RELEASED JULY 2019

2019 ALZHEIMER'S DRUG PIPELINE

THE CURRENT STATE OF ALZHEIMER'S DRUG DEVELOPMENT

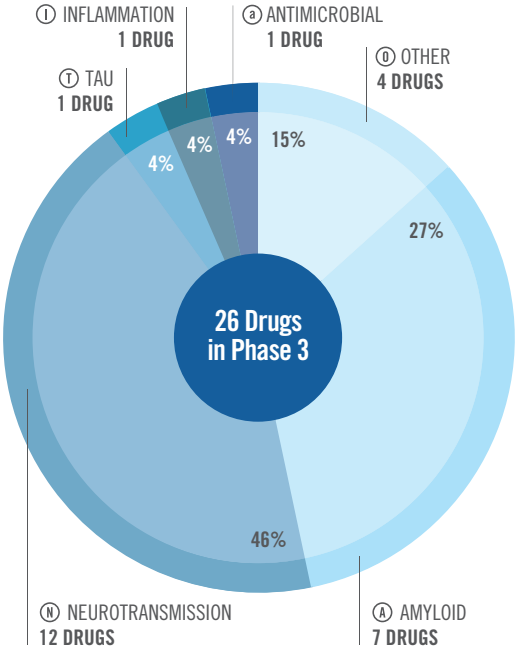
PHASE 3 FACTS 2019

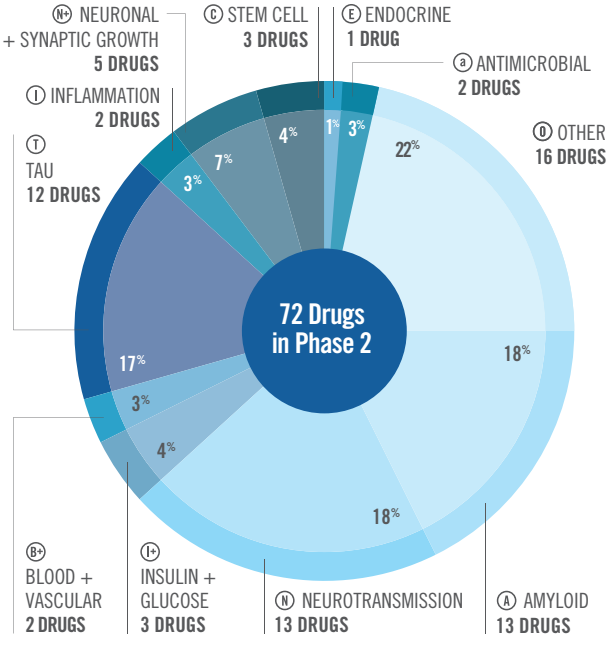
	Percent Change from 2018
Number of Drugs: 26	↓ -16%
Commercial Launch: 22 drugs could reach the market in the next five years	↓ -12%
Number of Symptomatic Drugs: 9	↓ -25%
Number of Disease Modifying Drugs: 17	↓ -11%
Prevention Trials: 6 drugs are in prevention trials	↓ -14%
Mechanism of Action: 7 drugs classified as Amyloid 12 drugs classified as Neurotransmission	↓ -30% ↓ -14%

PHASE 2 FACTS 2019

	Percent Change from 2018
Number of Drugs: 72	↑ 06%
Commercial Launch: 7 drugs could reach the market in the next five years	↓ -13%
Number of Symptomatic Drugs: 13	00%
Number of Disease Modifying Drugs: 59	↑ 07%
Prevention Trials: 2 drugs are in prevention trials	00%
Mechanism of Action: 5 drugs classified as Neuronal + Synaptic Growth 12 drugs classified as Tau	↑ 67% ↑ 09%

A Breakdown by Mechanism of Action





Symptomatic vs. Disease-Modifying

A Disease-Modifying drug is one that attempts to alter the underlying pathobiology of Alzheimer's disease and is being tested with biomarkers.

A Symptomatic drug is one that attempts to lessen the symptomology often associated with Alzheimer's disease, such as agitation, aggression, and insomnia.

Methodology

This analysis was constructed through extensive research and interviews, including interviews with company executives about publicly available information, SEC filings, company reports, presentations at medical conferences, and media coverage. Additionally, academic research experts and select RA2 members provided input and review of the analysis. However, the responsibility for the content of this report belongs solely to UsAgainstAlzheimer's, the convener of RA2, and not to any other organization or individual. Information presented in this analysis includes Alzheimer's drugs that are in Phase 2 and Phase 3. This information is subject to change given the nature of clinical trials and drug development. Our intention is to provide regular updates on the status of drug development in Alzheimer's, and we welcome input and corrections. Contact: dholzapfel@highlanterngroup.com

Prevention Trials

Prevention trials are all trials conducted on pre-symptomatic participants, including those who are healthy and cognitively normal.

