

The background of the slide is a technical drawing, likely a cross-section of a mechanical assembly, rendered in a light gray color. It features various components, surfaces, and edges, with several callout numbers scattered throughout, including 80, 84, 86, 82, 40, 22, 26, 68, 34, 32, 52, and 50. The drawing is set against a white background that is part of a larger blue gradient.

Technology Center 1600

Biotechnology and organic chemistry

UNITED STATES
PATENT AND TRADEMARK OFFICE

uspto

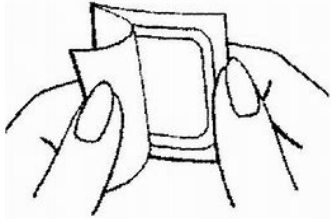
Our technology

Work group	Subject matter	Page #
1610	Pharmaceutical and drug delivery systems	3
1620	Organic chemistry: drugs and other bio-affecting body treating composition	4
1630	Molecular biology, cell biology, and bioinformatics	5
1640	Immunology, cytokines, antibodies, receptors, ligands, and recombinant hormones	6
1650	Protein, enzymes, and microbiology	7
1660	Transgenic plants and novel cultivars and varieties	8

1611-1613, 1615-1619—Drug formulations

Buffers, stabilizers, and other inactive agents

Transdermal patches



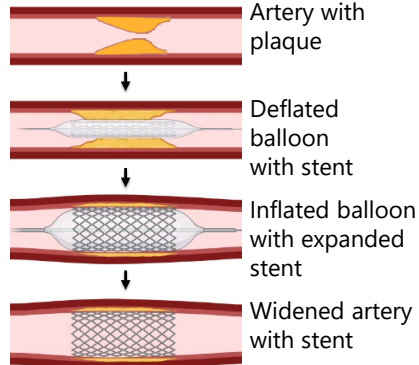
Cosmetics, shampoos, conditioners, and deodorants



Tamper-resistant tablets



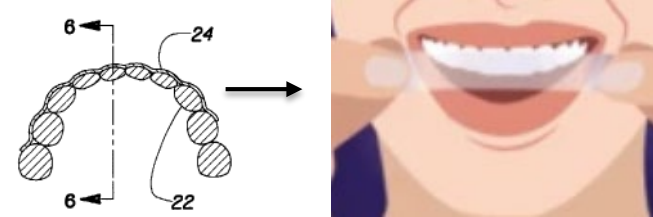
Surgical implants (drug-coated stents)



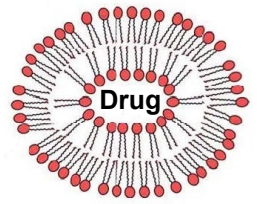
1612/1613—Drug formulations

Oral and dental care, liposome drug-delivery compositions

Teeth whitening strips

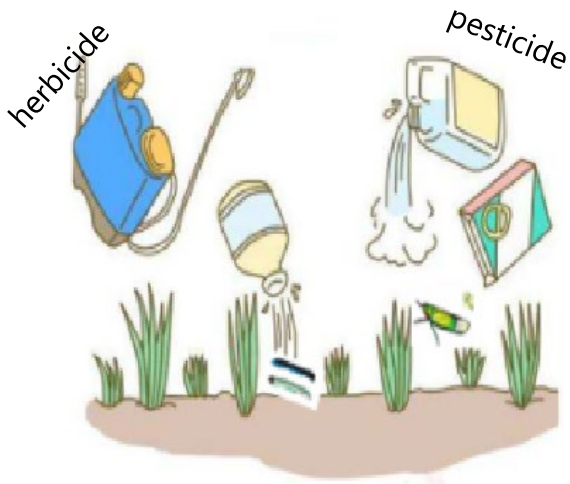


Liposome



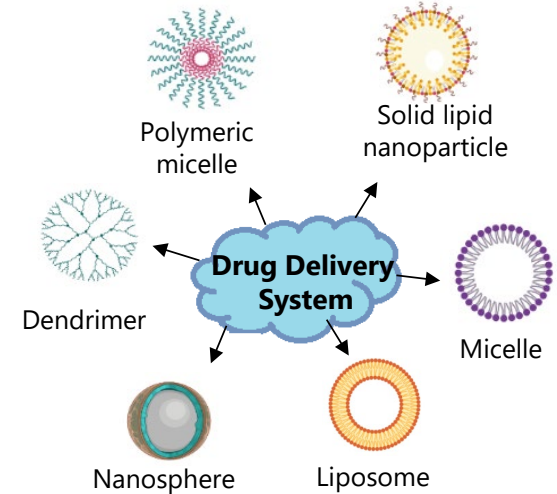
1616—Drug formulations

Herbicides, pesticides, biocides, and animal or insect repellants and attractants



