Acquisition of Multi-Indication Orphan Disease Therapeutic Program

January 6th, 2021

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Safe Harbor

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Agenda

- Base business update
- Transaction details
- Business rationale
- Financial impact
- Asset overview
- Endocrine/metabolic orphan disease opportunities
- Lead indication: Prader-Willi syndrome (PWS)
- Summation

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Base business update

- **TYMLOS® growth**
  - Q4, 2020 projected quarterly net revenue is highest to date: $59+ million
  - 2020 full year net revenue projection: $207+ million
  - Added ~1,500 net new patients in December: ~20% increase from the previous four-month trailing average
- **Three Phase 3 pivotal studies on track for pivotal readouts in Q4, 2021**
  - ATOM: abaloparatide-SC for male osteoporosis
  - wearABLe: abaloparatide-TD
  - EMERALD: elacestrant (partnered with Menarini Group)
- **Business development**
  - Ex-U.S. abaloparatide global footprint expansion
    - Paladin Labs Inc. commercial agreement in Canada for abaloparatide-SC and TD
    - Teijin Pharma Limited in Japan; continued progress
    - Ongoing discussions with partners in other geographies
  - Agreement reached with Massachusetts General Hospital for SIK inhibitors
  - Completed transactions with Menarini Group for elacestrant
  - Completed transaction with Ellipses Pharma for RAD140

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Transactional details

- Acquired global development and commercialization rights to Benuvia Therapeutics' synthetic cannabidiol ("CBD") oral solution, RAD011, on December 30, 2020
- RAD011: pivotal-trial ready product with Orphan and Fast Track designations granted
- Benuvia Therapeutics: formed to acquire CBD assets out of Insys Therapeutics, Inc.'s bankruptcy
- Deal terms:
  - Upfront consideration: $12.5 million
  - Development milestones:
    - For the first indication (expected to be Prader-Willi syndrome): up to $15 million
    - For the next three indications (at Radius's discretion): up to $45 million
  - Sales-based milestones
  - Royalties: tiered, high single digit effective rate

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Business rationale

- **Addition of pivotal-ready, orphan disease asset initially targeted for patients with PWS**
  - Pipeline within a program: multiple endocrine/metabolic orphan indications possible beyond PWS
- **Increases ‘optionality’ to unlock value through late-stage pipeline readouts**
  - Four pivotal-trial readouts expected over 24 months (Q4, 2021 to Q4, 2023)
- **Reduced concentration risk: move from one core Radius asset to two**
  - Abaloparatide and RAD011, in addition to elacestrant (partnered with Menarini Group)
- **Transaction and clinical trial costs absorbed without any equity dilution**
  - 2021 objective retained: generate cash for the first time since company created

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Projected financial impact

- Calculations based off 2021 TYMLOS® SC U.S. net revenue midpoint of $250 million

Non-GAAP by Segment	Actual	Forecast	2021 Forecast						
$ millions	FY19	FY20	SC US	TD US	Intl.	Elace	RAD011	Corp.	FY21
Product Revenue	173	207+	250	-	-	-	-	-	250
Milestones/Royalties, net	-	27	-	-	10	-	-	-	10
Total Revenue	**$173**	**$234**	**$250**	**-**	**$10**	**-**	**-**	**-**	**$260**
Gross Profit	**$158**	**$218**	**$230**	**-**	**$9**	**-**	**-**	**-**	**$239**
R&D[1,2]	(108)	(148)	(47)	(59)	-	-	(7)	-	(113)
SG&A[3]	(138)	(125)	(84)	-	-	-	-	(32)	(116)
Operating Expenses	**($246)**	**($273)**	**($131)**	**($59)**	**-**	**-**	**($7)**	**($32)**	**($229)**
Adjusted EBITDA	**($87)**	**($55)**	**$99**	**($59)**	**$9**	**-**	**($7)**	**($32)**	**$10**

(1) R&D includes a one-time charge of up to $16.0 million in the fourth quarter of 2020 for the acquisition of RAD011
(2) R&D is net of Menarini Group reimbursement for elacestrant program in 2020 and 2021
(3) Excludes stock-based compensation