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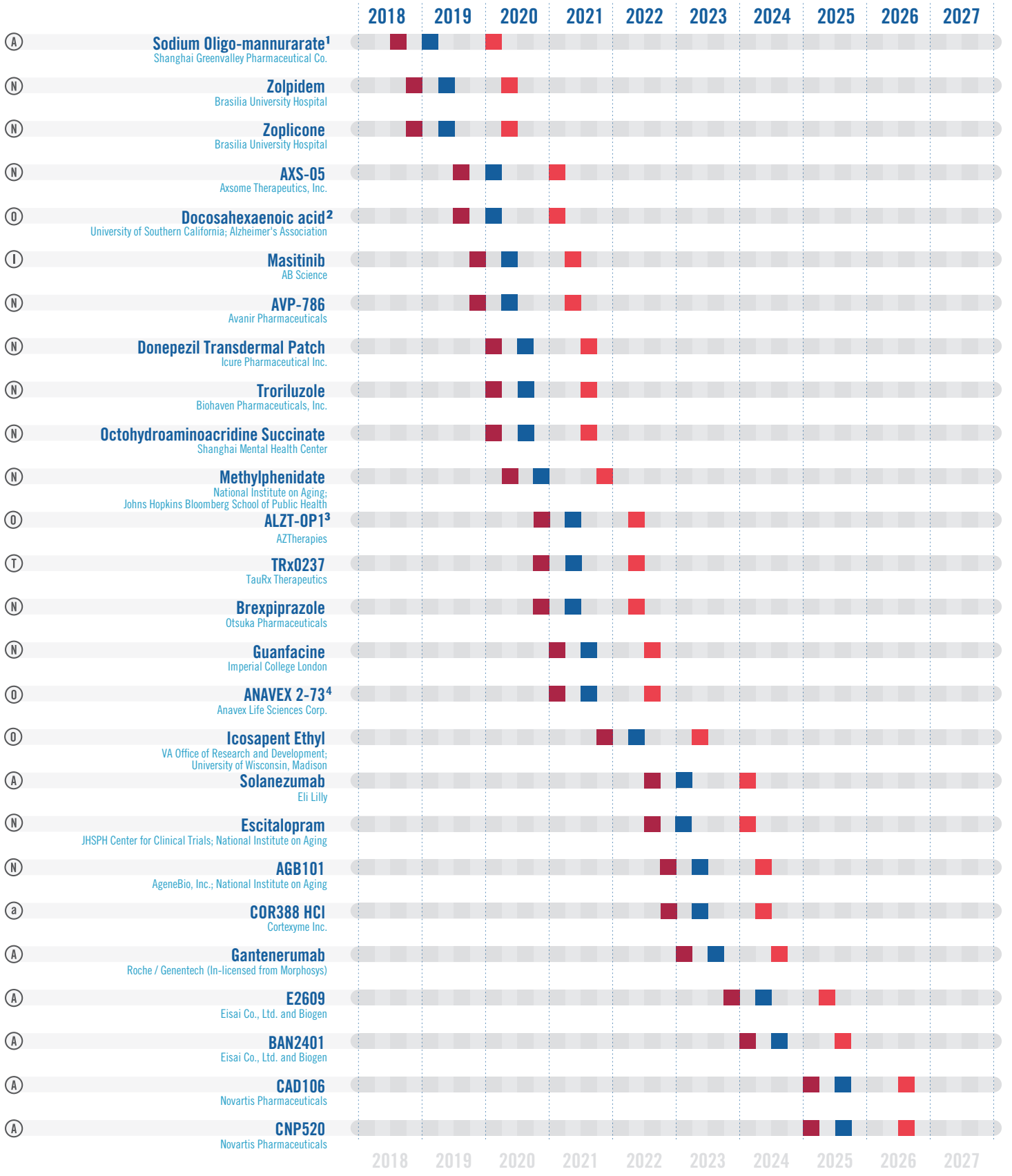
