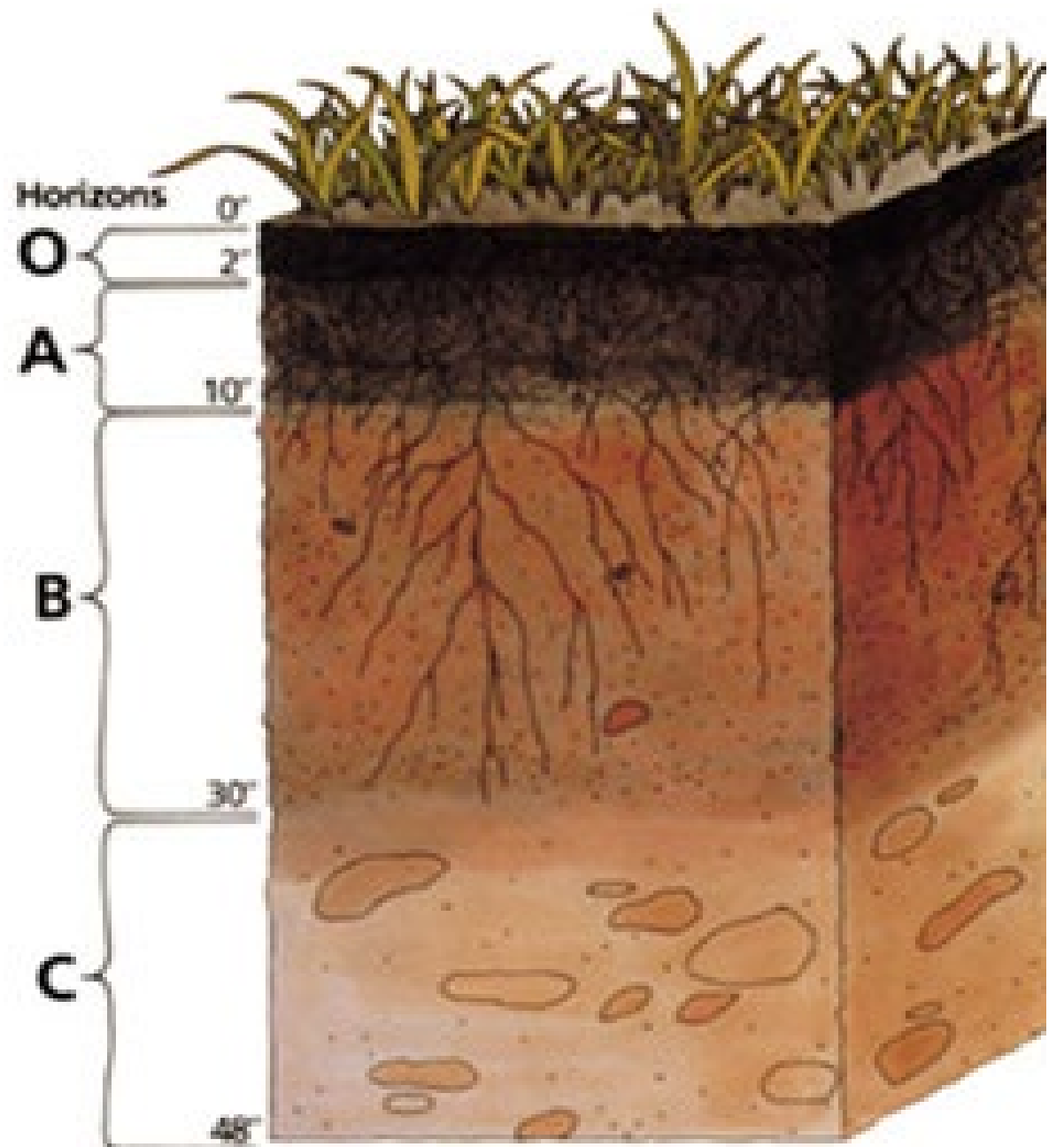
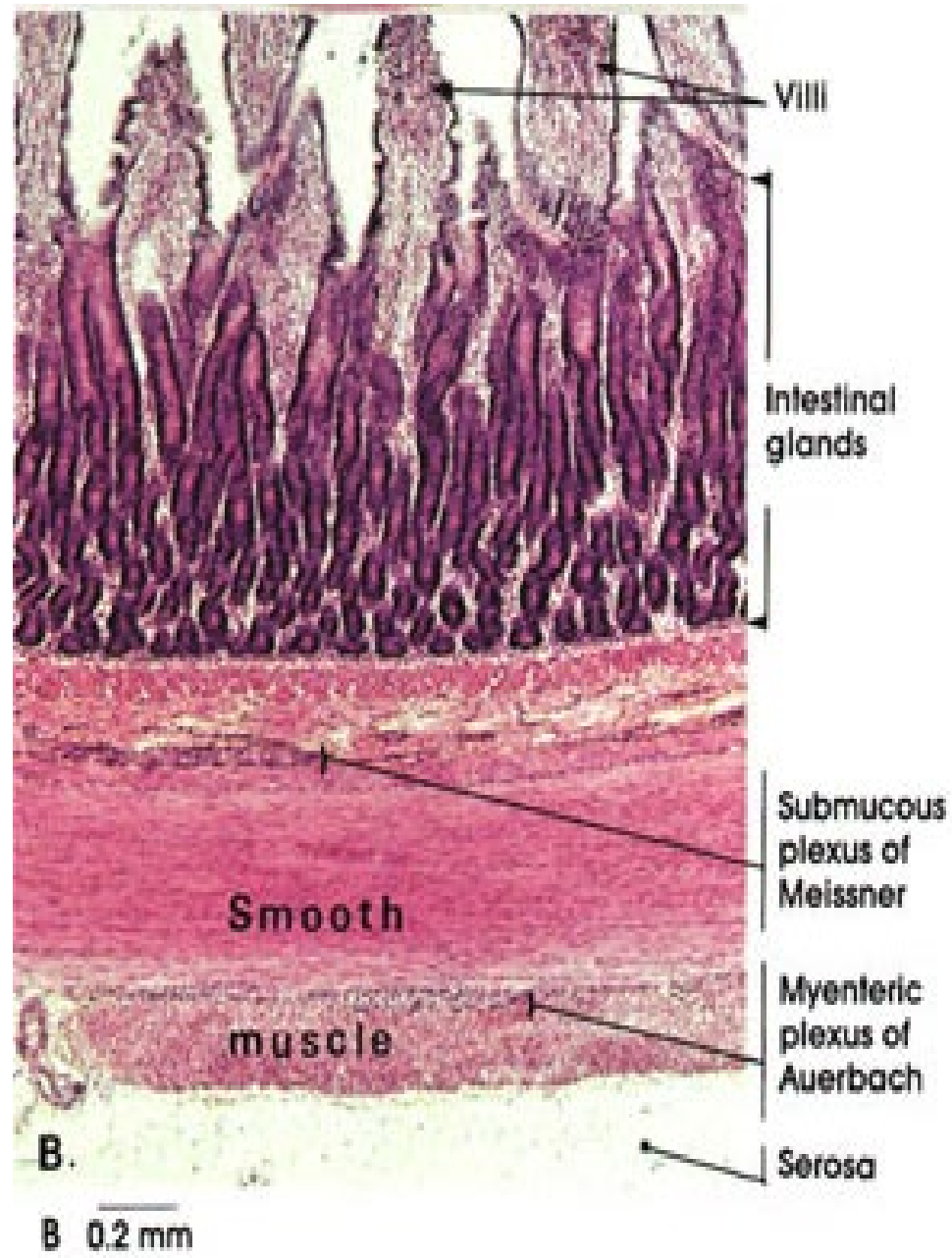