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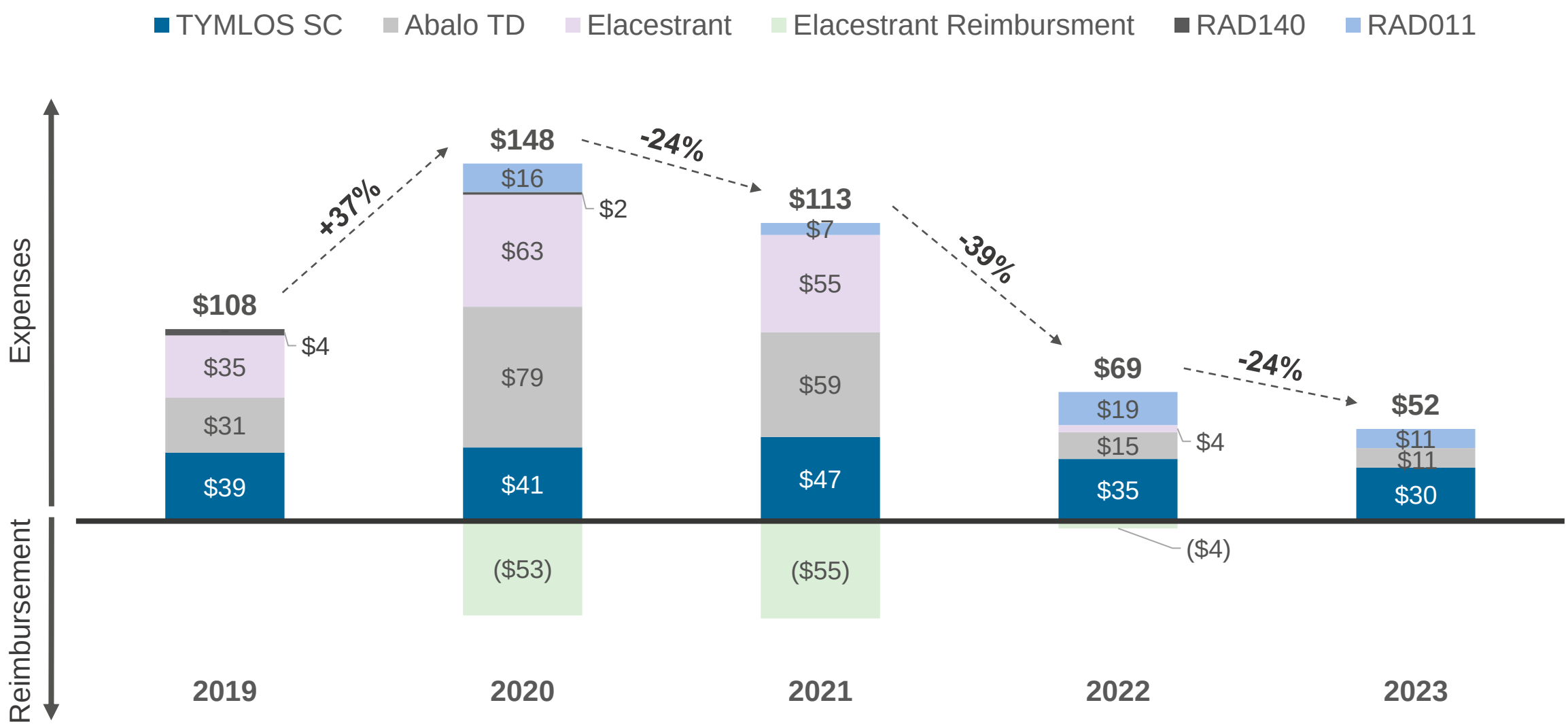
Current R&D progression through 2023



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Asset overview: RAD011

- **Synthetic cannabidiol compound which is chemically identical to botanical cannabidiol**
  - Assessed in over 150 patients across multiple indications – favorable safety and tolerability
  - Seven years of orphan drug exclusivity and fast track status
  - Novel formulation patents until 2035 and, if granted, methods of manufacturing patents until 2040
- **Advantages of synthetic formulation & manufacturing**:
  - No alcohol in formulation
  - Process with typical yields of >99% in assay purity and excludes THC, cannabinol and dronabinol
  - Utilizes standardized regulatory and quality control requirements
  - Scalable to support market needs with supply chain consistency
- **Benuvia Manufacturing to be primary supplier**
  - cGMP, FDA and DEA inspected and certified operational manufacturing plant
  - Currently manufacturing FDA-approved cannabinoid drug, SYNDROS®