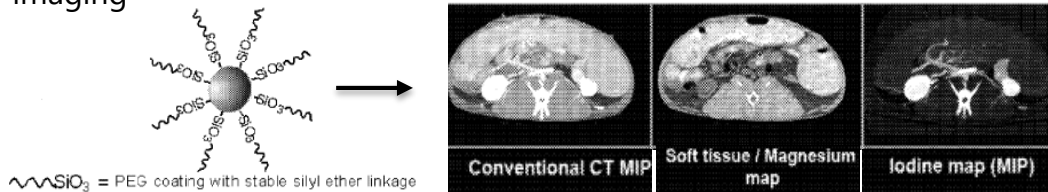
Workgroup 1610 Pharmaceutical and drug delivery systems*

*All art units in WG 1610 cover drug delivery systems, and each AU additionally encompasses the subject matter as shown.



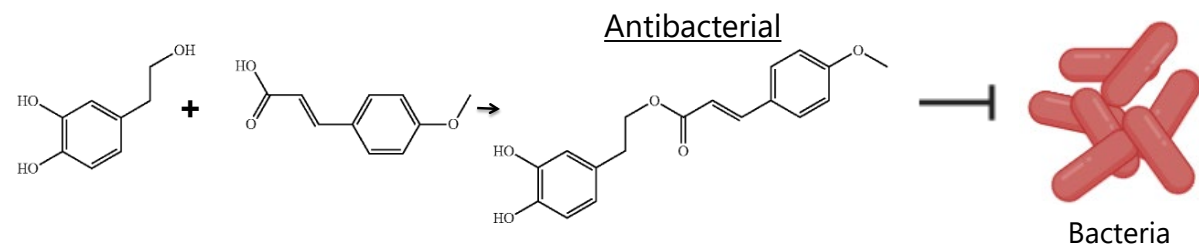
1618—Drug formulations

In vivo diagnostic contrast agents for techniques like radioimaging, MRI/NMR imaging, x-ray imaging, ultrasound imaging, and fluorescent imaging



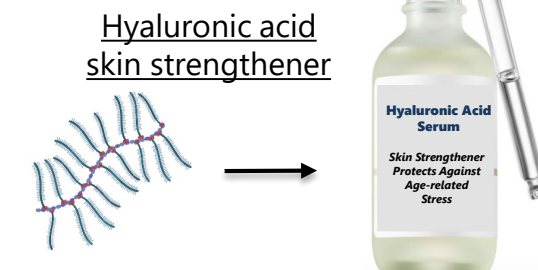
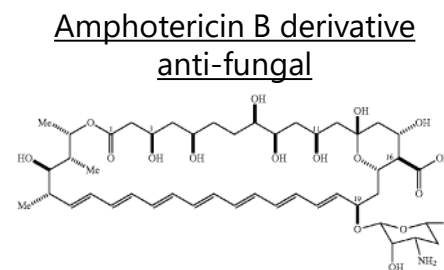
1622—Organic synthesis

Methods of making organic compounds from fats, fatty acids, organic compounds containing atoms other than carbon, ureas and their derivatives, ketones, aldehydes, ethers, and alcohols, plus compositions that are produced by these processes



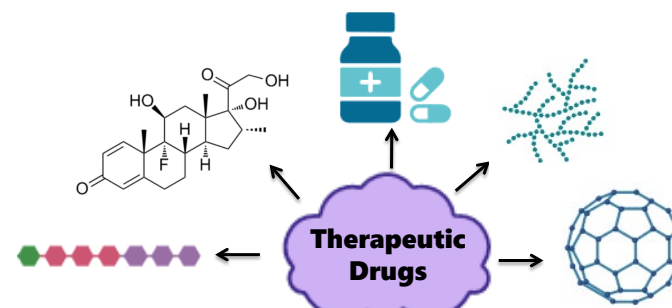
1623—Carbohydrates

Compositions and methods of treating comprising carbohydrates, nitrogen containing glycosides and polysaccharides, polysaccharides, and derivatives thereof