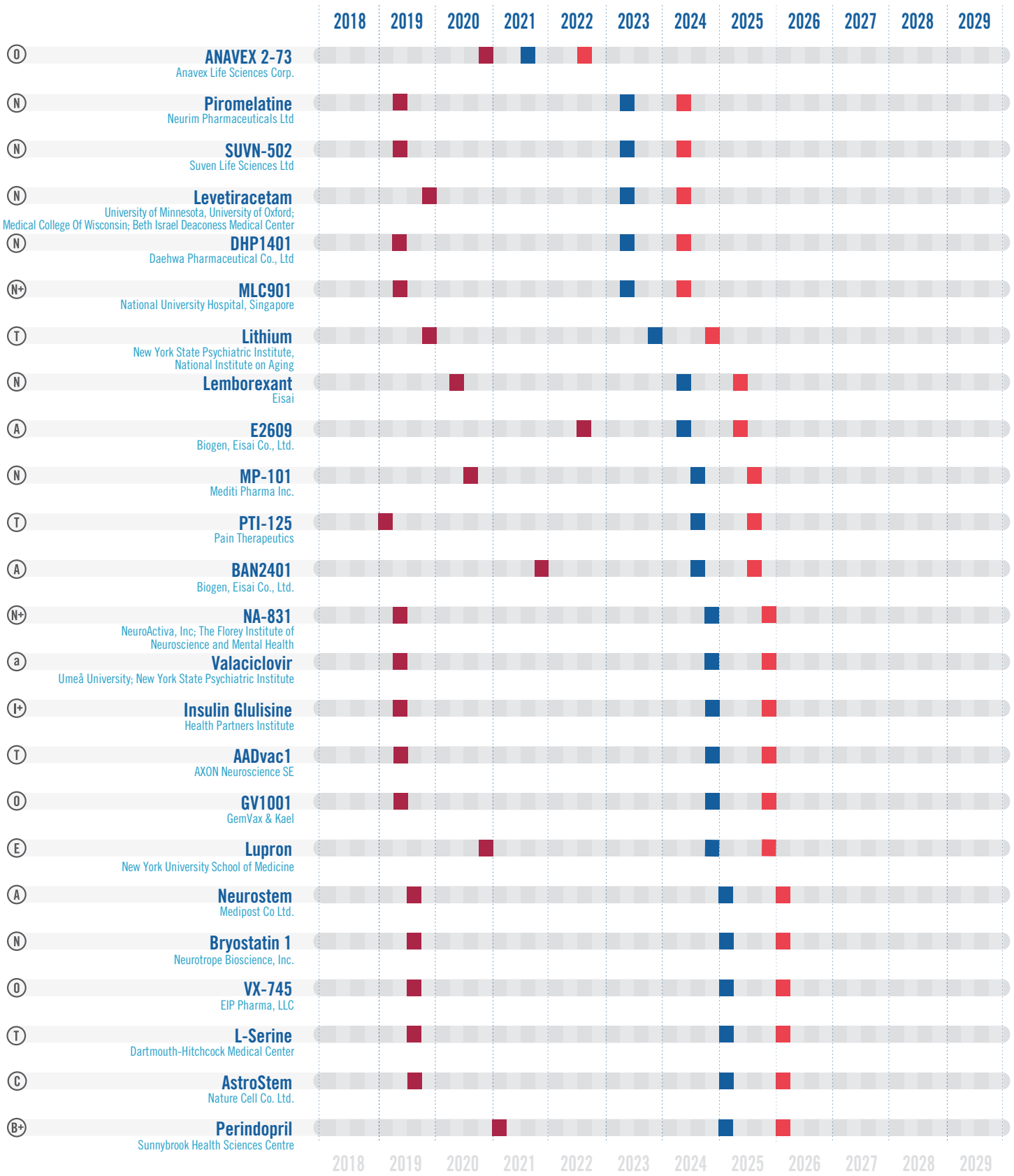
PHASE 3 Alzheimer's Drugs and Estimated Commercial Launch Dates



