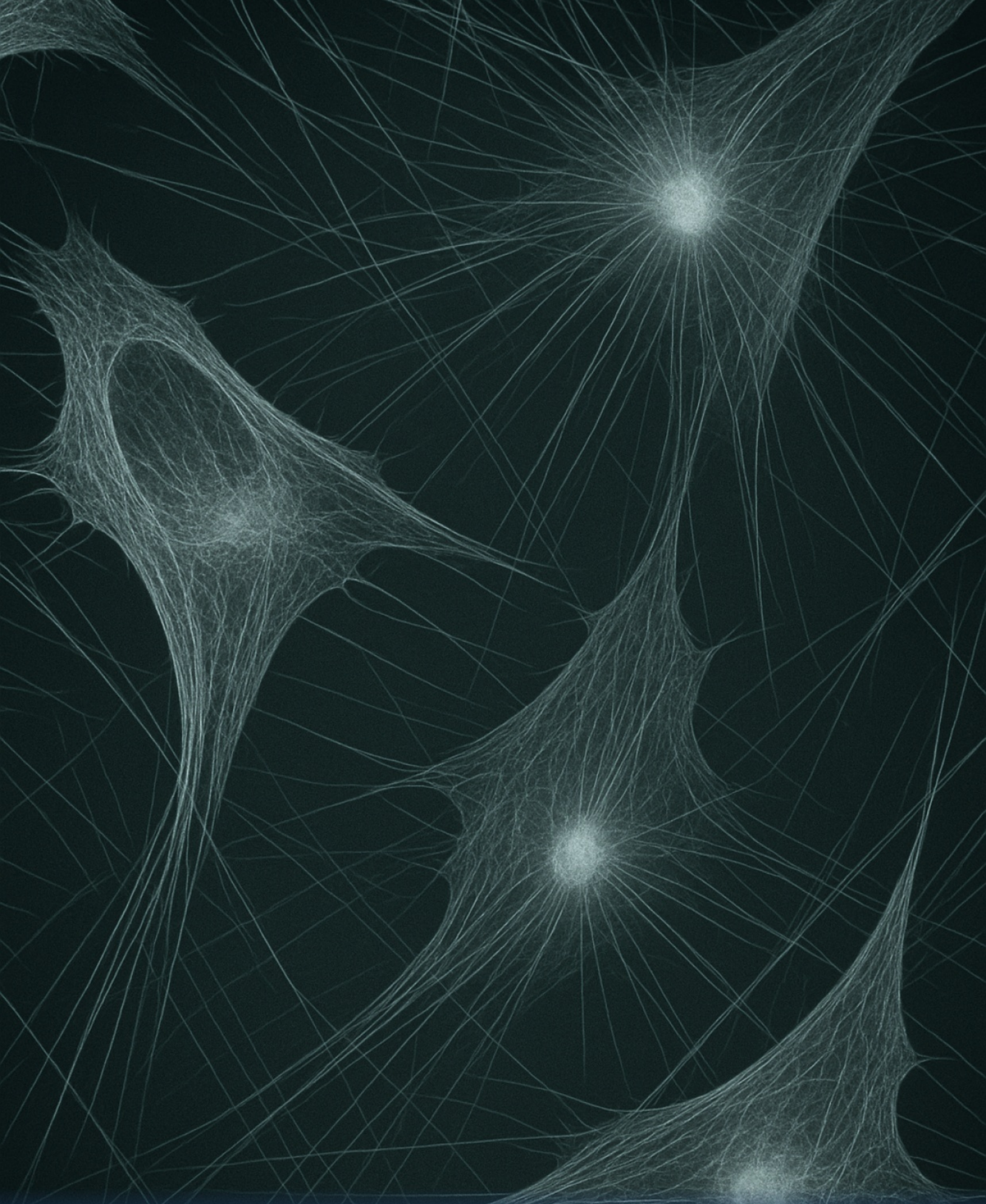

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Lars E. Neumann, Anand Kumar Singh, Mei-Ling Zhang

Keywords: single-molecule studies, protein folding, smFRET, Förster Resonance Energy Transfer, kinetic pathways, biophysics, ubiquitin

2.

Advancements in Proteomic Profiling: Insights into Post-Translational Modifications

Heike M. Bernhardt, Chen Ming-Hua, Arjun V. Patel

Keywords: Proteomics, Post-Translational Modifications, Mass Spectrometry, Phosphorylation, Methylation, Cellular Stress, Signaling Pathways

3.

Dynamical Interactions of Mitochondrial and Peroxisomal Networks in Cellular Homeostasis

Julian M. Schneider, Nisha Patel, Yang Li-Hua

Keywords: organelle dynamics, mitochondria, peroxisomes, cellular homeostasis, oxidative stress, mitofusin-2, live-cell imaging

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Hans M. Vogler, Li Mei-Ping, Tarun N. Patel

Keywords: drought tolerance, wheat improvement, genomic selection, phenotypic evaluation, quantitative trait loci, climate resilience, genome-wide association studies

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Delineating Cross-Talk Between Innate and Adaptive Immune Responses in Viral Infections

Anika M. Voigt, Hiroshi Nakamura, Nneka Okafor

Keywords: innate immunity, adaptive immunity, cytokine signaling, viral infections, natural killer cells, antigen-presenting cells

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Heinrich J. Vogel, Mei-Ling Zhang, Pedro N. Oliveira

Keywords: morphogenesis, vertebrate limb development, fibroblast growth factors, Wnt signaling, cellular dynamics, chondrocyte organization

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Integrative Machine Learning for Predictive Modeling of Cellular Dynamics

Katrin M. Svensson, Hiroshi Nakamura, Nneka A. Okoro

Keywords: machine learning, cellular dynamics, predictive modeling, single-cell RNA sequencing, deep neural networks, computational biology