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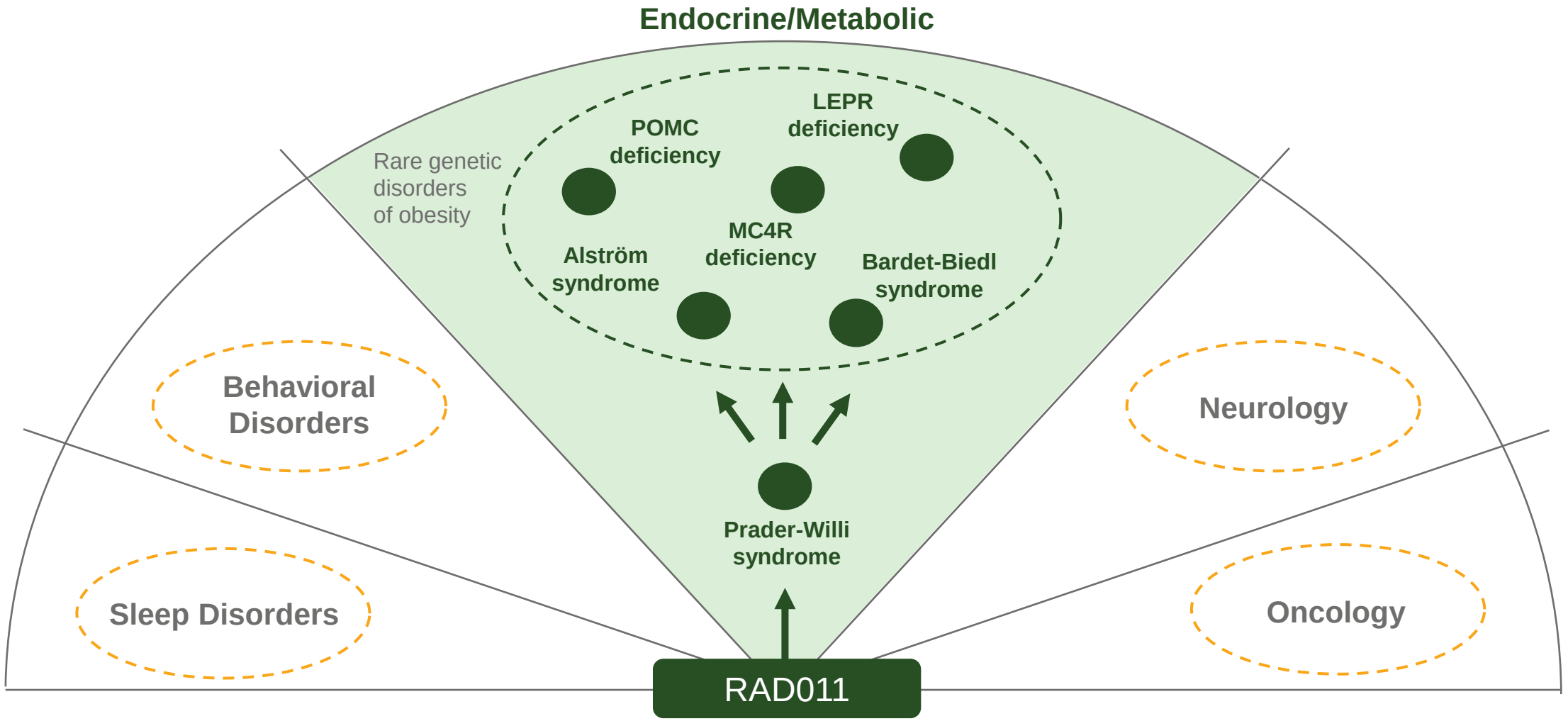
PWS: lead program enables pursuit of adjacent indications with common pathology



Endpoint intersection: hyperphagia, weight control, anxiety, daytime sleepiness

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Lead Indication: Prader-Willi syndrome (PWS)

Overview

Debilitating neurobehavioral/ metabolic disorder

Cause: genetic defect on chromosome number 15

Incidence: ~1/15,000 in US = ~ 20,000 patients

No FDA-approved therapies to treat hyperphagia

Symptoms & Manifestations

- Hyperphagia: relentless, insatiable, pathological drive to eat
- Behavioral: anxiety, habitual skin picking, oppositional defiance and cognitive rigidity
- **Hyperphagia and anxiety: key clinical features seeking medical attention by caregivers**

Complications

- Obesity and diabetes, cardiological complications etc. all contribute to morbidity and early mortality
- Significant impact on the quality of life of families

Goal of RAD011: reduce hyperphagia-related behavior and anxiety

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Science alignment to PWS: cannabidiol's impact on endocannabinoid system

