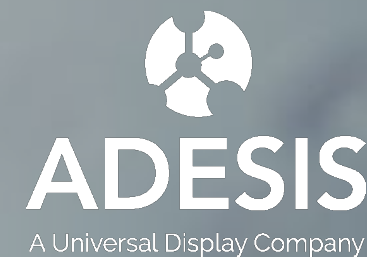




ADESIS

A Universal Display Company

Accelerating our clients' success through innovative chemistry and solutions from discovery to market



Mission

“Accelerate our clients’ success through innovative chemistry and solutions from discovery to market.”

Vision

“Innovate for Life”

Values

Innovation → **Advance The Line:** We are innovators and pioneers, pushing boundaries and innovating with quality and speed.

Ownership → **Act with Ownership:** We are accountable and personally invested to be the best for our clients and colleagues.

Integrity → **Achieve with Integrity:** We are honest, transparent, respectful and live up to our commitments.

Who We Are

Adesis Inc. is a premier **CDMO accelerating our clients' success** in the biotech, pharmaceutical and specialty chemistry industries through our innovative chemistry and solutions, and is a subsidiary of Universal Display Corporation (**Nasdaq: OLED**), a global leader in organic light emitting diodes.

Adesis Inc. encompasses almost **100,000 square feet** of state-of-the-art laboratory and manufacturing space in two U.S. locations - New Castle and Wilmington, DE, centrally located in the Mid-Atlantic biotech/pharmaceutical hub.

Our business model provides clients with organic chemistry services in three areas: early-stage **discovery research, scale-up** and **process development**, and **specialty manufacturing**. We specialize in organic and organometallic synthesis, from milligrams to multi-kilogram quantities.

Universal Display Corporation: Nasdaq: OLED

Vision
Innovation
Reality



Universal Display Corp (UDC) is a clean technology company.

UDC conducts research, develops, and markets organic light emitting diode (OLED) technologies and materials, which has applications in displays for wearables, tablets and televisions, smartphones, and solid-state lighting applications.

UNIVERSAL DISPLAY
CORPORATION™




ADESIS
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Products we enable today ...

OLED Smartwatches & Smartphones



Products we enable today ...

More OLED Products

UNIVERSAL DISPLAY
CORPORATION™




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BRAVIA XR A80K 4K HDR OLED TV



Samsung Class S95B OLED 4K Smart TV



LG C2 OLED Evo TV



2022 Mercedes EQS: 56" OLED Hyperscreen - 12.3" gauge cluster, 17.7" central touchscreen, and 12.3" passenger touchscreen

Nintendo Switch (OLED model)



SAMSUNG Galaxy Tab S8 Ultra 5G



HP Envy x360 13 (2022)



Lenovo ThinkPad X1 Fold 16.3 2022

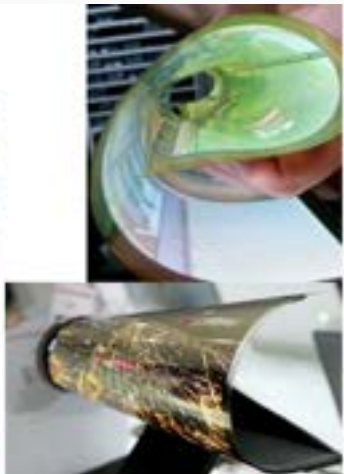
Products we enable today ...

Form Factor: Flexible, Foldable, Rollable

UNIVERSAL DISPLAY
CORPORATION™



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Xiaomi Mix Fold 2

Samsung Galaxy Z Fold4 and Galaxy Z Flip4



vivo X Fold+



Asus ZenBook 17 Fold

Products we enable today ...

OLED Lighting Around the World Today

UNIVERSAL DISPLAY
CORPORATION™




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Who We Are

2019

- Forbes America's 100 Most Innovative Leaders

2020

- Fortune's 100 Fastest-Growing Companies
- The Forum of Executive Women Champion of Board of Diversity

2021



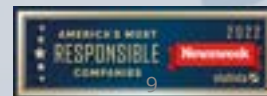
- Newsweek's America's Most Responsible Companies
- Financial Times' The America's 500 Fastest-Growing Companies
- Awarded Silver Medal from EcoVadis
- The Forum of Executive Women Champion of Board Diversity

2022

- Newsweek's America's Most Responsible Companies
- Forbes America's Best Mid-Sized Companies

