moderna

Relaxin (AZD7970)

Last updated: December 6, 2018

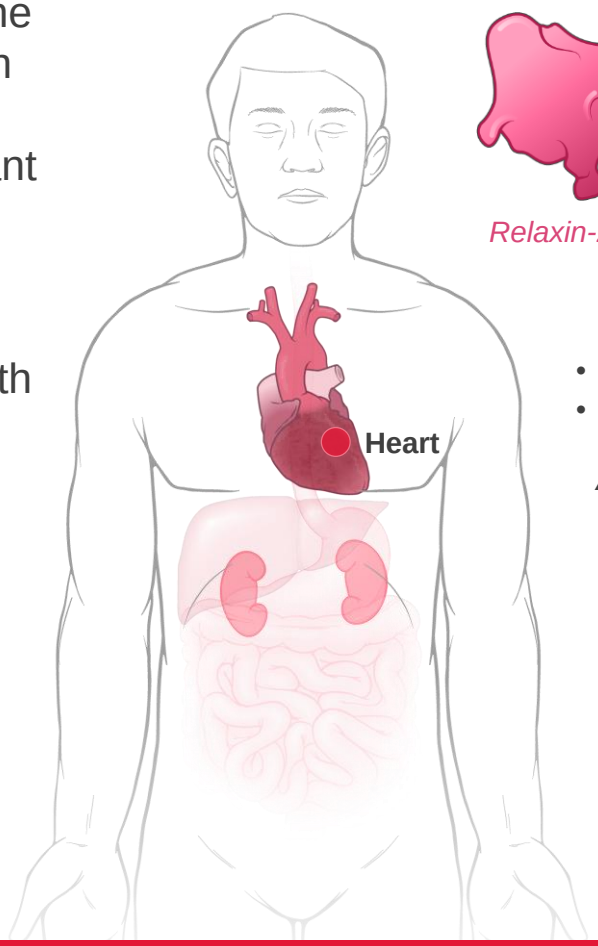
Modality	Program #	Program *Indication*	Preclinical development	Phase 1	Phase 2	Phase 3 and commercial	Moderna rights
Systemic secreted therapeutics	mRNA-1944	Antibody against Chikungunya virus 					Worldwide *DARPA funded*
	AZD7970	Relaxin *Heart failure* 					50-50 U.S. profit sharing; AZ to pay royalties on ex-U.S. sales
	mRNA-3630	α-GAL *Fabry disease* 					Worldwide

AZD7970 is in IND-enabling GLP toxicology studies

Relaxin (AZD7970) overview

Endogenous protein associated with cardiovascular remodeling

- A naturally occurring hormone (human relaxin-2), present in both men and women, that becomes elevated in pregnant women
- Protects from vascular overwork, increases renal function, promotes cell growth and survival, and maintains vessel structure



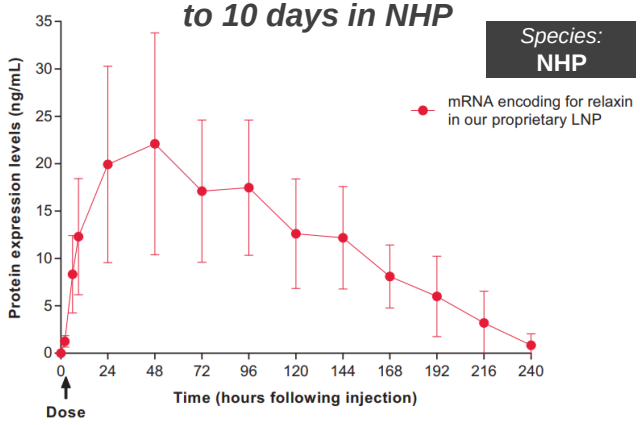
Relaxin-2

Relaxin is a vasoactive peptide associated with cardiovascular remodeling

Prior Novartis program failed to meet endpoints in multiple Phase 3 studies

- Delivered as a 48 hr infusion
- Short serum half-life

AZD7970 has shown protein expression up to 10 days in NHP



Moderna concept: IV-administered mRNA encoding relaxin peptide hormone with longer serum half life to address heart failure

Adapted from Du et al. *Nat Rev Cardiol.* 2010;7:48-58; Novartis serelaxin briefing document (Feb 2014)

Last updated: December 6, 2018

Special note regarding forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended including, but not limited to, statements concerning potential development candidate applications, development candidate activities, preclinical and clinical studies, regulatory submissions and approvals, risk management and estimates and forward-looking projections with respect to Moderna or its anticipated future performance or events. In some cases, forward-looking statements can be identified by terminology such as “may,” “should,” “expects,” “intends,” “plans,” “aims,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. The forward-looking statements in this presentation are neither promises nor guarantees, and you should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties and other factors, many of which are beyond Moderna’s control and which could cause actual results to differ materially from those expressed or implied by these forward-looking statements. These risks, uncertainties and other factors include, among others: preclinical and clinical development is lengthy and uncertain, especially for a new category of medicines such as mRNA, and therefore Moderna’s preclinical programs or development candidates may be delayed, terminated, or may never advance to or in the clinic; no mRNA drug has been approved in this new potential category of medicines, and may never be approved; mRNA drug development has substantial clinical development and regulatory risks due to the novel and unprecedented nature of this new category of medicines; and those described in Moderna’s Prospectus filed with the U.S. Securities and Exchange Commission (SEC) on December 7, 2018 and in subsequent filings made by Moderna with SEC, which are available on the SEC's website at www.sec.gov. Except as required by law, Moderna disclaims any intention or responsibility for updating or revising any forward-looking statements in this presentation in the event of new information, future developments or otherwise. These forward-looking statements are based on Moderna’s current expectations and speak only as of the date hereof.

moderna