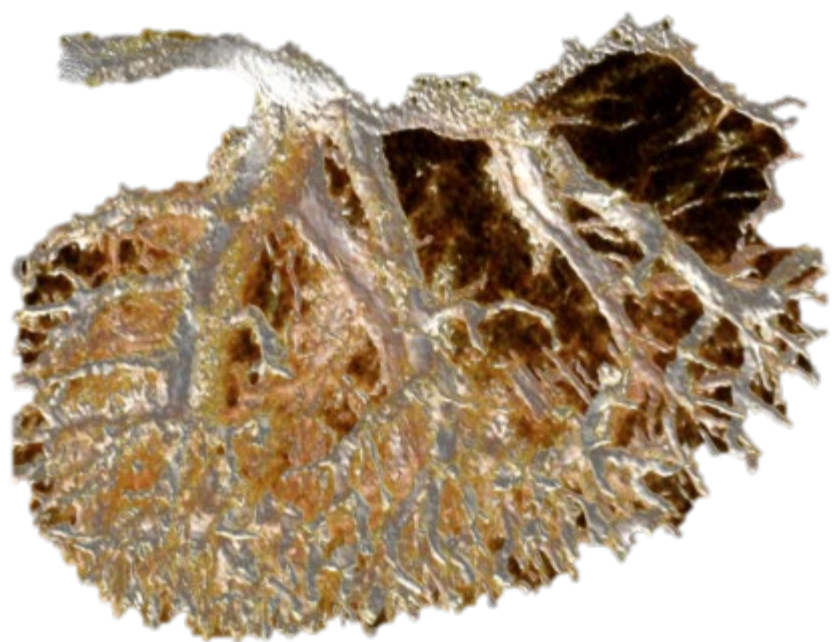
# SOIL HEALTH, A TRULY