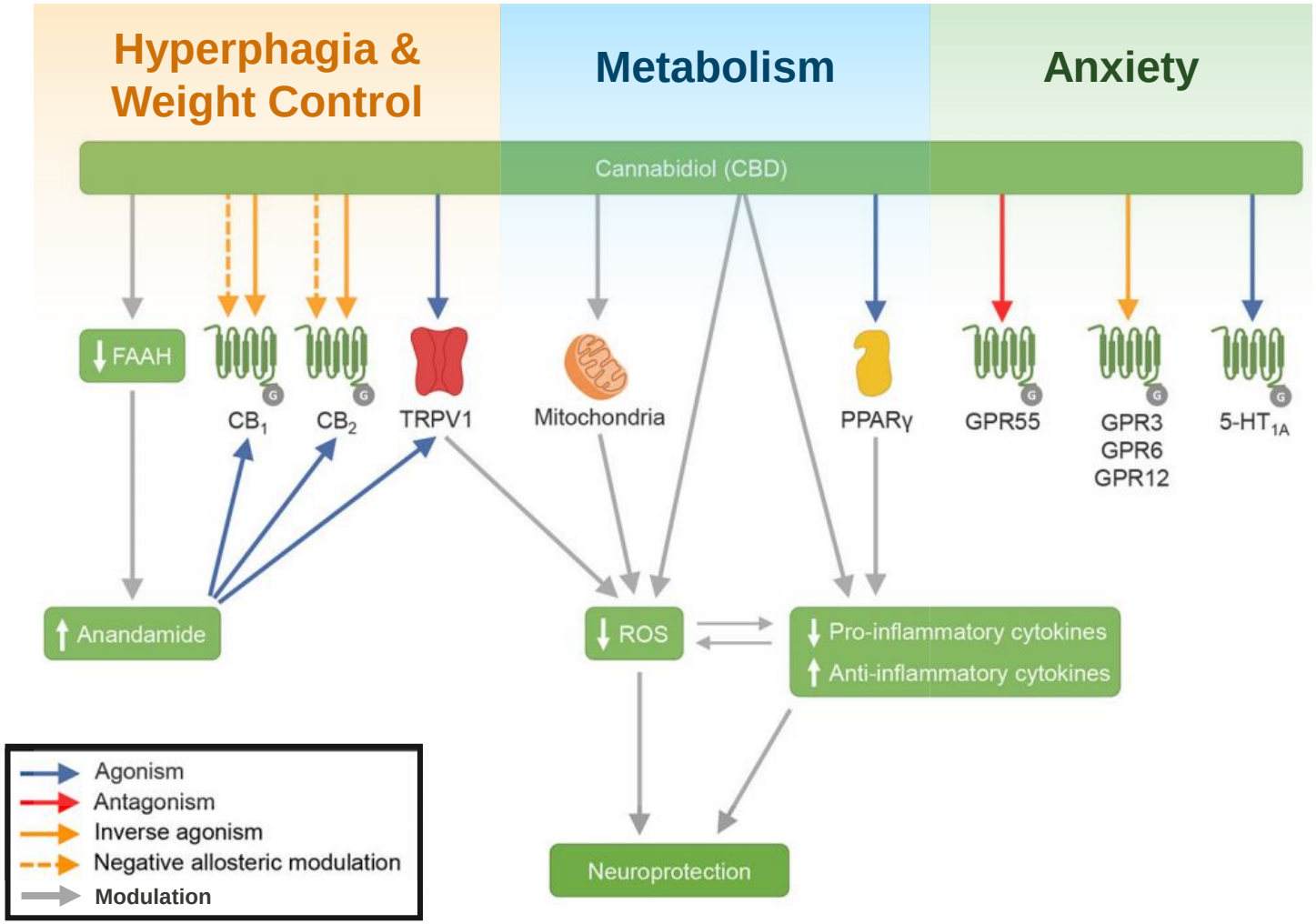

Image adapted from Peres et al 2018, Front Pharmacol., 9: 482

Multifactorial MOA; supports scientific rationale for treatment of PWS core symptoms:

Hyperphagia & Weight Control

- Inhibition of anandamide reuptake
- Indirect effects on cannabinoid receptors 1 and 2 (CB_1, CB_2)