2023

- Bloomberg's list of 50 Companies to Watch in 2023
- Newsweek's America's Most Responsible Companies 2023



Silicon Valley



New York, NY



UDC HQ, Ewing, NJ



A Universal Display Company

New Castle, DE

Wilmington, DE

UNIVERSAL DISPLAY CORPORATION™



China



Korea



Japan



Hong Kong



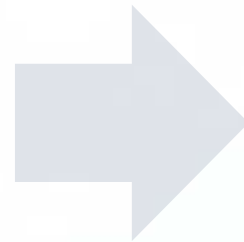
Taiwan



A Universal Display Company

Our Solutions

Accelerating our clients' success through innovative chemistry and solutions from discovery to market



- Custom compound sets/libraries
- Impurity and reference agent synthesis
- Stable-isotope labeling syntheses
(mgs to >100kg)

Wilmington DE Site

- Discovery process chemistry
- Process development
- Scale-up synthesis
 - APIs and Intermediates
 - Non-GMP in Kilo-lab setting

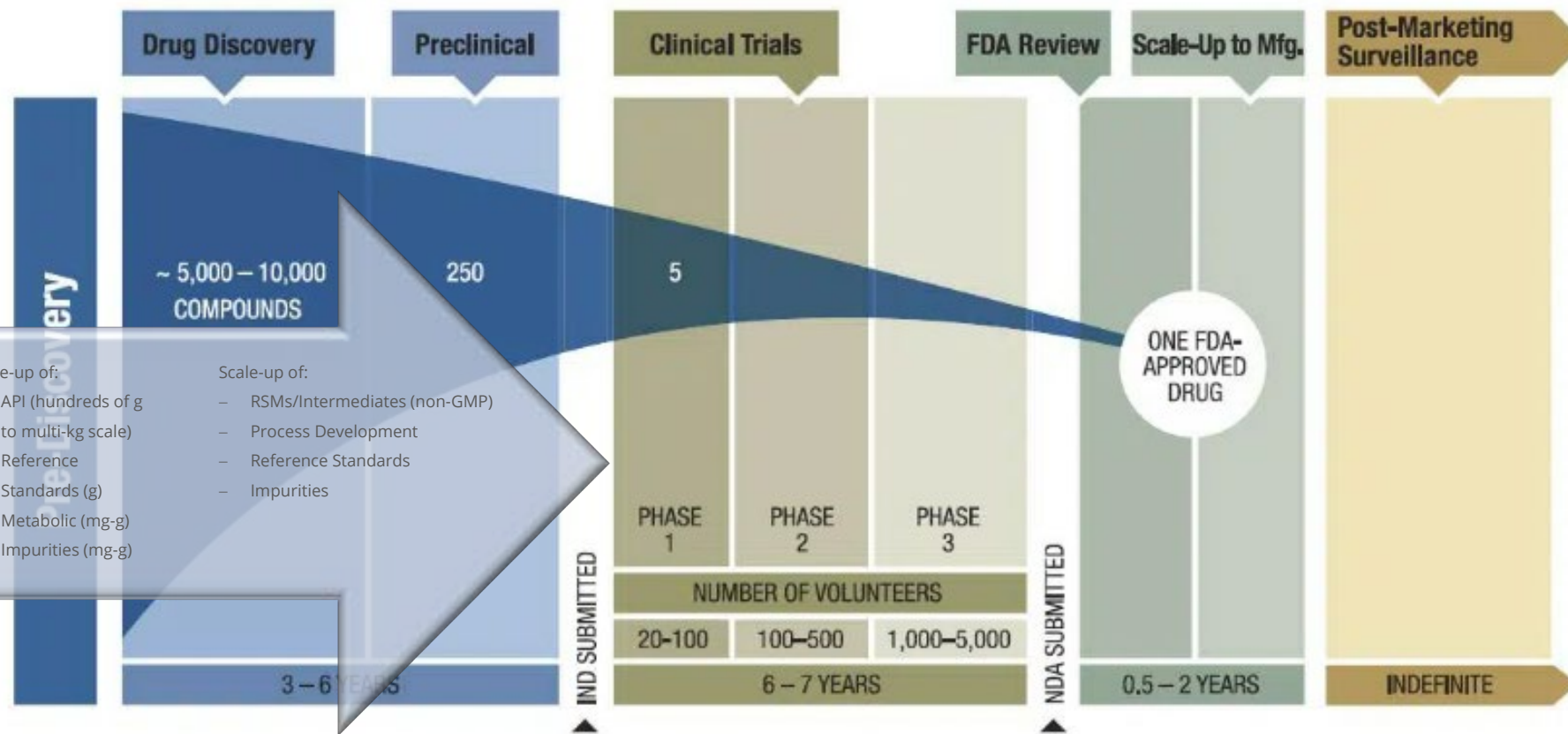
8 miles

- Small molecule manufacturing for:
 - Raw materials
 - Intermediates
 - Regulated starting materials
- Complex chemistry w/ high quality & purity
- Specialized applications