Workgroup 1620

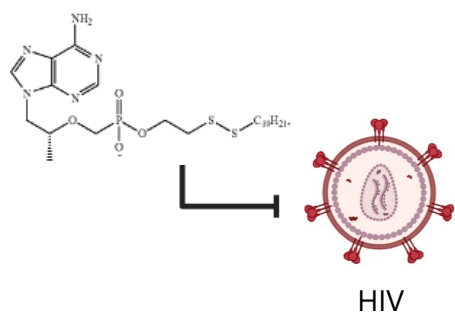
Organic chemistry: drugs and other bio-affecting and body-treating compositions



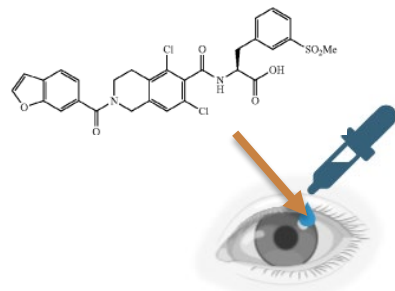
1624-1629—Bio-affecting and body-treating heterocyclic compounds and compositions

Novel bio-affecting drugs like antibiotics, fungicides, herbicides, pharmaceuticals, toxicology, and other bio-affecting organic compounds, organic compounds comprising atoms other than carbon, and methods of making and using these compositions

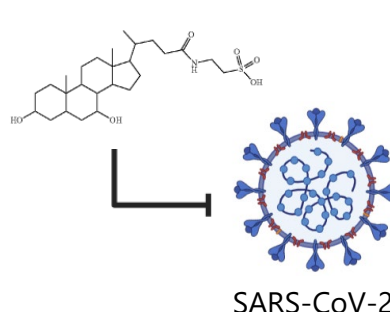
Treating HIV



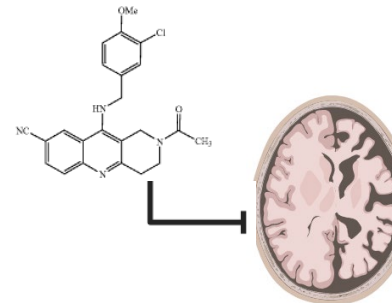
Treating dry eye



Treating COVID-19

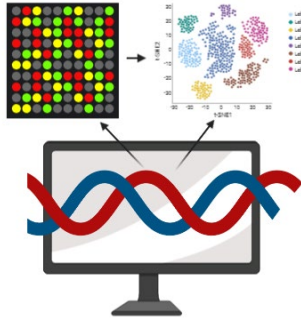


Treating Alzheimer's



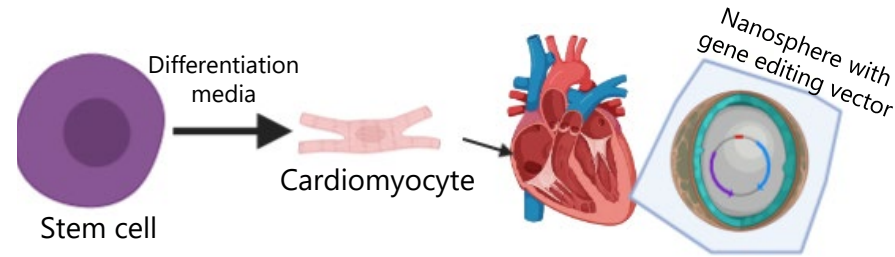
1631—Bioinformatics

Computerized and algorithmic methods of analyzing protein and nucleic acid sequences pertaining to biochemical processes and reactions



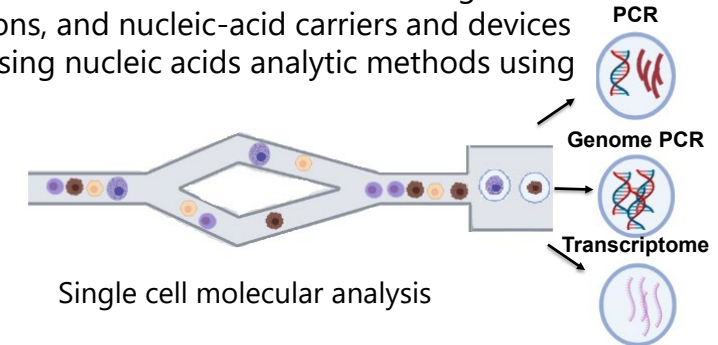
1632/1633—Gene therapy, stem cells, and transgenic animals