Metabolism

- Activation of PPARγ

Anxiety

- Agonism of $5HT_{1A}$

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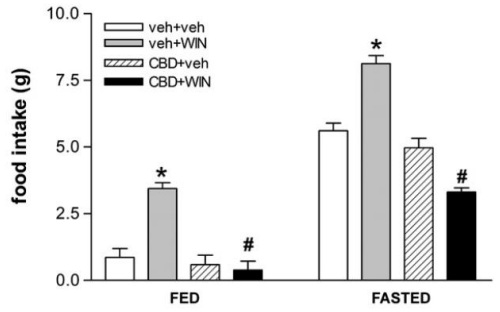
Science translation: the potential for cannabidiol as treatment for PWS

2010's

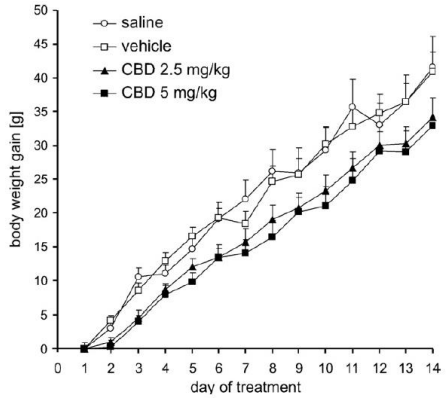
- Botanical cannabidiol: approved by FDA for rare epilepsy in 2018 – a common adverse event in these controlled trials was decreased appetite[1]
- Cannabidiol mechanism in treating core symptoms associated with PWS studied extensively in the literature:

Hyperphagia



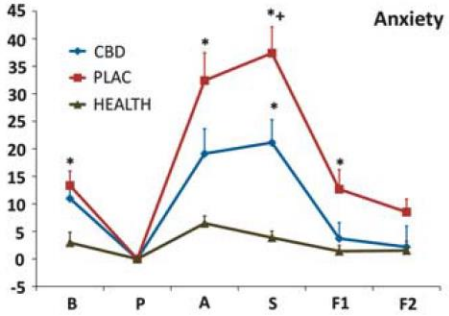
Cannabidiol inhibits hyperphagia induced by CB_1 agonist or serotonin receptor ($5HT_{1A}$) agonist[2]

Weight Control



Cannabidiol inhibits body weight gain via CB_2 receptors[3]

Anxiety



Patients with social anxiety disorder (SAD), treatment with cannabidiol results: lower anxiety compared to placebo[4]

2018

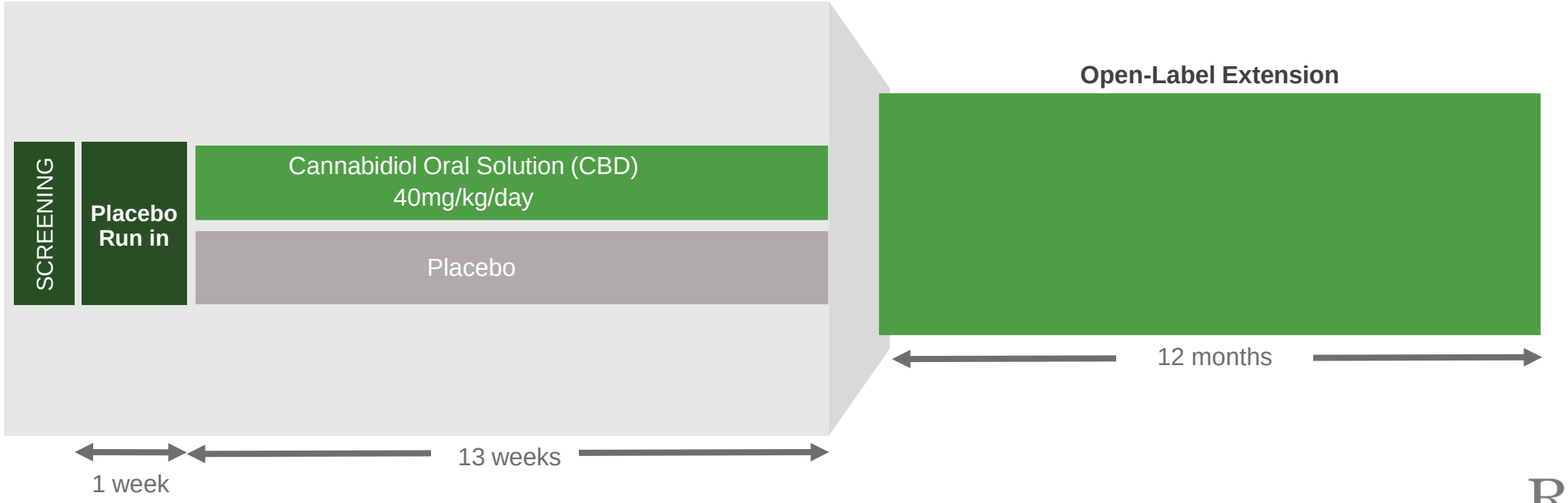
- Initiation of Phase 2 study with cannabidiol (RAD011) in subjects with PWS

1. Epidiolex FDA Prescribing Information. 2. Scopinho et al 2011, Pharmacol Biochem Behav. 3. Ignatowska-Jankowska et al 2011, Neurosci Lett. 4. Bergamaschi et al 2011, Neuropsychopharmacology.