KEY Estimated Trial Completion · Estimated Regulatory Filing · Estimated Commercial Launch Date

MOA (A) Amyloid · (B+) Blood + Vascular · (C) Stem Cell · (I) Inflammation · (I+) Insulin + Glucose · (N) Neurotransmission · (N+) Neuronal + Synaptic Growth · (O) Other · (T) Tau · (E) Endocrine · (a) Antimicrobial

PHASE 2 Alzheimer's Drugs and Estimated Commercial Launch Dates



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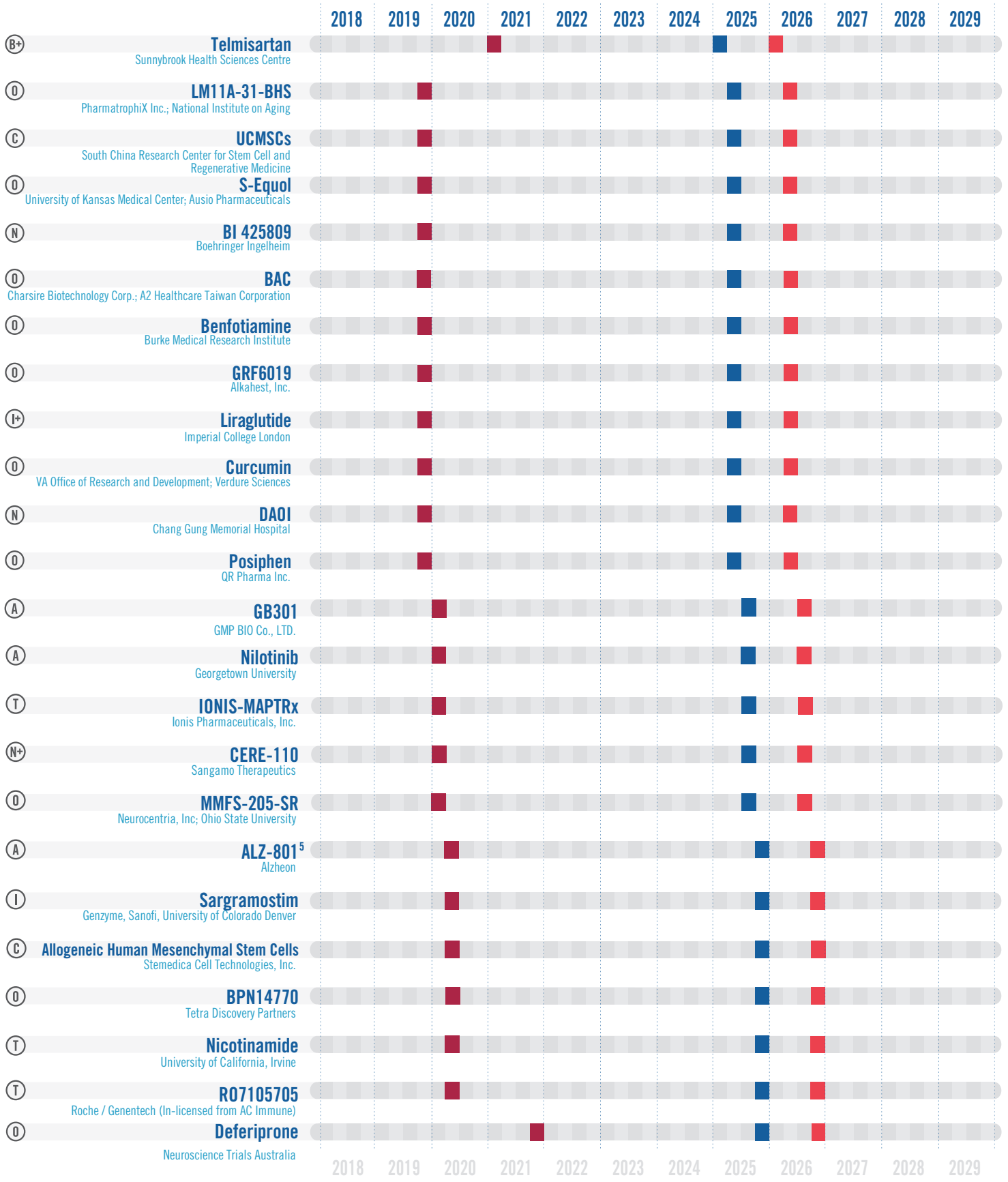