Embryonic stem cells and other pluripotent cells, gene-therapy methods, and systems for delivering nucleic acids to subjects



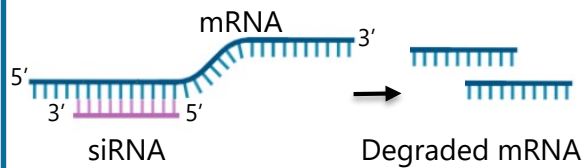
1634—Nucleic acid assays

DNA hybridization, methods of detecting mutations, and nucleic-acid carriers and devices comprising nucleic acids analytic methods using these

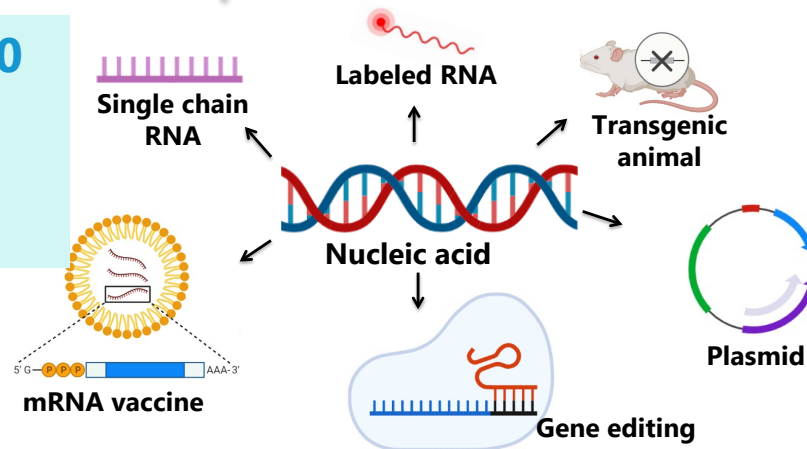


1635—Inhibitors of gene expression

Compositions and methods for inhibiting gene expression by degrading mRNA or modifying the genome itself

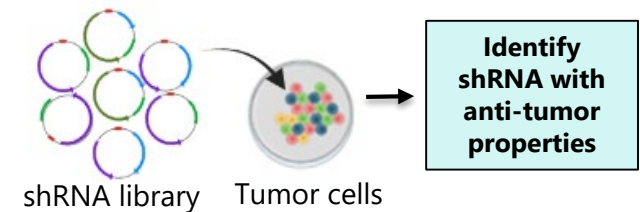


Workgroup 1630 Molecular and cell biology and bioinformatics



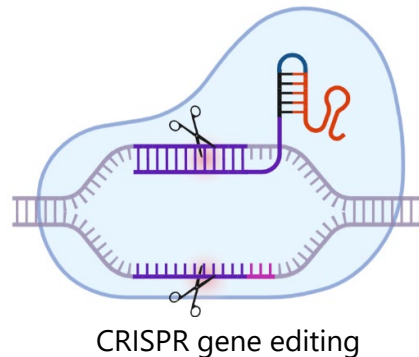
1639—Combinational/computational chemistry

Libraries of nucleic acids, peptides, and chemical molecules or biological entities, plus methods of preparing them and using them for analysis



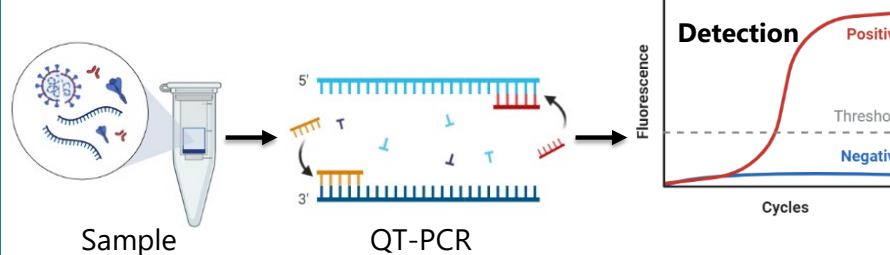
1636—Gene expression and genome editing

Genome editing and other genetic transformations, gene mapping, nucleic-acid vaccines, and gene therapy