holistic approach



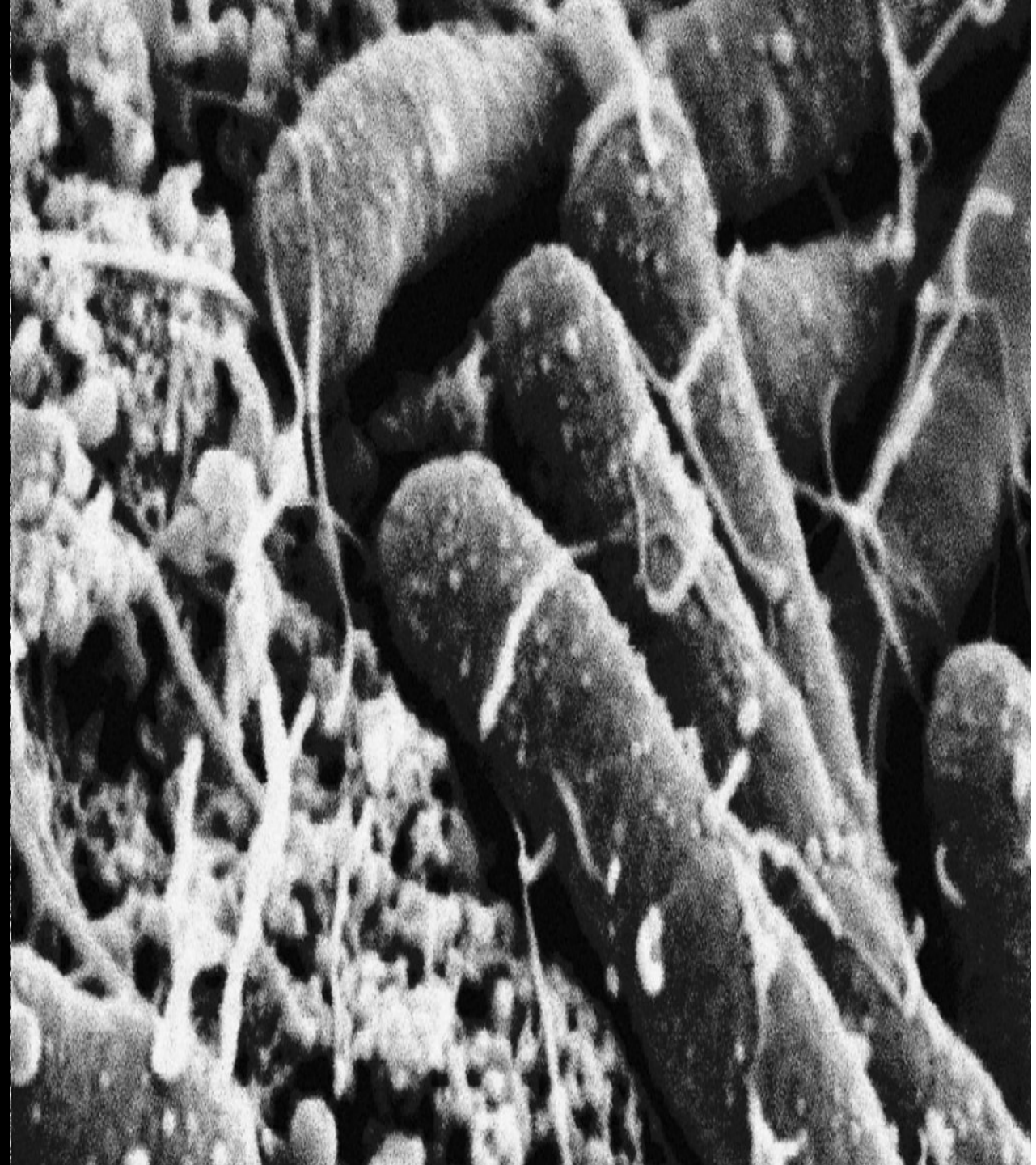