Benuvia: Phase 2 data generated from prematurely terminated trial

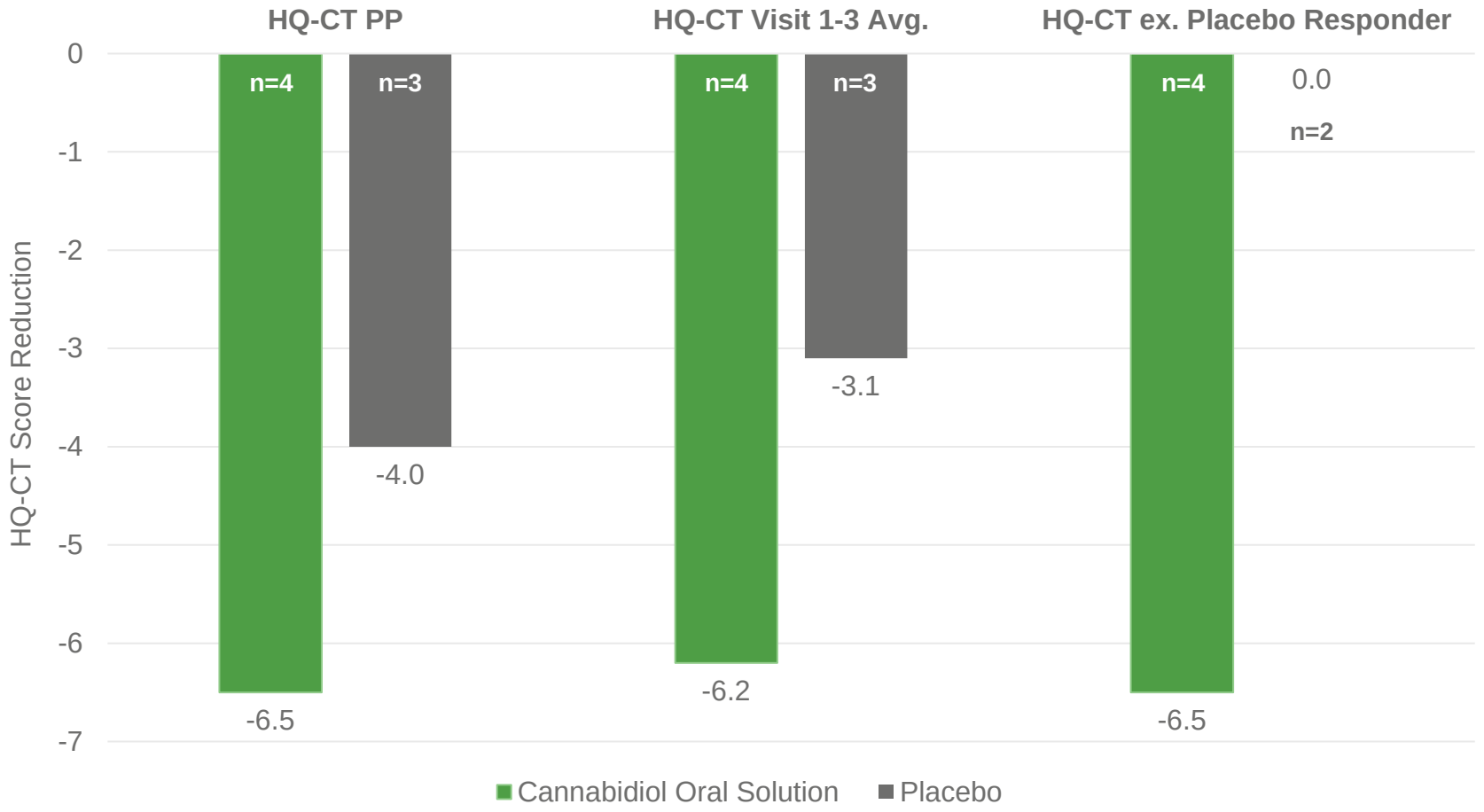
Study Design:

