

Applying Novel Technologies to Vaccine Development

workshop 1



2016

2010
Reverse Vaccinology
MenB, GBS, GAS,
E. coli, *S. aureus*, *C. difficile*

1990
Glycoconjugation
MenACWY, Pneumo,
Hib, GBS, *S. aureus*

1980
Recombinant DNA
Hepatitis B,
Acellular Pertussis, Lyme,
Human papillomavirus

1930
Empirical Approach
Diphtheria, Tetanus,
Pertussis, Rabies,
Influenza,
Smallpox, Polio,
BCG

Structural
Vaccinology

Synthetic
Biology
RNA vaccines

Adjuvants
Human
Immune
Response

This workshop



2016

2010
Reverse Vaccinology
MenB, GBS, GAS,
E. coli, *S. aureus*, *C. difficile*

1990
Glycoconjugation
MenACWY, Pneumo,
Hib, GBS, *S. aureus*

1980
Recombinant DNA
Hepatitis B,
Acellular Pertussis, Lyme,
Human papillomavirus

1930
Empirical Approach
Diphtheria, Tetanus,
Pertussis, Rabies,
Influenza,
Smallpox, Polio,
BCG

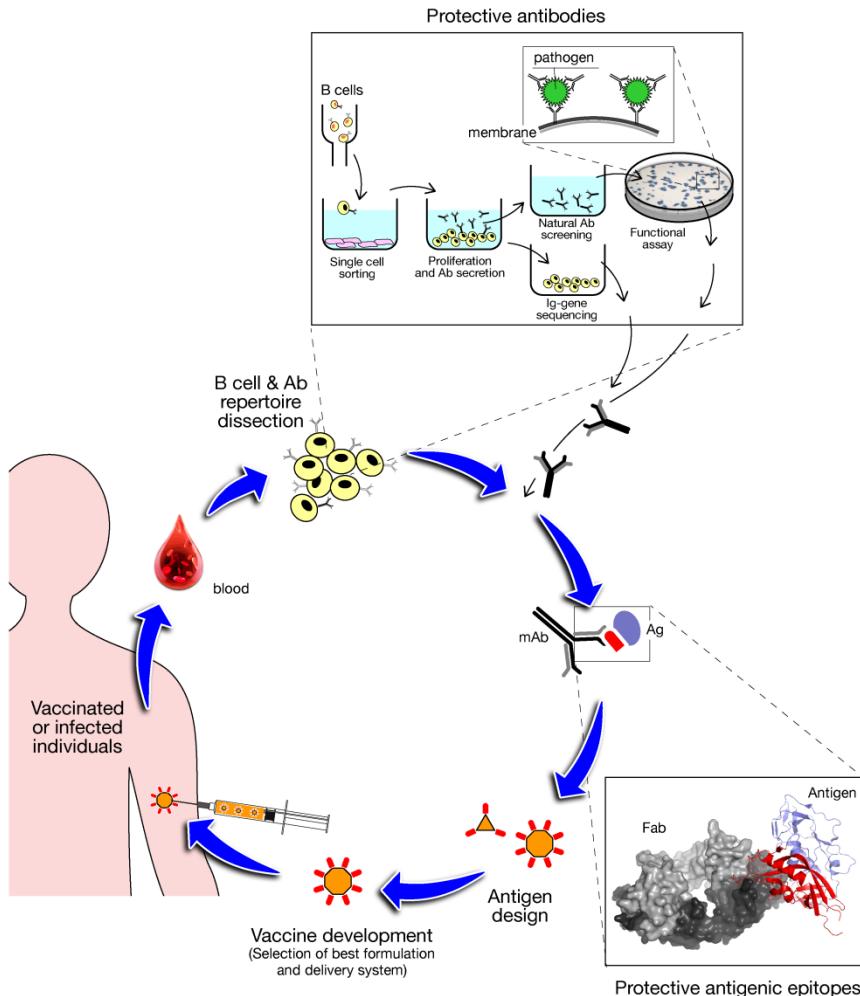
Adjuvants
Human
Immune
Response

Structural
Vaccinology

Synthetic
Biology
RNA vaccines

Reverse Vaccinology 2.0: human immunology instructs vaccine antigen design

Rino Rappuoli, Matthew Bottomley, Ugo D'Oro, Oretta Finco, Ennio De Gregorio *JEM in press*



Applying Novel Technologies to Vaccine Development

GVIRF workshop 1

Felix Rey

Institut Pasteur

William Schief

Scripp Research Institute

Neil King

Institute for Protein Design