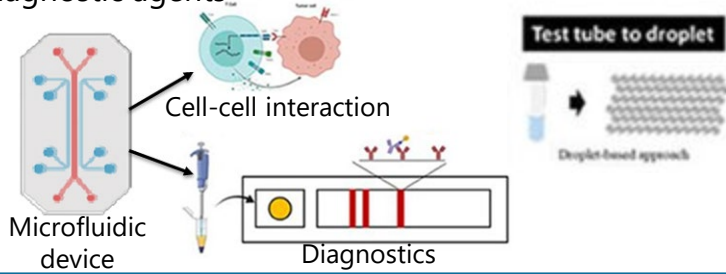
1637—DNA sequencing and genotyping

Purifying, amplifying, and sequencing nucleic acids, plus methods of diagnosis or detection using nucleic acids



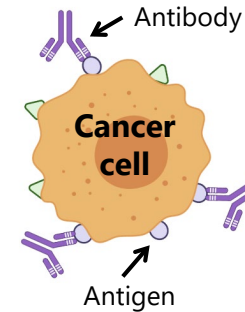
1641—Immunoassay and related devices

Detection assays and devices using antibodies as diagnostic agents.



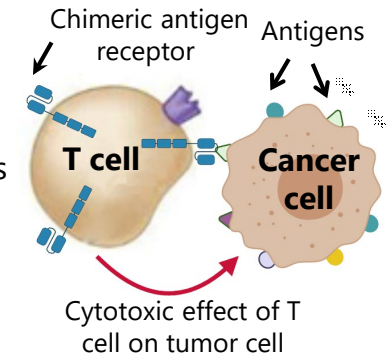
1642/1643—Cancer immunology

Antibodies or peptides binding to proteins involved in cancer and their uses in diagnosis and treatment



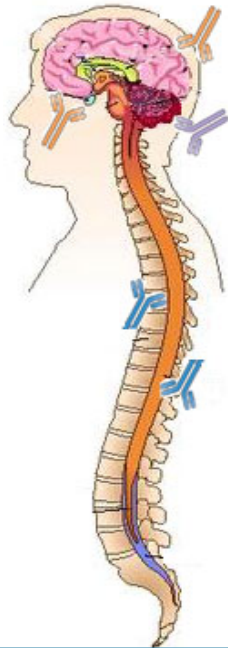
1644—Cellular immunology

Antibodies or peptides binding to proteins on immune cells and their uses in diagnosis and treatment, plus engineered immune cells expressing antibodies

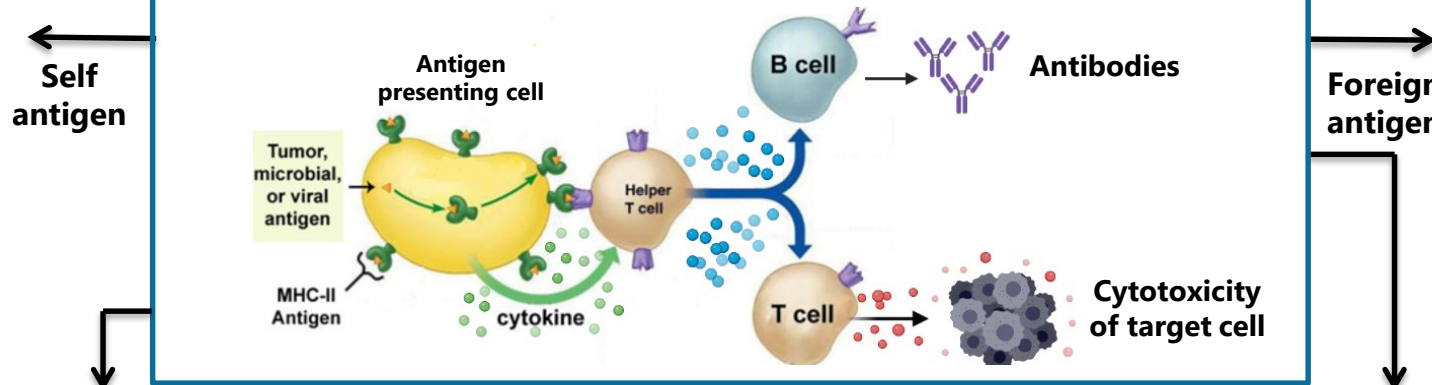


1649—Neuroimmunology

Nervous system or neuron related proteins and nucleic acids, neural stem/progenitor cells, and diagnosis and treatment