- Randomized, double blind, placebo-controlled, study to assess the efficacy, safety, and tolerability of cannabidiol oral solution for the treatment of patients with Prader-Willi syndrome
- One week placebo run in with a 13-week treatment phase and 12-month open label extension across 12 U.S. sites
- Intended to enroll 66 patients (7 enrolled due to prematurely terminated study) aged 8 to 17 years with genetically confirmed Prader-Willi syndrome that are hyperphagic
- Endpoints: HQ-CT[1], CGI-I[2] and body weight. Study powered sufficiently to serve as registration study if completed



1. HQ-CT: Hyperphagia Questionnaire for Clinical Trials. 2. CGI-I: Clinical Global Impressions-Improvement scale

Phase 2 clinical data: evidence of hyperphagia reduction



Commentary

- Despite abbreviated Phase 2 study, data are directionally supportive of reducing hyperphagia
- ~6.5-point reduction in the HQ-CT scale was noted across the cannabidiol treatment group, who were treated for a mean duration of 9-weeks
- Zafgen's beloranib Phase 3 study set benchmark for clinically meaningful results in HQ-CT (~7-point reduction)
- Data supported by a positive trend in reducing weight

* **Per Protocol (PP):** Visit 3 (Baseline) compared to end of study
* **Visit 1-3 Averaged:** average of scores during screening through end of placebo run-in
* **Excluding Placebo Responder:** excludes patients with >6 pt reduction in run-in (one placebo patient had an 8 pt reduction in run in and further 12 pt reduction during treatment)

HQ-CT: Hyperphagia Questionnaire for Clinical Trials

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Lessons learned from historical PWS studies* to optimize pivotal-trial design

Key Learnings	Previous Studies	Optimized Study	Rationale
Longer Placebo Run-In	0-1-2 weeks	2+ weeks	• Identify and exclude high placebo responders from primary analysis
Longer Treatment Duration	8-13 weeks	26 weeks	• Allow for placebo-effect to wane and demonstrate greater separation between treatments
Increased Severity of Hyperphagia	HQ-CT ≥ 10	HQ-CT ≥ 13	• Target more severe patients for greater treatment effect
Older and Broader Age Range	4+ y.o.	12-65 y.o.	• Severe/significant hyperphagia doesn't typically develop until early adolescence

*Studies used in analysis: Zafgen (beloranib) Phase 3, Soleno Therapeutics (DCCR) Phase 3, Levo Therapeutics (carbetocin) Phase 3, Millendo Therapeutics (livoletide) Phase 2/3, Saniona (Tesomet) Phase 2