New Castle, DE Site

Our Solutions

Drug Discovery and Development Timeline



- Med Chem (mg & g)
- Scale-Up of Leads (g)



Scale-up of:

- API (hundreds of g to multi-kg scale)
- Reference Standards (g)
- Metabolic (mg-g)
- Impurities (mg-g)

Scale-up of:

- RSMs/Intermediates (non-GMP)
- Process Development
- Reference Standards
- Impurities



Our Solutions

- Scaffold hopping
- Hit-to-lead and lead optimization
- Route design
- Custom synthesis and scale up (100ml reactors)
- Lead molecules scaled up to support efficacy models, toxicity and salt selection
- Small molecule heterocycles
- Stable label
- Parallel synthesis
- Structural elucidation
- Lead optimization
- Compound development for in vivo efficacy
- Metabolite synthesis (hydrolysis, oxidation, glucuronides, etc.)
- Labelled compounds (^{13}C , ^2H , ^{15}N) for PK & metabolism studies



Our Solutions

- Route scouting and selection
- Fit-for-purpose process development to enable expedited synthesis on kilo-lab scale
- Process development and non-GMP synthesis to deliver intermediates, specialty chemicals and APIs on multi-Kilo scale
- Process intensification
- Process development to enable cGMP manufacturing
- Process hazard evaluation (DSC, TSu and reaction calorimetry)
- Synthesis and isolation of impurities
- Fate and purge of impurities
- Process consistency studies
- Design of Experiments (DoE)
- Study critical process parameters and operating ranges



Our Solutions: Flow Chemistry

- Continuous flow chemistry
- Three fully automated systems for reaction optimizations, and an automated reagent injectors that can be programmed for up to 120 reagent combinations in one run
- Accurate flow rate from 1 uL/min to 10 mL/min per channel, expandable to 50 mL/min per channel for production use
- Pressure up to 5000 psi
- Large collection of reactor from 1 mL to 60 mL, and ability to design and fabricate reactor to meet customer need. Materials: PTFE, HPFA, hastelloy, stainless steel, borosilicate, and quartz
- Dedicated photochemistry equipment
- Gas addition module for reaction involving hazardous or high-pressure gas, i.e. H₂, O₂, CO, etc.
- Solid phase reactor
- Temperature range: -30 °C to 300 °C
- Experienced in mg to 100s g synthesis




Our Solutions: Analytical Chemistry

Capabilities

- Multi-nuclei 400 MHz NMR spectrometers
- HPLC-MS and UPLC-MS systems with photo diode array detectors and single quad mass spectrometers

Equipment

- Dedicated HPLC systems for chiral and normal phase chromatography
- Gel permeation chromatography with refractive index (RI) detector
- Evaporative light scattering detector (ELSD) and charged aerosol detector (CAD) for HPLC
- Walk-up LC-MS & GC-MS systems for R&D
- GC-MS systems with single quad mass spectrometers
- GCs with flame ionization (FID) and thermal conductivity (TCD) detectors
- Prep LC systems
- X-Ray diffractometer (PXRD)
- Differential scanning calorimeter (DSC) and thermogravimetric analyzer (TGA) for thermal analysis




Scale-up
Manufacturing

Our Solutions

- Seamless transfer from ongoing R&D scale up efforts through to manufacturing
- Complex synthesis of small molecules used in:
 - Non GMP synthesis of starting materials, intermediates, or API's
 - Specialty chemicals
- Batch sizes from 5 - 35 kg up to 1 MT per year
- ISO-9001:2015 Certified Quality Management System with additional elements based on ICH Q7 - GMP for API's




Our Solutions



Scale-up
Manufacturing



Our Solutions



Scale-up
Manufacturing

The graphic features a teal hexagon with a white molecular structure icon consisting of five nodes connected by lines. The text 'Scale-up Manufacturing' is centered below the icon.



Visit Us

Booth 507



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Thank You!



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