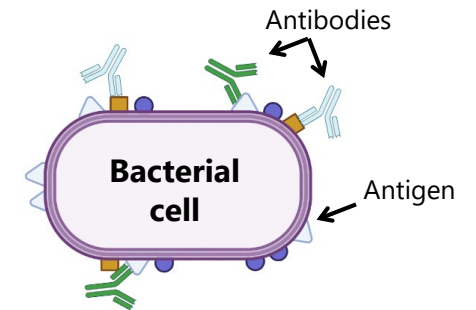


Workgroup 1640 Immunology, cytokines, antibodies, receptors, ligands, and recombinant hormones



1645—Bacterial/parasitic immunology

Antibodies or agents binding to bacterial proteins and their uses as biologics/ diagnosis; and vaccines against bacteria and parasites



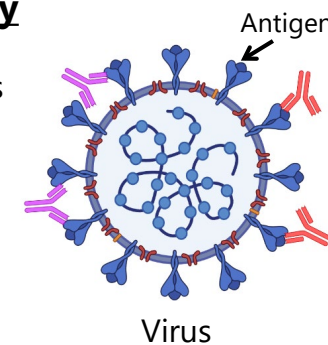
1646/1647—Cytokines and Growth Factors/Receptors

Antibodies, recombinant hormones, or agents that bind to proteins involved in growth signaling



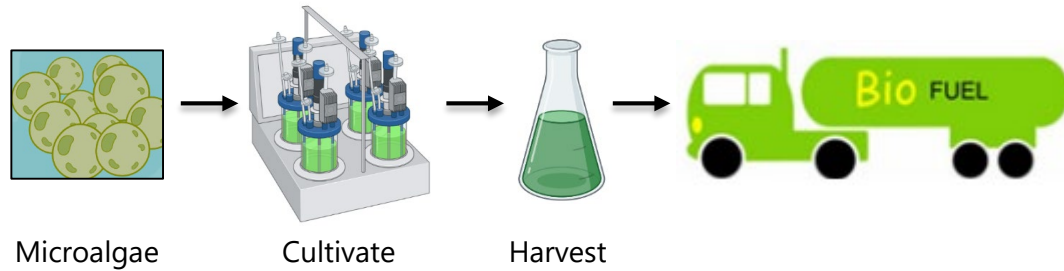
1648—Viral Immunology

Antibodies or agents binding to viral proteins and their uses in diagnosis and treatment, including vaccines against viruses



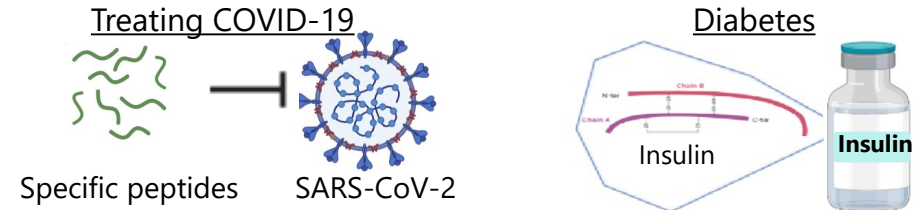
1651/1653/1657—Microbiology, enzymes, & fermentation

Non-transformed microorganisms and processes of growing and using them, plus non-recombinant enzymes and methods of using them for assays and treatments



1654/1658—Peptides

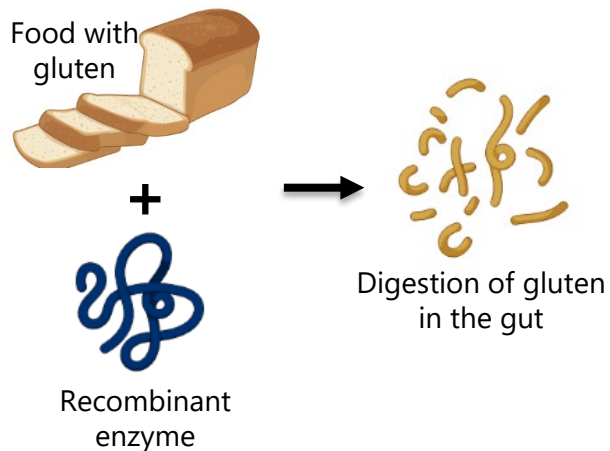
Small proteins and peptides including hormones, anti-inflammatories, antibiotics, antivirals, non-recombinant insulin, enzyme/protease inhibitors and blood factors, as well as the pharmaceutical compositions containing them and methods of using and making them