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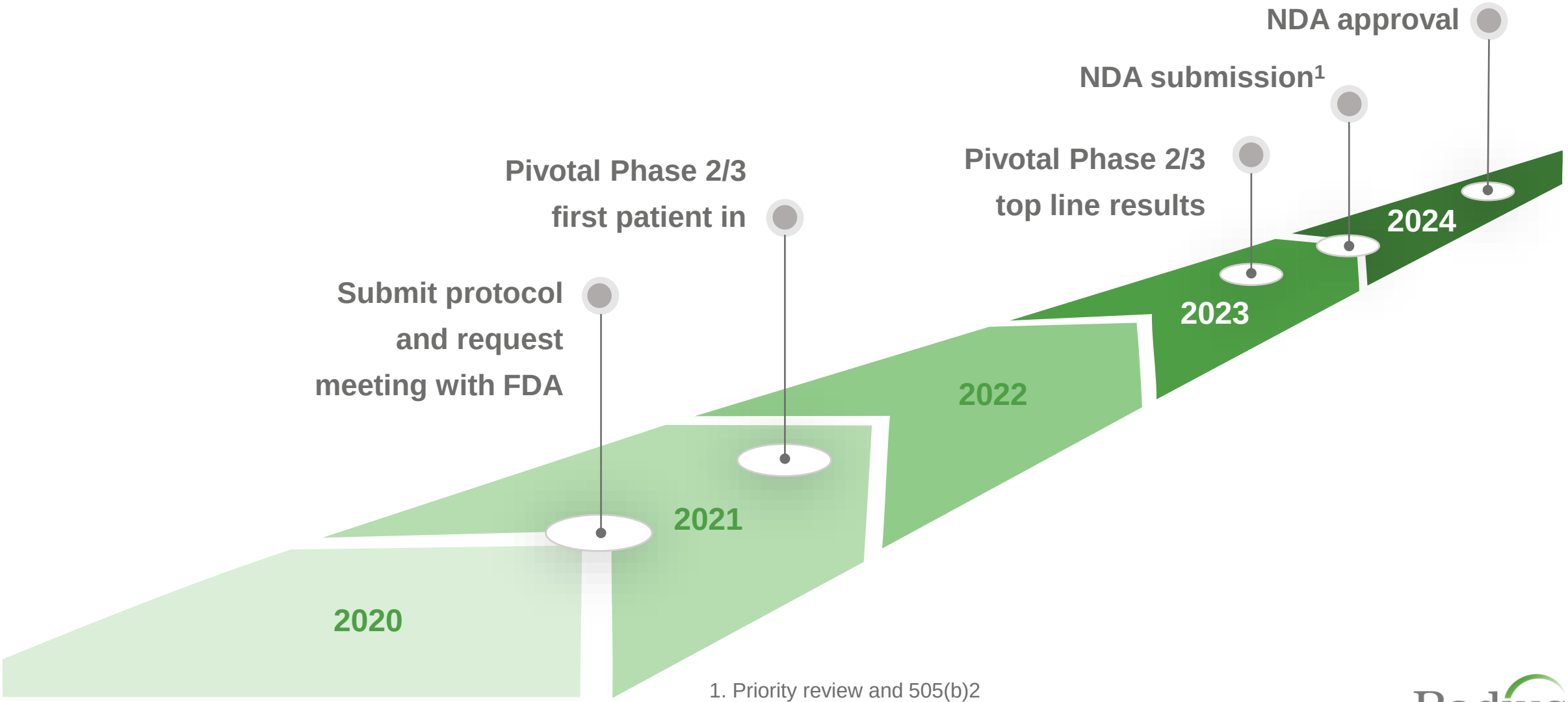
Prader-Willi syndrome: projected timelines



1. Priority review and 505(b)2

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Summation

- Fundamentals of RAD011 acquisition:
  - Opportunistic with regard to circumstances surrounding the asset's availability
  - Aligned to an area of focus: endocrinology
  - Attractive timelines: pivotal-trial readout expected in ~2.5 years in an orphan disease with high unmet need
  - Extendable, with additional clinical work, into other highly attractive metabolic/endocrine orphan diseases
  - Acquisition funded by current internal cash flow and $15.0 million from an existing debt facility
  - Pivotal-trial costs absorbed by projected operating cash flow

- Adds additional dynamics to the investment calculus of Radius
  - Four pivotal trial readouts expected over 24 months (Q4, 2021 to Q4, 2023)
  - Pivotal trial readout risk distributed across three assets: abaloparatide, elacestrant and RAD011
  - Favorable environment for TYMLOS® in the U.S.: AACE guidelines, payer alignment, high-risk patient need
  - Operating leverage: opportunity to demonstrate continued progress across multiple fronts

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Appendix

GAAP Income Statement 2019 - 2021

$ millions	Actual FY19	Forecast [1] FY20	Forecast FY21
Product Revenue	173	207	250
Milestones/Royalties, net	-	27	10
Total Revenue	**$173**	**$234**	**$260**
COGS	(16)	(16)	(21)
Gross Profit	**$157**	**$218**	**$239**
Gross Margin %	*91%*	*92%*	*92%*
R&D	(117)	(155)	(119)
SG&A	(153)	(148)	(128)
Operating Expenses	**($269)**	**($303)**	**($247)**
Operating Income (Loss)	**($112)**	**($85)**	**($8)**
Other Income / (Expense)	(21)	(25)	(7)
Net Income (Loss)	**($133)**	**($110)**	**($16)**

(1) Actuals through November 2020 plus forecast for December 2020

GAAP to Non-GAAP Reconciliation

$ millions	Actual FY19	Forecast [(1)] FY20	Forecast FY21
GAAP Net Loss	**($133)**	**($110)**	**($16)**
Stock-based compensation: R&D	9	7	6
Stock-based compensation: SG&A	15	20	12
Intangible asset amortization	1	-	-
Restructuring charges: R&D	(1)	-	-
Restructuring charges: SG&A	0	-	-
Other expense	21	25	7
Depreciation: R&D	1	-	-
Depreciation: SG&A	0	1	1
Operating lease ROU asset impairment	0	2	-
Non-GAAP Adjusted EBITDA	**($87)**	**($55)**	**$10**

(1) Actuals through November 2020 plus forecast for December 2020

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