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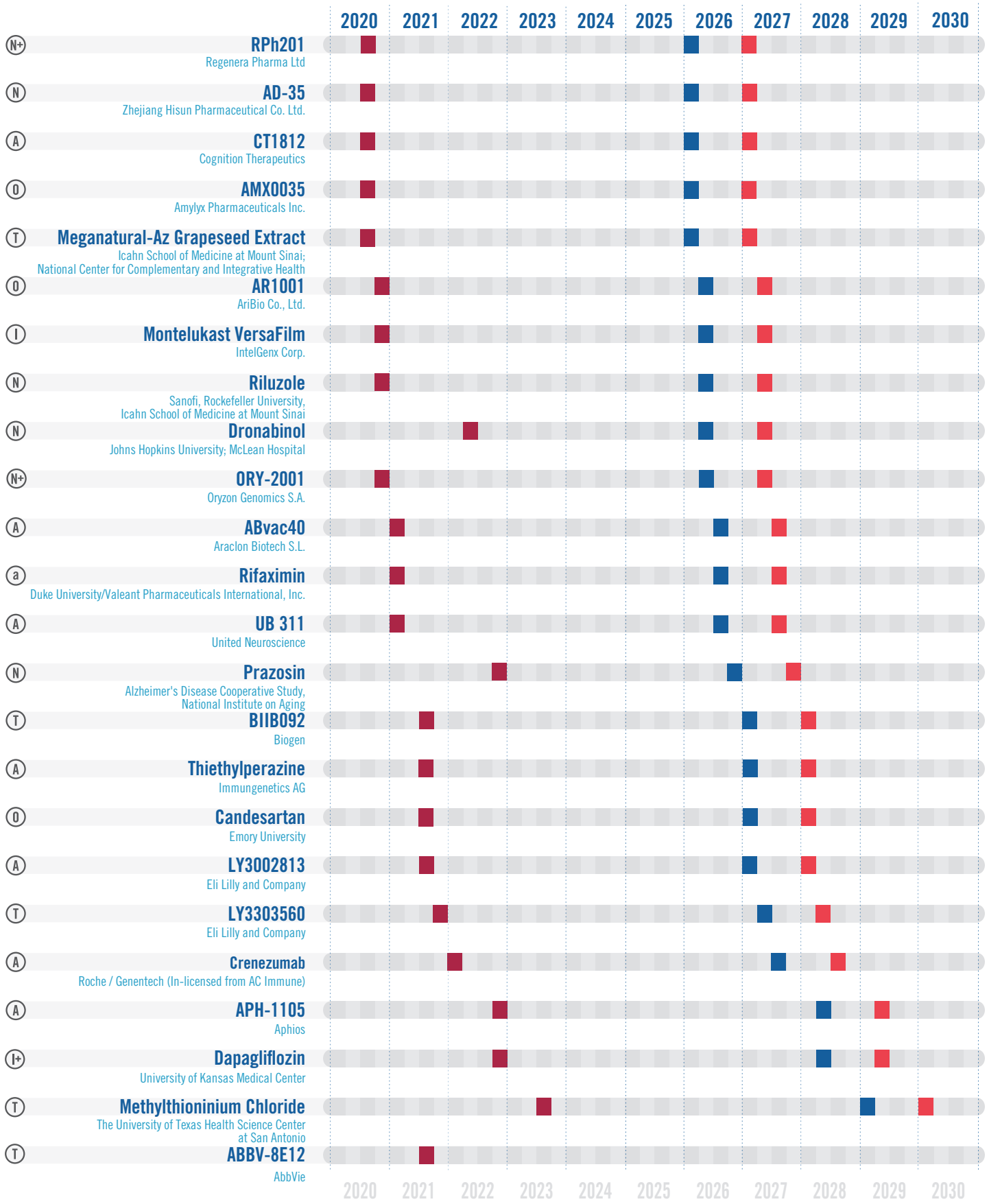

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FOOTNOTES:

1. All drug commercial launch dates in these charts assume trial success in Phase 3. And all commercial launch dates are estimates made by RA2 based on the formulas outlined below.
2. Drugs are labeled as Other when the medication's Mechanism of Action (MOA) is not clearly defined within the MOA categories RA2 uses for the purposes of this report.
3. We recognize this drug's mechanism of action could be classified as both Amyloid and Inflammation. For the purposes of this report, we have classified it as Other.
4. In some cases, a drug is currently enrolled in both Phase 2 and Phase 3 clinical trials. For these anomalies, RA2 always assumed the same Phase 3 regulatory filing and commercial launch date for both trials so that there is consistent information on when a drug may reach the market.
5. The trial completion date, regulatory filing and commercial launch date are based on an estimate made by RA2.

PHASE 2 + 3 COMMERCIAL LAUNCH FORMULAS:

PHASE 3:

DEFINITIONS:
For the purposes of this report, Phase 3 drugs are those in either Phase 3 or Phase 2/3 clinical trials.

PHASE 3 FORMULA:
LPV to Regulatory Filing: 6 months
Regulatory Filing to Commercial Launch Date: 12 months

PHASE 2:

DEFINITIONS:
For the purposes of this report, Phase 2 drugs are those in either Phase 2 or Phase 1/2 clinical trials.

PHASE 2 FORMULA (SX DRUGS):
Phase 2 LPV to Start of Phase 3 Enrollment: 12 months
Phase 3 Enrollment Period + Treatment Period:
24 months + 6 months
LPV to Regulatory Filing: 6 months
Regulatory Filing to Commercial Launch Date: 12 months

PHASE 2 FORMULA (DM DRUGS):
Phase 2 LPV to Start of Phase 3 Enrollment: 12 months
Phase 3 Enrollment Period + Treatment Period:
24 months + 24 months
LPV to Regulatory Filing: 6 months
Regulatory Filing to Commercial Launch Date: 12 months

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