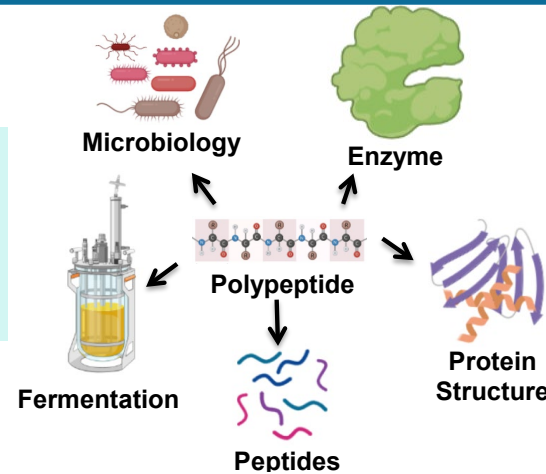
1652—Recombinant enzymes

Recombinant enzymes and DNA encoding them, plus methods of making them and using them for treatments and other applications

Treating celiac sprue disease

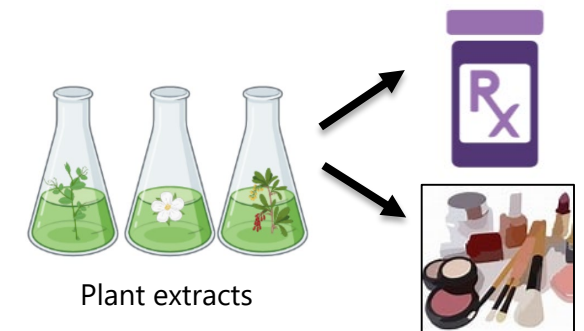


Workgroup 1650 Protein, enzymes, and microbiology



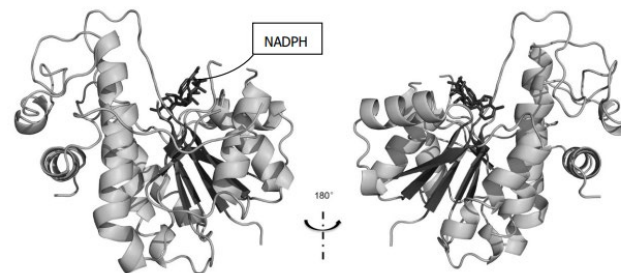
1655—Bioactive plant, microbial, and animal extracts

Extracts from herbs, fungi, algae, microbes, and animals, plus methods of making and using them as pharmaceuticals or cosmetics



1656—Recombinant enzymes and protein crystallography

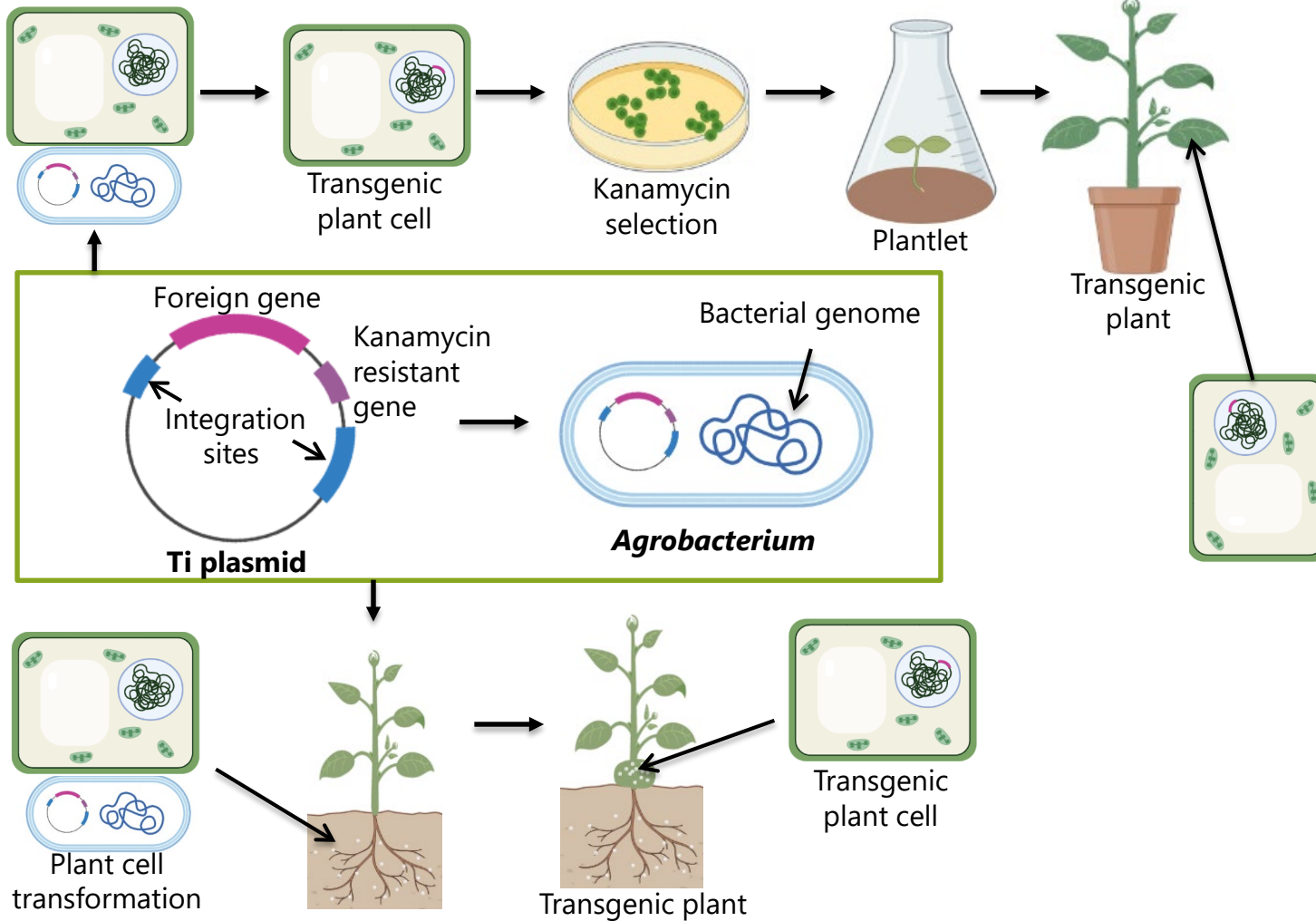
Recombinant biosynthetic pathway enzymes and recombinant microorganisms that generate them, plus methods of using the enzymes and microorganisms