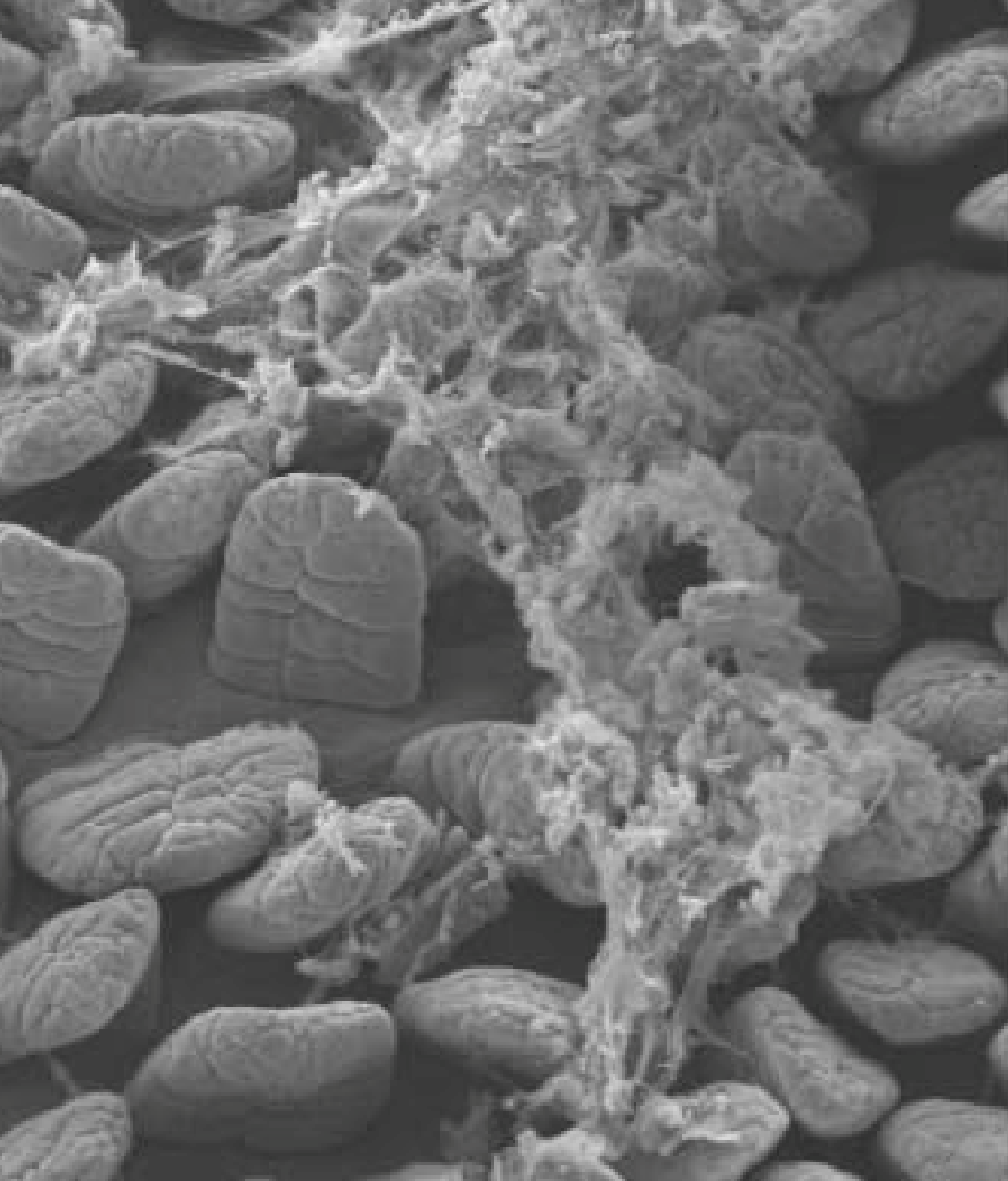












Thank you!



@drdaphnemiller