Novel Vaccines in the Near Future and on the Horizon

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Substantial progress has been made in vaccine development since previous century and continued further. Tremendous novel vaccines are going to reveal in the near future and a lot more are energetically researched in the pipeline. We pursue this advancement with exciting and expecting.

This issue is intended as structured overview of the novel immunization paradigms according to the following perspectives:
1. Non-infectious diseases and therapeutic vaccines (e.g., vaccines for autoimmune diseases, allergy, drug addiction, type 1 diabetes, Alzheimer’s disease, multiple sclerosis, atherosclerosis, contraception and cancer)
2. Pathogen – related challenges (e.g., HIV, Mycobacterium tuberculosis, Plasmodium falciparum, hepatitis C, parasites and universal influenza vaccines)
3. Host – related challenges (e.g., vaccines for neonate, elderly, pregnancy and immunocompromised hosts)
4. Route of administration (e.g., epicutaneous, sublingual, intranasal, intratracheal, edible vaccines)
5. Innovative technologies (e.g., adjuvants, vectors, nucleic acid vaccines and structure-based antigen design)

In conclusion, advances in immunology, disease pathogenesis, genetics and biotechnology have drastically improved vaccine development and signaled the dawn of a new era in novel tools for prevention and therapeutics.

References

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