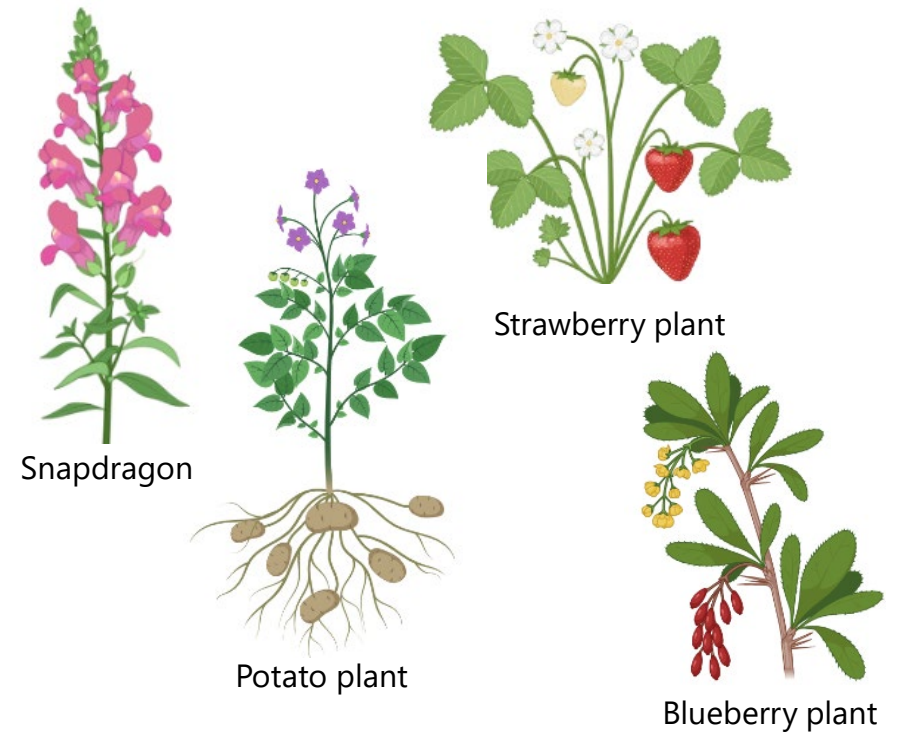
Workgroup 1660

Transgenic plants and novel cultivars and varieties

1662/1663—Transgenic plants and cultivars



1661—Asexually reproducing plant varieties





Curated by Lora Driscoll, Bao-Thuy Nguyen & Julie Wu